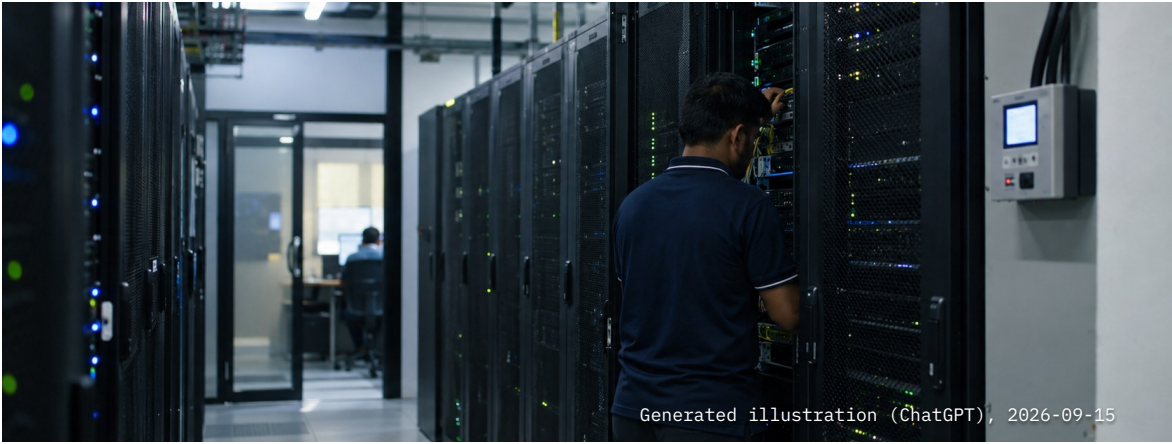




Generated illustration (ChatGPT), 2026-09-15

DATA CENTRE AND SERVER-ROOM MONITORING

Rack Monitoring System

Rack monitoring controller and central software for server racks, data centres and R&D rooms: access control, camera, temperature, humidity, water leak, smoke and fan control.

Complete v1.0 cutoff 2026-09-15 Session 2 · Rack Monitoring India · Saudi Arabia · GCC · Europe

Pilot first Confidence medium 60/100

Contract the FUJI OEM programme now, run one ten-room bank pilot through an existing e-surveillance integrator on RBI para 61, and ship SNMP, a software datasheet and a corrected CE claim before any direct, tender or export selling.

31 Jul 2026 in force RBI para 61: banks must monitor temp, water, smoke, access Verified S139	1,500 MW IT India data-centre capacity 2025, from 375 MW in 2020 Verified S43 S19 S153	201 to 261 sets RMC sets on FUJI work orders, FY2025-26 Rax-supplied S3 S148	₹36k vs ₹1L controller only Rax controller vs NetBotz 250, India Publicly observed S3 S59	58 ₹ Cr Reachable market 2026, of a ₹235 Cr total Estimated S125 S57 S59 S
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AT A GLANCE

- Since 31 July 2026 every commercial bank must have mechanisms to monitor temperature, water, smoke, access alarms and access logs at DC and DR sites; the product does exactly that, and the buyer's auditor now has a checklist. Verified S139
- The only installed base is one OEM, Fuji Electric India, a UPS maker that services over 10,000 ATM sites and thousands of bank branches: 201 to 261 sets on eleven work orders in FY2025-26, about ₹1.75 crore, 86.7 percent of deliveries late. Rax-supplied S148 S149
Publicly observed S144
- Rax's controller is a third of NetBotz 250's Indian street price and out-features every Indian GSM box, but it has no SNMP MIB, no software datasheet and a CE claim the internal record contradicts. Publicly observed S59 S134 Rax-supplied S1 S2
- India spends about ₹235 crore a year on controller-level monitoring; ₹58 crore is reachable through OEMs, integrators and public rooms in the south and west; ₹1.7 crore is today's run-rate and ₹6 crore by 2028 is credible if readiness closes. Estimated S125 S57 S3

5. Route to market is two documents and three files: an OEM agreement, an integrator programme, a MIB, a software datasheet and a price list; no agency, no distributor, no tender until a certificate exists. ● Recommendation
6. The Saudi dossier's conditional verdict stands; Europe waits for CE marking; both sit behind the Indian readiness items. ● Rax-supplied S6 ● Publicly observed S106

00 Verdict

KEY TAKEAWAYS

- Pilot first: contract the one OEM account that exists, run one bank-room pilot through an integrator Rax already invoices, and fix three readiness items before selling anywhere else. ● Recommendation
- The regulator has just written the product's feature list into law: RBI para 61, in force since 31 July 2026, requires banks to monitor temperature, water, smoke, access alarms and access logs at DC and DR sites. ● Verified S139
- The installed base is one account, Fuji Electric India, 201 to 261 sets in FY2025-26 with 86.7 percent of deliveries late; the product has no public reference, no SNMP and a datasheet that claims a CE mark the company does not hold. ● Rax-supplied S148 S149 S1 S2
- The reachable Indian market is about ₹58 crore a year of a ₹235 crore total; today's run-rate is ₹1.7 crore, ₹6 crore by 2028 is credible, and ₹0.5 crore is the case if FUJI leaves and nothing changes. ● Estimated S125 S57 S3
- Confidence is medium: the demand and price evidence is strong, the internal margin and end-use evidence is absent. ● Inferred

The decision

Classify the Rack Monitoring System as Pilot first. Keep and formalise the Fuji Electric India OEM programme, which is the whole business today; open the bank and NBFC regional-room segment through the e-surveillance integrators Rax already sells to, on the strength of RBI's new paragraph 61; and spend the next two quarters on the three things every other buyer asks for before price: an SNMP MIB, a software datasheet, and a datasheet without an unsubstantiated CE claim. Do not sell direct to enterprises, do not list on GeM, do not push export, until those exist. The score is 60 of 100 and readiness is 7 of 15, which the charter reads as Pilot first. Confidence is medium because the demand, competitor and price evidence is public and current, while the margin, the OEM's end use and the field failure record are unknown. ● Recommendation ● Estimated S139 S3 S59

The five findings that drive it

First, the regulation moved. The 2023 RBI Master Direction that asked banks for "physical and environmental controls" and "e-surveillance" at DC and DR sites has been withdrawn and replaced by the Commercial Banks Cybersecurity, Technology: Risk, Resilience and Assurance Framework Directions, 2026, effective 31 July 2026, whose paragraph 61 requires "mechanisms for monitoring of breaches of environmental controls including temperature, water, smoke, access alarms, service availability alerts ... and access logs", and whose paragraphs 60 and 61 flow down to ATM-switch service providers. That is the product's specification, written by the regulator, seven weeks before this report. ● Verified S139 S22

Second, the product sells, to one buyer whose profile now explains the purchase. Fuji Electric India, the former Consul Neowatt, placed eleven distinct work orders between March 2025 and February 2026 for 201 sets (261 if a disputed 60-set line counts) at ₹66,675 to ₹71,055, about ₹1.75 crore and a fifth of Rax's turnover, and accepted a price step. It services over 10,000 ATM sites and thousands of bank branches, sold its own ATM-site monitoring system as Consul in 2013, and has no monitoring product today: the sets are most likely a bundled component for that estate. The account began with a small design job, and Rax delivered 86.7 percent of its orders late. There is no second RMC customer beyond one kit sale, and no public reference anywhere. ● Rax-supplied S148 S149 S150 S5 ● Publicly observed S144 S145 S12 ● Inferred

Third, the price position is real and the feature position is not. The controller at ₹36,000 is about a third of a NetBotz 250 at ₹1,00,000 in India, and the full set out-features every Indian GSM box at ₹27,500 to ₹67,796; but NetBotz, Watchdog, RMS III, CMC III, SRC and AKCP all speak SNMP and the Rax datasheet does not, and the central software has a one-line description. In every forum thread the buyer's question is the MIB. ● Publicly observed S59 S134 S65 S74 S73 S94 ● Rax-supplied S1 S9

Fourth, the market is large enough and growing: about 1,500 MW of operational capacity in 2025 from 375 MW in 2020 by the government's count, 387 MW added in 2025, 4 to 6 GW expected by 2029-2030, and behind it 1.64 lakh bank branches, 1,289 universities and 40-odd public data centres. Controller-level monitoring spend is about ₹235 crore a year, of which the hyperscale-

specified ₹133 crore is out of reach and ₹58 crore is reachable through OEMs, integrators and public rooms. ● Verified S43

● Publicly observed S19 S17 S41 S42 ● Estimated S125 S57

Fifth, the constraints are the company's, not the market's: two salespeople who do not prospect, a service reputation in the ATM segment, no BIS or CE, and a datasheet whose CE line the internal record contradicts. The plan has to fit those facts, which is why it is two documents and three files rather than a campaign. ● Rax-supplied S2 S1

The three numbers to remember

31 July 2026, the date RBI paragraph 61 took effect: it changes who the buyer is (every commercial bank's IT and compliance head) and what the sales language is (six named controls). 201 to 261 sets, the FUJI work orders of FY2025-26: they prove manufacturability and repeat demand, point to a channel into bank and ATM sites through a UPS maker's service estate, and define the concentration risk. ₹36,000 against ₹1,00,000, the Rax controller against NetBotz 250 in India: it is the argument, and it holds only until the protocol question is asked. ● Verified S139 ● Rax-supplied S3 ● Publicly observed S59

How Rax's stated priority changes the plan, and what it does not change

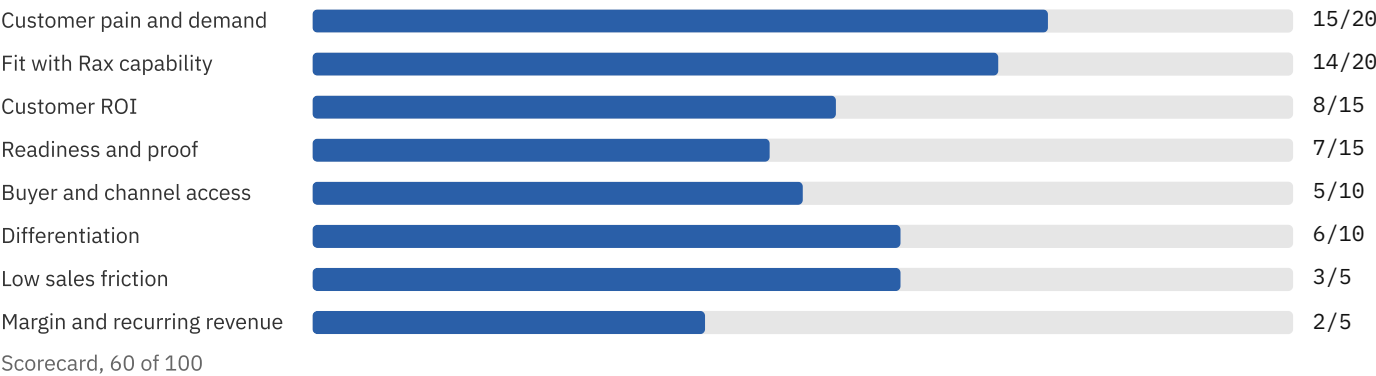
Rax has told this research that it is actively trying to grow Rack Monitoring and that it regards itself as a major e-surveillance player. The first statement is taken as the frame for section 12: the plan is written to grow the line from the FUJI proof point within two salespeople, idle software bandwidth and 35 to 50 percent factory utilisation. It does not change the score, because the score measures evidence, not intent. The second statement was tested for the one thing it would change here, whether Rax's bank and service-company relationships are a usable route into server rooms. The record says the route is plausible but unproven: none of Rax's e-surveillance accounts has bought an RMC set, the four named service companies were 14 percent of FY2025-26 revenue, e-surveillance revenue fell from ₹14.27 crore in FY2023-24 to ₹5.96 crore in FY2025-26, and no Indian e-surveillance integrator was found publicly selling server-room environmental monitoring. The route that has already bought is a UPS maker with a bank service estate. ● Rax-supplied S2 S5 ● Publicly observed S144 ● Unknown

What would change the verdict

Up to Sell now: a signed FUJI agreement with a known bundle and permission to reference it, an SNMP release with a published MIB, one bank-room pilot with under one false alarm per room per month and an auditor who accepts the log, and a BIS or CE certificate; together they lift readiness above 10 and access above 6. Down to Defer: FUJI qualifying a second source before a second OEM signs; evidence that banks satisfy para 61 with existing BMS and UPS probes and never buy at rack level; or a fail-safe lock or fire-interface failure in the field. ● Recommendation

The first ninety days

Managing Director: sign the FUJI OEM agreement with a delivery commitment and learn the end use. Quality head: issue datasheet revision 2 without the CE claim, with the corrected camera resolution and the fail-safe note, and get lab quotations for LVD, EMC and RoHS. Software lead: publish the RT-SW-RMC datasheet and scope a vulnerability assessment. Firmware lead: commit an SNMP and Modbus TCP release date. Sales: one pilot charter with one integrator, and samples with a price list to two more rack or micro-DC makers. Finance: establish COGS and gross margin per set, which nobody has. ● Recommendation



DIMENSION	SCORE	RATIONALE
Customer pain and demand	15/20	Documented and current: RBI para 61 (31 July 2026) names temperature, water, smoke, access alarms and access logs for every commercial bank's DC and DR; capacity grew four-fold to about 1,500 MW; three fires in three years. Budgeted at institutions, discretionary at SMEs. ● Verified S139 S43 S19 S46 S47 S131
Fit with Rax capability	14/20	Shipping product inside the ISO 9001:2015 scope, free manufacturing capacity, free software bandwidth, adjacent PCMU, sensors and 4G router; but no SNMP, no software specification and an unverified CE claim. ● Rax-supplied S2 S1 S4 S9
Customer ROI	8/15	Payback is plausible (a Rs 69,065 set against an overnight cooked rack or an audit finding) but unquantified with Rax data; forum anecdotes and vendor case narratives are the only evidence. ● Estimated S109 S107 S91 S3
Readiness and proof	7/15	One OEM account with a year of repeat orders; no public reference, no certificate beyond ISO 9001, no MIB, no software datasheet, a datasheet with a CE conflict and a VGA camera called 2MP. ● Rax-supplied S3 S1 S2 S6
Buyer and channel access	5/10	One OEM and the existing e-surveillance integrators are reachable; GeM, tenders, EPC and distributors are closed until a certificate and a MIB exist; two salespeople with no prospecting habit. ● Rax-supplied S2 S3 S61
Differentiation	6/10	Only Indian controller found that integrates access, camera, fire interface and environment in one box at a third of NetBotz's Indian price; erased at the protocol question against NetBotz, RMS III, CMC III and SRC. ● Publicly observed S59 S74 S73 S75 S134
Low sales friction	3/5	Simple physical install and an OEM route with monthly call-offs; integration with NMS or BMS adds friction until SNMP exists; bank information-security review adds a quarter. ● Inferred
Margin and recurring revenue	2/5	COGS, gross margin and receivables unknown; hardware-only with no AMC or subscription sold to date. ● Unknown

01 Product truth

KEY TAKEAWAYS

- One shipping controller, RT-RMC-G2V0, sold as a set with sensors and a one-line central software; the datasheet is four pages and the software has no datasheet at all. Rax-supplied S1 S9
- The only installed base is one account, FUJI: 201 sets on eleven distinct work orders in FY2025-26, or 261 if a disputed 60-set line counts, worth about ₹1.75 crore; no data-centre operator, bank or public body is a named reference. Rax-supplied S3 S148 S5
- FUJI resolves publicly to Fuji Electric India, the former Consul Neowatt, a UPS maker that services over 10,000 ATM sites and several thousand bank branches and once sold its own ATM-site monitoring system; the sets are most likely a bundled site-monitoring component for that estate. Publicly observed S12 S144 S145 Inferred
- The datasheet says CE certified; the internal record says CE is not held; the camera is called 2MP but specified at 640 by 480. These must be resolved before any regulated buyer sees the document. Rax-supplied S1 S2 S6
- ISO 9001:2015 with rack monitoring controllers in scope is the one certification a buyer can check; it dates from September 2025. Verified S2

What ships today

The hardware is the RT-RMC-G2V0 rack monitoring controller, a 1U-style unit of 430 by 45 by 160 mm with sixteen digital inputs, one fire-alarm interface, nine outputs for magnetic locks, fan control and hooter, a serial JPEG camera with IR night vision, a 0.96-inch OLED, two Wiegand reader interfaces, Modbus internally, 100 Mbps Ethernet externally, SIA and TCP/IP protocols, web-based configuration, 100 to 240 V AC input and 12 V DC working voltage. The datasheet is revision 1 dated 28 July 2025, prepared in Canva, and carries a one-year warranty and factory calibration statement. Rax-supplied S1



Rack Monitoring Controller

RT-RMC-G2V0



The Rack Monitoring Controller is a device that keeps server racks and data centers safe by checking important environmental and security conditions. It tracks temperature, humidity, water leaks, unauthorized access, and smoke to ensure the safety and optimal performance of equipment. With real-time monitoring and automatic alerts, the system helps reduce downtime and improve efficiency. It seamlessly integrates with existing infrastructure and provides remote access through a secure web client, allowing users to monitor and manage conditions from anywhere. This advanced solution enables proactive maintenance, enhances security, and ensures smooth operations in mission-critical environments.

In modern data centers and IT infrastructure, security, environmental monitoring, and automation are critical to ensure seamless operations. The Rack Monitoring system is a solution designed to protect, control, and remotely monitor server racks and data centres. It has the following features:

- **Security Protection:** Features include authorized access control, Camera Images for Monitoring, water leakage detection, and smoke detection.
- **Environmental Monitoring:** Monitors temperature and humidity both inside and outside the rack.
- **Control Features:** Fans can be controlled based on temperature, schedules, or other parameters. A hooter is activated in case of alarm events.
- **Centralized Monitoring:** All alerts and data are sent to a central monitoring software for immediate action.

Applications

- Server Rack
- Data Centers
- R&D Centers

RTS-RMC-G2V0-R02



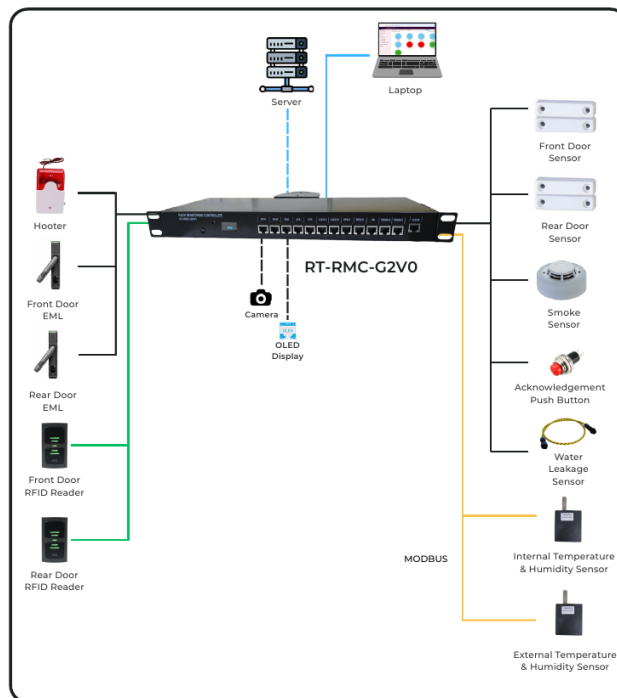
www.rax-tech.com

1

Datasheet cover, revision RTS-RMC-G2V0-R02, listing security, environmental, control and centralised-monitoring features and three applications: server rack, data centres, R&D centres. Source S1

The system diagram shows what a set contains: front and rear door sensors, front and rear electromagnetic locks, front and rear RFID readers, smoke sensor, water-leakage rope sensor, acknowledgement push button, hooter, camera, OLED, and internal and external temperature-humidity sensors on Modbus, all terminating on the controller, which reports to a server and is viewed on a laptop. (Rax-supplied S1)

System Diagram



RTS-RMC-G2V0-R02

 www.rax-tech.com

2

The set as drawn: two doors, two locks, two readers, smoke, leak, push button, hooter, camera and two Modbus temperature-humidity sensors on one controller. Source S1

The website lists the same product as RT-RMC-GX on the IoT and data-centre pages while the specification block on the product page names RT-RMC-G2V0; the product master carries RT-RMC-GX in the FIOT group and RT-SW-RMC, Smart Rack Monitoring Central Software, in the software group. The software page says only "Smart rack monitoring central software"; there are no screenshots, feature lists, licensing terms or deployment options anywhere public. The July 2026 Saudi dossier reached the same conclusion and rated the software bundle-only. Publicly observed S8 S9 S10 S11 Rax-supplied S4 S7



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RT-RMC-GX

Rack Monitoring Controller

Ethernet-based monitoring for rack and server room

[Enquire about this product](#)[Datasheet \(PDF\)](#)

[Read the datasheet as a web page](#)

Overview

Ethernet-based monitoring for rack and server room

Specifications

Digital Input	16 No's Digital Inputs
Fire Alarm Interface	1 No's
Output	9 No's for controls like magnetic lock, fan control, Hooter etc
Camera	2MP (640X480) resolution, 2.8/3.6mm lens, with IR night vision, serial JPEG Camera
Display	OLED display (128*64*0.96)
Access Control	2 No's Wiegand reader interface
Internal Communication	MODBUS
External Communication	Ethernet:100 Mbps-RJ45 Connector
Protocol	Standard SIA Protocol, TCP/IP
Configuration	Web-based
Input Supply	100 to 240V AC
Working voltage	12V DC

 **Input Supply**
Working voltage

100 to 240V AC
12V DC

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The public product page: model naming differs between the page title and the specification block; no price, protocol list beyond Modbus, SIA and TCP/IP, or customer reference. Source S8

Verified versus claimed

CLAIM	WHERE IT IS MADE	INDEPENDENT EVIDENCE	STATUS
16 inputs, 9 outputs, 2 Wiegand, Modbus, Ethernet	Datasheet, website	None; no test report supplied	Rax-supplied
2MP camera	Datasheet	Datasheet itself specifies 640 by 480, which is VGA	Conflict
Secure web client, remote access	Datasheet prose	No TLS, RBAC, audit or update-signing detail	Unknown
Standard SIA protocol	Datasheet	No SIA DC-09 profile or receiver compatibility stated	Unknown
SNMP, BACnet, MQTT, REST	Not claimed	Not claimed; buyers of NetBotz, Watchdog and CMC III expect SNMP	Gap
CE certified	Datasheet	Internal record says CE not held; no certificate seen	Conflict
RoHS compliant	Datasheet, website	Claimed; no test report seen	Rax-supplied
ISO 9001:2015, scope includes rack monitoring controllers	Website, certificate	Bureau Veritas certificate IND.25.902/QM/U, valid to 21 September 2028	Verified

CLAIM	WHERE IT IS MADE	INDEPENDENT EVIDENCE	STATUS
One-year warranty, factory calibration	Datasheet	Consistent with e-surveillance practice	Rax-supplied

The table is drawn from the datasheet, the website and the internal record, and repeats the conflicts the Saudi research already logged: model naming, camera resolution and an unsubstantiated "secure". Rax-supplied S1 S2 S6 Publicly observed S8

Certifications: held, applied, missing

Held: ISO 9001:2015 (first cycle from 22 September 2025) and ZED Silver. Applied: BIS CRS, in process, for a product the record does not name; the CRS list names power adapters for IT equipment, standalone SMPS up to 48 V, CCTV cameras and recorders and smart card readers, but no category for a rack or environmental monitoring controller, so the set's external power supply may need registration while the controller itself may not. Missing: CE, UL, TEC/MTCTE, FM, EN 54, SABER and ECAS. The datasheet's CE statement therefore cannot be used in a tender response or a European quotation until a certificate exists; a European buyer under the Low Voltage, EMC and RoHS directives, or a Saudi buyer under SABER, would ask for it first. Rax-supplied S2 S6

Verified S164 Inferred

SO WHAT FOR RAX

Remove or substantiate "CE certified" on the datasheet before the next revision, and add the protocol list buyers actually ask for (SNMP v2c/v3, Modbus TCP, email, SMS) or state that they are absent. A regulated Indian buyer will ask for BIS and an SNMP MIB before price. Recommendation

Installed base and references

The FUJI record was rebuilt in pass 2 from the production team's monthly delivery workbook, work order by work order, because the monthly sheets repeat open orders and several purchase orders were re-issued under new numbers. The reconstruction is below. Rax-supplied S148 S3

WORK ORDER (DW0)	WO DATE	DUE	SETS	PRICE PER SET	DELIVERY NOTE
RW25-PD030	6 Mar 2025 (PO dated)	28 Jun 2025	20	₹66,675	Delivered by July
RW25-PC002	19 Jun 2025	6 Jun 2025	20	₹66,675	3 still pending on the August sheet
RW25-PD044	27 Jun 2025	24 Jul 2025	10	₹66,675	Delivered in August
RW25-PD050	9 Jul 2025	30 Jul 2025	11	₹66,675	Delivered in August
RW25-PD050, second line	9 Jul 2025	30 Jul 2025	60 (disputed)	₹66,675	Same PO; no deliveries; absent from later sheets
RW25-PD061	23 Jul 2025	11 Aug 2025	20	₹66,675, amended to ₹71,055	4 pending in October
RW25-PD062	23 Jul 2025	20 Aug 2025	20	₹66,675	8 pending in December
RW25-PD063	23 Jul 2025	28 Aug 2025	20	₹66,675	4 pending in January 2026
RW25-PC007 and PC008	18 Dec 2025	18 Dec 2025	40	₹69,065	8 pending in March 2026
RW25-PC009 and PC010	12 Feb 2026	10 and 20 Mar 2026	40	₹69,065	Still listed pending on the 24 April 2026 sheet

Distinct work orders hold 201 sets. The 60-set line shares a purchase order with the 11-set order, carries no deliveries and disappears after July; the three twenty-set orders issued on 23 July 2025 look like its re-issue, but the record does not say so. Rax's internal analyses count the line and arrive at ₹1.75 to ₹1.77 crore; without it the sets are worth about ₹1.37 crore. Around the sets sit five bare controllers at ₹36,000 (the May 2025 row that names the customer as FUJI ELECTRIC), five kits at ₹32,000 and 75 one-millimetre rack shelves at ₹1,590. The ten-digit purchase-order numbers run in one sequence from the FUJI ELECTRIC row to the

February 2026 orders, which ties the account to a single buyer system. Internal documents state that the account began with a small design job; the delivery analysis finds 86.7 percent of FUJI deliveries late by a mean 45.6 days.

Rax-supplied S148 S3 S5 S149 S150

201 to 261 sets

RMC sets on FUJI work orders in FY2025-26, about ₹1.75 crore on Rax's own count; the ordering rhythm is bursts of 40 to 60 sets every two to five months, the pattern of a programme rather than a trial.

Rax-supplied S148 S3

Three other facts frame the reference position. First, a second buyer, MRS, took one RMC KIT at ₹16,500 in June 2025, which suggests a sensor-kit or sub-assembly price point below the controller. Second, the product master carries RT-CP-Delibo, "Delibo Smart Racks", as a customer use case; Delibo is a nine-person Chennai OEM of smart parcel lockers, so the "smart rack" there is a locker cabinet with OTP-controlled doors, not a server rack. It proves the controller platform can be customised for door, lock and reader control at low volume, which is relevant to the rack-OEM route. Third, no public case study, testimonial, tender award or LinkedIn post names Rax rack monitoring at any data centre, bank or public body; searches on rax-tech rack monitoring returned only the company's own pages.

Rax-supplied S3 S4 Publicly observed S15 S16 Unknown

Who FUJI is and what the order pattern reveals

The order-book name, the Chennai delivery pattern and the PO series point to Fuji Electric India Pvt. Ltd., formed around the Japanese group's 2019 acquisition of Consul Neowatt, then India's largest UPS maker, for USD 104 million. Its public pages add three facts that the first pass missed. Its service organisation of 350 engineers in 80 locations supports over one lakh installations, "several thousand" bank branches, over 10,000 ATM sites and 6,000 hospital installations. As Consul, it launched iPEMS in 2013, a remote ATM-site management system with burglar and motion sensors, a smoke detector, remote reboot sockets and SMS alerts, sold to banks and ATM service providers. And its data-centre page lists UPS, drives and per-rack power-monitoring PDUs but no environmental or access monitoring. A UPS maker with a bank, ATM and hospital service estate, a history of selling site monitoring to banks, no current monitoring product, a small design job with Rax, then rack shelves and sets in production bursts: the most consistent reading is that Fuji Electric India bundles the Rax set into site or server-room packages for its own service estate. Which estate, under whose brand, and whether a "RMC RACK" noted on the September 2025 planning sheet is a Fuji-assembled rack, remain unknown and should be asked directly.

Publicly observed S12 S13 S14 S144 S145 S147 Rax-supplied S148 S150

Inferred

The segment this reveals is not "rack OEMs" in general but power-infrastructure makers that already service bank, ATM and hospital sites. Public look-alikes exist: Numeric (Legrand) powers more than 60,000 ATMs through 250 service centres, and E&C supplies UPS to bank branches and to integrators building smart racks. Each has the same ingredients FUJI had.

Publicly observed S151 S152 Inferred

SO WHAT FOR RAX

FUJI is best treated as a channel into bank, ATM and hospital rooms, not as a rack buyer. Rax's growth priority for this product should start with a written agreement that fixes delivery performance, because an OEM that has waited 45 days on average for its sets is the account most likely to qualify a second source.

Recommendation

Service model and delivery record

The datasheet gives a one-year warranty and nothing on AMC, spares, remote support or response times. The e-surveillance record described internally is the only evidence of how Rax services fielded electronics: frequent support calls including at installation, sample-based QC on large orders, component dependency causing missed urgent deliveries, and a stated reputation problem in the ATM segment. The FUJI order book contains mixed evidence: repeat orders through a full year and an accepted price rise, which a dissatisfied buyer would not give, alongside deliveries that were late 86.7 percent of the time. Whether FUJI has raised quality issues is unknown.

Rax-supplied S1 S2 S3 Unknown

Readiness gaps ranked by commercial impact

1. Central software with no specification: multi-site scale, user roles, alert escalation, retention, API, mobile app and licensing are all undocumented; a colocation or bank buyer cannot evaluate it.
- Rax-supplied S7 S9

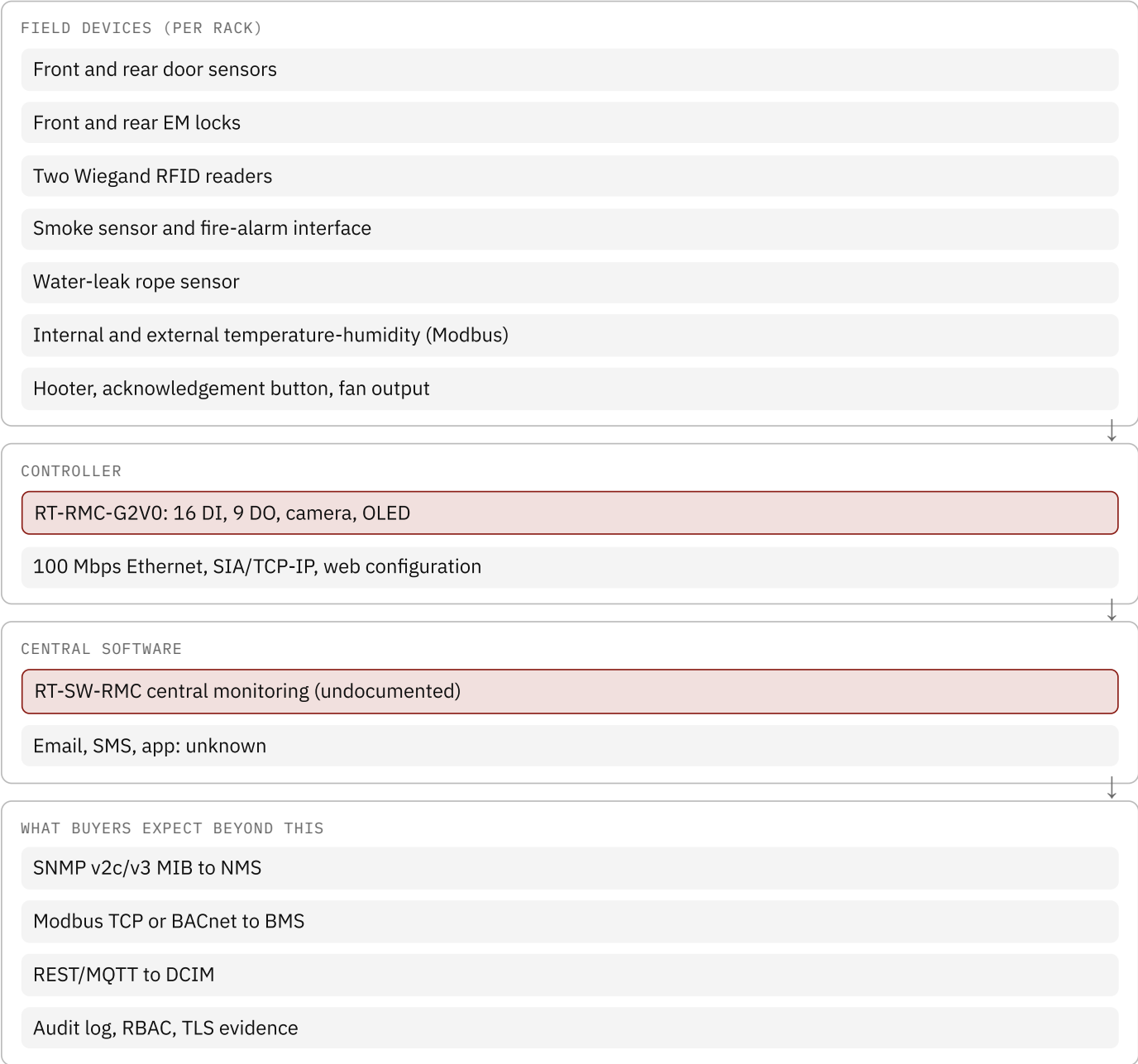
- 2. No SNMP, no BACnet, no MQTT stated: every incumbent in the comparison set integrates with an NMS or BMS by SNMP; without it the product cannot be added to an existing monitoring estate. Publicly observed S31 S34
- 3. CE claim without certificate, and no BIS: blocks Europe, Saudi Arabia and Indian public tenders that require BIS or CE marks on electronics. Rax-supplied S2
- 4. No cybersecurity evidence for the web client: RBI-regulated and SEBI-regulated buyers must show physical and environmental controls in DC and DR sites and will not accept an unassessed network device inside the rack. Verified S22 S23
- 5. No named reference outside one OEM account and no public case study. Unknown
- 6. Camera resolution and model naming inconsistencies that a technical evaluator will notice on page one. Rax-supplied S1 S6

Adjacent Rax products that bundle naturally

The temperature and humidity sensor unit, the temperature and light sensor unit, the PCMU power control and monitoring unit, the 4G LTE dual-SIM router (for sites without wired Ethernet), the alarm automation panels, the Edge Video Analytics units and the industrial edge IoT gateway are all in the catalogue and share the e-surveillance central monitoring software lineage. A server-room package that adds a PCMU for UPS and mains status and a 4G router for out-of-band alerting is buildable from existing SKUs, and the ISO scope covers customised hardware and software design, which is what an OEM buyer like FUJI needs.

Rax-supplied S2 S4 S11

RT-RMC-G2V0 set as drawn in the datasheet, with the gaps a buyer will ask about



Sensors, locks and readers terminate on one controller that reports over Ethernet to RT-SW-RMC; SNMP, BMS and DCIM paths are absent from the documentation. ● Rax-supplied S1 S9

02 Market definition

KEY TAKEAWAYS

- The category is rack-level and room-level environmental and access monitoring: a controller, its sensors and the software that raises the alarm; DCIM capacity planning, CCTV recording, fire suppression and power metering are adjacent and are usually bought separately. Inferred
- Buyers say "EMS", "environment monitoring system", "intelligent rack" and "smart rack"; "rack monitoring system" on Indian tender portals also means petroleum loading gantries, so keyword searches mislead. Publicly observed S132 S63 S33
- The chain runs from imported modules through global brands and their Indian distributors, Indian rack OEMs that bundle, ELV and e-surveillance integrators that install, and operators that answer the alarm; Rax sits at design and manufacture for one OEM today. Inferred
- Indian street prices sit in five tiers from a ₹4,800 rack alarm to a ₹10 lakh smart cabinet; the global appliances land at 2.5 to 3.6 times US street price after duty, margin and GST. Publicly observed S35 S124 S59 S30
- The Indian category grew with regulation and incidents rather than technology: the 2016 RBI framework, the 2023 Master Direction, and fires at a bank server room (2023), a Jio data centre (2024) and a Delhi point of presence (2026). Verified S24 S22 S46 Publicly observed S131 S47

What is in and what is out

In scope is the equipment and software that watches the physical state of a server rack or a computer room and raises an alarm: temperature and humidity inside and outside the rack, water on the floor, smoke, door position, who opened the door and when, a camera frame on the event, and outputs that lock a door, start a fan or sound a hooter. The controller is the unit of sale; sensors, readers and locks attach to it; a central application collects and escalates. This matches what Rax ships and what NetBotz, Watchdog, CMC III, SRC, Delta EMS and AKCP sell. Rax-supplied S1 Publicly observed S60 S31 S75 S73 S71 S70

Out of scope, but adjacent and sometimes bundled in the same tender line: DCIM software for asset and capacity management (Sunbird, Nlyte, EcoStruxure IT, Huawei NetEco), which consumes monitoring data but is bought by a different owner at a different price; building management systems for chillers and CRAC units; intelligent PDUs that meter power per outlet; CCTV recording; and gas suppression. Micro and modular data centres (ReadyPod, APS, Huawei smart module, Netrack iRack) arrive with monitoring inside and are therefore both a channel and a substitute. Publicly observed S81 S69 S67 S72 S66 S33

Substitutes a buyer will weigh: a UPS network card with a temperature probe; monitoring software reading temperatures the servers, switches and UPS already expose over SNMP or IPMI (PRTG, OpManager, Nagios); wireless consumer-grade sensors tied to a WiFi access point; a Raspberry Pi with a one-wire sensor; and doing nothing until the air-conditioner fails. Forum threads recommend each of these as often as they recommend a dedicated appliance. Publicly observed S88 S80 S90 S96

The value chain



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RT-RMC-GX

Rack Monitoring Controller

Ethernet-based monitoring for rack and server room

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Overview

Ethernet-based monitoring for rack and server room

Specifications

Digital Input	16 No's Digital Inputs
Fire Alarm Interface	1 No's
Output	9 No's for controls like magnetic lock, fan control, Hooter etc
Camera	2MP (640X480) resolution, 2.8/3.6mm lens, with IR night vision, serial JPEG Camera
Display	OLED display (128*64*0.96)
Access Control	2 No's Wiegand reader interface
Internal Communication	MODBUS
External Communication	Ethernet:100 Mbps-RJ45 Connector
Protocol	Standard SIA Protocol, TCP/IP
Configuration	Web-based
Input Supply	100 to 240V AC
Working voltage	12V DC

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Rax's public product page; the value-chain diagram follows the prose. Source S8

Components are imported: temperature-humidity modules, serial cameras, leak cable and readers come from East Asian and European sensor makers, and some fall under BIS compulsory registration. Controller design and manufacture is where margin and the certification burden sit; Schneider, Vertiv, Rittal, Legrand and Delta design abroad, while Rax and Netrack design in India. Distribution in India runs through Redington for APC, through named distributors for AKCP (Fluke Infotech) and Delta (Mpower), and through IndiaMART traders such as Netspace Infotech, Serrax and Maxxcom, who add the margin that lifts a USD 690 NetBotz 250 to ₹1,00,000. Publicly observed S61 S70 S71 S59 S32 S62 S30

Rack and enclosure OEMs bundle: Netrack's iRack lists intelligent climate monitoring, camera surveillance and rack access as line items; Valrack smart racks are resold with environmental monitoring on GeM; President's smart rack is now sold on Schneider Electric India's own site; and Fuji Electric India, a UPS maker, is Rax's only rack-monitoring buyer. Integration and installation is done by data-centre EPC firms (Sterling and Wilson DC claims 28 projects), by MEP contractors, and, for bank and ATM rooms, by the same e-surveillance integrators that already buy Rax alarm panels. Operation sits with colocation NOCs, enterprise facilities teams, NIC and state data-centre operators, and AMC vendors. Publicly observed S33 S63 S64 S100 Rax-supplied S2 S3

Rax occupies the design and manufacture stage for one OEM. The stages it could add are integration for bank rooms through its existing channel, and operation through a hosted version of its central software. Inferred

How buyers describe and search for it

Tender headings use "Environmental Monitoring System (EMS)", "Environment Monitoring System for server room", "Intelligent Rack", "Smart Rack" and, in state data-centre RFPs, "IBMS package for data centre requirements". Marketplace categories on IndiaMART are "Rack Monitoring System", "Environmental Monitoring Systems" and "Temperature Monitoring Device". Standards named in specifications are TIA-942 for facility rating, ASHRAE TC 9.9 for the thermal envelope (18 to 27 degrees C recommended),

ISO 27001 Annex A 7.4 for physical security monitoring, EN 50600-2-5 in Europe, and IS 2189 for the fire-alarm interface. A search for "rack monitoring system" on Indian tender aggregators returns petroleum loading-gantry rack monitoring as often as IT racks.

Publicly observed S36 S59 S35 S56 S27 S28 S53 S132

Customs classification is not established in this pass. The controller could be declared under alarm and signalling apparatus or under automatic regulating instruments, and the choice affects duty and BIS applicability; the code Rax and Fuji use on invoices should be checked. Unknown

Market structure

The Indian market is fragmented and import-led at the top and fragmented and informal at the bottom. Global brands hold the specified enterprise and colocation tier; Indian rack OEMs hold the bundled tier; dozens of IndiaMART and TradeIndia sellers hold the sub-₹70,000 tier with GSM-alert boxes. No Indian company publishes a share, and no analyst covers rack monitoring as a category; the closest published figure is an India DCIM software market of USD 107.5 million in 2025 from a commercial report of undisclosed method. Publicly observed S65 S127 Inferred

TIER	EXAMPLE AND OBSERVED PRICE	WHO BUYS
Stand-alone rack alarm	Spaceage digital rack temperature alarm, ₹4,800	Small offices, branch rooms
Indian GSM or web monitoring box	AdvanceTech server room monitoring, ₹67,796 per set; Rax RMC set, ₹69,065	SME rooms, OEM bundles
Global entry appliance	Watchdog 100-P ₹61,115; NetBotz 250 ₹1,00,000	Enterprise IT, colocation retrofit
Global enterprise appliance	NetBotz 750 USD 2,706; CMC III PU USD 1,220 plus sensors	Certified data halls
Bundled micro or smart cabinet	Smart cabinet ₹70,000; ReadyPod 4 x 42U ₹3.8 lakh; Vertiv 42U with 3.5 kW AC ₹10 lakh	Edge, campus, bank regional rooms

Prices are marketplace listings and one order book, not negotiated contracts. Publicly observed S35 S65 S32 S59 S30 S34 S66 S124

Rax-supplied S3

SO WHAT FOR RAX

Rax's set price sits in the Indian-box tier while its feature list reads like the global entry appliance. That gap is the commercial opening, and it only exists if the software and protocol gaps are closed; otherwise the buyer comparing on features will pay for NetBotz and the buyer comparing on price will pick a ₹40,000 GSM box. Recommendation

How the category evolved in India

Ten years ago, monitoring in Indian server rooms meant a thermostat on the wall and a security guard. Four things changed it. The RBI's 2016 cyber security framework made environmental controls an assessable domain for banks, the 2023 Master Direction turned that into a clause naming DC and DR sites and e-surveillance, and the consolidated 2026 Directions (effective 31 July 2026) now list temperature, water, smoke, access alarms and access logs as things a bank must monitor. State data-centre policies from 2021 and the draft national policy of 2020 brought infrastructure status, dual-grid power and a promise of a data-centre building code, which pulled certified colocation supply from 350 MW in 2019 to about 1,500 MW in 2025. Incidents made the risk visible: a bank server room fire in Delhi in February 2023, the Jio data-centre fire that took a national network down in September 2024, and the Delhi point-of-presence fire that degraded Google Cloud for weeks in June 2026. And the vendors changed: Vertiv launched the entry-level Watchdog 15 in India in 2023, Netrack (now Legrand) put an access controller into its racks, and President racks moved into Schneider's channel. Verified S24 S22 S139 S43 Publicly observed S131 S46 S47 S38 S33 S64

What has still not happened is a product-specific mandate. No Indian regulation names a rack controller; even para 61 of the 2026 bank Directions specifies what must be monitored (temperature, water, smoke, access alarms, access logs) and not how, so a buyer can meet it with a BMS, a NetBotz, a Rax set or, at a stretch, a guard with a logbook and a thermometer, and auditors accept any of them if the evidence trail exists. That is why the category grows with data-centre capacity and audit pressure rather than with a scheme, and why the sizing in section 04 is built from racks and rooms rather than from a mandate. Inferred

Value chain for rack and server-room monitoring in India

1 Sensors, modules, cameras

Chinese and Taiwanese module vendors; Sontay, HW group for leak cable
Import-dependent; BIS CRS applies to some components

2 Controller design and manufacture

Schneider, Vertiv, Rittal, Raritan, Delta abroad; Rax, Netrack in India
Where the margin and the certification burden sit

3 Distribution

Redington, Ingram, IndiaMART traders (Netspace, Serrax, Maxxcom), Fluke Infotech, Mpower
Adds 2.5 to 3.6x over US street price

4 Rack OEM and bundle

Fuji Electric India, Netrack, Valrack, President (Schneider), ReadyPod, APS
The FUJI route: controller becomes part of a smart rack or micro DC

5 Integration and installation

Sterling and Wilson DC, MEP contractors, ELV and e-surveillance integrators (SIS, Securens, Zicom)
The stage Rax's existing accounts already occupy for banks

6 Operation and service

Colocation operators, enterprise facilities, NIC and SDC operators, AMC vendors
Where alarms are answered and AMC revenue is earned

Global brands stop at the distributor; Indian rack OEMs and integrators bundle; Rax today sits at design and manufacture for one OEM and could move into the integrator and service stages. ● Inferred

03 Market growth, demand drivers and regulation

KEY TAKEAWAYS

- Indian colocation capacity rose from about 375 MW in 2020 to around 1,500 MW in 2025 by the government's own count, with 387 MW added in 2025 alone and 4 to 6 GW expected by 2029-2030. Verified S43 Publicly observed S19 S17
- Since 31 July 2026 every commercial bank (public, private and foreign; small finance, payments and local area banks excluded) must have 'mechanisms for monitoring of breaches of environmental controls including temperature, water, smoke, access alarms ... and access logs' (RBI 2026 Directions, para 61); MeitY's SDC guidelines, SEBI CSCRF, ISO 27001 and the fire code add clause-level duties. Verified S139 S140 S157 S120 S52 S53 Publicly observed S27 S161
- No scheme pays for monitoring devices; state data-centre policies subsidise the operators who then specify monitoring, and the 2026 tax holiday feeds hyperscale self-build that buys from global vendors. Verified S25 S50 Inferred
- Three fires in three years, a bank server room, a Jio data centre and a Delhi point of presence, are the incidents a salesperson can name. Publicly observed S131 S46 S47
- Counter-drivers are real: enterprise rooms are migrating to colocation, hyperscalers bring their own vendors, and free software can read temperatures the servers already expose. Publicly observed S18 S80 Inferred

Market growth

Operational data-centre capacity is the one series every source publishes and the government has confirmed. JLL recorded 350 MW in 2019 and 722 MW at the end of 2022; ICRA put December 2024 at 1,150 MW; Savills counted 1,520 MW at the end of 2025 after 387 MW of additions (double 2024's 191 MW); CBRE's nine-month 2025 figure was about 1,530 MW; JLL's mid-2026 figure is 1.6 GW; and the Minister of State told the Rajya Sabha on 13 March 2026 that capacity had risen from about 375 MW in 2020 to around 1,500 MW by 2025. The outlook diverges by house: ICRA 2,000 to 2,100 MW by March 2027 and 2,400 to 2,500 MW by FY2028; Savills over 4 GW by 2030 at 23 percent a year; JLL 6 GW by 2029 on USD 110 billion of investment.

Publicly observed S44 S20 S19 S45 S17 Verified S43

YEAR	OPERATIONAL MW IT	SOURCE	IMPLIED RACKS AT 7.5 KW
2019	350	JLL	47,000
2020	375	MeitY, Rajya Sabha	50,000
2022	722	JLL	96,000
2024	1,150	ICRA	153,000
2025	1,520	Savills via DD News	203,000
2026 (mid)	1,600	JLL	213,000
2027 (Mar)	2,000 to 2,100	ICRA	273,000
2030	over 4,000	Savills	533,000

Pass 2 re-verified the capacity series against the Rajya Sabha reply and added the latest city split. Houses disagree by up to a fifth on the same date because of edge and captive inclusion: for mid-2026 JLL says 1.6 GW and Savills 1,819 MW; for end-2025 Savills says 1,520 MW and CBRE over 1,700 MW. Verified S43 Publicly observed S17 S153 S19 S125

CITY	OPERATIONAL MW IT	DATE AND SOURCE	SHARE OF STOCK
Mumbai and Navi Mumbai	846	H1 2026, Savills	46 percent
Chennai	320	H1 2026, Savills	18 percent
Delhi-NCR (Noida, Greater Noida, Gurugram)	191	H1 2026, Savills	about 10 percent
Pune	182	H1 2026, Savills	about 10 percent

CITY	OPERATIONAL MW IT	DATE AND SOURCE	SHARE OF STOCK
Bengaluru	78	December 2024, Houlihan Lokey	about 7 percent then
Hyderabad	48	December 2024, Houlihan Lokey; 420 to 450 MW expected by 2030	about 4 percent then
India	1,819	H1 2026, Savills; 36 percent hyperscale, 55 percent hyperscale-and-enterprise campuses, 8 percent enterprise, 1 percent edge	100 percent

The edge figure matters for Rax: at 1 percent of stock, dedicated edge facilities are about 18 MW nationally, so "edge" demand for a rack controller sits in bank, telecom and enterprise rooms that analysts do not count as data centres. Publicly observed S153 S18

Estimated S153

Rack counts use the Uptime Institute's 2025 modal average of 7.5 kW per rack; Indian halls built for AI run far denser, so the rack count is an upper bound on monitored positions. Absorption tells the same story: 160 MW in 2022, 407 MW in 2024, 427 MW in 2025, 101 MW in the first half of 2026, with hyperscale pre-commitments at 82 percent of the last figure. Publicly observed S57 S44 S19 S17 Estimated S57

387 MW IT

Capacity added in India in calendar 2025, more than double 2024 and roughly 50,000 new rack positions in one year at average density. Publicly observed S19 Estimated S57

Behind the colocation series sits an enterprise and public estate that no one counts as data centres. The sourced counts, with their dates, are the units the sizing in section 04 is built on. Verified S154 S42 S155 Publicly observed S111 S129 S114

SITE TYPE	COUNT	DATE	SOURCE	EARLIER POINT , FOR TREND
Scheduled commercial bank branches (domestic)	1.64 lakh	end-March 2025	RBI Trend and Progress 2024-25	up 2.8 percent on a year earlier
ATMs	2,51,057	end-March 2025	RBI Trend and Progress 2024-25	2,53,417 at end-March 2024
Mobile towers	8.43 lakh	31 October 2025	DoT year-end review	7.4 lakh on 9 December 2022
Mobile base transceiver stations	31.44 lakh	31 October 2025	DoT year-end review	23.98 lakh on 9 December 2022
Universities / colleges / standalone institutions	1,289 / 48,246 / 15,221	AISHE 2023-24 (released July 2026)	Ministry of Education	colleges 38,498 in 2014-15
Government hospitals	about 23,600	2025	secondary compilation, low confidence	not established
NIC national data centres	4 operating plus Guwahati under construction	2024-25	MeitY annual report	not established
State data centres	planned for 29 states and 6 UTs	undated	Meghalaya SDC page; MeitY SDC status report not opened	not established
Dedicated edge data centres	about 1 percent of 1,819 MW	H1 2026	Savills	not established

Each is a room with something to overheat, and none of these series is falling except ATMs. Verified S154 S155 S156 S42

Publicly observed S111 S129 S114 S153

Macro indicators, five-year view

INDICATOR	2020 OR NEAREST	2022	2024	2025	OUTLOOK
Operational data-centre capacity, MW IT	375 (2020)	722	1,150	about 1,500	1,819 at H1 2026; over 4 to 7 GW by 2030 by house
Annual capacity additions, MW IT	not established	160 absorbed	191	387	about 500 (CBRE) to over 600 (Savills) in 2026
Mobile towers, lakh	not established	7.4	not established	8.43	rising with 5G densification
Bank branches, lakh	not established	not established	1.60 (implied)	1.64	rising about 3 percent a year
ATMs	not established	not established	2,53,417	2,51,057	falling slowly
Data-centre electricity demand	not established	not established	not established	not established	13.56 GW by 2031-32 (Ministry of Power estimate)

Gaps marked "not established" were not found in a primary source during this research. The indicator that moves the product is capacity and the regulated room count, not ATMs.

● Verified

S43

S154

S155

S156

● Publicly observed

S44

S20

S19

S125

S153

● Estimated

S154

Regulation and mandates

INSTRUMENT	ISSUER AND DATE	WHAT IT SAYS THAT TOUCHES MONITORING	ENFORCEMENT REALITY
Cyber Security Framework in Banks, Annex 1	RBI, 2 June 2016	Environmental controls a baseline domain; auditors expect access logs, fire and cooling records, CCTV, environmental monitoring and alerting	Consolidated into the 2026 framework
Outsourcing of IT Services Directions	RBI, 10 April 2023	Outsourced hosting stays the RE's responsibility; provider must report incidents within six hours	Contract clauses flow down to colocation providers
CSCRF for SEBI-regulated entities	SEBI, 20 August 2024; FAQ 11 June 2025	PR.AA standard 10: "Physical access to assets is managed, monitored, and protected"; guideline 1.e: the perimeter of the critical equipment room is "physically secured and monitored"; FAQ 52: ANSI/TIA-942 rated-4 facilities mandated for hosted services; FAQ 58: ISO 27001 scope must include primary, DR and near-DR sites, SOC and colocation	Cyber audit reports to SEBI by RE category
ISO/IEC 27001:2022 Annex A 7.4, 7.5, 7.11	ISO, 2022	7.4: premises continuously monitored for unauthorised physical access; 7.5: protection against physical and environmental threats "should be designed and implemented"; 7.11: facilities protected from failures of supporting utilities, which auditors read as temperature, humidity and leak monitoring with alarms on mains and UPS failure	Certification audits; voluntary but near-universal in IT services
ANSI/TIA-942-C and Uptime Institute Tier Standard	TIA, 9 May 2024; Uptime	TIA-942 scope covers physical security and monitoring and is the basis of Indian rated-3 and rated-4 certificates; the clause text is paywalled and was not opened; Uptime's Tier Standard concerns topology and was not found to name rack-level monitoring	Certification by EPI (TIA) or Uptime; SEBI mandates rated-4 for hosted services
National Building Code 2016 Part 4 and IS 2189:2008	BIS	Automatic fire detection and alarm in electrical and IT rooms; alarm must indicate location and initiate ancillary services	State fire NOC; insurer surveys
EN 50600-2-5:2021	CENELEC	Protection classes for unauthorised access, intrusion, fire and environmental events inside and outside DC spaces	Polish regulator expects Class 3 for regulated industries

Paragraph 61 applies to commercial banks as the Directions define them (banking companies other than small finance, payments and local area banks, the nationalised banks and SBI), and paras 60 and 61 flow to ATM-switch service providers through contract (para 136). It is the first Indian financial-regulatory text found that names temperature, water, smoke, access alarms and access logs as things a regulated entity must monitor; MeitY's 2008 SDC guideline named water leak, temperature, humidity and access monitoring for state data centres long before; it converts what was an audit outcome into a listed control, and it took effect seven weeks before this report. Its wording, together with "e-surveillance mechanism", is the language Rax's existing bank-channel customers already sell against. ● Verified S139 S140 S22 S24 S121 S23 S120 S52 S53 S157

● Publicly observed S27 S28 S104 S158 S159 S160 S161

The bank shall put in place mechanisms for monitoring of breaches of environmental controls including temperature, water, smoke, access alarms, service availability alerts (power supply, telecommunication, servers), and access logs.

Reserve Bank of India, para 61, Commercial Banks Cybersecurity, Technology: Risk, Resilience and Assurance Framework Directions, 2026, effective 31 July 2026 ● Verified S139

Schemes and budgets

Nothing pays for a monitoring device directly. The draft national Data Centre Policy 2020 offers infrastructure status, economic zones and a facilitation unit; Uttar Pradesh's 2021 policy gives a 7 percent capital subsidy up to ₹10 crore, interest subsidy, land and stamp-duty concessions and dual-grid power to parks; Tamil Nadu's 2021 policy gives electricity-tax waivers, open-access concessions, dual grid above 50 MW and reimburses 10 percent of Tamil Nadu MSME sub-contractor fees up to ₹10 lakh per data centre; Maharashtra's 2023 IT policy gives data centres essential-services status; the Union Budget 2026-27 gives foreign cloud providers using Indian data centres a tax holiday to 2047. The State Data Centre scheme funds an operations team for five years and third-party audits by STQC. The effect on Rax is indirect: subsidised operators build faster and write specifications, and the Tamil Nadu MSME clause is a small, real lever for a Chennai supplier. ● Verified S49 S25 S50 S51 S113 S130 ● Publicly observed S26

Incidents that move procurement

A bank's server room in Greater Kailash, Delhi caught fire on 9 February 2023 and nine fire tenders attended. On 17 September 2024 a fire at a Reliance Jio data centre caused a nationwide network outage. On 10 June 2026 a fire at a third-party data centre in Delhi forced an emergency shutdown of networking equipment and degraded Google Cloud traffic from Delhi, Chennai and Mumbai for weeks. Forum accounts add the routine version: an air-conditioner that failed overnight or over a weekend and cooked a rack because nothing alerted anyone. Publicly observed S131 S46 S47 S48 S107 S109

Power is the everyday incident outside the metros, and it is what para 61 calls a "service availability alert". The Ministry of Power's reply to Lok Sabha unstarred question 235 (3 February 2022) put average rural outage hours in 2020-21 at 906 in Tamil Nadu, 1,107 in Maharashtra, 1,758 in Karnataka and 2,762 in Uttar Pradesh, against 91 urban hours in Uttar Pradesh. A branch or campus server room outside a city lives on UPS for weeks of the year, which is why a UPS vendor is a natural seller of room monitoring. Verified S173 Inferred

Insurance was searched as a driver and not found to be one: Indian electronic-equipment policies cover damage from air-conditioning failure and ask about air-conditioning on the proposal, but no insurer wording or tariff clause was found that requires or discounts environmental monitoring. Unknown

Technology shifts

Buyers now expect SNMP and a MIB as a minimum, and increasingly Modbus TCP, MQTT and a REST API so that the controller feeds an NMS, a BMS or DCIM rather than a vendor portal; Vertiv's RMS III lists all of these, Raritan's SRC adds JSON-RPC. Wireless sensors on batteries (Meraki, NetBotz wireless, AKCP wireless tunnel) cut installation cost in retrofits. Cloud portals with per-device subscriptions (Room Alert, EcoStruxure IT at about USD 53 per node per year) shift revenue to recurring. Rack access has moved from key locks to networked handles with audit logs (Raritan SmartLock, Kentix, NetBotz handles). Rax's specification names none of these except Modbus. Publicly observed S74 S73 S92 S77 S67 S78 S62 Rax-supplied S1

Timing windows

Bank and PSU budgets run April to March with IS-audit findings landing in the second half; GeM and state tenders cluster before March closure; the DPDP Act's full compliance date of 13 May 2027 will push breach-reporting and physical-control reviews through 2026-27; ISO 27001 recertification cycles are three years with the 2022 transition completed in 2025; and a colocation hall is specified twelve to eighteen months before it opens, so the 2027-2029 supply is being specified now. Publicly observed S17 S27

Inferred

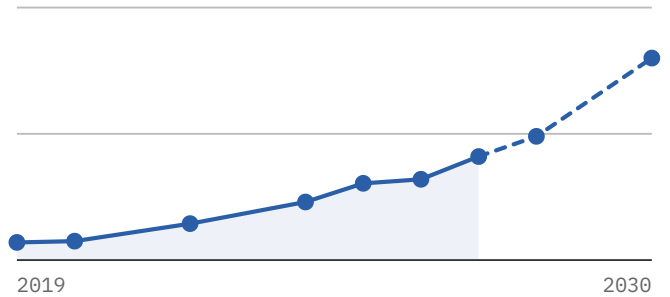
Counter-drivers

Enterprise rooms are shrinking as workloads move to colocation and cloud; Houlihan Lokey expects small and mid-sized corporates to keep migrating. Hyperscalers, 82 percent of recent absorption, self-build with global vendors on global framework agreements. Free software can read the inlet temperature every server already reports. Alert fatigue makes buyers distrust new alarm sources. And price pressure from IndiaMART sellers at ₹15,000 to ₹40,000 for a GSM-alert box caps what a feature-light controller can charge. Publicly observed S18 S17 S80 S89 S65

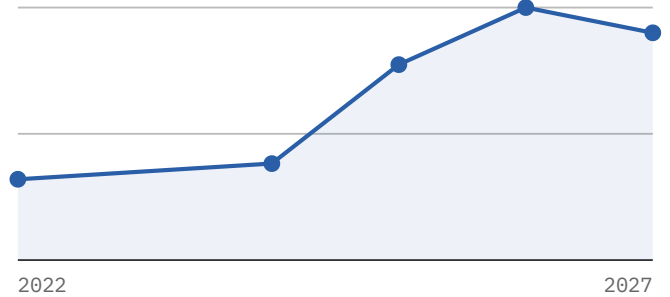
SO WHAT FOR RAX

Demand for monitoring in India is regulation-and-incident driven and grows with rack count, but it is expressed as an audit outcome, so Rax must sell the evidence trail (logs, access records, camera frames) as much as the sensor. The buyer with a compliance deadline is a bank or a state data centre; the buyer with a fire in living memory is a telecom or a colocation operator. Recommendation

Operational capacity (MW IT) 4,000 in 2030
350 in 2019 · +24.8% a year



Annual supply addition (MW IT) 450 in 2027
160 in 2022 · +23.0% a year



India operational data centre capacity, MW IT. Each panel has its own scale. Dashed from 2027 is outlook. Operational colocation and hyperscale capacity. 2019 and 2022 from JLL; 2020 and 2025 as stated by MeitY in Rajya Sabha; 2024 from ICRA; 2026 from JLL mid-year; outlook from ICRA (2027, 2028) and Savills (2030, over 4 GW). Analyst counts differ by 5 to 10 percent because of edge and captive inclusion; the series takes the mid-point where a range is given. Racks are derived at 7.5 kW per rack (Uptime 2025 modal average). Pass 2: Savills counts 1,819 MW at H1 2026 and CBRE over 1,700 MW at end-2025, so the JLL 1,600 MW mid-2026 point is the low end of house estimates.

2008	REGULATION	MeitY State Data Centre guidelines require a centralised monitoring panel for water leak, air-conditioning alarms, temperature and humidity Annexure-1 clause 1.5.7; clause 1.4.2 requires proximity-card access control that monitors each person.
2013-04-26	MARKET	Consul Neowatt (now Fuji Electric India) launches iPEMS remote site monitoring for ATMs FUJI's predecessor sold alarm, smoke and remote-monitoring suites to banks before it bought Rax sets.
2016	REGULATION	National Building Code 2016 and IGBC Green Data Centre rating published Part 4 fire and life safety sets detection and suppression baselines for electrical and IT rooms; IGBC launches a data-centre specific rating.
2016-06-02	REGULATION	RBI Cyber Security Framework in Banks: environmental controls become an assessable domain Annex 1 baseline controls include physical and environmental protection of data centres and critical facilities; auditors ask for temperature and humidity logs and BMS alerts.
2019-06-20	MARKET	Fuji Electric agrees to buy Consul Neowatt for USD 104 million Creates Fuji Electric India's Chennai and Pune UPS manufacturing base, the entity that later becomes Rax's only rack-monitoring account.
2020-11-05	REGULATION	MeitY publishes the draft Data Centre Policy 2020 Infrastructure status, Data Centre Economic Zones, a facilitation unit and a promise of data-centre building and safety guidelines under NBC 2016.
2021-01-28	SCHEME	Uttar Pradesh Data Centre Policy 2021 notified 250 MW target, capital subsidy 7 percent to Rs 10 crore, dual-grid supply for the first three parks; Tamil Nadu and Maharashtra follow with their own policies in 2021 and 2023.
2023-04-10	REGULATION	RBI Master Direction on Outsourcing of IT Services Brings outsourced data centre hosting under RE accountability with six-hour incident reporting from the provider.
2023-11-07	REGULATION	RBI Master Direction on IT Governance, Risk, Controls and Assurance Practices Clause 18: REs shall implement suitable physical and environmental controls in DC and DR sites and subject them to e-surveillance; applies from 1 April 2024.
2024-05-09	REGULATION	ANSI/TIA-942-C published Third revision; scope includes physical security and monitoring.
2024-07-19	REGULATION	DPIIT revises the Public Procurement (Preference to Make in India) Order Class-I local supplier at 50 percent local content gets purchase preference in central procurement.
2024-08-20	REGULATION	SEBI Cybersecurity and Cyber Resilience Framework (CSCRF) Graded framework for SEBI-regulated entities including physical security of data centres; FAQ of June 2025 sets audit periodicity.

2024-09-17	INCIDENT	Fire at a Reliance Jio data centre causes an India-wide network outage Reuters source attributes the nationwide outage to a data-centre fire; the reference incident for board-level attention to facility monitoring.
2025-06	RAX	Rax's first twenty-set RMC work orders for FUJI Work orders RW25-PD029 and PD030 in June 2025 open the programme; eleven distinct work orders and 201 to 261 sets follow by February 2026.
2025-07-23	RAX	FUJI issues three twenty-set RMC work orders on one day RW25-PD061 to PD063; PD063 due 28 August 2025 still had 4 sets pending on the January 2026 sheet.
2025-09-22	RAX	Rax ISO 9001:2015 certificate issued with rack monitoring controllers in scope Bureau Veritas certificate IND.25.902/QM/U, valid to 21 September 2028.
2025-11-14	REGULATION	DPDP Rules 2025 notified; substantive obligations from May 2027 Camera frames and access logs from rack controllers are personal data; security safeguards and breach reporting apply from May 2027.
2025-12-18	RAX	FUJI accepts a price step to Rs 69,065 per set Two twenty-set orders (RW25-PC007, PC008) at 3.6 percent above Rs 66,675, a week after 75 rack shelves were ordered.
2026-02-01	SCHEME	Union Budget 2026-27 grants foreign cloud providers using Indian data centres a tax holiday to 2047 Reduces hyperscaler operating cost in India; JLL links it to the 6 GW by 2029 pipeline.
2026-03-13	MARKET	MeitY tells Rajya Sabha capacity rose from about 375 MW in 2020 to around 1,500 MW in 2025 Official confirmation of the four-fold growth used in this report's growth series.
2026-06-10	INCIDENT	Fire at a third-party Delhi data centre disrupts Google Cloud across Delhi, Chennai and Mumbai Emergency shutdown of networking equipment at a point of presence; weeks of degraded performance reported.
2026-07-22	MARKET	Savills puts India's operational stock at 1,819 MW IT for H1 2026 Mumbai 846 MW, Chennai 320 MW; edge only 1 percent of stock.
2026-07-31	REGULATION	RBI consolidated Cybersecurity, Technology: Risk, Resilience and Assurance Framework Directions for banks and NBFCs take effect Para 61 for commercial banks requires mechanisms to monitor breaches of environmental controls including temperature, water, smoke, access alarms and access logs at DC and DR sites; the 2023 Master Direction is withdrawn.

Regulation, schemes, incidents and market events that shape demand, in date order.

KEY TAKEAWAYS

- Bottom-up, India spends about ₹235 crore a year (2026) on rack and room environmental and access monitoring hardware with its embedded software; the colocation build-out is 57 percent of it, enterprise and public rooms 20 percent, retrofit 14 percent, OEM bundles 9 percent. ● Estimated | S125 | S57 | S42 | S111 | S41 | S66
- The TAM is triangulated: built bottom-up and checked against a top-down reading of a commercial estimate of India's DCIM software market (USD 107.5 million, about ₹900 crore, in 2025), which at an assumed 20 to 30 percent hardware-layer ratio gives ₹180 to ₹270 crore and brackets the bottom-up figure. ● Estimated | S127
- Rax can reach about ₹58 crore of it: OEM bundles, enterprise and public rooms in the south and west, bank rooms through integrators, and a quarter of colocation retrofit. ● Estimated | S3 | S18 | S55
- Rax's obtainable share is ₹1.7 crore today on one account (about 240 FUJI sets a year), ₹6 crore by 2028 if protocol and certificate gaps close, ₹12 crore by 2031; the whole range is smaller than the FY2022-23 e-surveillance peak. ● Estimated | S3 | S2
- The largest uncertainty is not the market but concentration: the 2028 figure swings from ₹0.5 crore to ₹10 crore on whether FUJI stays and a second OEM signs. ● Estimated | S3

Bottom-up: units, penetration, price

The market is sized as annual spend on the controller-level monitoring layer: the rack or room controller, its sensors, locks and readers, and the software licence that ships with it. DCIM suites, BMS, CCTV recorders, fire suppression and intelligent PDUs are excluded because they are bought by different owners on different budgets. Four pools are added. ● Inferred

POOL	UNITS (2026)	SOURCE OF UNITS	PENETRATION OR REFRESH	PRICE PER UNIT	ANNUAL SPEND
A. New colocation and hyperscale racks	66,700 rack positions (500 MW at 7.5 kW)	CBRE 2026 additions; Uptime density	100 percent monitored at row or room level	₹20,000 per rack (one ₹1 lakh controller per five racks plus sensors)	₹133 Cr
B. Installed colocation base	213,000 racks (1,600 MW)	JLL mid-2026; Uptime density	8 percent a year refreshed or retrofitted	₹20,000 per rack	₹34 Cr
C. Enterprise and public server rooms	40,000 rooms	AISHE, NHP, RBI, MeitY counts plus a 25,000 corporate-room assumption	10 percent a year buy or replace	₹1.2 lakh per room (set plus install)	₹48 Cr
D. Rack, UPS and micro-DC OEM bundles	5,000 intelligent racks and micro DCs (assumed)	No census; FUJI alone took 201 to 261 sets in FY2025-26	100 percent need a controller	₹40,000 controller allowance	₹20 Cr
Total					₹235 Cr

The rack count in pools A and B uses the Uptime Institute's 2025 modal average of 7.5 kW per rack; the ₹20,000 per-rack allowance is one NetBotz-class controller at the observed Indian price of ₹1,00,000 shared by five racks, which is how colocation halls are instrumented, plus a starter sensor set. Pool C's room count is the weakest number in the report: universities (1,289), 15 percent of colleges (7,237), 10 percent of government hospitals (2,360), about 2,000 bank regional and DR rooms, 1,500 NBFC and market-entity rooms, 40 state and national data centres, and an assumed 25,000 corporate rooms with more than two racks. Pool D has no census at all and is anchored on one buyer. ● Publicly observed | S125 | S17 | S57 | S59 | S42 | S111 | S41 | S114 | S129 ● Rax-supplied | S3

● Estimated | S125 | S57 | S59

₹235 Cr

India's annual controller-level monitoring spend in 2026, of which the hyperscale-specified part Rax cannot reach today is ₹133 crore. ● Estimated | S125 | S57 | S59

Top-down triangulation and reconciliation

The TAM in the sizing data file is labelled triangulated because it is the bottom-up figure accepted only after a top-down check agreed with it. Only one published figure describes an adjacent Indian category: a commercial report values India's DCIM software market at USD 107.5 million in 2025, growing at 18.5 percent to USD 495 million by 2034. At ₹84 to a dollar that is about ₹900 crore. The hardware sensing layer is assumed to run at a fifth to three tenths of DCIM-plus-monitoring spend; that ratio is this report's assumption, not a published statistic, and it puts the Indian hardware layer at ₹180 to ₹270 crore. A second commercial report values the India rack market at USD 4.21 million in 2025, a figure too small to be credible against 66,700 new rack positions a year, and it is not relied on.

Publicly observed

S127

S128

Estimated

S127

Inferred

CHECK	METHOD	2026 VALUE	GAP TO BOTTOM-UP ₹235 CR
Bottom-up pools A to D	Units × penetration × price, table above	₹235 Cr	Reference
Top-down, DCIM ratio low	USD 107.5 m × ₹84 × 20 percent	₹180 Cr	−23 percent
Top-down, DCIM ratio high	USD 107.5 m × ₹84 × 30 percent	₹270 Cr	+15 percent
Capex share, new-build pool only	500 MW (CBRE 2026) × USD 6 to 7 m per MW (Nomura) × assumed 0.4 to 0.6 percent × ₹84	₹100 to ₹175 Cr against pool A ₹133 Cr	pool A inside the bracket
Physical-security market, context only	USD 87.6 m in 2026 (about ₹735 Cr), 46 percent video; rack and room sensing is an unquantified slice of the rest	not used as a point	consistent with a ₹200 to ₹300 Cr sensing layer only if that slice is a third to a half of non-video spend
Rack-market report	USD 4.21 m, rejected as implausible	not used	n/a
Reconciled TAM range	Bottom-up inside the top-down bracket	₹180 to ₹300 Cr, point ₹235 Cr	Accepted

Pass 2 added the capex-share check on the largest pool, using CBRE's 2026 supply forecast and Nomura's Indian build cost of USD 6 to 7 million per MW; the monitoring share of facility cost is this report's assumption. A physical-security market figure is shown for context and not used, because it bundles CCTV, perimeter and mantraps. The methods agree within a quarter, but all rest on weak inputs: the bottom-up on an assumed corporate-room count and OEM volume, the top-down on an undisclosed commercial method and an assumed ratio. The bottom-up arithmetic is the one to check and replace.

Estimated

S127

S125

S57

S166

Publicly observed

S165

Inferred

The five-year series

YEAR	TAM ₹ CR	SAM ₹ CR	SOM ₹ CR	ASSUMPTION
2026	235	58	1.7	FUJI run-rate of about 240 sets a year
2027	280	70	3.5	SNMP and software datasheet shipped; one integrator pilot
2028	335	85	6.0	Second OEM; bank-room channel live; AMC attached
2029	400	100	8.5	GeM listing after BIS or CE
2030	475	118	10.5	Hosted software subscription on 300 sites
2031	560	138	12.0	About 1,400 sets a year plus AMC; 9 percent of SAM

TAM grows at about 19 percent a year, below the 23 percent capacity CAGR that Savills projects because the enterprise-room pool shrinks as workloads move to colocation. SAM holds at about 25 percent of TAM. SOM is a plan, not a forecast.

Estimated

S19

S18

S3

Sensitivity

DRIVER	LOW (2028 SOM)	BASE	HIGH	WHAT MOVES IT
OEM concentration	₹0.5 Cr	₹6.0 Cr	₹10.0 Cr	FUJI qualifies a second source versus FUJI doubling and Netrack or a micro-DC assembler signing
Protocol and certificate readiness by mid-2027	₹3.0 Cr	₹6.0 Cr	₹9.0 Cr	Without SNMP and a certificate the bank, enterprise and GeM channels stay closed
Set price and AMC attach	₹4.5 Cr	₹6.0 Cr	₹8.0 Cr	₹55,000 sets with no AMC versus ₹69,065 with a 12 percent AMC on half of non-OEM sales

The three drivers are not independent: losing FUJI while lacking SNMP is the ₹0.5 crore case, which is where the product was before June 2025. Estimated S3

Government versus private, India versus export

Of the ₹235 crore TAM, about ₹35 crore sits with public bodies (state and national data centres, PSU rooms, public universities and hospitals) and is bought through GeM, NICSI and open tenders; the rest is private, dominated by colocation operators and enterprises. Of the ₹58 crore SAM, about ₹12 crore is public. Export is excluded from the Indian figures; the Saudi dossier's own scenario is SAR 24 million TAM, SAR 6 million SAM and SAR 0.6 million SOM over 24 months, and Poland has about 200 MW of core-and-shell capacity with no Rax route until CE marking exists. Estimated S36 S114 S129 S42 Rax-supplied S6
Publicly observed S103

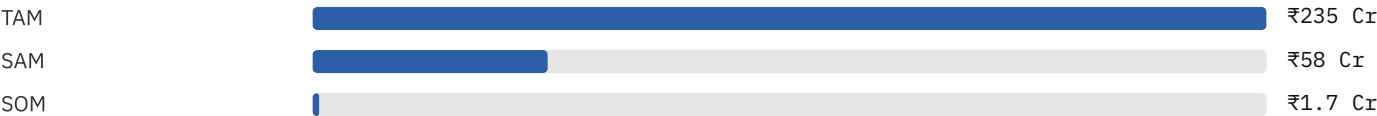
What the sizing does not capture

It omits AMC and subscription revenue on the installed base, which is where incumbents earn; it omits the software layer entirely; it treats hyperscale racks as monitored at row level when many AI halls use cabinet-level telemetry built into the rack; it assumes 40,000 enterprise and public rooms without a census; and it ignores telecom shelters, where the unit count is in the lakhs but the product would need a 48 VDC, outdoor-rated variant. Read the TAM as ₹180 to ₹300 crore and the SAM as ₹45 to ₹75 crore. Inferred

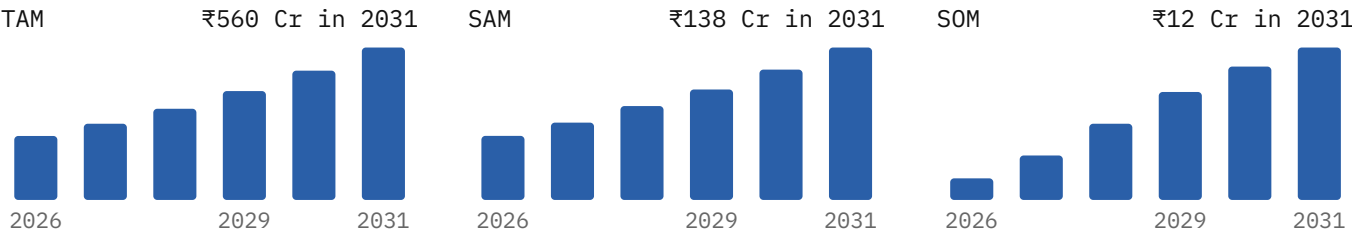
SO WHAT FOR RAX

The reachable market is large enough to matter to a ₹7.9 crore company and small enough that one OEM account is a third of the plan; the sizing says protect FUJI first, then earn the right to the bank-room pool with SNMP and a certificate.

Recommendation



Addressable, serviceable and obtainable market, 2026. Bars share one scale.



	VALUE	DEFINITION	ASSUMPTIONS
TAM	₹235 Cr	India annual spend on rack and room environmental and access monitoring hardware with embedded software, 2026 triangulated	- New colocation and hyperscale capacity 2026 about 500 MW IT (CBRE) at 7.5 kW per rack (Uptime 2025 modal average) = about 66,700 new rack positions; monitoring allowance Rs 20,000 per rack (one NetBotz-class room or row controller at Rs 1 lakh per five racks plus sensors) = Rs 133 crore - Installed colocation base mid-2026 1,600 MW = about 213,000 racks; 8 percent a year refreshed or retrofitted at Rs 20,000 = Rs 34 crore - Enterprise and public server rooms: about 40,000 rooms with more than two racks (1,289 universities, 15 percent of 48,246 colleges, 10 percent of 23,600 government hospitals, about 2,000 bank regional and DR rooms, about 1,500 NBFC and market-entity rooms, 35 state and 5 national data centres, and an assumed 25,000 corporate rooms); 10 percent buy or replace monitoring each year at Rs 1.2 lakh per room = Rs 48 crore - Rack, UPS and micro-DC OEM bundles: an assumed 5,000 intelligent racks and micro data centres a year at Rs 40,000 controller allowance = Rs 20 crore - Excludes DCIM software, BMS, CCTV recording, fire suppression and intelligent PDUs - Triangulated top-down: India DCIM software USD 107.5 million in 2025 (about Rs 900 crore at Rs 84) with a hardware sensing layer at 20 to 30 percent of that spend gives Rs 180 to Rs 270 crore, bracketing the bottom-up Rs 235 crore; the reconciliation table is in section 04 - Second top-down anchor on the new-build pool: CBRE expects about 500 MW of new supply in 2026; at USD 6 to 7 million per MW facility cost (Nomura, excluding land and IT) that is USD 3.0 to 3.5 billion of build; an assumed 0.4 to 0.6 percent for rack and room environmental and access monitoring gives USD 12 to 21 million, about Rs 100 to Rs 175 crore, against bottom-up pool A of Rs 133 crore
Estimated S125 S57 S17 S42 S111 S41 S114 S129 S59 S66 S3 S127 S166 S165			
SAM	₹58 Cr	Segments Rax can reach in 36 months: OEM bundles, enterprise and public rooms in south and west India, bank rooms via existing integrators, non-hyperscale colocation retrofit bottom-up	- All of the OEM bundle pool (Rs 20 crore) because it is the proven route 60 percent of the enterprise and public room pool (Rs 29 crore): Tamil Nadu, Karnataka, Telangana, Maharashtra, Kerala, Andhra Pradesh and public bodies buying on GeM 25 percent of the colocation retrofit pool (Rs 8.5 crore): non-hyperscale halls and enterprise suites where a low-cost controller can be specified - None of the new hyperscale build pool, which is specified on global framework agreements
Estimated S3 S18 S55 S17			
SOM	₹1.7 Cr	Rax obtainable revenue in FY2026-27 on the current FUJI run-rate: about 240 sets a year at Rs 69,065 bottom-up	- FUJI run-rate: the last three ordering cycles (60 sets on 23 July 2025, 40 on 18 December 2025, 40 on 12 February 2026) give about 140 sets in seven months, or about 240 a year; 240 x Rs 69,065 = Rs 1.66 crore - The FY2025-26 order book holds 201 sets on eleven distinct work orders, or 261 if a 60-set line on the July 2025 sheet is a separate order; Rax's internal Rs 1.75 to Rs 1.77 crore counts it - No second RMC account in 2026 - Rises to Rs 6 crore by 2028 only if SNMP, a software datasheet and a certificate are delivered by mid-2027 and one integrator or UPS-OEM channel into bank rooms and one second OEM are signed - Rs 12 crore by 2031 implies about 1,400 sets a year plus AMC, roughly 9 percent of the reachable market
Estimated S3 S148 S5			

Sensitivity

DRIVER	LOW	BASE	HIGH	NOTE
OEM concentration: FUJI stays, grows or leaves	0.5	6	10	2028 SOM in Rs crore. Low: FUJI qualifies a second source (its deliveries from Rax were 86.7 percent late) and Rax has no replacement. High: FUJI doubles and one more rack or UPS OEM signs.
Protocol and certificate readiness by mid-2027 (SNMP, software datasheet, CE or BIS)	3	6	9	Without SNMP the bank and enterprise channels do not open; with it and a certificate, GeM listing becomes possible.
Set price and AMC attach	4.5	6	8	Low: sets at Rs 55,000 to win a second OEM with no AMC. High: Rs 69,065 held with a 12 percent AMC on half of non-OEM sales.

05 Segments and ideal customer

KEY TAKEAWAYS

- Ten segments are scored; UPS, rack and micro-DC OEMs with bank, ATM and hospital service estates rank first at 76 because one of them is already a ₹1.75 crore account and the product needs no change to serve them.
Rax-supplied S148 S5 Publicly observed S144 Estimated S33 S66
- Bank and NBFC regional and DR rooms rank second at 66: RBI's 2026 Directions now name temperature, water, smoke and access-alarm monitoring; Rax's e-surveillance integrators are a stated but untested route, and FUJI-type service estates are a second way in. Verified S139 Rax-supplied S2 S5
- Enterprise and campus rooms of 5 to 50 racks rank third at 60 on inbound demand and fit, but need SNMP and a published price list before a technical evaluator will sign. Publicly observed S108 S91 Rax-supplied S2
- Colocation halls score 40 and Europe 33: real demand, wrong buyer for a product without certificates, protocols or references. Publicly observed S55 S18 Estimated S102 S106
- Twenty-six named organisations are listed as research targets on public evidence; none is a relationship.
Publicly observed S55 S133 S12 S33

Segment scores

RANK	SEGMENT	BUYER	SIZE SIGNAL	DEMAND 20	FIT 20	ROI 15	READY 15	ACCESS 10	DIFF 10	FRICTION 5	MARGIN 5	TOTAL
1	UPS, rack and micro-DC OEMs with service estates	OEM product head	₹20 Cr pool; FUJI about ₹1.75 Cr	16	18	11	10	8	7	4	2	76
2	Bank and NBFC regional and DR rooms	DGM IT via integrator or UPS vendor	3,500 rooms; RBI para 61	15	15	10	7	6	6	3	4	66
3	Enterprise and campus rooms 5 to 50 racks	IT manager	25,000 rooms; ₹30 Cr	13	14	9	7	5	6	3	3	60
4	Hospitals and diagnostic chains	IT head, biomedical	2,400 rooms	11	13	8	6	4	5	3	3	53
5	State data centres, NIC, PSU rooms	SDC operator, GeM buyer	40 sites plus PSUs	13	12	8	5	4	5	2	3	52
6	Universities and colleges	IT director	8,500 rooms	9	13	7	6	5	5	3	2	50
7	Telecom edge and tower shelters	Towerco operations	2.6 lakh towers (Altius)	12	9	8	4	3	4	2	3	45
8	GCC via iibdaei and Gulf Connect	Saudi infrastructure manager	SAR 24 m TAM	10	10	7	4	3	5	2	3	44
9	Colocation and hyperscale halls	DC design head	66,700 new racks a year	14	7	7	3	2	3	1	3	40
10	Europe via RaxTech Europe	Polish MSP	200 MW core and shell	8	8	6	2	2	3	1	3	33

Scores follow the charter model. Demand is the documented, current, budgeted need; fit is the match to the product and the ISO scope; readiness is the state of references, certificates and service; access is whether two salespeople can reach the buyer. The OEM segment scores highest on fit and readiness because it is the only one with a shipping reference; pass 2 cut its readiness by one

point for the delivery record (86.7 percent late). Banks score highest on demand because the 2026 Directions name the controls; pass 2 cut their access by one point because the integrator route Rax describes has produced no RMC order. Rax-supplied S149 S5

Estimated S3 S139 S33 S66 S108 S111 S36 S42 S101 S6 S55 S102 Recommendation

Ideal customer profile

The ideal customer today is an Indian maker of UPS systems, racks or micro data centres that already services bank branches, ATM sites, hospitals or enterprise rooms, that ships between 100 and 2,000 intelligent enclosures a year, has been quoting NetBotz or Delta EMS at ₹1 lakh or more per enclosure, and wants a controller it can brand, at a third of that price, from a supplier within a day's drive of its plant. The trigger is a lost deal on price or a new smart-rack line. The current alternative is a global appliance, a Chinese board, or no monitoring. The budget holder is the product-line head; the decision takes one to three months and a sample. Fuji Electric India matches this profile exactly; Numeric (60,000+ ATMs powered, in the Legrand group) and E&C match its service-estate half, and Netrack, Valrack, ReadyPod and APS match its rack half. The trigger that the FUJI record adds is a small paid design job before any volume order. Rax-supplied S148 S150 Publicly observed S144 S151 S152 S33 S63 S66 Inferred

The ideal customer in eighteen months is a private or public-sector bank's regional office or DR room manager, with five to thirty racks, an RBI IS audit in the next two quarters, a UPS service contract with a FUJI-type vendor or an e-surveillance contract with SIS, Securens or Zicom, and no temperature, water, smoke or access-alarm log to show the auditor. The trigger is para 61. The current alternative is a UPS probe and a logbook. The budget holder is the DGM IT; procurement runs through the integrator's rate contract; the decision takes three to six months. Verified S139 Rax-supplied S2 Inferred

Buying committee

The committee diagram after this section sets out six roles. Two features of it deserve emphasis. First, the technical evaluator's question is always the same, "what is the MIB", and today Rax has no answer. Second, the risk and compliance role has just been handed a checklist by the RBI: temperature, water, smoke, access alarms, service availability alerts and access logs. A product that reports exactly those six things, with a timestamped log, answers the auditor before the auditor asks. Verified S139

Rax-supplied S1 Inferred

Jobs to be done and willingness to pay

SEGMENT	JOB TO BE DONE	EVIDENCE OF WILLINGNESS TO PAY
OEM	Ship an intelligent rack that undercuts NetBotz-equipped racks	FUJI pays ₹69,065 a set, twenty sets a month, for a year Rax-supplied S3
Bank rooms	Produce the log the IS auditor asks for; get a call before the AC failure becomes an outage	SBI buys 24x7 panel monitoring as a service; Delhi bank server room fire 2023 Verified S133 Publicly observed S131
Enterprise rooms	Not arrive Monday to a cooked rack	Forum buyers pay USD 690 to 2,700 for NetBotz and complain about the price Publicly observed S30 S93 S109
Hospitals	Protect the IT room and the adjacent cold room with one system	Jyoti sells the same box to server rooms and cold storages Publicly observed S134
SDC and PSU	Meet the STQC audit and the IBMS specification at L1	GeM bids for smart racks and IBMS packages in five states Publicly observed S36 S130
Campuses	Cheap, simple, works with the rack vendor's bundle	Netrack and Valrack list education as a target Publicly observed S33 S63
Telecom	Unmanned-site alarms to a NOC over 48 VDC	Raritan and AKCP sell 48 VDC and telecom references Publicly observed S73 S70
Colocation	Row-level telemetry into DCIM on a global framework	STT, CtrlS and Sify certified halls Publicly observed S55

Case study 1: the FUJI programme (segment 1)

Fuji Electric India gave Rax a small design job, then placed eleven work orders between March 2025 and February 2026 for 201 sets, plus a disputed 60-set line, with kits, bare controllers and 75 rack shelves alongside. Orders came in bursts: 130 sets in June and July 2025, three twenty-set orders on a single day, a pause while late sets were delivered, forty sets in December at a new price of

₹69,065 and forty more in February 2026. The pattern is a production schedule, not a trial. The buyer services over 10,000 ATM sites and thousands of bank branches, sold its own ATM-site monitoring suite in 2013, and publishes no monitoring product today, so the sets most likely complete a site or server-room package for its service estate. Two lessons follow. The OEM route works without SNMP, certificates or marketing, because the OEM supplies the customer, the brand and the service. And the route is fragile: 86.7 percent of FUJI deliveries were late by a mean 45.6 days, and the OEM can also qualify a different controller.

Rax-supplied

S148

S149

S150

S5

Publicly observed

S144

S145

S147

Inferred

Case study 2: how a bank buys monitoring (segment 2)

SBI's November 2024 RFP for facility management of its Navi Mumbai data centre lists the monitoring estate as assets the contractor must watch, not buy: one water leak detection system, one access control system, one VESDA, one BMS, 132 cameras, a rodent repellent system, 53 precision air-conditioners, and it instructs the contractor to "monitor Information Panels like BMS, WLD, CCTV and Fire alarm displays" and to keep the BMS "monitored continuously 24x7". A primary data centre of this class will never buy a Rax set; the systems are already there and are watched by people. The regional offices, zonal DR rooms and branch back rooms of the same bank are where no such estate exists, where the 2026 Directions' para 61 now applies with equal force, and where the bank's e-surveillance integrator, not its data-centre department, holds the contract. That is the door.

Rax-supplied

S2

Inferred

Verified

S133

S139

RFP FOR PROCUREMENT OF FACILITY MANAGEMENT SERVICES FOR BANK'S DATA CENTRE AT NAVI MUMBAI			
S. No	Equipment Name	Qty	
1.	Main Panels	6	
2.	Output Panels	10	
3.	UPS 40 KVA and Battery Bank	4	
4.	UPS 100 KVA and Battery Bank	4	
5.	UPS 200 KVA and Battery Bank	4	
6.	UPS 500 KVA and Battery Bank	4	
7.	Split Ac 2 TR	29	
8.	Split Ac 2.5 TR	5	
9.	PAC 55 TR	1	
10.	AHU 5.5 TR	1	
11.	PAC 10 TR	15	
12.	PAC 12 TR	38	
13.	PAC 16.5 TR	2	
14.	PAC 18 TR	2	
15.	PAC 22 TR	2	
16.	FAS along with FSS system	1	
17.	WLD system	1	
18.	Access Control System	1	
19.	VESDA System	1	
20.	Building Management System	1	
21.	CCTV (Dome + Bullet)	132	
22.	PA System	1	
23.	Bus Bar Trunking System	1	
24.	Rodent Repellent System	1	

Page 65 of 144

Page 65 of SBI's Navi Mumbai data-centre facility-management RFP: the monitoring estate listed as assets to be maintained, including WLD, access control, VESDA, BMS and 132 CCTV cameras. Source S133

Case study 3: the enterprise room that nobody watched (segment 3)

The enterprise buyer's story repeats across forums and vendor blogs: an air-conditioner fails on a Friday night, a rack cooks by Monday, and the fix costs more than a decade of monitoring; or an old NetBotz 350 emails at 2 am about a leak and someone drives in. Indian vendors describe the same rooms: comfort split ACs running flat out, hot spots inside racks, dust and humidity, "often

unnoticed until failure occurs". The buyer then searches, finds NetBotz at ₹1 lakh and a Jyoti GSM box at ₹27,500, and either overpays for features or underbuys and gets SMS only. A ₹69,065 set with access control, camera and a log sits between those two, and a Chennai company answering the phone is a differentiator in a market served by Delhi traders. The gate is the network engineer's MIB question and a price list on the website. Publicly observed S109 S107 S91 S108 S59 S134 Inferred

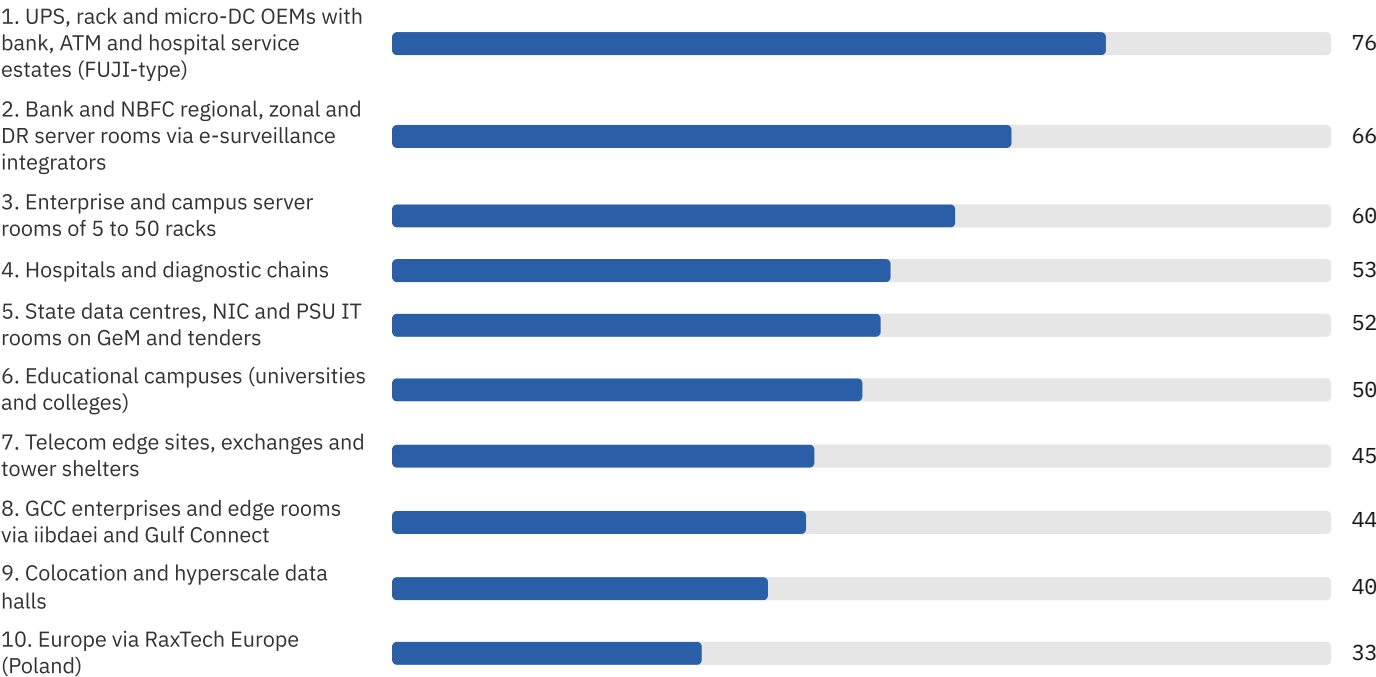
Named organisations as research targets

Inclusion is a research target on public evidence, not a relationship. OEMs and assemblers: Fuji Electric India (existing account), Numeric (Legrand; 60,000+ ATMs powered), Electronics & Controls, Netrack, Valrack, President Enclosures (Schneider), ReadyPod Technologies, APS Tech Systems, Green Powers, Delta Power Solutions India, Sunlite Systems, Infomac, Delibo (existing custom-controller account). Banks and market entities: State Bank of India (GITC data-centre and DR estate), Punjab and Sind Bank (January 2026 observability platform RFP), the existing e-surveillance integrators SIS, Securens, Zicom, CMS Info Systems and Apar Innosys as the route into them. Public bodies: NIC national data centres at Delhi, Pune, Bhubaneswar, Hyderabad and the Guwahati build; the Puducherry and Meghalaya state data centres; Airports Authority of India's DR site in Hyderabad; BSNL; C-DOT; Coal India; RailTel's Mahalaxmi, Noida and Manesar rooms. Colocation and EPC (for row-level and enterprise-suite retrofit only): Sify, CtrlS, STT GDC India, Nxtra, Techno Digital Chennai, Web Werks, Sterling and Wilson DC. Telecom: Indus Towers and Altius. Distributors: Fluke Infotech, Mpower Group, Redington. Rax-supplied S3 S4 S2

Publicly observed S33 S63 S64 S66 S133 S143 S129 S113 S114 S55 S100 S101 S70 S71 S61 S151 S152

SO WHAT FOR RAX

Sell to UPS and rack OEMs with service estates now, build the bank-room case on para 61 through FUJI's estate and one integrator pilot, and treat colocation and Europe as 2028 questions. Recommendation



Segment priority score, out of 100

#	SEGMENT	BUYER	SIZE	SCORE	EVIDENCE
1	UPS, rack and micro-DC OEMs with bank, ATM and hospital service estates (FUJI-type) Indian makers of UPS systems, smart racks and micro data centres that already service bank branches, ATM sites, hospitals and enterprise rooms and need an integrated controller at Rs 36,000 to Rs 70,000 rather than a NetBotz at Rs 1 lakh: Fuji Electric India (10,000+ ATM sites serviced), Numeric (60,000+ ATMs powered), E&C, Netrack, Valrack, President, ReadyPod, APS, Delta.	OEM product line head and purchase officer	About 5,000 intelligent racks and micro DCs a year (assumed) plus UPS-maker site packages; Rs 20 crore controller pool; one account already about Rs 1.75 crore	76	 Estimated S3 S148 S12 S144 S151 S33 S63 S66 S149
2	Bank and NBFC regional, zonal and DR server rooms via e-surveillance integrators RBI-regulated entities that must show physical and environmental controls and e-surveillance at DC and DR sites; reached through the ATM and branch e-surveillance integrators that already buy Rax panels (SIS, Securens, Zicom, CMS, Apar). Rax states its e-surveillance relationships are a route; none of those accounts has bought an RMC set yet, so the route is untested, and FUJI's own bank service estate is a parallel way in.	Bank DGM IT or premises head; integrator project manager	About 2,000 bank regional and DR rooms plus 1,500 NBFC and market-entity rooms (estimated); RBI clause makes the audit trail mandatory	66	 Estimated S2 S5 S22 S24 S41 S133 S139 S144
3	Enterprise and campus server rooms of 5 to 50 racks Manufacturing plants, IT and ITES offices, logistics and retail head offices with a comfort-AC server room and no monitoring beyond a thermostat; found through IndiaMART and Google inbound.	IT manager or head of infrastructure; facilities manager	Assumed 25,000 corporate rooms; 10 percent a year buying or replacing monitoring at Rs 1.2 lakh = Rs 30 crore	60	 Estimated S108 S91 S97 S2 S65
4	Hospitals and diagnostic chains Hospital IT rooms plus adjacent cold rooms and UPS rooms; NABH and insurer expectations; Fuji Electric already sells isolated power supplies and UPS into hospitals.	Hospital IT head and biomedical or facilities engineer	About 23,600 government hospitals and an unknown private count; 10 percent with a monitored-worthy IT room = 2,400 rooms	53	 Estimated S111 S13 S134
5	State data centres, NIC and PSU IT rooms on GeM and tenders 35 state data centres, five NIC national data centres, PSU and statutory-body server rooms procured through GeM, NICS and open tenders; monitoring usually bought inside an IBMS or facility-management package.	SDC operator (SI cum DCO), NIC officer, PSU IT head, GeM buyer	About 40 SDC and NDC sites plus hundreds of PSU rooms; live bids in MP, UP, Gujarat, Assam, AP in September 2026	52	 Publicly observed S36 S114 S113 S129 S133

#	SEGMENT	BUYER	SIZE	SCORE	EVIDENCE
6	Educational campuses (universities and colleges) 1,289 universities and 48,246 colleges with campus data rooms; a natural attach to ZenCampus and to the Netrack and Valrack education channel.	University IT director; college principal via a rack reseller	1,289 universities plus 15 percent of colleges = about 8,500 rooms	50	Estimated S42 S33 S63 S2
7	Telecom edge sites, exchanges and tower shelters Unmanned equipment rooms and shelters at exchanges, fibre nodes and tower sites; volume is enormous but the product must be 48 VDC, outdoor-rated and integrated with the towerco NOC.	Towerco or telco operations head; O&M contractor	Altius alone has 260,340 towers; Indus a comparable count; BSNL exchanges in every district	45	Estimated S101 S73 S46
8	GCC enterprises and edge rooms via iibdaei and Gulf Connect Saudi and Omani distributed private-enterprise server rooms and 10 to 100-rack estates, as ranked in the July 2026 Saudi dossier; SABER, CST and NCA gates apply.	Saudi infrastructure manager; local ELV or UPS integrator	Saudi scenario: 2,000 qualified racks at SAR 12,000 = SAR 24 million TAM; SOM 50 racks in 24 months	44	Rax-supplied S6 S7
9	Colocation and hyperscale data halls Certified halls run by STT GDC, CtrlS, Sify, Nxtra, NTT, Yotta, AdaniConneX and hyperscaler self-builds; monitoring specified on global frameworks with SNMP, BMS and DCIM integration and 24x7 SLAs.	Data centre design head; facilities procurement	About 66,700 new rack positions in 2026 and 213,000 installed; Rs 167 crore pool, almost none reachable today	40	Estimated S17 S18 S55 S125
10	Europe via RaxTech Europe (Poland) Polish SME server rooms and regulated-industry data centres expected to meet EN 50600 Class 3; CE marking under LVD, EMC and RoHS is the gate and does not exist yet.	Polish MSP or SME IT manager	Poland core-and-shell capacity about 200 MW (Arizton) with capacity projected to triple in six years (PMR)	33	Estimated S102 S103 S104 S105 S106 S2

Buying committee for a server-room monitoring purchase

Economic buyer

CIO or head of infrastructure (enterprise); DGM IT (bank); rack OEM product head (FUJI-type); SDC operator (public)

NEEDS Audit evidence for RBI para 61 (2026 Directions) or ISO 27001 A.7.4 at a price below NetBotz

KILLS THE DEAL No certificate, no reference, a vendor with a service reputation problem

Champion

Data-centre or facilities manager who was called at 2 am when the AC failed

NEEDS Alerts that reach a phone and stop when acknowledged

KILLS THE DEAL Alert spam, false alarms, a web client that only works on one browser

Technical evaluator

Network or NMS engineer; BMS integrator

NEEDS SNMP MIB, Modbus TCP register map, API, TLS and RBAC details

KILLS THE DEAL Modbus RTU and SIA only; no MIB

Risk and compliance

CISO, IS auditor, fire officer

NEEDS Fire-interface behaviour per IS 2189, cyber assessment of the device, data retention

KILLS THE DEAL An unassessed network device inside the DC perimeter

Procurement

GeM buyer, bank procurement cell, OEM purchase officer

NEEDS OEM authorisation, BIS or CE, three-year warranty and AMC rates, L1-competitive price

KILLS THE DEAL Missing registration, single-vendor lock-in, no AMC schedule

End user

NOC operator, night security, branch IT

NEEDS Simple acknowledgement, OLED status at the rack, a camera image on a door event

KILLS THE DEAL Nuisance hooter, locks that fail closed during power loss

Roles drawn from the RBI and SEBI control language, tender structures and forum threads; the economic buyer differs by segment but the technical evaluator's protocol question is constant. Inferred

KEY TAKEAWAYS

- Thirty-eight competitors are profiled: sixteen direct controller vendors, thirteen partner-competitors (rack OEMs, UPS makers with bank service estates such as Fuji Electric India and Numeric, micro-DC assemblers, EPC firms and colocation operators), four indirect software platforms and five substitutes including the UPS probe and doing nothing.
Publicly observed S60 S31 S75 S73 S70 S33 S12 S80
- The specified tier belongs to Schneider (NetBotz), Vertiv (Geist, Knurr), Rittal (CMC III) and Legrand (Raritan SRC, Netrack); all four have Indian pages, distributors and SNMP; NetBotz 250 costs ₹1,00,000 for the appliance alone.
Publicly observed S59 S74 S75 S73 S33
- The sub-₹70,000 tier is Indian GSM boxes (Jyoti Telecom ₹27,500, AdvanceTech ₹67,796, Spaceage ₹4,800) with SMS and call alerts and no integration; Rax's set price sits here while its feature list sits in the tier above.
Publicly observed S134 S65 S35 Rax-supplied S3
- The most dangerous competitor is not a vendor but the rack OEM's own bundle: Netrack, now Legrand, sells an intelligent rack access controller inside iRack, and President racks are sold on Schneider's site with NetBotz beside them.
Publicly observed S33 S64
- Buyers on forums judge on three things: does it stop spamming me, does it have a MIB, and can I find it on eBay cheaply; Rax fails the second test today. Publicly observed S89 S94 S93

Landscape overview

The competitive set has four layers. At the top are the four global infrastructure groups that sell the rack and the controller together and are named in tenders: Schneider Electric with APC NetBotz and now President racks; Vertiv with Geist Watchdog, Knurr RMS III and Liebert; Rittal with CMC III inside TS IT racks; and Legrand with Raritan SRC and Netrack, India's largest rack maker. Beneath them sit specialist monitoring vendors with SNMP-first appliances and thin Indian channels: AKCP (Thailand, distributor Fluke Infotech), Delta InfraSuite EMS (distributor Mpower), HW group, AVTECH Room Alert, Kentix, ServersCheck, NTI ENVIROMUX and Sensaphone. Beneath them are Indian GSM-alert makers on IndiaMART and TradeIndia: Jyoti Telecom in Nashik, Spaceage in Noida, AdvanceTech in Zirakpur, Dynamic Micro Tech in Mumbai. And around all of them are the substitutes: the UPS network card with a probe, PRTG reading host sensors, Meraki wireless sensors, an ESP32 build, and a guard with a logbook.

Publicly observed S60 S64 S31 S74 S75 S73 S33 S70 S71 S76 S77 S78 S79 S82 S134 S35 S65 S136 S88 S80 S90 S138 S108

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Overview

Products

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The incumbent's Indian storefront: 'cost-effective and flexible environmental monitoring for all IT environments, from small edge networks to large data centers'. Source S60

Import versus domestic: every product in the specified tier is designed abroad and lands in India through distributors at 2.5 to 3.6 times US street price; the domestic tier is designed and built in India but stops at SMS. Rax is the only Indian maker found in this pass that combines access control, camera, fire interface and environment in one Ethernet controller with a central application; that is a real gap, and it is also why no Indian buyer has a reference point for it.

Publicly observed S59 S30 S134 Rax-supplied S1

Inferred

Partner-competitors matter more than direct ones for a two-person sales team. Rack OEMs (Netrack, Valrack, President), UPS makers with bank and ATM service estates (Fuji Electric India, which services over 10,000 ATM sites and once sold its own iPEMS site-monitoring suite; Numeric, which powers over 60,000 ATMs and sits in the Legrand group beside Raritan and Netrack; E&C; Delta), micro-DC assemblers (ReadyPod, APS, Green Powers), EPC firms (Sterling and Wilson DC) and colocation operators (Sify, CtrlS, STT GDC, Nxtra, NTT) each buy or specify monitoring at volume, and each can either carry a Rax controller or crowd it out with a house brand.

Publicly observed S33 S63 S64 S12 S66 S100 S18 S55 S144 S145 S151 S152

Deep dive 1: Schneider Electric and APC NetBotz

NetBotz is the reference product. The 250 is a 1U rack monitor with six universal sensor ports, four rack-access ports, two A-Link ports, support for 42 wired and 47 wireless sensors, badge access for two rack doors, a wireless starter kit and a wired temperature-humidity cable in the box, a two-year warranty, and configuration through its own web UI or EcoStruxure IT. The 750 adds a camera and pods. Indian availability is complete: Schneider's India site lists the range and the NBRK0250 SKU, Redington is the distributor, and traders in Ahmedabad and Delhi list the 250 at ₹1,00,000 against a US street price of USD 690 (list USD 945). EcoStruxure IT Expert, the cloud layer, costs about USD 53 per node per year on a five-year term. Forum users call it "my go to" and in the same breath say it "will fill your inbox up with alerts" and that a 755 "won't send email motion alerts"; the product is trusted, verbose and expensive. Schneider's acquisition of the President rack brand in India puts NetBotz next to an Indian rack on the same order form.

Publicly observed S30 S60 S61 S59 S62 S67 S89 S92 S64

Deep dive 2: Vertiv, Geist Watchdog and Knurr RMS III

Vertiv sells two monitoring lines in India. Geist Watchdog 15 and 100 are small environmental monitors with on-board temperature, humidity and dew point, two RJ12 sensor inputs, up to fifty alarms with escalation, alerts by email, SNMP and email-to-SMS, and a three-year warranty that becomes five on registration; the 15 was launched in India in August 2023, and the 100-P is listed at ₹61,115 by a Delhi reseller. The Knurr RMS III is a zero-U rack monitor with SNMP and web configuration, https, three user levels, Boolean alarm filters, relay, SNMP and email alarms, Modbus TCP, MQTT and NTP, and third-party sensor support on RJ11 or screw terminals. Vertiv's channel in Chennai includes Multivista, which also carries Fuji Electric Consul Neowatt UPS, so Vertiv monitoring and Fuji UPS already meet in one distributor. Forum users bought Watchdogs on eBay and praised the PoE-15 as "easy to setup and fits in with Nagios nicely". Publicly observed S31 S32 S38 S74 S40 S93 S95

Deep dive 3: Rittal CMC III

The CMC III Processing Unit integrates a temperature sensor, an access sensor, digital inputs and a relay in the base unit, and takes up to 32 CAN-bus sensors: temperature-humidity 7030.111, transponder reader 7030.230, smoke, motion, early fire detection and door control. It configures over web or USB, alarms by email and reports to an NMS by SNMP; PRTG ships native CMC III sensors. The processing unit alone is USD 1,220 at a US reseller, before sensors. Rittal India sells it with TS IT racks and cooling into manufacturing plants and IT rooms, and Rittal is a small account in Rax's own e-surveillance customer list, which means a door is already open. The weakness is the proprietary sensor bus and the price; the strength is that a plant engineer who already runs Rittal enclosures will not evaluate anyone else. Publicly observed S75 S34 S80 Rax-supplied S2

Deep dive 4: Legrand, Raritan SRC and Netrack

Raritan's Smart Rack Controller is the most complete direct analogue to what Rax is trying to be: a central connection point for up to 204 environmental sensors, SmartLock door handles with audited access, asset tags to 1U, alerts by SNMP, email and API, integration with BMS and DCIM by SNMP, Modbus TCP and JSON-RPC, and 100-240 VAC or 48 VDC power for telecom sites. Legrand also owns Netrack in Bengaluru, whose iRack and iRack Block racks integrate a PAC unit, UPS, intelligent PDU, "surveillance and environmental management", KVM and an intelligent rack access controller, and which markets to banking, insurance, warehouses, manufacturing and education under ISO 9001, 14001, 27001 and 45001. The combination means the largest Indian rack OEM can source a world-class controller from its own group; a Rax white-label pitch to Netrack has to beat an in-house option. Publicly observed S73 S33

Deep dive 5: AKCP and the Indian GSM tier

AKCP's sensorProbe and sensorProbeX+ are SNMP-first appliances (v1, v2, v3 with licence), with Modbus and RADIUS on the X+, up to 16 sensor ports and 60 dry contacts, RFID swing-handle monitoring per cabinet and per employee through AKCPro, and a telecom reference of 200 units at one operator; the Indian distributor is Fluke Infotech. Forum users call the sensorProbe2 "rock solid" and use the 2+ for leak detection at air-conditioner units. At the other end, Jyoti Telecom in Nashik sells a made-in-India GSM temperature-humidity monitor at ₹27,500 with SMS, voice call, email and hooter alerts, 48-hour battery and a one-year warranty, a cloud version at ₹32,500 and a water sensor at ₹27,500; AdvanceTech sells a set at ₹67,796 with a cloud dashboard and app; Spaceage sells a rack alarm at ₹4,800. None has Ethernet SNMP, access control or a camera. Rax's set, at ₹69,065 with two locks, two readers, a camera, a fire interface and a leak rope, out-features every product in this tier at the same price and under-features AKCP on protocols. Publicly observed S70 S137 S94 S134 S65 S35 Rax-supplied S1 S3

Feature and price comparison against Rax

CRITERION	BUYERS	RAX RT-RMC SET	NETBOTZ 250	WATCHDOG 100	CMC III	RARITAN SRC	AKCP SPX+	JYOTI GSM
Indian street price, controller		₹36,000 (set ₹69,065)	₹1,00,000	₹61,115	USD 1,220	quote	quote	₹27,500
SNMP MIB		not stated	yes	yes	yes	yes	yes v1-v3	no
Modbus TCP, BACnet, MQTT, API		Modbus (internal)	via EcoStruxure	no	via NMS	Modbus TCP, JSON-RPC	Modbus	no
Rack door access		2 Wiegand, 2 EM locks	2 doors, badge	no	transponder reader	SmartLock handles	swing handle	no

CRITERION	BUYERS	RAX	RT-RMC	SET	NETBOTZ 250	WATCHDOG 100	CMC III	RARITAN SRC	AKCP SPX+	JYOTI GSM
Camera		serial JPEG, IR			on 750	no	no	no	no	no
Fire-alarm interface		1			dry contact	dry contact	early fire detection	contact	contact	no
Leak, smoke, temperature, humidity		all			all	temp, humidity, dew point	all	all	all	temp, humidity, leak unit
Warranty		1 year			2 years	3 to 5 years	n/a	n/a	n/a	1 year
Central software		undocumented			EcoStruxure IT	web	web, SNMP	web, app	AKCPro	cloud portal
Certifications stated		CE (unverified), RoHS, ISO 9001			CE, FCC, UL	CE, FCC	CE, UL	CE, UL	CE, FCC	CE (claimed on one model)

Cells for global vendors' certifications reflect normal product practice and were not individually verified on certificates in this pass.

Rax-supplied S1 S3 Publicly observed S59 S32 S34 S31 S74 S75 S73 S137 S134 Inferred

Positioning map narrative

The map in this report plots Indian street price of a monitored rack against integration breadth. The crowded corner is the top right: NetBotz 750, Raritan SRC, CMC III, Huawei NetEco and Kentix all sell breadth at a price. The bottom left is also crowded: Spaceage, Jyoti, Dynamic Micro Tech and the ESP32 sell a single alarm for a few thousand rupees. The empty space is the middle left: a controller under ₹75,000 with access control, camera and SNMP that a bank auditor and a network engineer both accept. Rax sits at that price today but at the wrong height, because SNMP and the software are missing; adding them moves Rax up without moving it right. AKCP and Watchdog are the nearest occupants and both lack access control and camera. Inferred

Where Rax wins, where it loses

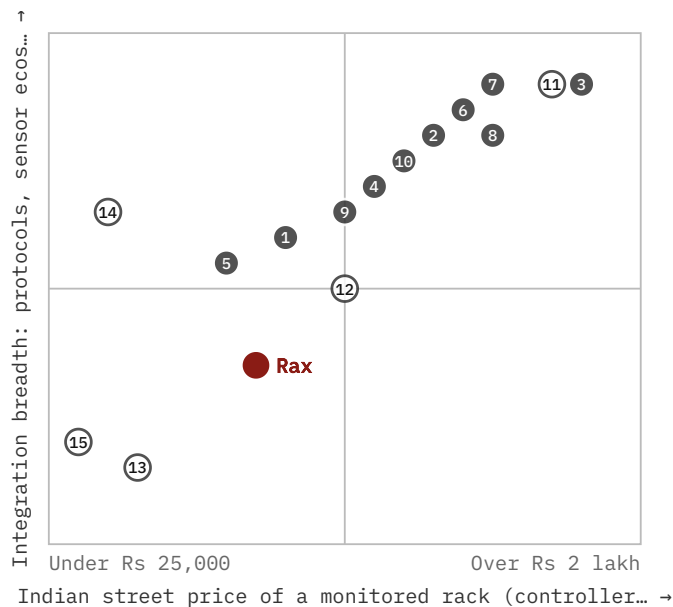
Rax wins where the buyer wants one box for environment, door and camera at an Indian price, wants customisation (a locker OEM already has one), wants a Chennai engineer on site, or is a rack, UPS or micro-DC OEM that needs a controller at ₹36,000 rather than ₹1,00,000. Rax loses where the buyer names NetBotz or Rittal in the specification, needs an SNMP MIB or BACnet for an existing BMS, needs a certificate (CE, UL, BIS) on paper, runs a certified data hall with global framework agreements, or has been burned by Rax's e-surveillance service record and will not risk a second product. Buyers say the incumbents spam them, cost too much and lock them into cloud subscriptions; those are the three complaints Rax can answer if its software is documented and its alerts are tuneable. Publicly observed S89 S92 S90 S67 Rax-supplied S2 S4 Inferred

SO WHAT FOR RAX

The only competitive position Rax can hold with two salespeople is the OEM controller: the cheapest credible integrated board for Indian rack, UPS and micro-DC makers. Direct competition with NetBotz in specified halls is a losing use of time until SNMP, a software datasheet and a certificate exist. Recommendation

Competitor responses to expect

If Rax wins a second OEM, Legrand can bundle Raritan into Netrack at cost; Schneider can discount NetBotz 250 through Redington for a bank framework; Delta can offer its EMS free inside a UPS deal to Fuji's competitors; and Fuji Electric India itself can qualify a second controller source or design one in its Chennai automation R&D centre. Indian GSM makers will add Ethernet and copy the access-control feature within a year. None of these responses is speculative; they are the normal moves of the groups named, and the mitigation in every case is a written OEM agreement with volume, price and exclusivity terms and a protocol roadmap the OEM cannot get cheaper elsewhere. Publicly observed S73 S33 S61 S71 S12 Inferred



1	AKCP sensorProbe	Direct	11	Huawei NetEco (smart module)	Indirect
2	APC NetBotz 250	Direct	12	NetrackPartner-competitor intelligent rack access controller	
3	APC NetBotz 750	Direct			
4	Delta InfraSuite EMS	Direct			
5	HW group / AVTECH Room Alert	Direct	13	Indian rack temperature alarms (Spaceage, AdvanceTech)	Substitute
6	Kentix ONE	Direct			
7	Raritan SRC (Legrand)	Direct	14	PRTG or OpManager over host sensors	Substitute
8	Rittal CMC III	Direct			
9	Vertiv Geist Watchdog 100	Direct			
10	Vertiv Knurr RMS III	Direct	15	Raspberry Pi or ESP32 build	Substitute

● Rax ● Direct ○ Indirect, substitute or partner

Indian street price of a monitored rack (controller plus starter sensors and access) across, Integration breadth: protocols, sensor ecosystem, central software up. Positions are judgements on a 0 to 10 scale; see the competitor profiles for the evidence.

COMPETITOR	TYPE	PRODUCTS IN INDIA	PRICE BAND	INDIA PRESENCE	THREAT
AdvanceTech India (Zirakpur) Zirakpur, Punjab	direct	Server room monitoring system with SMS or missed-call alerts, cloud dashboard and mobile app, custom sensors	Rs 67,796 per set	Indian IoT and AV firm on TradeIndia and its own site	medium
AKCP sensorProbe / sensorProbeX+ Bangkok, Thailand	direct	sensorProbe 2/4/8, sensorProbeX+ (8 to 16 ports, up to 60 dry contacts), securityProbe, RFID swing-handle monitoring, AKCPro software	Quote-based; UK reseller pricing only	India distributor Fluke Infotech listed on akcp.com; sold through UK and global resellers; forum favourite	medium
AVTECH Room Alert Warren, Rhode Island, US	direct	Room Alert 12S/32S PRO (wired, PoE) and MAX (wireless), Room Alert Account cloud	Room Alert 32S with PoE and SNMP v3 sold via UK resellers; India price not found	Global online sales; forum recommendations; no Indian distributor found	low
Delta Electronics InfraSuite EMS Taipei, Taiwan	direct	EMS1000, EMS2000, EnviroProbe, EnviroStation; InfraSuite micro data centre with integrated monitoring	Quote-based	Delta Power Solutions India (UPS and micro data centres); EMS leaflet hosted by Mpower Group, an Indian distributor	medium
Eaton (environmental monitoring probe for UPS) Dublin, Ireland	direct	Environmental Monitoring Probe attached to Eaton network cards	Not established	Eaton India sells UPS widely; the EMP page returned 404 in this pass	low
HW group Prague, Czech Republic	direct	STE2 R2, Poseidon2, Perseus 150/155, WLD2 leak detector, Ares 12 LTE, NB-IoT sensors, SensDesk portal	Entry devices in the low hundreds of USD (UK reseller); India price not found	Sold through global resellers; no Indian distributor found in this pass	low

COMPETITOR	TYPE	PRODUCTS IN INDIA	PRICE BAND	INDIA PRESENCE	THREAT
Jyoti Telecom (Nashik) Nashik, Maharashtra	direct	GSM server-room temperature and humidity monitors, cloud version, water sense detector, UPS power-fail alert; SMS, voice call, email, hooter	Rs 27,500 to Rs 32,500 per unit	Indian manufacturer selling through IndiaMART storefront; claims customised embedded development	medium
Kentix Idar-Oberstein, Germany	direct	KentixONE eight-in-one platform: access control, intrusion, environmental monitoring, early fire detection, video, network monitoring, rack handles	Quote-based	No Indian presence evidenced	low
Legrand / Raritan Smart Rack Controller Limoges, France (Raritan: New Jersey, US)	direct	SRC intelligent sensor controller, DX2 SmartSensors, SmartLock door handles, asset tags; 204 sensors per controller	Quote-based; USD list not found	Legrand owns Netrack in Bengaluru and Raritan; Raritan PDUs sold through Indian distributors; SRC availability in India not evidenced on the page	medium
Network Technologies Inc (ENVIROMUX) Aurora, Ohio, US	direct	E-MINI-LXO, E-2D, E-5D, E-16D environment monitoring systems with camera snapshots, SNMP, syslog, SMS via USB modem	E-2D USD 462 to 618; E-5D USD 1,506 to 2,133 (US reseller)	Online sales; no Indian distributor found	low
Rittal CMC III Herborn, Germany	direct	CMC III Processing Unit and Compact PU, CAN-bus temperature, humidity, access, smoke, motion, early fire detection, door control, transponder reader	CMC III PU USD 1,220 (CDW); sensors extra	Rittal India sells enclosures, cooling and CMC III; India blog on server racks; Rittal appears in Rax's own e-surveillance customer list as a small account	medium
Schneider Electric / APC NetBotz Rueil-Malmaison, France (APC: Rhode Island, US)	direct	NetBotz 250 rack monitor, NetBotz 750/755 room monitors, sensor pods, rack access handles, EcoStruxure IT Expert cloud	NetBotz 250 Rs 1,00,000 on IndiaMART (USD 690 US street); NetBotz 750 USD 2,706; EcoStruxure IT about USD 53 per node per year	Full: se.com/in product pages, Redington as distributor, IndiaMART traders in Ahmedabad and Delhi, President racks now on se.com India	high
Sensaphone Aston, Pennsylvania, US	direct	Sentinel, WSG30 remote monitoring with mobile alerts	Low-cost positioning; India price not found	No Indian channel found	low
ServersCheck (InfraSensing) Belgium	direct	SensorGateway base units, daisy-chained temperature-humidity sensors, leak sensors up to 1 km with hub, industrial protocols API	Quote-based	Online sales; claims 138 countries	low
Spaceage Security Systems (Noida) Noida, Uttar Pradesh	direct	Digital rack temperature monitoring and audio alarm; advanced temperature-humidity monitor with SMS and call alert	Rs 4,800 for the rack alarm	Indian manufacturer on IndiaMART	low
Vertiv (Geist Watchdog, Knurr RMS III) Westerville, Ohio, US	direct	Geist Watchdog 15/100 environmental monitors, Knurr RMS III zero-U rack monitor, Liebert RDU-A, SmartCabinet	Watchdog 100-P Rs 61,115 on IndiaMART; Vertiv 42U smart cabinet with 3.5 kW AC Rs 10 lakh	Full: Vertiv India catalogue pages, Watchdog 15 launched in India in 2023, resellers Radiant and Serrax, Multivista in Chennai	high

COMPETITOR	TYPE	PRODUCTS IN INDIA	PRICE BAND	INDIA PRESENCE	THREAT
Huawei Digital Power (NetEco, smart modular DC) Shenzhen, China	indirect	NetEco6000 DCIM; smart micro modular data centres with integrated monitoring	Bundle pricing	Sold in India through Huawei Digital Power partners; telecom heritage	medium
Nlyte Software San Mateo, California, US	indirect	DCIM suite, SaaS or perpetual, priced by racks, assets or facility power	Quote-based	Enterprise DCIM sold to Indian colocation and BFSI through partners	low
Schneider EcoStruxure IT Expert Rueil-Malmaison, France	indirect	Cloud monitoring and DCIM for APC and third-party devices	USD 6,581 per 25 nodes for five years (about USD 53 per node per year)	Sold with NetBotz and APC UPS in India	medium
Sunbird DCIM (dcTrack, Power IQ) Somerset, New Jersey, US	indirect	dcTrack asset and capacity DCIM; Power IQ power and environmental monitoring	50 cabinets MSRP USD 34,416; 300 cabinets USD 180,295; Power IQ from USD 3.99 per month	Sold globally; Indian resellers exist; 175 Capterra reviews at 4.7	low
Cisco Meraki MT sensors San Jose, California, US	substitute	Wireless temperature-humidity, water leak and door sensors reporting via Meraki access points	Per-sensor with Meraki licence	Sold with Meraki networks in India	medium
Do nothing: security guard, logbook and thermostat n/a	substitute	Manual rounds, a wall thermostat, a guard who notices smoke	Zero capital	The default in most Indian SME server rooms and many branch back rooms	high
Do-it-yourself builds (ESP32, Raspberry Pi) n/a	substitute	ESP32 with DHT22/BME280, leak and door sensors; Telegram, Blynk, GSM SMS alerts; Node-RED dashboards	Under Rs 5,000 in parts	Indian maker guides (Zbotic, Mumbai) and forum recommendations	low
Paessler PRTG (and ManageEngine OpManager) Nuremberg, Germany	substitute	Network monitoring software with sensors for Rittal CMC III, APC, HW group, Kentix, Jacarta and host IPMI temperatures	Licence by sensor count; free tier	Widely licensed by Indian enterprises and PSUs	medium
UPS network-card probes (APC NMC, Eaton, Vertiv) Various	substitute	Temperature and humidity probe on the UPS management card with email and SNMP thresholds	Probe in the low thousands of rupees	Every APC, Vertiv, Eaton and Fuji Electric UPS in India can take a temperature probe on its network card	high
CtrIS Datacenters Hyderabad, Telangana	partner-competitor	Colocation with in-house monitoring; edge data centres	n/a	15 data centres, about 250 MW, Rated 4 certified halls in Mumbai and Hyderabad; USD 2 bn expansion	low
Electronics & Controls Power Systems (E&C) Mumbai, Maharashtra	partner-competitor	Online UPS, remote monitoring, transfer switches, solar and EV chargers	Not published	Online UPS for bank head offices, branches and ATMs; supplies system integrators building smart racks; offers remote monitoring	low

COMPETITOR	TYPE	PRODUCTS IN INDIA	PRICE BAND	INDIA PRESENCE	THREAT
Fuji Electric India Chennai, Tamil Nadu (group: Tokyo)	partner-competitor	UPS 1 kVA upwards, VFDs, per-rack monitoring PDUs, ATM power suites (ATM-Sure) and a legacy iPEMS remote ATM-site monitoring system with alarm, smoke and remote reboot; RMC sets bought from Rax	Buys Rax sets at Rs 66,675 to Rs 71,055	Chennai headquarters (formerly Consul Neowatt), factories in Chennai and Pune; 350+ service engineers in 80+ locations, over one lakh installations, several thousand bank branches and over 10,000 ATM sites serviced; Rax's only RMC buyer	high
Micro data centre assemblers (ReadyPod, APS Tech, Green Powers) Hyderabad and others	partner-competitor	Smart micro data centre 4 x 42U, smart row and smart cabinet data centres with cooling, UPS, monitoring and access	Rs 70,000 to Rs 3.8 lakh per unit	TradeIndia listings with prices	medium
Netrack (Legrand) Bengaluru, Karnataka	partner-competitor	iRack and iRack Block self-cooled racks with intelligent PDU, climate monitoring, camera surveillance, KVM and an intelligent rack access controller	Rack systems quote-based; smart-cabinet class Rs 3 to 10 lakh	Indian rack market leader with national distributors; ISO 9001/14001/27001/45001 plant	high
NTT Global Data Centers India Mumbai, Maharashtra (group: Tokyo)	partner-competitor	Colocation and managed services	n/a	About 290 MW across five markets; certified NAV2 site; investing USD 1.5 bn to 700 MW by 2027	low
Numeric UPS (Legrand) Chennai, Tamil Nadu (group: Limoges, France)	partner-competitor	UPS for BFSI, ATMs and data centres; group access to Raritan SRC and Netrack iRack monitoring	No monitoring price published	Powers 60,000+ ATMs; 250+ company-owned service centres, 1,200 service professionals; same group as Netrack and Raritan	medium
Nxtra by Airtel Gurugram, Haryana	partner-competitor	Colocation and edge data centres for Airtel enterprise customers	n/a	14 data centres, 200 MW, USD 600 m expansion; certified sites in Chennai and Pune	low
President Enclosures (Schneider Electric India) Mumbai, Maharashtra	partner-competitor	Smart racks 42U, network and server enclosures	Quote-based	Sold on se.com India as President Enclosure Smart Rack 42U	medium
Sify Infinitt Spaces Chennai, Tamil Nadu	partner-competitor	Colocation with in-house BMS and NOC; enterprise services	n/a	14 data centres, 190 MW, many TIA-942 certified sites in Mumbai, Chennai, Noida, Bengaluru, Hyderabad; also an SI	low
Sterling and Wilson Data Center Mumbai, Maharashtra	partner-competitor	EPC design and build of data centres including BMS and EMS packages	Project-based	Claims 28 data centre EPC projects across India and Africa	low
STT GDC India Mumbai, Maharashtra (group: Singapore)	partner-competitor	Colocation; markets rack densities to 120 kW	n/a	30 data centres in 10 cities, about 390 MW, TIA-942 Rated 3 sites across Bengaluru, Noida, Chennai, Delhi, Pune, Mumbai, Hyderabad	low

COMPETITOR	TYPE	PRODUCTS IN INDIA	PRICE BAND	INDIA PRESENCE	THREAT
Valrack Modular Systems Vasai, Maharashtra	partner-competitor	Valrack smart and intelligent racks, server and network racks	Quote-based	Indian rack OEM; resold on GeM by Sunlite Systems and Infomac with 'environmental monitoring' in the smart-rack bundle	medium

Competitor profiles

– **AdvanceTech India (Zirakpur)** direct · threat medium Publicly observed S65 S135

Zirakpur, Punjab · Indian IoT and AV firm on TradeIndia and its own site · Rs 67,796 per set

STRENGTHS

- Priced against Rax's set almost exactly
- Cloud dashboard and app included

WEAKNESSES

- Diversified into agri, video walls and AV; monitoring is one of many lines
- No SNMP evidenced

– **AKCP sensorProbe / sensorProbeX+** direct · threat medium Publicly observed S70 S137 S94

Bangkok, Thailand · India distributor Fluke Infotech listed on akcp.com; sold through UK and global resellers; forum favourite · Quote-based; UK reseller pricing only

STRENGTHS

- SNMP v1/v2/v3, Modbus, RADIUS on X+
- Rack-door swing-handle access monitoring per employee
- Telecom references (200+ units at one operator)
- Cheap enough to be recommended on forums as 'rock solid'

WEAKNESSES

- Thin Indian channel
- Software (AKCPro) is a separate purchase
- No camera on base units

– **AVTECH Room Alert** direct · threat low Publicly observed S77 S137

Warren, Rhode Island, US · Global online sales; forum recommendations; no Indian distributor found · Room Alert 32S with PoE and SNMP v3 sold via UK resellers; India price not found

STRENGTHS

- Simple 'set up in minutes' positioning; HTTPS, TLS, SNMP v3 on S models
- Cloud account aggregates sites
- Forum votes for Room Alert 3E PoE

WEAKNESSES

- Cloud subscription for alerting
- Thin India channel

– **Delta Electronics InfraSuite EMS** direct · threat medium Publicly observed S71

Taipei, Taiwan · Delta Power Solutions India (UPS and micro data centres); EMS leaflet hosted by Mpower Group, an Indian distributor · Quote-based

STRENGTHS

- EMS2000 supports SNMP v1/v3, HTTPS, SSH, SFTP, syslog, RADIUS
- Cascades ten EnviroProbes over RS485
- Bundled into Delta's micro data centre, a direct FUJI-style competitor

WEAKNESSES

- Modest brand pull in Indian enterprise IT
- Leaflet dated 2023; roadmap unclear

– **Eaton (environmental monitoring probe for UPS)** direct · threat low ● Inferred

Dublin, Ireland · Eaton India sells UPS widely; the EMP page returned 404 in this pass · Not established

STRENGTHS

- Rides on the UPS network card, the substitute buyers already own

WEAKNESSES

- Page not opened; India specifics unknown

– **HW group** direct · threat low ● Publicly observed S76 S137

Prague, Czech Republic · Sold through global resellers; no Indian distributor found in this pass · Entry devices in the low hundreds of USD (UK reseller); India price not found

STRENGTHS

- Industrial-grade, secure protocols (SNMP v3, TLS, MQTT, Modbus RTU)
- LTE and NB-IoT variants for unmanned sites
- 185 m leak cable on WLD2

WEAKNESSES

- No Indian presence evidenced
- Portal-based model unfamiliar to Indian PSU buyers

– **Jyoti Telecom (Nashik)** direct · threat medium ● Publicly observed S134

Nashik, Maharashtra · Indian manufacturer selling through IndiaMART storefront; claims customised embedded development · Rs 27,500 to Rs 32,500 per unit

STRENGTHS

- Made in India, GSM-first for sites without LAN
- 48-hour battery backup; one-year warranty
- Price a third of a Rax set

WEAKNESSES

- No Ethernet or SNMP; no access control or camera
- Accuracy plus or minus 2 to 3 degrees C
- No central multi-site software beyond a cloud portal

– **Kentix** direct · threat low ● Publicly observed S78

Idar-Oberstein, Germany · No Indian presence evidenced · Quote-based

STRENGTHS

- Closest functional analogue to Rax's integrated access-plus-environment concept
- Rack readers with Ethernet, radio door handles

WEAKNESSES

- European price and channel
- Overkill for Indian SME rooms

– **Legrand / Raritan Smart Rack Controller** direct · threat medium ● Publicly observed S73 S33

Limoges, France (Raritan: New Jersey, US) · Legrand owns Netrack in Bengaluru and Raritan; Raritan PDUs sold through Indian distributors; SRC availability in India not evidenced on the page · Quote-based; USD list not found

STRENGTHS

- SNMP, Modbus TCP and JSON-RPC to BMS and DCIM
- Audited door access with SmartLock; asset tracking to 1U
- 100-240 VAC or 48 VDC for telecom sites
- Same owner as Netrack, the Indian rack leader

WEAKNESSES

- No published India price or distributor for SRC
- Enterprise complexity for a five-rack room
- Legrand can bundle Raritan into Netrack and squeeze third parties

– **Network Technologies Inc (ENVIROMUX)** direct · threat low Publicly observed S30

Aurora, Ohio, US · Online sales; no Indian distributor found · E-2D USD 462 to 618; E-5D USD 1,506 to 2,133 (US reseller)

STRENGTHS

- Linux-based, cascades five units, 17 email recipients
- Camera snapshot on door or keypad event, like Rax's camera idea

WEAKNESSES

- No Indian presence
- Designed and made in the US, priced accordingly

– **Rittal CMC III** direct · threat medium Publicly observed S75 S34 S80 S2

Herborn, Germany · Rittal India sells enclosures, cooling and CMC III; India blog on server racks; Rittal appears in Rax's own e-surveillance customer list as a small account · CMC III PU USD 1,220 (CDW); sensors extra

STRENGTHS

- Integrated temperature and access sensors in the base unit; up to 32 sensors
- PRTG has native CMC III sensors
- Ships inside Rittal TS IT racks and cooling
- Industrial credibility in manufacturing plants

WEAKNESSES

- Highest entry price in the set
- Proprietary CAN-bus sensor ecosystem
- Sold as part of a Rittal rack sale more than stand-alone

– **Schneider Electric / APC NetBotz** direct · threat high Publicly observed S60 S59 S30 S89 S92 S61 S64

Rueil-Malmaison, France (APC: Rhode Island, US) · Full: se.com/in product pages, Redington as distributor, IndiaMART traders in Ahmedabad and Delhi, President racks now on se.com India · NetBotz 250 Rs 1,00,000 on IndiaMART (USD 690 US street); NetBotz 750 USD 2,706; EcoStruxure IT about USD 53 per node per year

STRENGTHS

- Reference brand named in most tenders and forum threads
- 42 wired and 47 wireless sensors, badge access for two rack doors, camera on 750
- EcoStruxure IT and Data Center Expert integration; SNMP native
- Two-year warranty; national service network through APC UPS base

WEAKNESSES

- Indian street price 3.6x US price
- Alert spam without tuning; 755 email-alert failures reported on forums
- Cloud alerting adds subscription cost

– **Sensaphone** direct · threat low Publicly observed S82

Aston, Pennsylvania, US · No Indian channel found · Low-cost positioning; India price not found

STRENGTHS

- Simple phone alerts; strong in refrigeration and vaccine rooms

WEAKNESSES

- Not IT-rack focused
- No Indian presence

– **ServersCheck (InfraSensing)** direct · threat low Publicly observed S79

Belgium · Online sales; claims 138 countries · Quote-based

STRENGTHS

- Claims 13,000+ customers
- Daisy-chain sensors reduce cabling

WEAKNESSES

- No Indian channel evidenced

– **Spaceage Security Systems (Noida)** direct · threat low Publicly observed | S35

Noida, Uttar Pradesh · Indian manufacturer on IndiaMART · Rs 4,800 for the rack alarm

STRENGTHS

- Cheapest rack-level alarm found
- Existing security-products channel

WEAKNESSES

- Single function; no logging or integration

– **Vertiv (Geist Watchdog, Knurr RMS III)** direct · threat high Publicly observed | S31 | S32 | S74 | S38 | S37 | S40 | S95 | S124

Westerville, Ohio, US · Full: Vertiv India catalogue pages, Watchdog 15 launched in India in 2023, resellers Radiant and Serrax, Multivista in Chennai · Watchdog 100-P Rs 61,115 on IndiaMART; Vertiv 42U smart cabinet with 3.5 kW AC Rs 10 lakh

STRENGTHS

- Three-year warranty extended to five on registration
- RMS III lists SNMP, Modbus TCP, MQTT, https, three user levels
- Sold with Vertiv cooling and UPS into the same racks
- Forum reputation: easy setup, fits Nagios

WEAKNESSES

- Entry Watchdog has only two sensor inputs
- Access control and camera need other Vertiv products
- Price still above Rax's whole set for the monitor alone

– **Huawei Digital Power (NetEco, smart modular DC)** indirect · threat medium Publicly observed | S72

Shenzhen, China · Sold in India through Huawei Digital Power partners; telecom heritage · Bundle pricing

STRENGTHS

- Monitoring arrives inside the module at no separate line
- Strong in telecom edge

WEAKNESSES

- Government procurement restrictions on Chinese telecom-adjacent gear
- Not sold as a component

– **Nlyte Software** indirect · threat low Publicly observed | S69

San Mateo, California, US · Enterprise DCIM sold to Indian colocation and BFSI through partners · Quote-based

STRENGTHS

- Enterprise-grade capacity planning

WEAKNESSES

- Complex; irrelevant to a five-rack room

– **Schneider EcoStruxure IT Expert** indirect · threat medium Publicly observed | S67

Rueil-Malmaison, France · Sold with NetBotz and APC UPS in India · USD 6,581 per 25 nodes for five years (about USD 53 per node per year)

STRENGTHS

- Turns NetBotz into a subscription platform

WEAKNESSES

- Locks the buyer into the Schneider ecosystem

– **Sunbird DCIM (dcTrack, Power IQ)** indirect · threat low Publicly observed | S68 | S98 | S99 | S81

Somerset, New Jersey, US · Sold globally; Indian resellers exist; 175 Capterra reviews at 4.7 · 50 cabinets MSRP USD 34,416; 300 cabinets USD 180,295; Power IQ from USD 3.99 per month

STRENGTHS

- Consumes rack-controller data; linear per-cabinet pricing praised by users

WEAKNESSES

- Not a sensor vendor; needs controllers like Rax's to feed it

-
- **Cisco Meraki MT sensors** substitute · threat medium Publicly observed S90 S92

San Jose, California, US · Sold with Meraki networks in India · Per-sensor with Meraki licence

STRENGTHS

- Five-year battery, 'no fake alarms' per users
- Zero cabling

WEAKNESSES

- Only works with Meraki access points
 - No access control or camera
-

- **Do nothing: security guard, logbook and thermostat** substitute · threat high Publicly observed S108 S107 S109

n/a · The default in most Indian SME server rooms and many branch back rooms · Zero capital

STRENGTHS

- Accepted by auditors if the logbook exists
- No integration burden

WEAKNESSES

- Fails overnight and at weekends; the failure mode every forum anecdote describes
-

- **Do-it-yourself builds (ESP32, Raspberry Pi)** substitute · threat low Publicly observed S138 S96

n/a · Indian maker guides (Zbotic, Mumbai) and forum recommendations · Under Rs 5,000 in parts

STRENGTHS

- Near-zero cost; SMS under Rs 0.50 per alert

WEAKNESSES

- No warranty, audit trail, certification or support; unacceptable to auditors
-

- **Paessler PRTG (and ManageEngine OpManager)** substitute · threat medium Publicly observed S80 S90 S96

Nuremberg, Germany · Widely licensed by Indian enterprises and PSUs · Licence by sensor count; free tier

STRENGTHS

- Reads temperatures servers and UPS already expose; zero hardware cost
- Aggregates any SNMP controller, which is the integration Rax lacks

WEAKNESSES

- Cannot sense water, smoke or doors without hardware
-

- **UPS network-card probes (APC NMC, Eaton, Vertiv)** substitute · threat high Publicly observed S88 S13

Various · Every APC, Vertiv, Eaton and Fuji Electric UPS in India can take a temperature probe on its network card · Probe in the low thousands of rupees

STRENGTHS

- Already owned; 'saved our butts when the AC died'

WEAKNESSES

- No leak, smoke, door or camera; single point
-

- **CtrlS Datacenters** partner-competitor · threat low Publicly observed S18 S55

Hyderabad, Telangana · 15 data centres, about 250 MW, Rated 4 certified halls in Mumbai and Hyderabad; USD 2 bn expansion · n/a

STRENGTHS

- Large certified estate; reference value

WEAKNESSES

- Global-vendor framework agreements; cyber and SLA expectations exceed Rax's evidence
-

– **Electronics & Controls Power Systems (E&C)** partner-competitor · threat low Publicly observed S152

Mumbai, Maharashtra · Online UPS for bank head offices, branches and ATMs; supplies system integrators building smart racks; offers remote monitoring · Not published

STRENGTHS

- Already in smart-rack bills of materials through integrators
- Bank branch UPS relationships

WEAKNESSES

- No environmental or access monitoring product found
- Small public footprint

– **Fuji Electric India** partner-competitor · threat high Publicly observed S12 S13 S3 S144 S145 S147 S149

Chennai, Tamil Nadu (group: Tokyo) · Chennai headquarters (formerly Consul Neowatt), factories in Chennai and Pune; 350+ service engineers in 80+ locations, over one lakh installations, several thousand bank branches and over 10,000 ATM sites serviced; Rax's only RMC buyer · Buys Rax sets at Rs 66,675 to Rs 71,055

STRENGTHS

- Owns the bank, ATM, hospital and enterprise UPS service relationships Rax lacks
- Has sold integrated site monitoring to banks before (iPEMS, 2013)
- Could brand and bundle the Rax set nationally through 80+ service locations

WEAKNESSES

- Could design its own controller or switch to Delta or Vertiv
- Rax has no visibility of the end customer or the bundle price
- Rax delivered 86.7 percent of its orders late, which invites a second source

– **Micro data centre assemblers (ReadyPod, APS Tech, Green Powers)** partner-competitor · threat medium

Publicly observed S66

Hyderabad and others · TradeIndia listings with prices · Rs 70,000 to Rs 3.8 lakh per unit

STRENGTHS

- Ready buyers for an OEM controller at Rax's price
- Sell to edge, campus and SME rooms Rax cannot reach directly

WEAKNESSES

- Each already sources a monitoring board from someone

– **Netrack (Legrand)** partner-competitor · threat high Publicly observed S33

Bengaluru, Karnataka · Indian rack market leader with national distributors; ISO 9001/14001/27001/45001 plant · Rack systems quote-based; smart-cabinet class Rs 3 to 10 lakh

STRENGTHS

- Owns the rack the controller sits in
- Legrand ownership brings Raritan SRC in-house
- Positioned at banks, insurance, warehouses, manufacturing and education

WEAKNESSES

- Its own access controller competes with a Rax white-label
- Bundles are sold by rack salespeople, not monitoring specialists

– **NTT Global Data Centers India** partner-competitor · threat low Publicly observed S18 S55

Mumbai, Maharashtra (group: Tokyo) · About 290 MW across five markets; certified NAV2 site; investing USD 1.5 bn to 700 MW by 2027 · n/a

STRENGTHS

- Reference value; managed-services arm buys monitoring

WEAKNESSES

- Global procurement

- **Numeric UPS (Legrand)** partner-competitor · threat medium ● Publicly observed S151 S73 S33

Chennai, Tamil Nadu (group: Limoges, France) · Powers 60,000+ ATMs; 250+ company-owned service centres, 1,200 service professionals; same group as Netrack and Raritan · No monitoring price published

STRENGTHS

- Largest ATM UPS estate found; a FUJI look-alike with a bigger bank footprint
- Can bundle Raritan or Netrack monitoring in-group

WEAKNESSES

- In-group monitoring makes a Rax OEM pitch harder
- No public branch-room monitoring offer

- **Nxtra by Airtel** partner-competitor · threat low ● Publicly observed S18 S55

Gurugram, Haryana · 14 data centres, 200 MW, USD 600 m expansion; certified sites in Chennai and Pune · n/a

STRENGTHS

- Edge sites and enterprise customers overlap Rax's segments

WEAKNESSES

- Telecom-grade vendor qualification

- **President Enclosures (Schneider Electric India)** partner-competitor · threat medium ● Publicly observed S64

Mumbai, Maharashtra · Sold on se.com India as President Enclosure Smart Rack 42U · Quote-based

STRENGTHS

- Inside the Schneider channel, so NetBotz is the natural monitoring bundle

WEAKNESSES

- Same channel closes the door to a Rax controller

- **Sify Infinit Spaces** partner-competitor · threat low ● Publicly observed S18 S55

Chennai, Tamil Nadu · 14 data centres, 190 MW, many TIA-942 certified sites in Mumbai, Chennai, Noida, Bengaluru, Hyderabad; also an SI · n/a

STRENGTHS

- A Chennai neighbour with certified halls and an SI arm

WEAKNESSES

- Operators standardise on BMS and DCIM platforms, not rack boxes

- **Sterling and Wilson Data Center** partner-competitor · threat low ● Publicly observed S100

Mumbai, Maharashtra · Claims 28 data centre EPC projects across India and Africa · Project-based

STRENGTHS

- Specifies monitoring for whole halls
- Could adopt a low-cost rack controller for enterprise projects

WEAKNESSES

- Prefers global brands its clients name
- Long EPC procurement cycles

- **STT GDC India** partner-competitor · threat low ● Publicly observed S18 S55

Mumbai, Maharashtra (group: Singapore) · 30 data centres in 10 cities, about 390 MW, TIA-942 Rated 3 sites across Bengaluru, Noida, Chennai, Delhi, Pune, Mumbai, Hyderabad · n/a

STRENGTHS

- Largest certified footprint in India

WEAKNESSES

- Standardised global vendor list

– **Valrack Modular Systems** partner-competitor · threat medium

Publicly observed S63 S110

Vasai, Maharashtra · Indian rack OEM; resold on GeM by Sunlite Systems and Infomac with 'environmental monitoring' in the smart-rack bundle · Quote-based

STRENGTHS

- GeM presence through resellers
- Smart-rack bundle needs a controller like Rax's

WEAKNESSES

- Monitoring component vendor not disclosed
 - Reseller-led marketing
-

07 Pricing and unit economics

KEY TAKEAWAYS

- Forty-two price points across six categories, at least five in each: controllers from ₹4,800 to ₹1,00,000, sensor kits from ₹350 per metre to ₹1.5 lakh, DCIM from USD 53 per node per year to USD 600 per cabinet, access add-ons from a ₹900 EM lock and ₹1,529 Wiegand reader to a USD 1,255 NetBotz handle kit, NetBotz extended warranty at USD 380 a year, bundled micro-DCs from ₹70,000 to ₹10 lakh. Publicly observed S35 S59 S84 S86 S67 S68 S85 S167 S169 S170 S66 S124
- Rax's ₹69,065 set is priced at the Indian GSM tier and specified at the global entry tier; the controller alone at ₹36,000 is a third of NetBotz 250's Indian street price. Rax-supplied S3 Publicly observed S59
- Rax's own price list is inconsistent: three set prices in nine months (₹66,675, ₹69,065, ₹71,055), a kit at ₹32,000 to one buyer and ₹16,500 to another, and no published list at all. Rax-supplied S3 S8
- No AMC has ever been sold on this product; the modelled AMC at 12 percent of set price (₹8,300 a year) is the only recurring revenue on the table. Estimated S3
- Cost of goods, gross margin and receivable days are unknown; the plan needs a gross margin of at least 40 percent on sets to fund SNMP, certification and a second salesperson. Unknown Recommendation

Observed price points

CATEGORY	ITEM	PRICE	BASIS, DATE	SOURCE
Controllers	Rax RMC set to FUJI	₹69,065	order book, Dec 2025	S3
Controllers	Rax RMC controller only	₹36,000	order book, May 2025	S3
Controllers	NetBotz 250, IndiaMART Ahmedabad	₹1,00,000	listing, 2026	S59
Controllers	NetBotz 250, US reseller	USD 690	listing, 2026	S30
Controllers	NetBotz 750, US reseller	USD 2,706	listing, 2026	S30
Controllers	Vertiv Geist Watchdog 100-P, IndiaMART Delhi	₹61,115	listing, 2026	S32
Controllers	Rittal CMC III PU, CDW	USD 1,220	listing, Aug 2026	S34
Controllers	AdvanceTech server room monitoring set	₹67,796	TradeIndia, Aug 2026	S65
Controllers	Jyoti Telecom GSM temperature-humidity monitor	₹27,500	storefront, 2026	S134
Controllers	Vertiv Geist Watchdog 15-P, IndiaMART Delhi	₹33,134	listing, Sep 2026	S32
Controllers	NTI ENVIROMUX E-2D, US list	USD 445	list, 2026	S172
Controllers	Spaceage rack temperature alarm	₹4,800	IndiaMART, 2026	S35
Sensor kits	Rax RMC KIT to FUJI; to MRS	₹32,000; ₹16,500	order book, Jun 2025	S3
Sensor kits	APC AP9335TH temperature-humidity	USD 139	listing, 2026	S122
Sensor kits	Sontay leak controller and cable, Noida	₹28,000	IndiaMART, 2022	S83
Sensor kits	Leak sensing cable, Mumbai	₹350 per metre	IndiaMART, 2026	S84
Sensor kits	Full-room leak system, Delhi	₹1,50,000	TradeIndia, 2026	S86
DCIM	EcoStruxure IT Expert, 25 nodes, 5 years	USD 6,581	SHI, 2026	S67
DCIM	Sunbird dcTrack 50 cabinets; 300 cabinets	USD 34,416; 180,295	MSRP, 2026	S68
DCIM	Sunbird Power IQ entry	USD 3.99 per month	Capterra, 2026	S98

CATEGORY	ITEM	PRICE	BASIS, DATE	SOURCE
Access	EM lock 600 lbs	₹900 to ₹7,500	IndiaMART, Flipkart, 2026	S85, S123
Access	Wiegand 26 RFID reader; ELPRO26 proximity reader, Noida	₹1,529; ₹2,430	IndiaMART, 2026	S167, S168
Access	APC NetBotz 13.56 MHz rack access handle kit NBHN1356	USD 1,254.99	US reseller, 2026	S169
Bundles	Smart cabinet; smart row; ReadyPod 4 x 42U	₹70,000; ₹2 lakh; ₹3.8 lakh	TradeIndia, 2026	S66
Bundles	Vertiv 42U with 3.5 kW AC	₹10 lakh	IndiaMART, Aug 2026	S124
AMC	Data-centre asset AMC bids on GeM	₹5.4 lakh; ₹22 lakh	GeM via aggregator, Sep 2026	S36
AMC	NetBotz one-year extended warranty renewal, 3xx/4xx appliance	USD 379.99	US reseller, 2026	S170
AMC	NetBotz 7 Series three-year service pack	USD 2,849.99	US reseller, 2026	S171
AMC	Rax set AMC at 12 percent of set price	₹8,300 a year	modelled	S3

All prices are listings or one customer's order book; none is a negotiated enterprise contract. Pass 2 removed a petroleum loading-gantry bid that the first pass had filed under AMC, moved the rack-shelf line to bundles, and re-verified the NetBotz and Watchdog listings; the original Watchdog URL now shows another product and was replaced. The NetBotz warranty prices are the incumbent's own AMC benchmark: USD 380 for one year of cover on a single legacy appliance and USD 2,850 for three years on a 7-series, which makes a 12 percent AMC of ₹8,300 a year on a ₹69,065 Rax set look modest rather than ambitious.

Publicly observed

S59S30S32S34S65S134S35S122S83S84S86S67S68S98S85S123S167S168S169S170S171S172S66S124S36

Rax-supplied

S3

Estimated

S170S30

Rax's pricing and how it compares

The set price moved from ₹66,675 (June to November 2025 work orders) to ₹69,065 (December 2025 onward) with one order at ₹71,055; the kit was ₹32,000 to FUJI and ₹16,500 to MRS; the controller alone was ₹36,000; a shelf was ₹1,590. There is no published price list, no distributor price, no GeM catalogue price. Against the market, the controller at ₹36,000 is 36 percent of the NetBotz 250 Indian street price and 59 percent of a Watchdog 100-P, while the full set at ₹69,065 is close to AdvanceTech's ₹67,796 GSM set and 2.5 times Jyoti's ₹27,500 monitor. A NetBotz 250 dressed to Rax's set (two handles, leak rope, smoke, camera pod) would exceed ₹2 lakh in India on the listed component prices.

Publicly observed

S59S32S65S134S30

Estimated

S59S30

Rax-supplied

S3

₹36,000 versus ₹1,00,000

Rax controller against NetBotz 250 appliance, both without sensors, in India; the 64 percent gap is the whole commercial argument, and it disappears if the buyer needs SNMP.

Rax-supplied

S3

Publicly observed

S59

Price architecture options

ARCHITECTURE	FITS	EVIDENCE IT WORKS IN THE CATEGORY
OEM controller, per unit, volume tiers, no software	Fuji Electric India, Netrack, Valrack, micro-DC assemblers	FUJI's twenty-set monthly orders at a fixed unit price Rax-supplied S3
Set plus one-year warranty, capital sale	SME and campus server rooms, e-surveillance integrators into bank rooms	Jyoti and AdvanceTech sell this way; NetBotz sold this way for two decades Publicly observed S134S65S30
Set plus AMC at 10 to 12 percent a year	Banks, PSUs, state data centres, hospitals	Every GeM data-centre AMC bid; SBI's facility-management RFP buys 24x7 monitoring as a service Publicly observed S36S133
Per-site subscription including hosted RT-SW-RMC	Multi-site enterprises, telecom edge, distributed bank rooms	EcoStruxure IT at USD 53 per node per year; Room Alert cloud; Jyoti's ₹5,000 premium for the cloud version Publicly observed S67S77S134

Bundle inside a smart rack or micro DC at a rack price

Rack OEMs, EPC firms

Netrack iRack, ReadyPod, Huawei smart module all price monitoring inside the enclosure Publicly observed S33 S66 S72

The OEM architecture is proven for Rax; the AMC and subscription architectures are where the margin and stickiness are, and neither has been tried. Recommendation

Cost to serve and margin

No cost, margin, receivables or profitability data exists in the Rax record. The bill of materials for a set (a controller board, camera module, OLED, two readers, two EM locks, two door contacts, smoke sensor, leak rope, two Modbus temperature-humidity sensors, hooter, enclosure and power supply) can be bounded from the same marketplaces that price the finished goods: EM locks at ₹900 to ₹2,250 each, leak cable at ₹350 per metre, an AP9335TH-class sensor at USD 139 retail (far less at component level). A 40 percent gross margin on ₹69,065 leaves about ₹27,600 per set; at about 240 sets a year that is ₹66 lakh, which does not fund SNMP firmware, a software datasheet, CE testing and a salesperson in one year. The margin must be established before any price cut for a second OEM. Publicly observed S85 S123 S84 S122 Unknown Estimated S3

Subsidy and scheme effects

There is no subsidy on the buyer's side for a monitoring device. Tamil Nadu's data-centre policy reimburses 10 percent of fees paid to Tamil Nadu MSME sub-contractors up to ₹10 lakh per data centre, which makes a Chennai MSME's installation and AMC fractionally cheaper to a Chennai colocation operator; it does not touch the hardware price. State capital subsidies go to park and unit developers. Publicly observed S26 Verified S25

Tender pricing dynamics

Public buyers buy monitoring in three ways: inside a facility-management or IBMS package (SBI's Navi Mumbai RFP lists WLD, access control, VESDA and BMS as assets to be monitored by the contractor, not bought), inside a smart-rack line on GeM (Gujarat's smart rack V2 bid, MP State Data Centre's smart-PDU racks), or as an AMC lot. L1 wins each of these on the total package, so a component maker gets in by being the cheapest compliant board on an SI's bill of materials, which again points at the OEM route. GeM catalogue listing needs a registered seller, OEM authorisation where the item is branded, and typically a three-year warranty; none of that is in place. Verified S133 Publicly observed S36 Inferred

Price discovery from past awards was attempted and failed at the paywall. Award values for GeM contracts and state tender results sit in paid databases (GeM contract search, tender-result aggregators), and no open award for a stand-alone environmental monitoring line was found. What is public is the size of the lots: of 40 live smart-server-rack tenders on 15 September 2026, 28 were estimated below ₹10 lakh, 8 between ₹10 lakh and ₹1 crore, 3 between ₹1 and ₹10 crore and 1 above ₹100 crore; Gujarat's intelligent-cabinet bid was ₹18 crore. Monitoring is therefore bought in lots small enough for an MSME to bid, inside packages large enough that the SI, not the component maker, sets the price. Two policies tilt those lots towards an Indian MSME maker: central buyers must source at least 25 percent of purchases from MSEs, and a Class-I local supplier (50 percent local content) can match the lowest price under the revised Make in India order. Publicly observed S174 S36 Verified S162 S163 Unknown

Payment terms and receivable risk

The order book shows FUJI work orders with expected delivery dates two to six weeks after the work-order date and a March 2026 batch delivered on the order date, consistent with an OEM running a kanban on Rax; payment terms are not recorded. Bank and PSU buyers pay 60 to 90 days after acceptance and hold retention against warranty; AGS Transact's insolvency cost Rax ₹0.86 crore in FY2025-26 and is the reminder that integrator receivables are the real risk in the bank channel. Rax-supplied S3 S2 Inferred

SO WHAT FOR RAX

Publish one price list with three tiers (controller, set, set plus AMC), hold the FUJI OEM price for volume commitments only, and attach a 12 percent AMC to every non-OEM sale from the first pilot. Do not quote below ₹66,675 for a set until COGS is known. Recommendation

Rack monitoring controllers
9 · ₹4,800 to ₹1,00,000

Environmental sensor kits
7 · ₹350 to ₹1,50,000

DCIM and monitoring software licences
1 · ₹32,500 to ₹32,500

Access-control add-ons
5 · ₹900 to ₹7,500

Bundled racks and micro data centres
5 · ₹1,590 to ₹10,00,000

AMC and service
3 · ₹8,300 to ₹22,00,000

₹100 ₹1,000 ₹10,000 ₹1 L ₹10 L ₹1 Cr

● Rax ● Observed market price — Observed range

Log scale, INR. Hover or tap a point for item, vendor, basis and date; every point is listed in the table below.

CATEGORY	ITEM	PRICE	BASIS	EVIDENCE
Access-control add-ons	Fail-safe electromagnetic lock, 600 lbs Riddhi Siddhi Computers, Mumbai (IndiaMART)	₹900 per piece	published 2026-09-15	Publicly observed S85
Access-control add-ons	APC NetBotz 13.56 MHz rack access handle kit NBHN1356 Zones (US reseller)	USD 1,254.99 per kit	published 2026-09-15	Publicly observed S169
Access-control add-ons	Wiegand 26 RFID card reader, 125 kHz, waterproof Aladdin Shoppers, IndiaMART	₹1,529 per piece	published 2026-09-15	Publicly observed S167
Access-control add-ons	Realtime EM lock 600 lbs Realtime via Flipkart	₹2,250 per piece	published 2026-09-15	Publicly observed S123
Access-control add-ons	Wiegand 26 proximity card reader ELPRO26 Indosoft Technology (Noida), IndiaMART	₹2,430 per piece	published 2026-09-15	Publicly observed S168
Access-control add-ons	Electromagnetic lock 600/1200 lbs, branded Instec India, Dombivli (IndiaMART)	₹7,500 per piece	published 2026-09-15	Publicly observed S85
AMC and service	APC NetBotz one-year extended warranty renewal, one 3xx/4xx appliance APCGuard (US reseller)	USD 379.99 per appliance per year	published 2026-09-15	Publicly observed S170

CATEGORY	ITEM	PRICE	BASIS	EVIDENCE
AMC and service	NetBotz 7 Series extended warranty service pack, parts and software support, 3 years CDW (US reseller)	USD 2,849.99 per appliance, 3 years	published 2026-09-15	 Publicly observed S171
AMC and service	Annual comprehensive AMC for a Rax RMC set (modelled at 12 percent of set price; no observed AMC exists yet) Rax Tech International (modelled)	₹8,300 per set per year	modelled 2026-09-15	 Estimated S3
AMC and service	GeM bid: annual maintenance service, rack-mounted proxy server, Delhi Statutory body via GeM (TenderDetail)	₹5,40,000 per contract	published 2026-09	 Publicly observed S36
AMC and service	GeM bid: annual maintenance service, data centre assets (storage and blade servers), Meghalaya Government buyer via GeM (TenderDetail)	₹22,00,000 per contract	published 2026-09	 Publicly observed S36
Bundled racks and micro data centres	1mm shelf (rack hardware line on FUJI work order) Rax Tech International	₹1,590 per piece	observed 2025-12-05	 Rax-supplied S3
Bundled racks and micro data centres	Smart cabinet data centre TradeIndia listing	₹70,000 per unit	published 2026-09-15	 Publicly observed S66
Bundled racks and micro data centres	Smart row data centre APS Tech Systems (TradeIndia)	₹2,00,000 per unit	published 2026-09-15	 Publicly observed S66
Bundled racks and micro data centres	Smart micro data centre, 4 x 42U IT racks ReadyPod Technologies, Hyderabad (TradeIndia)	₹3,80,000 per unit	published 2026-09-15	 Publicly observed S66
Bundled racks and micro data centres	Vertiv 42U rack with 3.5 kW rack-mount air conditioner (Smart Cabinet) Vertiv via IndiaMART seller	₹10,00,000 per piece	published 2026-08-23	 Publicly observed S124
DCIM and monitoring software licences	Sunbird Power IQ entry subscription Sunbird via Capterra listing	USD 3.99 per month, entry tier	published 2026-06-02	 Publicly observed S98
DCIM and monitoring software licences	EcoStruxure IT Expert, 25 nodes, five-year subscription Schneider Electric via SHI (US)	USD 6,581 per 25 nodes for 5 years	published 2026-09-15	 Publicly observed S67
DCIM and monitoring software licences	Cloud monitoring software for Jyoti GSM monitor (online version premium over stand-alone) Jyoti Telecom, Nashik	₹32,500 per device with cloud software	published 2026-09-15	 Publicly observed S134
DCIM and monitoring software licences	Sunbird dcTrack licence for up to 50 cabinets (MSRP) Sunbird via Matrix Solutions (US)	USD 34,416 per 50 cabinets, perpetual	published 2026-09-15	 Publicly observed S68
DCIM and monitoring software licences	Sunbird dcTrack licence for up to 300 cabinets (MSRP) Sunbird via Matrix Solutions (US)	USD 1,80,295 per 300 cabinets, perpetual	published 2026-09-15	 Publicly observed S68

CATEGORY	ITEM	PRICE	BASIS	EVIDENCE
Environmental sensor kits	APC AP9335TH temperature and humidity sensor APC via IT Devices Online (US)	USD 138.83 per piece	published 2026-09-15	 Publicly observed S122
Environmental sensor kits	Conventional PVC water-leak sensing cable National Fire Protection System, Mumbai (IndiaMART)	₹350 per metre	published 2026-09-15	 Publicly observed S84
Environmental sensor kits	USB pendrive temperature and humidity data logger Dynamic Micro Tech, Mumbai	₹8,500 per piece	published 2026-09-15	 Publicly observed S136
Environmental sensor kits	RMC KIT sold to MRS Rax Tech International	₹16,500 per kit	observed 2025-06-13	 Rax-supplied S3
Environmental sensor kits	Water sense detector system for server room, GSM Jyoti Telecom, Nashik	₹27,500 per unit	published 2026-09-15	 Publicly observed S134
Environmental sensor kits	Sontay water leak detection controller and sensing cable for server rooms Sontay via IndiaMART seller, Noida	₹28,000 per unit	published 2022-05-22	 Publicly observed S83
Environmental sensor kits	RMC KIT (sensor kit) sold to FUJI Rax Tech International	₹32,000 per kit	observed 2025-06-03	 Rax-supplied S3
Environmental sensor kits	Water leak detection system for server room (full room) Digital Kawach Solutions, New Delhi (TradeIndia)	₹1,50,000 per system	published 2026-09-15	 Publicly observed S86
Rack monitoring controllers	NTI ENVIROMUX E-2D small enterprise environment monitoring system Network Technologies Inc (US list)	USD 445 per unit	published 2026-09-15	 Publicly observed S172
Rack monitoring controllers	NetBotz 250 Room Monitor (NBRK0250A), US reseller APC via Server Racks Online	USD 690 per piece	published 2026-09-15	 Publicly observed S30
Rack monitoring controllers	Rittal CMC III Processing Unit 7030.000 Rittal via CDW (US)	USD 1,219.99 per piece	published 2026-08-09	 Publicly observed S34
Rack monitoring controllers	NetBotz Rack Monitor 750 (NBRK0750), US reseller APC via Server Racks Online	USD 2,706 per piece	published 2026-09-15	 Publicly observed S30
Rack monitoring controllers	Digital rack temperature monitoring and audio alarm Spaceage Security Systems, Noida (IndiaMART)	₹4,800 per piece	published 2026-09-15	 Publicly observed S35
Rack monitoring controllers	Server room temperature and humidity monitoring system, GSM, SMS and call alert Jyoti Telecom, Nashik	₹27,500 per piece	published 2026-09-15	 Publicly observed S134

CATEGORY	ITEM	PRICE	BASIS	EVIDENCE
Rack monitoring controllers	Vertiv Geist Watchdog 15-P NPS environmental monitor NCR Data Voiz Comm (New Delhi), IndiaMART	₹33,134 per piece	published 2026-09-15	 Publicly observed S32
Rack monitoring controllers	RMC controller only (row named FUJI ELECTRIC) Rax Tech International	₹36,000 per unit	observed 2025-05	 Rax-supplied S3
Rack monitoring controllers	Vertiv Geist Watchdog 100-P NPS environmental monitor Vertiv via Serrax Technologies, New Delhi (IndiaMART)	₹61,115 per piece	published 2026-09-15	 Publicly observed S32
Rack monitoring controllers	RMC Set, earlier price band (June to November 2025) Rax Tech International	₹66,675 per set	observed 2025-06-19	 Rax-supplied S3
Rack monitoring controllers	Server room monitoring system (GSM alerts, one-year warranty) AdvanceTech India, Zirakpur (TradeIndia)	₹67,796 per set	published 2026-08-13	 Publicly observed S65
Rack monitoring controllers	RMC Set (controller, sensors, locks, readers) sold to FUJI Rax Tech International	₹69,065 per set	observed 2025-12-18	 Rax-supplied S3
Rack monitoring controllers	NetBotz Rack Monitor 250 (NBRK0250), appliance only APC by Schneider via Netspace Infotech, Ahmedabad (IndiaMART)	₹1,00,000 per piece	published 2026-09-15	 Publicly observed S59

08 Channels and go-to-market

KEY TAKEAWAYS

- Six routes are assessed against twenty-five named intermediaries; the OEM white-label route is the only one with revenue, and it needs a contract, not a campaign. ● Rax-supplied S3 ● Publicly observed S33 S63 S66
- The bank-room route has two doors: FUJI-type UPS makers that already service bank branches and ATM sites (one of them already buys), and the e-surveillance integrators Rax invoices, which Rax names as a route but which have not bought a single RMC set. ● Rax-supplied S2 S5 ● Publicly observed S144 S151 ● Verified S139
- GeM, tenders and EPC specification wait for a certificate, an SNMP MIB and a three-year warranty; entering them earlier wastes the two salespeople. ● Publicly observed S36 S133 ● Inferred
- Distributors who carry APC, Vertiv, AKCP and Delta (Redington, Fluke Infotech, Mpower, Multivista) will not carry an unknown Indian controller until it has references; IndiaMART traders will list anything, which is how inbound already arrives. ● Publicly observed S61 S70 S71 S40 ● Rax-supplied S2
- Digital marketing agencies and partner sales teams failed before; the only marketing this category rewards is a price list, a datasheet with a MIB, and a case study, which cost nothing but honesty. ● Rax-supplied S2 ● Publicly observed S97 S94

Route by route

ROUTE	NAMED INTERMEDIARIES	ECONOMICS	CYCLE	RAX MUST PROVIDE	EVIDENCE IT WORKS
1. OEM and white-label	Fuji Electric India; Numeric (Legrand); Electronics & Controls; Netrack; Valrack; President (Schneider); ReadyPod; APS Tech; Green Powers; Delta Power Solutions India	₹36,000 to ₹69,065 per unit, volume call-offs, no marketing cost, low margin visibility	1 to 3 months to a sample; monthly thereafter	Compatibility documentation, spares, price stability, customisation	201 to 261 sets to one OEM in FY2025-26 ● Rax-supplied S148
2. Existing e-surveillance integrators into bank rooms	SIS Prosecur; Securen; Zicom; CMS Info Systems; Apar Innosys; AnG; ITAS	Set plus AMC at rate-contract prices; integrator margin 15 to 25 percent	3 to 6 months per bank programme	Para-61 evidence pack, SNMP, a pilot site, warranty terms	Same integrators bought 3,000 EVA units for SIS ● Rax-supplied S2
3. Micro-DC and smart-rack assemblers	ReadyPod; APS Tech; Sunlite Systems; Infomac	Controller inside a ₹2 to 4 lakh bundle	2 to 4 months	Board-level integration, OLED status, low unit price	TradeIndia bundles list monitoring as a line ● Publicly observed S66 S63
4. GeM catalogue, SDC and PSU tenders	GeM; NICSI; state SDC operators (UP, MP, Gujarat, AP live bids); STQC audits	L1 on package price; 60 to 90 day payment	6 to 12 months	BIS or CE, GeM registration, three-year warranty, OEM authorisation	Smart-rack and IBMS bids live in five states ● Publicly observed S36 S130
5. DC EPC and MEP specification	Sterling and Wilson DC; MEP consultants	Specified into halls; volume per project	12 to 18 months ahead of opening	SNMP, BACnet, specification sheet, references	28 EPC projects at one firm ● Publicly observed S100
6. Export via group entities	iibdaei (Dammam); Gulf Connect (Muscat); RaxTech Europe (Warsaw)	Paid pilots on the Saudi dossier's terms	12 months plus	SABER, CST, CE, local partner	Saudi dossier ranks RT-RMC-GX top three, conditional ● Rax-supplied S6

Distributors are the seventh route and the one to defer: Redington (APC), Fluke Infotech (AKCP), Mpower Group (Delta) and Multivista (Vertiv, Fuji Consul Neowatt UPS) carry brands with references; IndiaMART traders such as Netspace Infotech, Serrax, Maxxcom and Radiant list whatever sells, and are where Rax's inbound already comes from. A distributor listing before a certificate and a MIB exist would produce enquiries Rax cannot close. ● Publicly observed S61 S70 S71 S40 S59 S32 S62 S37 ● Rax-supplied S2

● Inferred

Testing the e-surveillance relationship as a route

Rax describes itself as a major e-surveillance player and wants its bank and service-company relationships to carry rack monitoring. The route was tested against the record rather than assumed. For it: the integrators hold rate contracts at bank branches, ATMs and some regional offices; Rax's alarm panels, temperature and light sensor units and PCMU already sit on those sites; and para 61 now gives the bank a reason to ask for temperature, water, smoke and access logs. Against it: the cross-sell file shows that none of Rax's e-surveillance accounts (APAR, ANG, SIS, Automation Systems, Zicom, Securens, ITAS) bought an RMC set in FY2025-26; SIS, Securens, Zicom and CMS together were 14 percent of revenue; ANG and ITAS, the two largest losses, left over quality and service; e-surveillance revenue fell from ₹14.27 crore in FY2023-24 to ₹5.96 crore; and no Indian e-surveillance integrator was found publicly selling server-room environmental monitoring. The data-centre room and the branch lobby are also different contracts: SBI's own data centre is watched by a facility-management contractor, not by its e-surveillance vendor. The route is therefore worth one pilot, not a programme, and it should run beside the route that has already bought: UPS makers whose engineers are in the same branch and ATM rooms every quarter. Fuji Electric India services over 10,000 ATM sites and thousands of branches; Numeric powers over 60,000 ATMs.

● Rax-supplied | S2 | S5 ● Verified | S133 ● Publicly observed | S144 | S151 ● Unknown

SO WHAT FOR RAX

Ask FUJI which bank and ATM estates the sets serve and offer a para-61 room package through that estate; run the integrator pilot as the test of Rax's stated relationships, with a kill date. ● Recommendation

Procurement mechanics

Public buyers procure monitoring inside packages. SBI's data-centre RFP buys the watching of existing panels as a facility-management service; state data-centre RFPs bundle smart-PDU racks and IBMS; GeM bids for smart racks (Gujarat) and data-centre AMCs (Meghalaya, Delhi) go to registered sellers with OEM authorisation and, for electronics, BIS marks where the product category requires them. Eligibility clauses typically ask for three years of turnover, past supply of similar items, a three-year warranty and a local service centre; Rax can meet turnover and service but not the certificate or the past-supply evidence outside one OEM. The pilot-to-scale path in the public sector runs through a system integrator's bill of materials, which again points to route 1 and 3 before route 4. Once a certificate exists, two national orders help: the MSE procurement policy sets a 25 percent MSE purchase goal for central buyers, and the revised Make in India order gives a Class-I local supplier with 50 percent local content purchase preference above ₹5 lakh. A Chennai-designed controller should qualify as Class-I, subject to a local-content calculation Rax has not done.

● Verified | S133 | S162 | S163 ● Publicly observed | S36 | S130 ● Inferred

Bank procurement runs on rate contracts held by integrators and on IS-audit findings; a finding under para 61 becomes a purchase order to the incumbent integrator within a quarter. The integrator, not the bank, chooses the device, subject to the bank's information-security review of any network-connected equipment, which is where the software datasheet and a vulnerability assessment are needed.

● Verified | S139 ● Rax-supplied | S2 ● Inferred

What Rax tried before and why this differs

Digital marketing agencies and channel partners with their own sales teams both failed, by Rax's own account, and referrals are dead. Neither is re-proposed. Route 1 needs no marketing and began with a design job, not a campaign; route 2 uses relationships Rax already invoices and one it already supplies (FUJI); route 3 is inbound from marketplaces Rax already appears on. The one new thing is a written OEM agreement and a written integrator programme, both of which are documents, not campaigns.

● Rax-supplied | S2 ● Recommendation

Sales motion for a two-person team

Person A owns OEMs: a quarterly review with Fuji Electric India, samples to two more rack or micro-DC makers, a controller-level price list and a compatibility note. Person B owns the bank-room channel: one pilot of ten rooms with one integrator, a para-61 evidence pack (what the device logs, how the auditor reads it), and a monthly call with the integrator's project managers. Nobody sells direct to enterprises until 2027; IndiaMART enquiries get the price list and a datasheet and are closed only if they fit routes 1 to 3. The part-time technical person prepares the SNMP MIB, the software datasheet and the fail-safe note.

● Rax-supplied | S2 ● Recommendation

Proof assets in order: a software datasheet with screenshots; an SNMP MIB and Modbus register map; a corrected hardware datasheet without the CE claim; a FUJI reference (with permission) or, failing that, an anonymised "240 sets to a Japanese-owned UPS maker" line; a pilot report with alarm-delivery and false-alarm statistics on the Saudi dossier's KPI list; and a one-page para-61 mapping.

● Rax-supplied | S6 | S1 ● Recommendation

Demo and pilot design

The demo is a single rack with the full set, a laptop showing the central software, and a phone receiving an alert when the door is opened without a card and when a heat gun warms the internal sensor. The pilot is ten rooms at one integrator's bank customer for ninety days, measuring alarm delivery success, false and stale alarm rate, mean time to acknowledge, door events matched to identity, and system availability, with a rollback plan; the same KPIs the Saudi dossier specified. Success is 95 percent alarm delivery, under one false alarm per room per month, and an auditor who accepts the log.

Rax-supplied S6 Recommendation

Reference-building under the quality history

Every pilot gets a named engineer, a 24-hour response commitment in writing, and 100 percent functional QC on the sets shipped, because the market knows the e-surveillance record and a second failure is unrecoverable. References are requested in writing after ninety clean days, never assumed.

Rax-supplied S2 Recommendation

Marketing that matches how buyers find suppliers

Buyers in this category find suppliers by asking peers on forums, by searching a product name plus "price", and by looking at IndiaMART; then they ask for a datasheet, a MIB and a price. Rax's website has the datasheet and no price; its software page has one line. The marketing plan is therefore: publish the price list, publish the software datasheet, publish the MIB, post a FUJI-style case study, and keep the IndiaMART listing current. No agency, no paid search.

Publicly observed S97 S94 S89 S8 S9

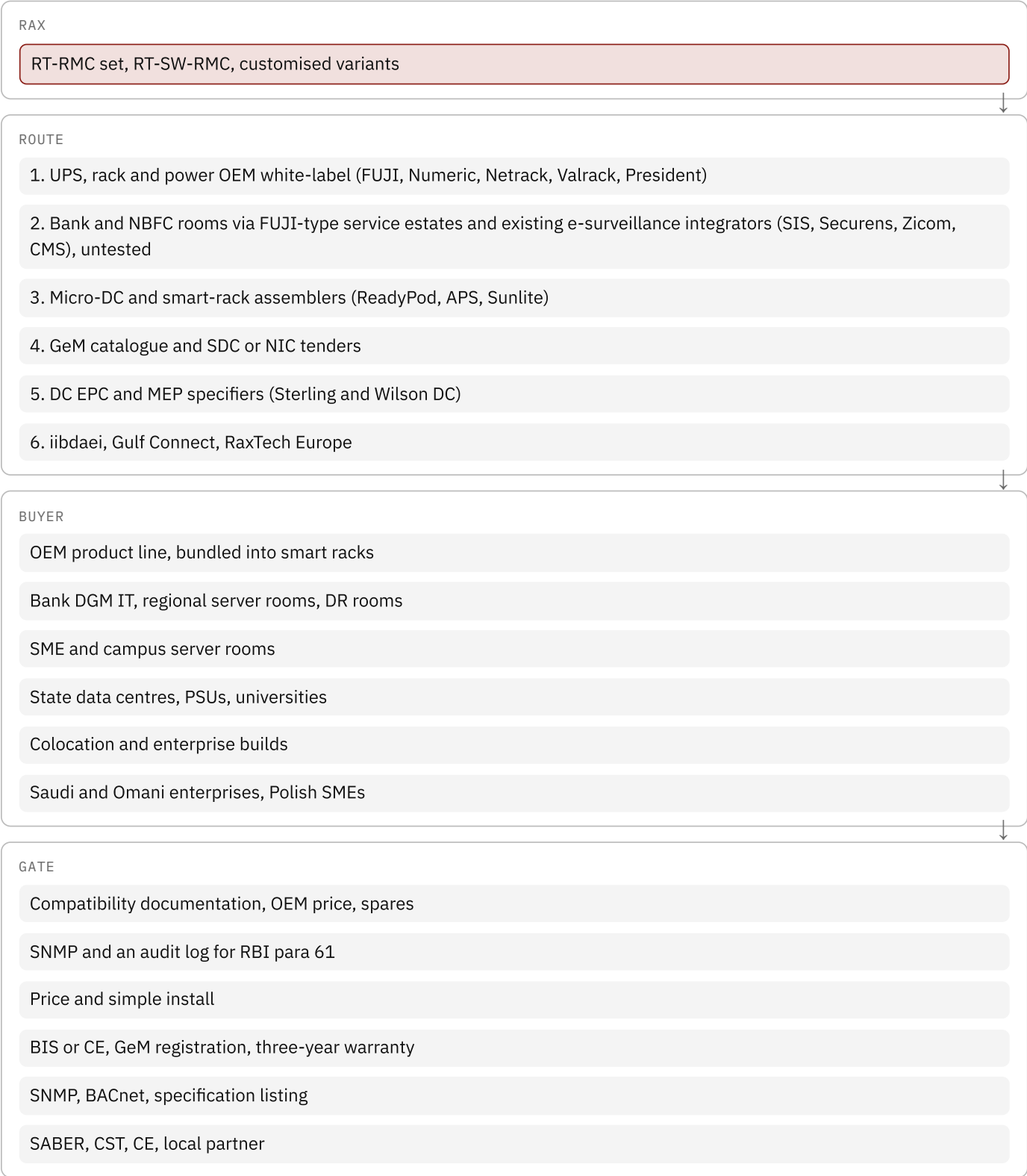
Recommendation

SO WHAT FOR RAX

Two documents, an OEM agreement and an integrator programme, and three files, a MIB, a software datasheet and a price list, are the whole go-to-market for the next twelve months.

Recommendation

Routes to market ranked for a two-person sales team



Existing OEM and e-surveillance accounts carry the product first; GeM and direct enterprise wait for readiness items; export runs through group entities on the Saudi dossier's terms. ● Recommendation

KEY TAKEAWAYS

- Tamil Nadu and Maharashtra score highest: Chennai holds 320 MW (18 percent of stock at H1 2026) and both Rax and Fuji Electric India are there; Mumbai and Navi Mumbai hold 846 MW (46 percent) and Pune another 182 MW. Publicly observed S153 S55 S12
- Karnataka, Telangana and Uttar Pradesh follow on enterprise density, 2030 pipelines (Hyderabad 420 to 450 MW) and live state data-centre tenders. Publicly observed S18 S19 S36
- Fourteen states are scored; the south-and-west arc from Chennai to Mumbai is serviceable from one base and holds three quarters of the reachable market. Estimated S19 S45
- The GCC view is the July 2026 Saudi dossier: conditional entry through distributed private-enterprise rooms after SABER, CST and NCA gates; not repeated here. Rax-supplied S6 S7
- Europe through RaxTech Europe needs CE marking under LVD, EMC and RoHS before a single unit can be sold; Poland's regulated-industry buyers expect EN 50600 Class 3. Publicly observed S105 S106 S104

India: states ranked

The tile map after this section scores fourteen states on four factors: share of operational capacity and pipeline (40 points), density of enterprise and public rooms proxied by bank branches, universities and state data centres (25), procurement activity visible in certified sites and state incentives (15), and proximity to Chennai service (20). Estimated S19 S18 S55 S41 S42

RANK	STATE	SCORE	THE DATA BEHIND IT
1	Tamil Nadu	92	Chennai about 290 MW (19 percent of 1,520 MW); half of H1 2026 supply additions; eight subsea cables; AdaniConneX Rated 4, STT, Sify, CtrlS, Nxtra, Techno Digital certified; Rax and Fuji Electric India plants; TN policy MSME clause
2	Maharashtra	90	Mumbai about 520 MW (34 percent); Pune 94 MW and an AI hub; CtrlS, NTT, Sify, Web Werks, Reliance, Equinix certified; SBI's GITC data centre; essential-services status under the 2023 IT policy
3	Karnataka	76	Bengaluru 78 MW rising to 220 to 270 MW; STPI Rated 4; Wipro, STT, Web Werks; Netrack headquarters; dense enterprise IT rooms
4	Telangana	74	Hyderabad 48 MW to 420 to 450 MW by 2030 at 44 percent CAGR; CtrlS, Sify, STT, CapitaLand, Airports Authority DR; largest share of investment commitments
5	Uttar Pradesh	70	Noida carries most of Delhi-NCR's 20 percent; 2021 policy subsidies; Yotta, STT, Sify, Web Werks, RailTel; UP SDC operator tender live
6	Delhi	62	Government and sovereign-cloud demand; C-DOT and STT certified; the June 2026 fire
7	Haryana	55	Gurugram and Manesar: Anant Raj Cloud and RailTel rooms; corporate headquarters
8	Gujarat	52	Reliance Jamnagar IDC; GIFT City; ₹18 crore intelligent-cabinet bid; Smart Rack V2 bid on GeM
9	West Bengal	48	Kolkata at 48 percent CAGR from a small base; Coal India site
10	Andhra Pradesh	45	Visakhapatnam emerging; live IBMS and fire-suppression package on GeM
11	Kerala	38	Enterprise, hospital and campus rooms; no certified colocation cluster
12	Madhya Pradesh	35	MP State Data Centre RFP live
13	Puducherry	30	SDC on the NIC composite model, 160 km from Chennai
14	Odisha	30	Bhubaneswar IT parks and NIC NDC; no certified colocation site

Capacity shares in the table are Savills via DD News for end-2025 and Houlihan Lokey for December 2024; Savills' H1 2026 figures (Mumbai 846 MW, Chennai 320 MW, Delhi-NCR 191 MW, Pune 182 MW) confirm the order and were added in pass 2 without changing a rank; certified sites are from the EPI register; tenders from the aggregator listing; policies from state documents.

Cities

Chennai first, for service reach, FUJI, Multivista's Vertiv-and-Fuji channel, and Techno Digital, Sify, STT, CtrlS and AdaniConneX halls within an hour of the factory; Bengaluru second for Netrack and enterprise rooms; Hyderabad third for the 2030 pipeline and public sites; Mumbai and Navi Mumbai for banks' head offices and the largest colocation estate, but with a two-day service radius that argues for an integrator-led presence rather than direct sales; Noida and Delhi for public-sector buyers and NIC.

Publicly observed S55 S40 S33 S18 S129 Recommendation

Export

GCC: the July 2026 IIBDAEI Saudi research already did this work and is reused, not redone. It ranks RT-RMC-GX in the top three for Saudi entry with a conditional verdict and a priority score of 86, sequences distributed private-enterprise server rooms first, mid-sized 10 to 100-rack estates second and rack, UPS and MSP channel bundles third, names eight commercial research targets from Almarai to EDGNEX, and gates entry on SABER and Saudi RoHS, CST approval for Ethernet equipment, NCA ECC flow-down, PDPL for images and badge data, and SBC 801 fire integration. The software dossier rates RT-SW-RMC bundle-only. Nothing in the Indian evidence changes those conclusions; the Indian readiness items (SNMP, software datasheet, CE) are prerequisites for the Saudi ones. Gulf Connect in Muscat has one small OEM client and no data-centre activity in the record.

Rax-supplied S6 S7 S2

Europe: RaxTech Europe in Warsaw has traded since November 2025 with no sales. To sell a mains-powered Ethernet controller in Poland, the manufacturer must CE-mark it under the Low Voltage Directive 2014/35/EU and the EMC Directive 2014/30/EU with RoHS 2011/65/EU compliance and REACH substance declarations, and the importer carries obligations of its own; none of that exists, and the datasheet's CE claim would be a liability at the border. Poland's market is about 200 MW of core-and-shell capacity, projected by PMR to triple within six years, and its financial regulator expects regulated-industry data centres to meet EN 50600 at least at Class 3, which raises the specification bar above the Indian SME room. Europe is a 2028 question after CE marking, and only through a Polish MSP or rack assembler.

Rax-supplied S2 Publicly observed S105 S106 S103 S102 S104 S28

Sequence

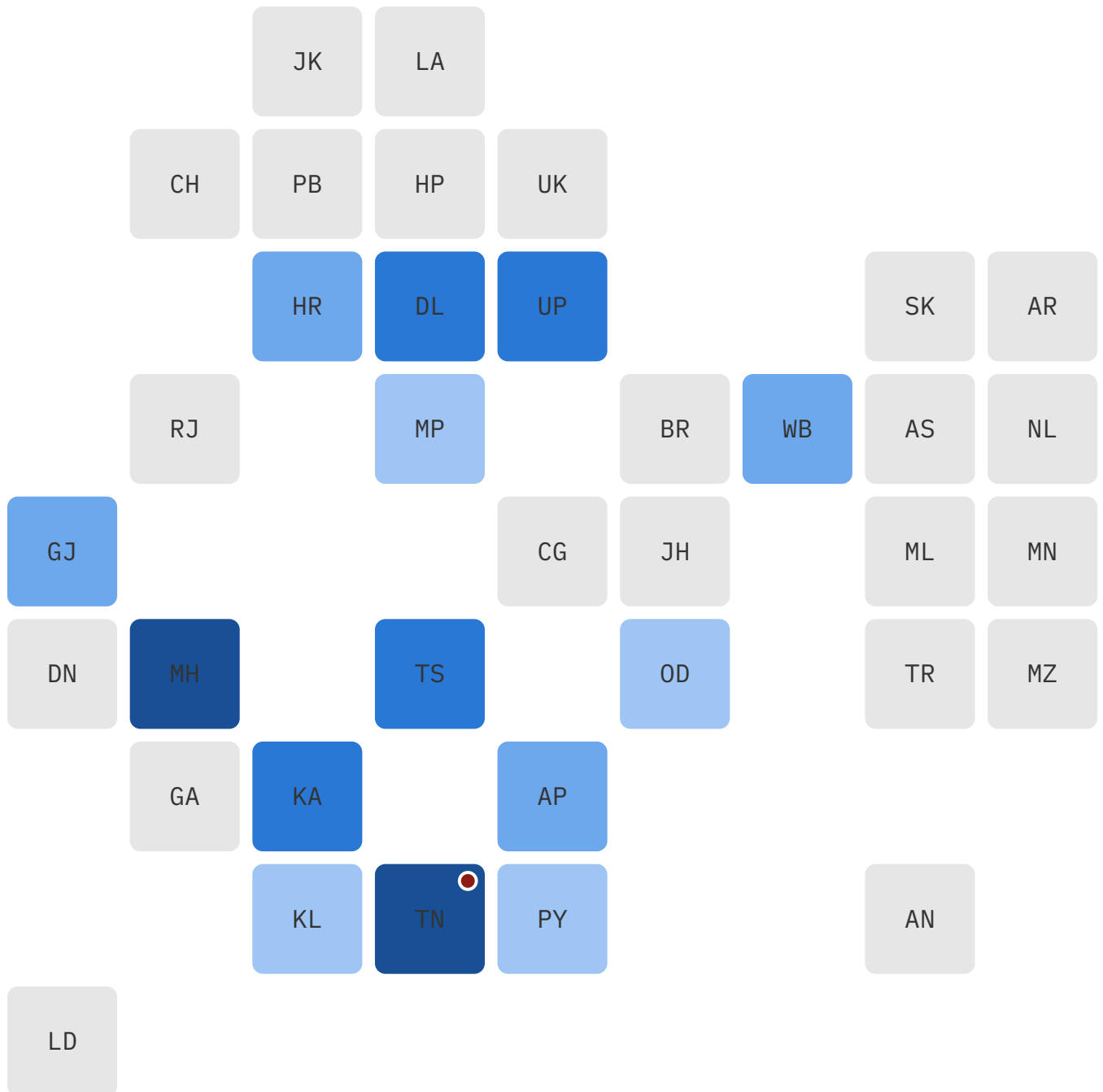
First, Chennai and Tamil Nadu through FUJI and one more OEM, and a bank-room pilot with a Chennai-based integrator. Second, Bengaluru and Hyderabad through Netrack-type OEMs and public sites, triggered by the SNMP release. Third, Mumbai and Noida through integrators and GeM, triggered by a certificate. Fourth, Saudi Arabia through iibdaei on the dossier's paid-pilot gate, triggered by CE and SABER. Fifth, Poland, triggered by CE and one European partner.

Recommendation

SO WHAT FOR RAX

Geography is not the constraint; readiness is. Every state in the top five can be served from Chennai through an OEM or an integrator once the protocol and certificate items exist.

Recommendation



1. TN Tamil Nadu 92

Chennai 320 MW IT at H1 2026 (18 percent of stock) and half of JLL's H1 2026 additions; Rax and Fuji Electric India headquarters; TN policy MSME clause

2. MH Maharashtra 90

Mumbai 846 MW IT (46 percent of stock) and Pune 182 MW at H1 2026; SBI's GITC data centre; essential-services status under the 2023 IT policy

3. KA Karnataka 76

Bengaluru 78 MW with 220 to 270 MW expected by 2030; STPI Rated 4 site, Wipro, STT, Web Werks certified; dense enterprise IT rooms; Netrack is headquartered here.

4. TS Telangana 74

Hyderabad 48 MW today but 420 to 450 MW by 2030 and a 44 percent CAGR; CtrlS, Sify, STT, CapitaLand and Airports Authority DR certified sites; largest share of 2019-2025 investment commitments.

5. UP Uttar Pradesh 70

Noida carries the Delhi-NCR share (20 percent of national capacity with Delhi); 2021 policy with capital subsidy and dual grid; Yotta, STT, Sify, Web Werks, RailTel certified sites; UP State Data Centre operator tender live.

6. DL Delhi 62

Government access and sovereign-cloud demand; C-DOT and STT Delhi sites certified; the June 2026 point-of-presence fire happened here.

7. HR Haryana 55

Gurugram and Manesar: Anant Raj Cloud and RailTel certified computer rooms; corporate headquarters server rooms.

8. GJ Gujarat 52

Reliance Jamnagar IDC, GIFT City, an Rs 18 crore intelligent-cabinet and in-row cooling bid, and a Smart Rack (V2) hyper-converged bid on GeM.

9. WB West Bengal 48

Kolkata projected to grow at 48 percent CAGR from a small base; Coal India certified site; among the six states with 45 percent of investment commitments.

10. AP Andhra Pradesh 45

Visakhapatnam named as an emerging coastal hub; a live GeM package for data-centre IBMS and fire suppression; adjacent to Chennai service reach.

Tile cartogram, priority score 0 to 100; darker is higher. The red dot marks Chennai. Score blends four factors: share of operational data-centre capacity and pipeline (40), density of enterprise and public-sector server rooms proxied by bank branches, universities and state data centres (25), procurement activity visible in TIA-942 certified sites and state policy incentives (15), and proximity to Rax's Chennai service base and the FUJI plant (20). Colocation share from Savills via DD News and Houlihan Lokey; certified sites from the EPI register.

KEY TAKEAWAYS

- Thirty-nine sourced signals: regulators, a bank RFP, a utility's AMC rate contract, a parliamentary reply on power cuts, three Indian incidents, Indian vendors describing their customers' rooms, and IT administrators on forums describing incumbents. ● Verified S139 S133 S173 S157 ● Publicly observed S46 S47 S131 S108 S89 S36
- The dominant complaint about incumbents is alert spam, then price, then cloud lock-in; the dominant praise is "it saved us when the AC died". ● Publicly observed S89 S90 S93 S91
- Buyers ask three questions: does it have a MIB, does it work with what I have (PRTG, Nagios, Meraki, my UPS), and can I get it cheaper on eBay. ● Publicly observed S94 S95 S90 S93
- The Indian buyer's own words are scarce online; the regulator's words are precise, and para 61 now lists the six things a bank must monitor. ● Verified S139 ● Unknown
- No public signal about Rax rack monitoring exists, positive or negative; the market has not met the product. ● Unknown

What buyers complain about

Alert fatigue is the loudest theme. NetBotz "will fill your inbox up with alerts" and "takes some tuning"; one administrator "got tired of the inbox spam" and moved alerts into PRTG and PagerDuty; another "had to adjust the thresholds quite a few times"; users praise Meraki sensors for working "without any issues, fakes alarms etc". Reliability of the incumbent's notifications is the second theme: a NetBotz 755 that "won't send email motion alerts", an original poster "very unhappy" with an APC monitor across all rooms. Price is the third: Watchdogs bought on eBay, UPS probes used because "you don't have any budget", a Raspberry Pi and a DS18B20 because it is "cheap". Subscription resistance is the fourth: no ongoing cost "if you use SNMP or the built-in web interface and monitor it yourself". ● Publicly observed S89 S90 S92 S88 S93 S96

APC Netbotz works well and has an array of sensors including wireless ones and will fill your inbox up with alerts. Definitely takes some tuning so it won't completely spam you.

Reply, r/sysadmin, January 2025 ● Publicly observed S89

What buyers say they want

They want a device that emails or messages a phone when temperature, humidity, water or a door goes out of range, that logs history, that speaks SNMP to the monitoring they already run (PRTG, Nagios, Zabbix), that fits in the rack or on a wall, and that does not need a subscription. They value the product on the night the air-conditioner fails: the old NetBotz 350 that "has been very helpful when we had a water leak in the building or the AC unit crapped out". They replace when the firmware ages: "my current hardware is out of date and will stop working with modern web browsers any day now". ● Publicly observed S91 S97 S95 S94

Requirements observed in real RFPs and tenders

SBI's Navi Mumbai data-centre RFP of November 2024 does not buy monitoring devices; it buys people to watch them. The contractor must monitor the BMS "continuously 24x7", take hourly readings of UPS, PDU and energy meters, "monitor Information Panels like BMS, WLD, CCTV and Fire alarm displays for suspicious or irregular activity and report to the designated Bank official", check "proper closure of all the doors through the system", check "alarm status of all VESDA and HSSD", and log complaints to equipment vendors and chase them. The equipment schedule lists one WLD system, one access control system, one VESDA, one BMS, one fire alarm and suppression system, one rodent repellent system and 132 cameras. Punjab and Sind Bank's January 2026 RFP buys an observability platform for a resilience operations centre, the place a rack alarm must ultimately land.

● Verified S133 S143

RFP FOR PROCUREMENT OF FACILITY MANAGEMENT SERVICES FOR BANK'S DATA CENTRE AT NAVI MUMBAI		
	Tasks to be performed: - CCTV system shall be monitored continuously 24x7 - Monitor all entry and exits to the Data Centre and bringing any suspicious activity to the attention of Bank officials. - Monitor Information Panels like BMS, WLD, CCTV & Fire alarm displays for suspicious / irregular activity and report to the designated Bank official, if any without delay. - Replay daily record for any irregularities - Check for proper closure of all the doors through the system and take action appropriately. - Execute back-up and archiving methods - First level problem solving - Complaint logging to equipment vendor in case of any fault. - Monitoring response from equipment vendor Follow-up with vendor in case of delay in response OR for regular maintenance - Closure of call Prepare incident report for SBI within SLA timelines 4. Access Control: The access control system involves constant monitoring and carrying out tasks such as allotting new access cards, assistant towards problem resolution of access related issues, maintaining of the logs of all entry and exits of the Data Centre and bringing any suspicious activity to the attention of the designated Bank officials. Responsible for generating attendance reports from the systems as per the Banks requirement. Tasks to be performed: - Periodically monitor access records - Issuing access card as per instruction to the approved users. - Program (activation/deactivation etc.) of the permanent cards as per requirement and taking daily access reports. - Keep records of card issue temp / permanent. - Assist during problems in use of bona fide cards - Complaint logging to equipment vendor in case of any fault.	

Page 54 of 144

Page 54 of the SBI RFP: the contractor must monitor information panels for BMS, WLD, CCTV and fire alarm displays and check door closure through the system. Source S133

The regulator's requirement is now explicit. Para 61 of the RBI's 2026 Directions for commercial banks: "mechanisms for monitoring of breaches of environmental controls including temperature, water, smoke, access alarms, service availability alerts (power supply, telecommunication, servers), and access logs"; para 63: DC and DR "subjected to necessary e-surveillance mechanism"; and paras 60 and 61 flow down to ATM-switch service providers. The NBFC Directions carry paras 101 to 103 for the Middle Layer and above.

● Verified S139 S140

Older and wider public text says the same. MeitY's State Data Centre guideline asks that "the monitoring system for all the installed equipments should be installed in one centralized panel at NOC room", covering water leak detection, air-conditioning alarms, humidity and temperature, connected to BMS. And monitoring is increasingly bought as a service lot rather than a device: BSES Rajdhani's current tender is a "Rate Contract For Amc & Support Services For Non-It Infrastructure (Electrical, Bms, Access Control, Fire Related Cctv, Water Leakage System, Rodent Repellent, Racks And Others Materials) In Data Centers".

● Publicly observed S36

● Verified S157

Parliamentary and RTI signals

Parliament has not been asked about rack or server-room monitoring in any reply found. Two replies bear on it. On 13 March 2026 the Minister of State for Electronics and IT told the Rajya Sabha that capacity rose from about 375 MW in 2020 to around 1,500 MW by 2025 and that operators are adopting advanced cooling. On 3 February 2022 the Ministry of Power's answer to Lok Sabha unstarred question 235 tabulated state-wise outage hours: 2020-21 rural averages of 906 hours in Tamil Nadu, 1,758 in Karnataka and 2,762 in Uttar Pradesh. For a branch or college server room those are hours on UPS with nobody watching. No RTI response on data-centre or server-room incidents was found in searches of RTI portals and news.

● Verified S43 S173 ● Unknown

Monitor Information Panels like BMS, WLD, CCTV & Fire alarm displays for suspicious / irregular activity and report to the designated Bank official, if any without delay.

State Bank of India, RFP for facility management of its Navi Mumbai data centre, 14 November 2024 Verified S133

Indian signals

Indian buyer voices are scarce online; what exists comes from vendors describing customers and from incidents. A Mumbai panel-AC vendor writes that "most server rooms rely on standard split or cassette ACs" designed "for human comfort", that "hot spots inside server racks" go unseen while "the overall room temperature may look normal", and that problems "often go unnoticed until failure occurs". A Mumbai electronics retailer's DIY guide tells Indian makers to use Telegram and Blynk for alerts "with GSM SMS as a fallback for when internet connectivity is lost during power outages", at under ₹0.50 per SMS. Netrack explains its iRack by "the trend towards having intelligent infra capsules on premises at banking and insurance sector, warehouses, manufacturing sector and educational institutions". Meghalaya's state data centre describes itself as "continuously monitored by surveillance mechanisms and administered by 24x7 operations and management staff". Three incidents supply the rest: a bank server room fire in Greater Kailash in February 2023 needing nine fire tenders, a Jio data-centre fire causing a nationwide outage in September 2024, and a Delhi data-centre fire in June 2026 that triggered "an emergency shutdown of networking equipment" and degraded Google Cloud for weeks.

Publicly observed S108 S138 S33 S114 S131 S46 S47 S48

Signals about Rax

None. Searches for Rax rack monitoring return Rax's own pages. The e-surveillance reputation described internally, "no one will refer us because we have bad names in market", is not visible in public sources either; it lives in the integrators' memory, which is where route 2 begins. Unknown Rax-supplied S2

Patterns and implications

Four patterns. Buyers tolerate a monitor that is verbose and pay a premium for one that is trusted; a new entrant must ship with sensible default thresholds, acknowledgement and escalation, or it will be judged as spam on day one. Integration is the purchase criterion, not sensing; every thread ends with SNMP, PRTG, Nagios or Meraki. Price sensitivity is real and expressed as second-hand purchases and DIY builds, so a ₹36,000 controller with a MIB is attractive and a ₹36,000 controller without one is invisible. And Indian institutional buyers express requirements through the regulator and the RFP, not through forums, so the sales language must be para 61's six items and the SBI task list, not "IoT". Publicly observed S89 S94 S93 S139 S133 Inferred

SO WHAT FOR RAX

Position the product as the para-61 evidence pack with tuned alerts and a MIB, priced below the UPS-probe-plus-NetBotz combination; do not position it as an IoT platform, which no buyer in the evidence asked for. Recommendation

THEMES Regulation as buyer requirement4 Incident: fire and outage2 OEM demand signal2 Market growth2
Alert fatigue2 Integration with NMS2 Overnight failure without alerts2
Tender clause: monitoring is a human task on panels1 Tender clause: 24x7 alarm handling1
Incident: bank server room fire1 Indian server-room reality1 No monitoring until failure1
DIY substitute and alert channels1 Public-sector operating model1 Incumbent dissatisfaction1
Substitute: UPS card probe1 Subscription resistance1 Wireless simplicity and lock-in1
Value of remote alerts1 False alarms1 Incumbent reliability1 Price sensitivity1 SNMP integration1
Leak detection1 DIY substitute1 Incumbent satisfaction1 Replacement trigger: browser and firmware age1
Support quality1 Pricing model1 Tender clause: monitoring bought as AMC1

The bank shall put in place mechanisms for monitoring of breaches of environmental controls including temperature, water, smoke, access alarms, service availability alerts (power supply, telecommunication, servers), and access logs.

Reserve Bank of India, para 61, Commercial Banks Cybersecurity, Technology: Risk, Resilience and Assurance Framework Directions, 2026 · rbi.org.in Master Directions, id 13643 · 2026-07-31 · source Verified S139 Regulation as buyer requirement

REs shall ensure that their DC and DR sites are subjected to necessary e-surveillance mechanism.

Reserve Bank of India, Master Direction on IT Governance, clause 18(c) · RBI Master Direction RBI/2023-24/107 · 2023-11-07 · source ● Verified S22 Regulation as buyer requirement

Monitor Information Panels like BMS, WLD, CCTV & Fire alarm displays for suspicious / irregular activity and report to the designated Bank official, if any without delay.

State Bank of India, Data Centres and Operations Department · RFP for facility management services, Bank's Data Centre, Navi Mumbai, page 54 · 2024-11-14 · source ● Verified S133 Tender clause: monitoring is a human task on panels

BMS system to be monitored continuously 24x7 basis. Monitoring of alerts / warnings and taking appropriate actions.

State Bank of India, Data Centres and Operations Department · RFP for facility management services, Bank's Data Centre, Navi Mumbai, page 56 · 2024-11-14 · source ● Verified S133 Tender clause: 24x7 alarm handling

A fire at a data centre at India's largest telecom carrier Reliance Jio caused a nationwide network outage for its users on Tuesday, a source with direct knowledge of the matter told Reuters.

Reuters, citing a source at Reliance Jio · Reuters India · 2024-09-17 · source ● Publicly observed S46 Incident: fire and outage

Google Cloud users in parts of India are experiencing slower network performance after a fire at a third-party data centre facility in Delhi triggered an emergency shutdown of networking equipment.

The Times of India, reporting Google Cloud status · Times of India Tech · 2026-06-10 · source ● Publicly observed S47 Incident: fire and outage

The fire was in the server room of the bank situated in the basement and ground floor.

Delhi Fire Service official, reported by News18 · News18 India · 2023-02-09 · source ● Publicly observed S131 Incident: bank server room fire

Most server rooms rely on standard split or cassette ACs. These systems are designed for human comfort, not for equipment that produces heat round-the-clock.

Annair Drychill Tech, Mumbai panel-AC vendor · Company blog · 2025-12-29 · source ● Publicly observed S108 Indian server-room reality

Issues like overheating, uneven cooling, and contamination are common in real installations and often go unnoticed until failure occurs.

Annair Drychill Tech, Mumbai panel-AC vendor · Company blog · 2025-12-29 · source ● Publicly observed S108 No monitoring until failure

For Indian users, we recommend a dual-channel approach: WiFi-based notifications via Telegram or Blynk as the primary channel (free and instant), with GSM SMS as a fallback for when internet connectivity is lost during power outages or network issues.

Zbotic, Mumbai electronics retailer, DIY guide · zbotic.in · 2026-04-01 · source Publicly observed S138
DIY substitute and alert channels

Trend towards having Intelligent Infra Capsules on Premises at Banking & Insurance Sector, Warehouses, Manufacturing sector & Educational Institutions made the Rack manufactures to think on concept of iRack.

Netrack (Legrand), Bengaluru · iRack Series product page · 2026 · source Publicly observed S33 OEM demand signal

It is continuously monitored by surveillance mechanisms and administered by 24x7 operations and management staff.

Department of IT, Government of Meghalaya · Meghalaya State Data Centre page · 2026 · source Publicly observed S114
Public-sector operating model

With data centre absorption estimated at around 430 MW in 2025, driven by both enterprise and hyperscale demand, India's digital infrastructure growth is gaining strong momentum.

Srihari Srinivasan, Director and Lead, Data Centre Services, Savills India · DD News report on the Savills India data centre report · 2026-01-08 · source Publicly observed S19 Market growth

Hi I am using a APC temperature monitoring device in all our server rooms and I am very unhappy with it. Does anyone have recommendations and why

Original poster, r/sysadmin · Reddit r/sysadmin · 2020-08-08 · source Publicly observed S88 Incumbent dissatisfaction

Our 4 biggest APC UPSs have the optional management card with environmental monitoring. These work well for us. Upper and lower temp thresholds, email alerts and smnp monitoring. It's saved out butts when the ac died.

Reply, r/sysadmin · Reddit r/sysadmin · 2020-08-08 · source Publicly observed S88 Substitute: UPS card probe

APC Netbotz works well and has an array of sensors including wireless ones and will fill your inbox up with alerts. Definitely takes some tuning so it won't completely spam you but it's my go to for server room/network closet environmental

Reply, r/sysadmin · Reddit r/sysadmin · 2025-01-22 · source Publicly observed S89 Alert fatigue

If you use monitoring/alerting through their servers, yes. If you use SNMP or the built-in web interface and monitor it yourself, you should be fine without.

Reply on ongoing subscription cost, r/sysadmin · Reddit r/sysadmin · 2025-01-22 · source Publicly observed S89
Subscription resistance

I got tired of the inbox spam and got them into PRTG and then PagerDuty takes care of alerts.

Reply, r/sysadmin · Reddit r/sysadmin · 2022-05-30 · source Publicly observed S90 Integration with NMS

I had to adjust the thresholds quite a few times to lower the number of emails.

Reply, r/sysadmin · Reddit r/sysadmin · 2022-05-30 · source Publicly observed S90 Alert fatigue

We use Meraki MT sensors, they're wireless and last about 5 years at a time on a pair of AA batteries. They have a temp/humidity one, as well as a water leak one. But, they only work with Meraki APs for communication back to the dashboard.

Reply, r/sysadmin · Reddit r/sysadmin · 2022-05-30 · source Publicly observed S90 Wireless simplicity and lock-in

It has been very helpful when we had a water leak in the building or the AC unit crapped out and the server room got too hot to notify us remotely so I could drive in and handle things.

Original poster on an old NetBotz 350, r/sysadmin · Reddit r/sysadmin · 2020-12-11 · source Publicly observed S91
Value of remote alerts

The easiest thing to deploy and just seem to work fine without any issues, fakes alarms etc.

Reply on Meraki sensors, r/sysadmin · Reddit r/sysadmin · 2023-02-16 · source Publicly observed S92 False alarms

APC NetBotz 755 Environmental Monitors won't send email motion alerts.

Thread title, r/sysadmin · Reddit r/sysadmin · 2023-02-16 · source Publicly observed S92 Incumbent reliability

Vertiv/Geist Watchdogs (find on ebay). Netbotz, or many UPSs have the feature available via a add-in card or probe.

Reply, r/sysadmin · Reddit r/sysadmin · 2025-01-11 · source Publicly observed S93 Price sensitivity

We use netbotz for leak sensors. Probably overkill but the mibs were not hard to find.

Reply, r/sysadmin · Reddit r/sysadmin · 2025 · source Publicly observed S94 SNMP integration

AKCP sensorProbe2+ - used for water leak detection at the aircon units but they can do a variety of metrics.

Reply, r/sysadmin · Reddit r/sysadmin · 2025 · source Publicly observed S94 Leak detection

Ended-up purchasing a few WatchDog 15-PoE sensors. Very cool! Easy to setup and fits in with Nagios nicely. Would recommend.

Reply, r/sysadmin · Reddit r/sysadmin · 2014 · source Publicly observed S95 Integration with NMS

DS18B20 and a raspberry pi. Cheap, and can configure alerts however you want them

Reply, r/sysadmin · Reddit r/sysadmin · 2021 · source Publicly observed S96 DIY substitute

We use 2 APC NetBotz units in our smallish server room. They work well for their purpose.

Reply, r/sysadmin · Reddit r/sysadmin · 2014-12-18 · source Publicly observed S87 Incumbent satisfaction

My current hardware is out of date and will stop working with modern we browsers any day now.

Original poster, Spiceworks community · Spiceworks, Hardware and Infrastructure · 2020-04-17 · source Publicly observed S97
Replacement trigger: browser and firmware age

Great Technical Support and Customer Service while we are working on some dctrack and poweriq issues.

Verified reviewer of Sunbird DCIM · Capterra · 2026-06-02 · source Publicly observed S98 Support quality

The cost model for the tool is simple and linearly scales with our hardware footprint.

Customer review published by Sunbird · sunbirdcim.com reviews · 2026 · source Publicly observed S99 Pricing model

Turns out, the server room had overheated overnight. One of his early bird colleagues had opened the server room window in desperation.

Paessler blog, sysadmin anecdote · blog.paessler.com · 2025-11-18 · source Publicly observed S107
Overnight failure without alerts

The IT manager arrived Monday morning to discover an entire rack of servers had overheated over the weekend when the dedicated air conditioning unit failed without alerting anyone.

Envigilance, vendor case narrative · envigilance.com · 2026-01-19 · source Publicly observed S109
Overnight failure without alerts

The monitoring system for all the installed equipments should be installed in one centralized panel at NOC room

Ministry of Electronics and IT, State Data Centre guidelines, Annexure-1 clause 1.5.7 · meity.gov.in SDC physical security guidelines · 2008 · source Verified S157 Regulation as buyer requirement

our service team plays a critical role in keeping live over 10,000 ATM sites across India

Fuji Electric India, services page · india.fujielectric.com · 2026 · source Publicly observed S144 OEM demand signal

While the broader colocation market has experienced relatively moderate demand due to increasing enterprise adoption of cloud services, demand from hyperscalers and large enterprises remains strong

Srihari Srinivasan, Director and Lead, Data Centre Services, Savills India · Communications Today · 2026-07-22 · source Publicly observed S153 Market growth

Rate Contract For Amc & Support Services For Non-It Infrastructure (Electrical, Bms, Access Control, Fire Related Cctv, Water Leakage System, Rodent Repellent, Racks And Others Materials) In Data Centers At – Kalkaji And Cso, Nehru Place In Brpl

BSES Rajdhani Power Ltd, tender notice · TenderDetail server racks listing · 2026-09 · source Publicly observed S36
Tender clause: monitoring bought as AMC

The requirement has been mandated for hosted services.

SEBI, FAQ 52 on CSCRF (on ANSI/TIA-942 rated-4 data centres) · sebi.gov.in FAQ, 11 June 2025 · 2025-06-11 · source Verified S120
Regulation as buyer requirement

11 Risks and compliance

KEY TAKEAWAYS

- Eighteen risks are registered; the highest are the missing SNMP and software specification (product), delivery performance on the only account (86.7 percent late), the unsubstantiated CE claim (regulatory) and FUJI concentration (financial).
Rax-supplied S1 S2 S3 S149 Publicly observed S74 S73
- The compliance map has one uncertain gate for India (BIS CRS, applied, although no CRS category names a monitoring controller), one for Europe (CE under LVD, EMC, RoHS) and three for Saudi Arabia (SABER, CST, NCA); none is held.
Rax-supplied S2 S6 Verified S164 Publicly observed S105 S106
- The service reputation from the ATM business is the risk Rax controls least and the one buyers will remember longest.
Rax-supplied S2
- Dependencies are imported modules, the OEM's schedule, and integrators' receivables; there is no scheme money to lose.
Rax-supplied S2 S3
- Early warnings are FUJI's monthly call-off, the BIS application status, and the first pilot's false-alarm rate. Recommendation

Risk register

The matrix and register after this section list eighteen risks across product, regulatory, competitive, market, operational, financial and reputational categories with likelihood and impact on a five-point scale. The top of the matrix is occupied by product readiness (no SNMP, no software specification, both likelihood 5, impact 4), the CE claim (4, 4), the service reputation (4, 4), rack OEMs bringing monitoring in-house (4, 4), and FUJI concentration (3, 5). The fire-interface and fail-safe lock risk is rated likelihood 2 but impact 5 because a lock that holds a door shut during a fire is a life-safety liability, not a commercial one. Rax-supplied S1 S2 S3

Publicly observed S74 S73 S33 S53 Estimated S2

Compliance map

REQUIREMENT	GATES WHICH SEGMENT	STATUS	LEAD TIME AND OWNER
BIS CRS on applicable electronics	GeM, PSU and bank tenders; large enterprises	Applied, in process; the CRS list names IT power adapters, SMPS up to 48 V, CCTV cameras and smart card readers but no monitoring controller, so the obligation may fall on the power supply, not the controller	Unknown; Quality head to obtain a written BIS scope determination
CCTV Essential Requirements (S.O. 1652(E), 9 April 2024)	Government buyers, if the serial camera is treated as CCTV	Not assessed	Quality head; confirm whether the camera module is in scope
MSE procurement policy and Make in India Class-I status	Public tenders (an advantage, not a gate)	ZED Silver held; Udyam status not in the record; local-content calculation not done	Finance; one month
CE marking: LVD 2014/35/EU, EMC 2014/30/EU, RoHS 2011/65/EU, REACH declarations	Europe; also asked by Indian MNCs and the Saudi SABER route	Claimed on datasheet; not held	3 to 6 months at an accredited lab; remove the claim now
SABER product and shipment conformity, Saudi RoHS	Saudi Arabia	Not held	After CE; per the Saudi dossier
CST approval for Ethernet equipment; NCA ECC flow-down; PDPL for images and badge data; SBC 801 fire integration	Saudi Arabia	Not held	Per the Saudi dossier
SNMP v2c/v3 MIB; Modbus TCP register map; API	Banks, enterprises, colocation, EPC specification	Not stated	Firmware and software; 6 to 9 months
Software security evidence: TLS, RBAC, audit log, signed updates, vulnerability assessment	Banks (2026 Directions), SEBI entities, DPDP	None public	Software lead; 6 months plus a third-party VA

REQUIREMENT	GATES WHICH SEGMENT	STATUS	LEAD TIME AND OWNER
Fire-alarm interface behaviour per IS 2189; fail-safe or fail-secure lock policy	Any site with a fire officer	Undocumented	Hardware lead; 1 month to document and test
DPDP Act: camera images and access logs as personal data; full compliance from 13 May 2027	All Indian buyers	Not addressed	Software lead; retention and access settings
GeM seller registration with OEM authorisation and three-year warranty	Public sector	Not registered	After BIS or CE
ISO 9001:2015 with rack monitoring controllers in scope	All	Held to 21 September 2028	Maintain; surveillance audits

The map is drawn from the internal record, the Saudi dossier, the RBI 2026 Directions, EU directive guides and the fire code.

Rax-supplied S2 S6 S1 Verified S139 S53 S164 S162 S163 S175 Publicly observed S105 S106 S17 S28

The reputation and quality constraint

Internally, the e-surveillance business reports frequent support calls including at installation, sample-based QC on large orders, missed urgent deliveries from component dependency, lost accounts attributed to quality and service (ANG, ITAS, Soteria), and a stated belief that referrals are dead because of the company's name in the market. For rack monitoring this cuts two ways. The FUJI record, a year of repeat orders and an accepted price rise, is the best evidence that the controller is not failing in the field, while the same record shows 86.7 percent of deliveries late by a mean 45.6 days, the operational half of the reputation problem; but the bank-room route runs through the same integrators who carry the e-surveillance memory, and a controller that raises false door alarms at 2 am, or a lock that will not release, will be judged with that memory. The mitigation is operational, not commercial: 100 percent functional test on sets, a named engineer per pilot, written response times, and thresholds tuned before hand-over.

Rax-supplied S2 S3 Recommendation

Dependencies

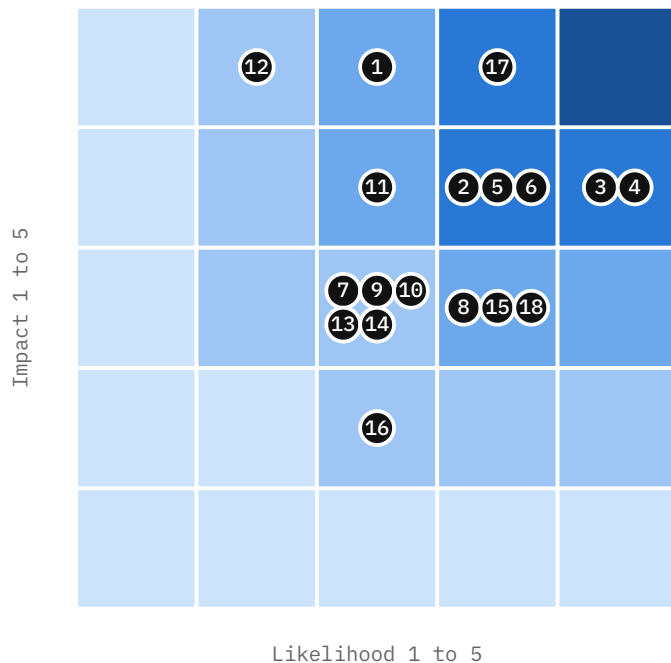
Components: the camera module, readers, EM locks, leak cable and sensors are imported and single-sourced by default; FUJI's monthly call-off makes a stock-out visible within weeks. Connectivity: Ethernet only; sites without LAN need the 4G router from the catalogue. Partners: one OEM for all revenue; integrators for the bank route; group entities for export. Scheme money: none, so nothing to lose. Rax-supplied S2 S3 S4

Early-warning indicators

Watch FUJI's call-off quantity and price each month (a skipped month or a price-down request is the signal); the BIS application status; the number of IndiaMART enquiries that ask for a MIB or a certificate; the false-alarm rate and acknowledgement time in the first pilot; any Netrack, Valrack or Delta announcement of a house controller; and RBI supervisory findings citing para 61 in bank annual reports, which will tell Rax the clause is being enforced. Recommendation

SO WHAT FOR RAX

Three risks are inside Rax's control and cheap to close (CE claim, fail-safe documentation, software datasheet); one is expensive (SNMP); one is a conversation (FUJI agreement). Do the cheap ones this quarter. Recommendation



Numbers refer to the register below. Shade deepens with likelihood × impact.

#	RISK	L	I	MITIGATION
1	Customer concentration: FUJI is the only RMC buyer and 22 percent of company turnover; a second-source decision at Fuji Electric India removes the entire installed base financial · owner Managing Director and Sales	3	5	Written OEM agreement with volume tiers, price steps and 12-month notice; quarterly review with Fuji's product head; second OEM signed within nine months ● Rax-supplied S3 S5 S2
2	Datasheet claims CE certification that the internal record says is not held; a buyer or a European customs check exposes it regulatory · owner Quality head	4	4	Remove the claim in the next datasheet revision or obtain LVD, EMC and RoHS test reports from an accredited lab; publish the certificate number when held ● Rax-supplied S1 S2 S106
3	No SNMP, BACnet or REST: the product cannot join an existing NMS, BMS or DCIM, so bank, enterprise and colocation evaluators reject it at the protocol question product · owner Firmware and software leads	5	4	Ship SNMP v2c/v3 with a published MIB and Modbus TCP register map by mid-2027; document the central software ● Publicly observed S74 S73 S94 S1
4	Central software RT-SW-RMC has no specification, no screenshots and no security evidence; regulated buyers cannot assess it product · owner Software lead	5	4	Write a software datasheet (roles, alerts, retention, API, deployment, TLS), run a third-party vulnerability assessment, and publish release notes ● Publicly observed S9 S7
5	Service reputation from the ATM e-surveillance business (frequent support calls, missed urgent deliveries, 'bad names in market') follows the product into new accounts reputational · owner Operations head	4	4	Separate service SLA for rack monitoring with a named engineer, 100 percent QC on sets, and a reference programme built on FUJI and one pilot ● Rax-supplied S2
6	Rack OEMs bring monitoring in-house: Netrack (Legrand) has an intelligent rack access controller and can use Raritan SRC; President sits in Schneider's channel with NetBotz competitive · owner Sales	4	4	Target OEMs without a captive controller (UPS makers, micro-DC assemblers) and offer customisation the groups will not do ● Publicly observed S33 S73 S64
7	Global vendors discount through distributors (Redington for APC) to defend bank framework agreements once a low-cost Indian controller appears competitive · owner Sales	3	3	Compete on integrated access-plus-camera scope and Chennai service, not on controller price alone; keep the OEM price confidential ● Publicly observed S61 S59
8	Regulated buyers require BIS CRS or a recognised certificate on electronics; Rax's BIS application is still in process and GeM listing is not possible without it regulatory · owner Quality head	4	3	Track the BIS application weekly; obtain CE test reports in parallel; register on GeM as soon as one is in hand ● Rax-supplied S2

#	RISK	L	I	MITIGATION
9	The 2026 RBI Directions are prescriptive about what to monitor but not how; banks may satisfy para 61 through existing BMS and UPS probes and never buy a rack controller market · owner Sales and software lead	3	3	Sell the log and the audit report, not the sensor: a para-61 evidence pack (temperature, water, smoke, access alarms, access logs) as the product ● Verified S139 S88
10	Enterprise server rooms keep migrating to colocation and cloud, shrinking the segment Rax can reach directly market · owner Managing Director	3	3	Follow the workload: sell to micro-DC and edge assemblers and to colocation enterprise suites ● Publicly observed S18 S17
11	Component dependency on imported camera, sensor and lock modules causes missed deliveries against FUJI's monthly schedule operational · owner Operations head	3	4	Hold eight weeks of set inventory for the OEM schedule; qualify a second source for camera and readers ● Rax-supplied S2 S3
12	Fire-alarm interface and fail-safe lock behaviour are not documented against IS 2189 or a fire officer's expectations; a lock that stays closed in a fire is a liability regulatory · owner Hardware lead	2	5	Document fail-safe behaviour on mains loss and fire input; test with an IS 2189 panel; state it on the datasheet ● Publicly observed S53 S1
13	Camera images and access logs are personal data under the DPDP Act once full compliance applies in May 2027; an undocumented web client becomes a breach vector regulatory · owner Software lead	3	3	Retention settings, role-based access and encryption in the software datasheet; a DPDP note for buyers ● Publicly observed S17
14	Receivables: bank-channel integrators pay late or fail (AGS Transact insolvency cost Rs 0.86 crore); OEM terms unknown financial · owner Finance	3	3	Advance or LC terms for new integrators; credit limits per account; AMC billed annually in advance ● Rax-supplied S2 S3
15	Two salespeople with no prospecting habit cannot run an OEM programme, an integrator channel and a pilot at once; the plan stalls on capacity operational · owner Managing Director	4	3	One person owns OEM accounts, one owns the bank-integrator channel; no direct enterprise selling until 2027; use IndiaMART inbound only ● Rax-supplied S2
16	Export entities (iibdaei, RaxTech Europe) pull effort toward SABER, CST and CE work before India readiness is done operational · owner Managing Director	3	2	Sequence: India SNMP and software first, CE second, SABER third; export only through the Saudi dossier's paid-pilot gate ● Rax-supplied S6 S2
17	Delivery performance on the only account: 86.7 percent of FUJI deliveries were late by a mean 45.6 days, and a July 2025 work order still had sets pending in January 2026 operational · owner Operations head	4	5	Kanban stock of long-lead parts for twenty sets, a written delivery commitment in the OEM agreement, weekly on-time tracking reviewed by the Managing Director ● Rax-supplied S149 S148
18	The e-surveillance integrator route does not convert: none of Rax's e-surveillance accounts has bought an RMC set, the four named service companies are 14 percent of revenue and shrinking, and their memory of Rax's service record is the weakest point market · owner Sales	4	3	Test with one pilot before building a programme; run the bank-room route in parallel through FUJI's and other UPS makers' bank service estates ● Rax-supplied S5 S2 S144

12 Strategy and recommendation

KEY TAKEAWAYS

- Rax has made growing Rack Monitoring a stated priority; the plan grows it from the FUJI proof point inside today's capacity rather than beside it. Rax-supplied S2 Recommendation
- Three options: stay a component supplier to OEMs; add the bank-room channel with a readiness investment; or build a monitoring platform for direct, tender and export sale. The second is recommended. Recommendation
- Option two costs the software bandwidth Rax already has idle, an SNMP firmware project, one lab test and two salespeople's time; it does not need an agency, a distributor or a new hire. Rax-supplied S2 Recommendation
- The plan moves revenue from ₹1.7 crore on FUJI alone to about ₹3.5 crore in 2027 with a second OEM and one bank-room channel, on the way to ₹6 crore in 2028. Estimated S3 S148
- Kill criteria are explicit: FUJI stops or second-sources with no replacement OEM by month nine, the pilot's false-alarm rate does not fall below one per room per month, or the bank channel proves para 61 is met by BMS alone. Recommendation
- Dependencies on other Rax lines are real and cheap: the e-surveillance channel, the PCMU, the 4G router and the central-software lineage. Rax-supplied S2 S4

Growing the line from the FUJI proof point

Rax has told this research that it is actively trying to grow Rack Monitoring and FIOT, and this section treats that as the objective. The evidence says how to grow it within what the company has. The proof point is not "a rack monitoring product sells"; it is a specific motion: a small paid design job for a power-infrastructure maker with a bank, ATM and hospital service estate, followed by production orders of 40 to 60 sets. Growth therefore means repeating that motion with two or three similar makers, fixing the delivery record that puts the first account at risk, and widening the product only where a paying buyer asks.

Rax-supplied S2 S148 S150 S149 Publicly observed S144 S151 Recommendation

Capacity fits. Factory utilisation is 35 to 50 percent, and 500 sets a year, about double the FUJI run-rate, is a few days of assembly a month; the constraint is component lead times and QC, which the 86.7 percent late record exposes, not floor space. Software engineering has free bandwidth, which is exactly what the SNMP MIB, the software datasheet and a hosted multi-site view need. Hardware and firmware engineering is booked, so the firmware work must displace something, and that is the one real trade-off the Managing Director has to make. Rax-supplied S2 S149 Estimated S148 Recommendation

GROWTH LEVER	WHAT IT TAKES	EVIDENCE IT CAN WORK	FIRST MILESTONE
Protect and deepen FUJI	Written agreement, on-time delivery, end-use disclosure, a site package (set plus PCMU plus 4G router) for its bank and ATM estate	Accepted price step; 201 to 261 sets; Fuji services 10,000+ ATM sites	Agreement signed and on-time delivery above 90 percent for a quarter
Repeat the design-job motion with two UPS or rack makers	A priced design study offer and samples to Numeric-type and Netrack-type makers	FUJI began exactly this way	Two paid studies or evaluations
Test the e-surveillance relationship route	One ten-room para-61 pilot with one integrator, with a kill date	Stated by Rax; no RMC order from these accounts yet	Pilot charter signed
Readiness that every buyer asks for	SNMP MIB, software datasheet, corrected hardware datasheet	Forum and incumbent evidence in sections 06 and 10	MIB published
Public tenders later	BIS scope determination, GeM listing, Class-I local-content certificate	MSE and Make in India preferences	Listing after certificate

Rax-supplied S2 S148 Publicly observed S144 S151 Verified S162 S163 Recommendation

Three options

OPTION	WHAT IT IS	INVESTMENT	TIME TO REVENUE	WHAT MUST BE TRUE	TRADE - OFF
A. Component supplier	Serve FUJI and add one or two rack or micro-DC OEMs at ₹36,000 to ₹69,065; no SNMP, no certificate, no software work	Near zero; samples and a price list	Immediate for FUJI; 3 to 6 months for a second OEM	OEMs keep sourcing controllers rather than designing them; Legrand and Schneider do not undercut	Cheapest and fastest; leaves Rax invisible, margin-taking by others, and hostage to one account
B. OEM plus bank-room channel (recommended)	Option A plus SNMP, a software datasheet, a corrected datasheet, a lab test, and one ten-room pilot with an existing e-surveillance integrator on para 61	Idle software bandwidth; an SNMP firmware project; one accredited-lab test; two salespeople's time; pilot hardware at cost	FUJI immediate; pilot revenue in 6 months; channel revenue in 12	Para 61 is enforced through IS audits; integrators carry the product; Rax delivers a clean pilot	Uses relationships Rax has; exposes the product to the reputation problem; needs execution discipline
C. Platform push	Build RT-SW-RMC into a hosted multi-site platform, list on GeM, sell direct to enterprises and colocation, pursue SABER and CE for export	New hires in sales and software; BIS, CE, SABER programmes; marketing	18 months plus	Certificates land; a direct sales team exists; references accumulate	Highest ceiling; contradicts every constraint in the record (two salespeople, failed agencies, no certificates)

Option A is the floor, not a strategy. Option C is what the website already implies and the company cannot execute. Option B is the recommendation because it spends what Rax has (software bandwidth, integrator relationships, a Chennai service base) on the two segments with evidence (OEMs, bank rooms) and defers the segments that need certificates. Rax-supplied S2 Recommendation

Ninety-day plan

ACTION	OWNER	COST	MILESTONE
FUJI OEM agreement: volumes, price steps, on-time delivery commitment, notice, reference clause, end-use disclosure	Managing Director	Time	Signed by day 60
Delivery recovery: long-lead parts stocked for twenty sets, 100 percent functional test, weekly on-time report	Operations head	Working capital for twenty sets of parts	On-time delivery above 90 percent from day 60
Datasheet revision 2: CE line removed or substantiated, camera resolution corrected, fail-safe lock and fire-interface behaviour stated	Quality head, hardware lead	Time	Published by day 30
RT-SW-RMC software datasheet: screens, roles, alerts, retention, API, deployment, TLS	Software lead	Time	Published by day 45
SNMP v2c/v3 and Modbus TCP: scope, MIB draft, release date	Firmware lead	Unknown; internal	Release date committed by day 90
Lab quotations for LVD, EMC, RoHS; BIS CRS status in writing	Quality head	Quotation only	On paper by day 45
Pilot charter with one integrator, or with FUJI for its bank estate: ten rooms, ninety days, KPIs, rollback	Sales	Sets at cost	Signed by day 90
Priced design-study offer, samples and price list to two more UPS or rack makers (Numeric-type, Netrack-type)	Sales and Managing Director	Two sets	Evaluations by day 90
COGS and gross margin per set	Finance	Time	Known by day 30

Costs are labelled Unknown where no quotation exists; nothing in the plan requires a hire. Recommendation Unknown

Twelve-month plan

Months 4 to 6: run the pilot; ship SNMP beta to the pilot and to FUJI; close one second OEM; obtain the lab test. Months 7 to 9: pilot review against KPIs; request a reference; publish the case study; register on GeM if BIS or CE is in hand; start a hosted-software trial on the pilot sites. Months 10 to 12: convert the pilot to a rate-contract programme with the integrator; second integrator; price list

with AMC; decide on Saudi entry with iibdaei on the dossier's gate. KPIs: FUJI call-offs per month (target 20 plus), second-OEM units (target 100), pilot alarm delivery (95 percent), false alarms (under one per room per month), acknowledgement time (under 15 minutes), AMC attach on non-OEM sales (50 percent), IndiaMART enquiries closed (10 percent). ● Recommendation

● Rax-supplied | S6

Proof pilot

Ten regional or DR rooms of one bank or NBFC, reached either through one existing e-surveillance integrator or through FUJI's bank service estate; full set per room; central software on the integrator's server; alerts to the bank's IT and the integrator's control room; a para-61 evidence pack produced monthly (temperature, water, smoke, access alarms, service availability, access logs). Success criteria: 95 percent alarm delivery, under one false alarm per room per month, mean time to acknowledge under 15 minutes, door events matched to identity, no lock failure, and the bank's IS auditor accepting the log as evidence. Target accounts are the integrators' bank customers; the integrators are SIS, Securens, Zicom, CMS and Apar. A pilot that passes unlocks the rate-contract programme; a pilot that fails on false alarms triggers a threshold and firmware fix before any second pilot. ● Rax-supplied | S2 | S6

● Verified | S139 ● Recommendation

Investment and revenue scenario

Investment is mostly time already paid for: software bandwidth is idle by Rax's own account, hardware and firmware engineering is booked and must be freed for SNMP, and two salespeople exist. Cash items are one lab test (quotation pending), pilot hardware at cost (ten sets, about ₹4 to 5 lakh at COGS if margin is 40 percent), and samples. Revenue: ₹1.7 crore in FY2026-27 on FUJI alone at about 240 sets a year; ₹3.5 crore in FY2027-28 with a second OEM and the first integrator programme; ₹6 crore in 2028 and ₹12 crore by 2031 on the sizing section's series, which is 9 percent of the reachable market. At a 40 percent gross margin, ₹6 crore of sets yields ₹2.4 crore, enough to fund the certificate programme and a third salesperson in 2028, not before. ● Estimated | S3

● Rax-supplied | S2 ● Unknown

Dependencies on other Rax product lines

The bank-room route depends on the e-surveillance business's integrator relationships and on its central monitoring software lineage; a set that plugs into the same control room as the alarm panels is easier to sell than a new platform. The PCMU adds UPS and mains status, which para 61 calls "service availability alerts"; the 4G LTE router covers rooms without LAN; the temperature and humidity units are shared sensors. ZenCampus shares the campus buyer with segment six but should not be bundled until either product has references. The ISO scope covering customised design is what OEM buyers need. ● Rax-supplied | S2 | S4

● Verified | S139

Kill criteria

Stop the bank-room channel if, after two pilots, the false-alarm rate does not fall below one per room per month or an auditor rejects the log. Stop the OEM expansion if FUJI stops or second-sources and no replacement OEM has signed within nine months. Stop the integrator route if no integrator signs a pilot charter within six months, which would show that Rax's e-surveillance relationships do not extend to server rooms. Stop everything beyond Option A if SNMP is not shipped within twelve months, because without it the product cannot leave the OEM route. Defer export until CE marking exists; do not fund SABER before CE. ● Recommendation

SO WHAT FOR RAX

The strategy is to become the cheapest credible integrated controller in India for people who assemble racks and for the integrators who answer to bank auditors, and to earn the right to sell anywhere else by shipping a MIB. ● Recommendation

13 Evidence gaps

KEY TAKEAWAYS

- The single most valuable unknown is which of Fuji Electric India's bank, ATM, hospital or enterprise service contracts the 201 to 261 RMC sets go into, and under whose brand; public evidence narrows it, only Rax can ask. Unknown
- Cost of goods, gross margin, receivable days and field failure rates do not exist in the record; every margin statement in this report is an assumption. Unknown
- The enterprise and public server-room count (40,000) is an assumption built from institution counts; a census does not exist. Estimated S42 S111 S41
- No Indian tender with a stand-alone rack-monitoring specification was opened; monitoring was found only inside facility-management and IBMS packages. Verified S133 Unknown
- The Uptime Institute Tier register was not counted for India, and the operational SDC count was not confirmed on a MeitY page. Unknown

Internal facts Rax must supply

Who holds them and what they change: the sales lead and FUJI's purchase officer hold the end use and bundle brand of the RMC sets, which decides whether FUJI is a channel or a competitor-in-waiting; the production team holds whether the 60-set line on the July 2025 sheet was a real order, which moves FY2025-26 FUJI value between ₹1.37 crore and ₹1.77 crore; the sales lead holds what the original design job was and who introduced the account, which decides whether the motion can be repeated. Finance holds COGS, gross margin, payment terms and receivable days on the FUJI orders, which decide whether the plan funds itself. The service desk holds the field failure and support-call record for the sets shipped since June 2025, which decides whether the reputation risk is live for this product. Engineering holds the firmware roadmap and whether SNMP has ever been scoped. The quality head holds the CE certificate, if any, and the BIS CRS file. The software lead holds RT-SW-RMC itself: screens, roles, retention, deployment. The pipeline of RMC enquiries from IndiaMART and Google, if logged, would show the inbound segment mix.

Rax-supplied S3 S2 S1 S9 Unknown

External unknowns and the searches run

FUJI's end use: pass 1 searched Fuji Electric India's site, LinkedIn posts, W.Media and Brave for "smart rack", "micro data center", "rack monitoring"; pass 2 added "Fuji Electric India tender server rack", "Consul Neowatt iPEMS ATM", the Retail and BFSI, services, energy storage, case-study and media pages, and look-alike searches on UPS makers' bank estates. Found: a services estate of 10,000+ ATM sites and thousands of branches, the 2013 iPEMS ATM-site monitoring suite, and no current monitoring product; not found: any product, tender or post naming the Rax set. Closes with a direct question. Award prices: GeM contract and tender-result values sit behind paid databases; closes with a subscription or an RTI to one state data-centre operator. TIA-942-C clause text: paywalled; closes with a purchased copy. Insurance: searched electronic-equipment insurance wordings and the fire tariff; no monitoring requirement or discount found. RTI: no RTI response on data-centre or server-room incidents found. Tender clause text for a stand-alone EMS: searched eprocure, GeM bid documents, tender aggregators, bank sites with fifteen phrasings; found SBI's facility-management RFP (monitoring as a service) and smart-rack and IBMS package bids, not a component specification. Closes with a GeM bid document for an "environmental monitoring system" line, which needs a logged-in GeM session. Number of operational State Data Centres: MeitY's SDC page did not render; the 2017-18 annual report lists DR-enabled states; Meghalaya's page says 29 states and six UTs were planned. Closes with the MeitY SDC status report. Uptime Tier certifications in India: the register is a dynamic page; not counted. Telecom tower count: closed in pass 2 with DoT's figure of 8.43 lakh towers and 31.44 lakh BTS at 31 October 2025. Indian buyer voices: LinkedIn, Quora and Twitter searches returned vendor content; Indian forum threads on server-room monitoring were not found. Customs classification of the controller: not searched beyond the datasheet; an invoice would settle it. Publicly observed S12 S133 S36 S130 S114 S101 S144 S145 S174 Verified S155 Unknown

Load-bearing assumptions

Seven point five kilowatts per rack for converting MW to racks (Uptime global modal average, not an Indian figure); ₹20,000 per rack monitoring allowance in colocation; 40,000 enterprise and public rooms with 10 percent annual purchase; 5,000 intelligent racks a year from OEMs; a 40 percent gross margin; that para 61 will be enforced through IS audits at regional and DR rooms and not only at primary data centres; that FUJI's orders continue at about 240 sets a year; and that global-vendor Indian prices on IndiaMART reflect what enterprises pay. Each is written into the sizing file and can be replaced without changing the arithmetic.

Estimated S57 S59 S42 S3 Inferred

Next research actions, in priority order

1. Ask Fuji Electric India, through the sales lead, which service estate the sets are installed in and under whose brand; request a reference; confirm the 60-set line.
2. Pull COGS and gross margin per set from the accounts.
3. Obtain one GeM bid document for an environmental monitoring system line and one bank IS-audit checklist that cites para 61.
4. Count Indian entries in the Uptime Tier register and confirm the operational SDC count.
5. Interview two integrators (SIS, Securens) on whether their bank customers have raised para 61, which is the direct test of Rax's stated e-surveillance route.
6. Test the Rax set against the six para-61 items and write the evidence pack.
7. Price a CE test programme at an accredited lab.

● Recommendation

14 Sources and method

KEY TAKEAWAYS

- Two passes on 15 September 2026: pass 1 in five phases, a gap audit against the charter, the section briefs and the session's twelve questions, then pass 2, which closed the audit list and re-verified the ten most load-bearing numbers. ● Inferred
- One hundred and seventy-five sources: 39 primary, regulatory or dataset; 69 vendor; 12 forum; 12 analyst; 15 news; 10 internal; 18 reference. ● Publicly observed S139 S133 S60 S87 S17 S46
- The Parallel search MCP, WebSearch, WebFetch and Brave were used for search; pdftotext, pdftoppm and a headless Chromium capture for evidence; Python for the order book. ● Recommendation
- The Saudi view is reused from the July 2026 IIBDAEI dossier rather than redone; non-India material is under a fifth of sources and words. ● Rax-supplied S6 S7
- Paywalled analyst reports and logged-in tender portals were not opened; their public summaries and government statements were used instead. ● Inferred

Search strategy

Query families ran in the buyer's language and in the vendor's. For the market: "India data centre capacity MW" by year and city across JLL, CBRE, Savills, Knight Frank, ICRA, Houlihan Lokey and the Rajya Sabha reply. For regulation: the RBI Master Direction pages themselves (which exposed the withdrawal of the 2023 direction and led to the 2026 Directions), SEBI's CSCRF and FAQ, MeitY's draft policy, state policy pages, NBC 2016, IS 2189, ISO 27001 commentaries, EN 50600 catalogue entries. For competitors: every official product page named in the prompt, plus Indian storefronts on IndiaMART and TradeIndia. For prices: product name plus "price" plus "India", plus US resellers for list prices. For buyers: "environmental monitoring system" and "server room" with tender, RFP, GeM and bank names; r/sysadmin and Spiceworks threads; Capterra and vendor review pages. For incidents: "data centre fire India" by year. Portals used: rbi.org.in, sebi.gov.in, pib.gov.in, meity.gov.in, nitiforstates.gov.in, invest.up.gov.in, sbi.bank.in, ddnews.gov.in, epi-certification.com, uptimeinstitute.com, tiaonline.org, tenderdetail.com, indiamart.com, tradeindia.com, se.com, vertiv.com, rittal.com, raritan.com, akcp.com, reddit.com. Languages: English only; Hindi and Tamil tender text was not searched. Date range: 2016 to 15 September 2026. ● Publicly observed S139 S23 S49 S133 S55 S36 S59 S87

Source mix and confidence

Confidence was set high for regulator and government pages opened directly, for company product pages, for the order book and for the certificate record; medium for analyst summaries, marketplace listings (which are asks, not deals) and news; low for secondary compilations, aggregator listings, and commercial market reports with undisclosed methods (used only to triangulate). Internal sources are cited as such and their figures are labelled Rax-supplied. ● Rax-supplied S2 S3 ● Inferred

Limits and workarounds

The Browser pane and Claude in Chrome were not used, by instruction; pages were captured with a headless Chromium script and PDFs with pdftoppm. GeM bid documents require a session and were not opened; the SBI RFP PDF was downloaded and read instead. The Uptime Tier register is a dynamic page and was not counted. The MeitY SDC page did not render. Analyst reports from JLL, CBRE, Savills and ICRA were read through their public pages and government citations, not the paid PDFs. Indian buyer voices proved scarce online; forum evidence is therefore mostly non-Indian and is labelled by geography. Four searches for an Indian stand-alone rack-monitoring tender specification found package bids only. ● Inferred

Corrections made during pass 1

Phases 1 and 2 built product truth, market structure and regulation on the 2023 RBI Master Direction. In phase 3 the direction was found stamped withdrawn on rbi.org.in; the consolidation was traced to the 2026 Directions, paragraphs 60 to 63 were quoted, and the regulation table, timeline, quotes and verdict were re-cut around para 61. The SBI RFP was added as the tender evidence and Indian GSM-box vendors were added to the competitor set and price ladder. Counts of words, sources, competitors, price points, quotes, states, events and figures were checked against the charter minimums with the validator at the end of each phase.

● Verified S139 S22 ● Inferred

Changes between the first and second pass

The gap audit found nine shortfalls; pass 2 closed them as follows. The FUJI record was rebuilt by work order from the production delivery workbook, which replaced a 280-set count that double-counted re-issued purchase orders with 201 to 261 sets, and public research on Fuji Electric India's service estate and its 2013 iPEMS product turned an unknown buyer into a segment reading. Section 03 gained a dated city table, a dated site-count table and a five-year macro view, and the regulation table gained clause-level text from MeitY's SDC guideline, SEBI CSCRF and its FAQ, ISO 27001 controls and the TIA-942-C scope. Prices were recategorised and extended to 42 points with at least five per category; section 07 gained the award-price search result and the MSE and Make in India preferences; section 04 gained a capex-share anchor and a SOM recomputed from the corrected run-rate. Section 10 gained parliamentary replies and the MeitY and BSES tender language; section 11 gained the BIS CRS scope finding, delivery risk and two new risks; section 12 was reframed around Rax's stated priority to grow the line, and sections 00, 05 and 08 test Rax's statement that its e-surveillance relationships are a route. Two segment scores moved by one point each; the product score did not change.

Rax-supplied

S148

S2

Verified

S157

S120

S164

Publicly observed

S144

S145

S153

Recommendation

Re-verification of the ten most load-bearing numbers

NUMBER	USED WHERE	RE-VERIFIED AGAINST	RESULT
RBI para 61 wording, 31 July 2026 issue and applicability	Verdict, 03, 05, 08	RBI Directions page, RBI/DoS/2026-27/410	Confirmed; applicability narrowed to exclude small finance, payments and local area banks
375 MW (2020) to about 1,500 MW (2025)	Headline, 03	PIB release of the Rajya Sabha reply, 13 March 2026	Confirmed
387 MW added in 2025; Mumbai 34, NCR 20, Chennai 19 percent	03, 09	DD News report of Savills	Confirmed; H1 2026 city stock added from Savills
About 500 MW new supply in 2026 (sizing pool A)	04	CBRE via Business Today	Confirmed; original URL dead and replaced
7.5 kW per rack	03, 04	Uptime Global Data Center Survey 2025	Confirmed as the average modal density excluding facilities of 30 kW and above
NetBotz 250 at ₹1,00,000	Headline, 06, 07	IndiaMART listing, Netspace Infotech, Ahmedabad	Confirmed, excluding taxes
Watchdog 100-P at ₹61,115	06, 07	IndiaMART, NCR Data Voiz	Confirmed on a new URL
FUJI sets and price	Headline, 00, 01, 04, 05	Production delivery workbook by work order	Corrected from 280 to 201 to 261 sets; ₹66,675 to ₹69,065 confirmed
1.64 lakh branches and 2.51 lakh ATMs	03, 04	RBI Trend and Progress of Banking 2024-25	Confirmed
AISHE 1,289 universities and 48,246 colleges	03, 04	AISHE 2023-24 report	Confirmed; PIB release dated 8 July 2026

Verified

S139

S43

S57

S154

S42

Publicly observed

S19

S125

S59

S32

Rax-supplied

S148

Source list

- S1

Rack Monitoring Controller RT-RMC-G2V0 Technical Data Sheet, RTS-RMC-G2V0-R02, rev 1

file:/// _rax-data/114911_Data_Sh

eets/unz_Updated_e-Surveillance__Techincal_Data_Sheet/Updated Rack Monitoring Controller Technical Data Sheet Document 2025.pdf

Rax Tech International · 2025-07-28 · accessed 2026-09-15 · India · internal · confidence medium · Four pages, Canva-produced, revision 1 dated 28-07-25. States 16 DI, 1 fire interface, 9 outputs, 2MP (640x480) serial JPEG camera, OLED, 2 Wiegand, Modbus, 100 Mbps Ethernet, SIA/TCP-IP, 100-240 VAC, 12 VDC, 430x45x160 mm, CE certified, RoHS, ISO 9001:2015, one-year warranty. Claims are Rax-supplied.
- S2

Rax Tech International: verified internal context (CONTEXT-RAX.md)

file:///rax-market-research/charter/CONTEXT-RAX.md

Rax market research programme, from RAX-GROUND-TRUTH.md of 4 to 5 August 2026 · 2026-08-05 · accessed 2026-09-15 · India · internal · confidence high · Includes Gabriel's statements of 15 September 2026 (Rax considers itself a major e-surveillance player and is actively trying to grow Rack Monitoring and FIOT); these are Rax-supplied and tested against records in this report.

- S3** **Rax order book FY2024-25 and FY2025-26 (rax-orderbook.csv)** file:/// _rax-data/ _analysis/rax-orderbook.csv
Rax Tech International internal analysis · 2026-08 · accessed 2026-09-15 · India · internal · confidence high · 967 monthly order-tracking rows; 37 FUJI rows resolving to 16 distinct work orders for RMC Set, RMC KIT, RMC and 1mm Shelf between May 2025 and April 2026; one MRS RMC KIT row.
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- S4** **Rax product master (rax-product-master.csv)** file:/// _rax-data/ _analysis/rax-product-master.csv
Rax Tech International internal analysis · 2026-08 · accessed 2026-09-15 · India · internal · confidence high · 57 models; row 12 RT-RMC-GX rack monitoring controller (FIOT group), row 41 RT-SW-RMC Smart Rack Monitoring Central Software, row 21 RT-CP-Delibo Delibo Smart Racks (customer use case).
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- S5** **Rax cross-sell matrix FY2025-26 (rax-cross-sell.csv)** file:/// _rax-data/ _analysis/rax-cross-sell.csv
Rax Tech International internal analysis · 2026-08 · accessed 2026-09-15 · India · internal · confidence high · FUJI FY2025-26 value 1,76,70,095 rupees, buys RMC SET only; no other account buys RMC SET.
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- S6** **RT-RMC-GX Integrated Rack Monitoring and Access Controller: Saudi commercial dossier (rt-rmc-gx.json)** file:///IIBDAEI-Saudi-Market-Research-2026/research-v2/products/rt-rmc-gx.json
IIBDAEI Saudi Market Research 2026, research-v2 · 2026-07-19 · accessed 2026-09-15 · Saudi Arabia · internal · confidence medium · Verdict CONDITIONAL, priority score 86; product-truth conflicts (RT-RMC-GX vs RT-RMC-G2V0, 2MP vs 640x480); unknowns list; Saudi TAM/SAM/SOM scenario SAR 24m/6m/0.6m; eight research targets; compliance list (SABER, CST, NCA ECC, PDPL, SBC 801).
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- S7** **RT-SW-RMC Smart Rack Monitoring: Saudi commercial dossier (rt-sw-rmc.md)** file:///IIBDAEI-Saudi-Market-Research-2026/research-v2/products/rt-sw-rmc.md
IIBDAEI Saudi Market Research 2026, research-v2 · 2026-07-19 · accessed 2026-09-15 · Saudi Arabia · internal · confidence medium · Verdict BUNDLE-ONLY: software has a one-line description; unknowns include screens, multi-site scale, RBAC, retention, escalation, APIs, HA, mobile app, cybersecurity and price. Saudi DCIM market USD 10.66m 2025 (dcmarketinsights) and S&P installed IT load 222 MW Q1 2025.
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- S8** **Rack Monitoring Controller RT-RMC-GX product page** https://www.rax-tech.com/products/rack-monitoring-controller-rt-rmc-gx
Rax Tech International, rax-tech.com · undated · accessed 2026-09-15 · India · vendor · confidence medium · Page titled RT-RMC-GX but specification block names RT-RMC-G2V0; repeats datasheet specification; links datasheet PDF on R2 bucket; no price, no customer or installation claim.
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- S9** **Smart Rack Monitoring RT-SW-RMC product page** https://www.rax-tech.com/products/smart-rack-monitoring-rt-sw-rmc
Rax Tech International, rax-tech.com · undated · accessed 2026-09-15 · India · vendor · confidence medium · Single-line description 'Smart rack monitoring central software'; no features, screenshots, licensing or deployment detail.
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- S10** **Data Centre and Rack Infrastructure industry page** https://www.rax-tech.com/industries/data-centre-rack-infrastructure
Rax Tech International, rax-tech.com · undated · accessed 2026-09-15 · India · vendor · confidence medium · Lists RT-RMC-GX and RT-SW-RMC; claims 'live visibility and alerting across every site from one dashboard'; cites ISO 9001:2015, ZED Silver, RoHS; no prices, customers or protocols.
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- S11** **IoT products page** https://www.rax-tech.com/products/iot
Rax Tech International, rax-tech.com · undated · accessed 2026-09-15 · India · vendor · confidence medium · Twelve IoT products including RT-RMC-GX, RT-DFI-W/G temperature-humidity units, RT-ICM; the page source also carries 'RT-CP-Delibo / Delibo Smart Racks'.
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- S12** **About Us: Fuji Electric 'In India For India'** https://www.india.fujielectric.com/about-fuji-electric
Fuji Electric India Pvt. Ltd. · undated · accessed 2026-09-15 · India · vendor · confidence medium · 1,000+ employees, 400+ service engineers, 80+ service locations, 100+ channel partners, 300+ 1 MW customers; Consul Neowatt acquired 2019; factories in Chennai and Pune being expanded by 150,000 sq ft; Automation R&D in Chennai.
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- S13** **Data Center solutions page** https://www.india.fujielectric.com/solutions/data-center
Fuji Electric India Pvt. Ltd. · undated · accessed 2026-09-15 · India · vendor · confidence medium · Data-centre offer is UPS, VFDs and a PDU that 'monitor[s] the power consumption of each server rack' up to 128 poles; no smart rack or environmental-monitoring product is listed.
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- S14** **Fuji Electric to acquire Indian UPS maker Consul Neowatt for \$104 million** <https://www.datacenterdynamics.com/en/news/fuji-electric-acquire-indian-ups-maker-consul-neowatt-104-million>
Data Center Dynamics · 2019-06-20 · accessed 2026-09-15 · India · news · confidence high · USD 104m (Rs 720 crore) for 100 percent of Consul Neowatt Power Solutions, Chennai and Pune factories; renamed Fuji Electric Consul Neowatt.
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- S15** **Delibo smart parcel locker site** <https://delibo.in/>
Delibo (unit of Pranath Technocraft Pvt Ltd), Chennai · 2025-06-03 · accessed 2026-09-15 · India · vendor · confidence medium · OEM of smart parcel lockers with app, OTP and dynamic PIN; Perungudi, Chennai; the 'Delibo Smart Racks' in Rax's product master are locker cabinets, not server racks.
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- S16** **Delibo company page** <https://linkedin.com/company/delibo>
LinkedIn · 2026-03-04 · accessed 2026-09-15 · India · vendor · confidence low · Nine employees, founded 2020, Chennai; posts on Intersec 2026 Dubai and ACE Tech Expo Dec 2025; 'API-first architecture, built to integrate with access control, visitor management and ELV systems'.
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- S17** **India data centre 2026 mid-year report** <https://www.jll.com/en-in/insights/market-dynamics/india-data-centers>
JLL India · 2026-09-03 · accessed 2026-09-15 · India · analyst · confidence medium · Capacity 1.6 GW mid-2026 heading to 6 GW by 2029; H1 2026 absorption 101 MW, 82 percent pre-committed hyperscale; H1 2026 supply 85 MW split Mumbai 48 percent and Chennai 50 percent; 60 percent supply CAGR since 2021; USD 110 bn investment need by 2029; DPDP Act dates.
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- S18** **Real Estate Highlight: Data Center, India Edition, December 2025** <http://cdn.hl.com/pdf/2025/real-estate-highlight-data-center-india-edition.pdf>
Houlihan Lokey (citing Savills, JLL, C&W, operator disclosures) · 2025-12-01 · accessed 2026-09-15 · India · analyst · confidence medium · City capacities (Dec 2024 estimates): Mumbai 568 MW, Chennai 201 MW, Delhi-NCR 111 MW, Pune 94 MW, Bengaluru 78 MW, Hyderabad 48 MW; 2030 ranges; operator footprints STT GDC ~390 MW, NTT ~290 MW, CtrlS ~250 MW, Sify 190 MW, Nxtra 200 MW; occupier split cloud 43 percent, BFSI 14 percent, IT and telecom 15 percent.
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- S19** **India's data centre capacity more than doubled in 2025** <https://ddnews.gov.in/en/indias-data-centre-capacity-more-than-doubled-in-2025>
DD News (Prasar Bharati), reporting CBRE · 2026 · accessed 2026-09-15 · India · news · confidence medium · Operational stock 1,520 MW IT, up 34 percent year on year; Mumbai 34 percent, Delhi-NCR 20 percent, Chennai 19 percent of operational supply.
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- S20** **India's data centre capacity to grow to 2,000-2,100 MW by March 2027: ICRA** <https://www.ibef.org/news/india-s-data-centre-capacity-to-grow-to-2-000-2-100-megawatts-mw-by-march-2027-icra>
IBEF, citing ICRA and Business Standard · 2025-03-12 · accessed 2026-09-15 · India · analyst · confidence medium · 1,150 MW at December 2024; Rs 2,00,000-2,30,000 crore investment; 3-3.5 GW pipeline over 7-10 years; 75 percent of upcoming capacity in Mumbai, Chennai, Hyderabad; developers from 5 in 2019 to 18 in 2025; colocation 80-85 percent of DC revenue.
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- S21** **India's digital backbone to strengthen with Rs 90,000 crore data centre impetus during FY2026-FY2028** <https://www.icra.in/Research/ViewResearchReport/india-s-digital-backbone-to-strengthen-with-rs-90-000-crore-data-centre-impetus-during-fy2026-fy2028/6543>
ICRA · 2025 · accessed 2026-09-15 · India · analyst · confidence medium · Operational capacity 1,250 MW in FY2025 rising to 2,400-2,500 MW by FY2028; pipeline 3.0-3.5 GW over 7-10 years.
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- S22** **Master Direction on Information Technology Governance, Risk, Controls and Assurance Practices, 2023 (RBI/2023-24/107)** https://www.rbi.org.in/scripts/BS_ViewMasDirections.aspx?id=12562
Reserve Bank of India · 2023-11-07 · accessed 2026-09-15 · India · regulatory · confidence medium · Clause 18 Physical and Environmental Controls: REs shall implement suitable physical and environmental controls in DC and DR sites; DC and DR geographically separated; DC and DR sites subjected to necessary e-surveillance mechanism. NOTE: rbi.org.in stamps this direction WITHDRAWN as of September 2026; it was consolidated into the entity-wise Cybersecurity, Technology: Risk, Resilience and Assurance Framework Directions, 2026 (S139 banks, S140 NBFCs). Cited here for history only.
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- S23** **Cybersecurity and Cyber Resilience Framework (CSCRF) for SEBI Regulated Entities** <https://www.sebi.gov.in/legal/circulars/aug-2024/cybersecurity-and-cyber-resilience-framework-cscrf-for-sebi-regulated-entities-res-85964.html>
Securities and Exchange Board of India · 2024-08-20 · accessed 2026-09-15 · India · regulatory · confidence high · Circular of 20 August 2024 establishing a graded cyber-resilience framework for SEBI REs including physical security controls; clause-level text to be quoted from the circular.
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- S24** **Cyber Security Framework in Banks (DBS.CO/CSITE/BC.11/33.01.001/2015-16)** <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=10435>
Reserve Bank of India · 2016-06-02 · accessed 2026-09-15 · India · regulatory · confidence high · Annex 1 baseline controls include an 'Environmental Controls' domain for data centres and critical facilities; assessed as physical access logs, fire, power, cooling, CCTV and environmental monitoring evidence.
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- S25** **Uttar Pradesh Data Centre Policy 2021 (First Amendment 2022) and 2026 policy note** <https://invest.up.gov.in/up-data-centre-policy-2021/>
Invest UP, Government of Uttar Pradesh · 2021-01-28 · accessed 2026-09-15 · India · regulatory · confidence high · Targets 250 MW and Rs 20,000 crore; capital subsidy 7 percent up to Rs 10 crore; interest subsidy 60 percent up to Rs 50 crore per park; land subsidy 25-50 percent; 100 percent stamp-duty and electricity-duty exemptions; dual grid for first three parks.
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- S26** **Tamil Nadu Data Centre Policy 2021: benefits and incentives (legal summary)** <https://www.lexology.com/library/detail.aspx?g=ef886b87-d9d7-4c8a-89f6-a022e259cf75>
Ahlawat and Associates via Lexology · 2026-03-02 · accessed 2026-09-15 · India · reference · confidence medium · Summary of the 2021 policy: industrial status, electricity-tax waiver for five years for investments above Rs 500 crore with 30 percent renewables, 50 percent open-access charge concession, dual grid above 50 MW, stamp duty and land subsidies, 10 percent MSME sub-contractor reimbursement up to Rs 10 lakh per DC.
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- S27** **ISO 27001:2022 Annex A 7.4 Physical security monitoring** <https://www.isms.online/iso-27001/annex-a-2022/7-4-physical-security-monitoring-2022/>
ISMS.online (secondary commentary on the standard) · 2025-09-03 · accessed 2026-09-15 · Global · reference · confidence medium · Control 7.4 (new in 2022) requires continuous monitoring of premises for unauthorised physical access, via CCTV, alarms and access control; related controls 7.5 protection against physical and environmental threats, 7.8 equipment siting and protection.
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- S28** **EN 50600-2-5:2021 Information technology, data centre facilities and infrastructures, Part 2-5: Security systems (scope)** <https://standards.globalspec.com/std/14379579/en-50600-2-5>
CENELEC via GlobalSpec · 2021-04-01 · accessed 2026-09-15 · Europe · reference · confidence medium · Scope covers protection against unauthorised access, intrusion, fire events within DC spaces, and environmental events inside and outside DC spaces, with protection classes tied to EN 50600-1.
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- S29** **A comprehensive guide to TIA-942 and data centre compliance** <https://www.bradyid.com/resources/articles/tia-942-data-center-standard>
Brady (secondary commentary on ANSI/TIA-942-C) · 2025-05-09 · accessed 2026-09-15 · Global · reference · confidence low · States TIA-942 mandates continuous environmental monitoring of temperature and humidity and fire suppression; revisions A 2010, B 2017, C 2022. Clause text not opened.
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- S30** **APC NetBotz 250 Room Monitor NBRK0250A listing** <https://www.server-rack-online.com/nbrk0250a>
Server Racks Online (US reseller) · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · Listed USD 690 (list USD 945); 6 sensor ports, 4 rack-access ports, 42 wired and 47 wireless sensors, two-year warranty; NetBotz 750 at USD 2,706 (list 3,710); NetBotz 755 room monitor USD 2,475.
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- S31** **Watchdog 100, Vertiv Geist Environmental Monitors, India catalogue page** <https://www.vertiv.com/en-in/products-catalog/monitoring-control-and-management/monitoring/watchdog-100/>
Vertiv · undated · accessed 2026-09-15 · India · vendor · confidence high · On-board temperature, humidity, dew point; 2 RJ12 sensor inputs; up to 50 alarms with escalation; alerts by email, SNMP, email-to-SMS; three-year warranty extended to five on registration.
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- S32** **Vertiv Geist Watchdog 100-P NPS Environmental Monitor at Rs 61,115 per piece** <https://www.indiamart.com/proddetail/vertiv-geist-watchdog-100-p-nps-environmental-monitor-with-on-board-temperature-2854163270312.html>
IndiaMART (NCR Data Voiz Comm Pvt Ltd, New Delhi) · 2026 · accessed 2026-09-15 · India · vendor · confidence medium · Re-verified in pass 2: Watchdog 100-P at Rs 61,115 per piece; same seller lists Watchdog 15-P at Rs 33,134; another Delhi reseller lists the 100-P at Rs 68,115. The earlier listing URL now shows an unrelated product.
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- S33 iRack Series and iRack Block: self-cooled, self-powered, self-contained racks** <https://www.netrackindia.com/en/products-and-solutions/intelligent-racks-cooling-solutions/irack-series>
Netrack (Legrand), Bengaluru · undated · accessed 2026-09-15 · India · vendor · confidence high · 42U racks with integrated PAC 3.5-7 kW (Block 7-55 kW), UPS, intelligent PDU, surveillance and environmental management, KVM, intelligent rack access; positioned at banking, insurance, warehouses, manufacturing, education; ISO 9001/14001/27001/45001 manufacturing.
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- S34 Rittal DK CMC III Processing Unit 7030000 listing** <https://www.cdw.com/product/rittal-dk-cmc-iii-processing-unit-environment-monitoring-device/8080699>
CDW (US reseller) · 2026-08-09 · accessed 2026-09-15 · United States · vendor · confidence medium · USD 1,219.99 for the CMC III processing unit; Ethernet, web/USB configuration, e-mail alarms, SNMP to NMS.
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- S35 Digital Rack Temperature Monitoring and Audio Alarm at Rs 4,800 per piece** <https://www.indiamart.com/proddetail/rack-temperature-monitoring-and-audio-alarm-5671191373.html>
IndiaMART listing by Spaceage Security Systems Ltd, Noida · undated · accessed 2026-09-15 · India · vendor · confidence medium · Low-end single-rack temperature alarm at Rs 4,800; defines the bottom of the Indian price ladder.
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- S36 Server racks tenders in India 2026 (108 live) and data centre tenders (1,377 live)** <https://www.tenderdetail.com/Indian-tender/server-racks-tenders>
TenderDetail aggregator · 2026-09 · accessed 2026-09-15 · India · dataset · confidence low · Aggregator listing; examples include a Rs 18 crore Gujarat science and technology bid for intelligent cabinets, iPDUs, in-row cooling and PAC; MP State Data Centre RFP with smart PDU IT racks; Gujarat HCI with Smart Rack (V2); UP SDC operator selection.
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- S37 Vertiv Geist Watchdog 100 reseller page** <https://radiant.in/vertiv-geist-watchdog-100-environmental-monitors-reseller-partner-dealer-distributor-in-india/>
Radiant Info Solutions, New Delhi · undated · accessed 2026-09-15 · India · vendor · confidence low · Radiant lists itself as reseller and partner for Watchdog 100 and as CyberPower PDU regional distributor.
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- S38 Vertiv launches Geist Watchdog 15 environmental sensor solution in India** <https://www.expresscomputer.in/news/vertiv-launches-geist-watchdog-15-environmental-sensor-solution-to-enhance-enterprise-and-edge-data-center-monitoring-and-management-in-india/102036>
Express Computer · 2023-08-09 · accessed 2026-09-15 · India · news · confidence medium · India launch of the entry-level Watchdog 15 for enterprise and edge monitoring.
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- S39 Data centre industry in India** https://en.wikipedia.org/wiki/Data_centre_industry_in_India
Wikipedia (secondary, citing CBRE, JLL, Business Standard) · undated · accessed 2026-09-15 · India · reference · confidence low · Secondary compilation: 138 data centres in March 2022; 950 MW in 2024; historical city shares; Rs 60-70 crore per MW build cost.
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- S40 Fuji Electric Consul Neowatt partner page** <https://multivistaglobal.com/fuji-electric-consul-neowatt/>
Multivista Global Pvt Ltd, Chennai · 2022-12-16 · accessed 2026-09-15 · India · vendor · confidence low · Chennai channel partner listing Fuji Electric Consul Neowatt UPS ranges (Finch 1-30 kVA, Falcon 10-1000 kVA) with data centres and hospitals as application areas; also carries Vertiv and nVent Hoffman.
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- S41 India is using fewer ATMs even as bank branches keep growing, RBI reveals** <https://www.financialexpress.com/business/news/india-is-using-fewer-atms-even-as-bank-branches-keep-growing-rbi-reveals/4092382/>
Financial Express, reporting RBI Report on Trend and Progress of Banking · 2025-12-30 · accessed 2026-09-15 · India · news · confidence medium · Bank branches 1.64 lakh at 31 March 2025 (+2.8 percent); ATMs 2,51,057 at 31 March 2025 versus 2,53,417 a year earlier; private-bank ATMs down to 77,117.
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- S42 All India Survey on Higher Education (AISHE) 2023-24 report** <https://www.dohe-education.gov.in/static/uploads/2026/07/8616f33dfee644ab6b87a2bd0658b18d.pdf>
Department of Higher Education, Ministry of Education · 2026-07 · accessed 2026-09-15 · India · dataset · confidence high · 1,289 universities and university-level institutions, 48,246 colleges and 15,221 standalone institutions registered in AISHE 2023-24.
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- S43** Data centre capacity in the country has increased from about 375 MW in 2020 to around 1500 MW by 2025 (Rajya Sabha reply) <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2239616®=3&lang=1>
Press Information Bureau, MeitY; Minister of State Jitin Prasada · 2026-03-13 · accessed 2026-09-15 · India · primary · confidence high · Government statement in Rajya Sabha on 13 March 2026: total data centre capacity about 375 MW in 2020 to around 1,500 MW by 2025; industry adopting advanced cooling to reduce water use.
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- S44** Data centre in India: 2022 year-end update and three-year outlook <https://www.jll.co.in/en/trends-and-insights/research/data-centre-in-india-2022-year-end-update-and-three-year-outlook>
JLL India · 2023 · accessed 2026-09-15 · India · analyst · confidence medium · Industry doubled from 350 MW in 2019 to 722 MW at end-2022; 2022 absorption 160 MW; 678 MW addition expected by 2025 (1.4 GW); Mumbai 54 percent, Chennai 22 percent, NCR 11 percent of investment.
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- S45** India's Data Centre Market in a New Era: 2025 YTD market update <https://www.cbre.co.in/insights/reports/india-s-data-centre-market-in-a-new-era>
CBRE India Research · 2025-11-12 · accessed 2026-09-15 · India · analyst · confidence medium · Operational stock about 1,530 MW (23 million sq ft) at 9M 2025 with 260 MW added in the year; nearly 90 percent of capacity in Mumbai, Chennai, Delhi-NCR and Bengaluru; USD 94 bn commitments 2019 to 9M 2025, 45 percent in Telangana, Maharashtra, Tamil Nadu, UP, West Bengal and Karnataka.
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- S46** Fire at data centre causes India-wide outage for Reliance Jio users, source says <https://www.reuters.com/world/india/reliance-jio-users-report-network-outage-across-india-down-detector-shows-2024-09-17/>
Reuters · 2024-09-17 · accessed 2026-09-15 · India · news · confidence high · A fire at a Reliance Jio data centre caused a nationwide network outage on 17 September 2024, per a source with direct knowledge.
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- S47** Google Cloud outage update: fire at data centre, traffic rerouted from impacted facility in Delhi <https://timesofindia.indiatimes.com/technology/tech-news/google-cloud-outage-update-fire-at-data-centre-traffic-rerouted-from-impacted-facility-in-delhi/articleshow/131625933.cms>
The Times of India · 2026-06-10 · accessed 2026-09-15 · India · news · confidence medium · A fire at a third-party data centre in Delhi triggered an emergency shutdown of networking equipment, slowing Google Cloud network performance for users in parts of India.
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- S48** Google Cloud suffers network disruptions after fire at third-party data center in India <https://www.datacenterdynamics.com/en/news/google-cloud-suffers-network-disruptions-after-fire-at-third-party-data-center-in-india/>
Data Center Dynamics · 2026-06-18 · accessed 2026-09-15 · India · news · confidence medium · Incident affected traffic from Delhi, Chennai, Mumbai and nearby regions with increased latency; a local point of presence lost capacity.
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- S49** Data Centre Policy 2020 (draft for discussion) https://www.nitiforstates.gov.in/public-assets/Policy/policy_files/PNC510C000384.pdf
Ministry of Electronics and Information Technology, via NITI for States policy repository · 2020-11-05 · accessed 2026-09-15 · India · regulatory · confidence high · Sixteen-page draft: infrastructure status, single-window via a Data Centre Facilitation Unit, Data Centre Economic Zones, a Data Centre Incentivization Scheme, and clause 5.2.4 on drafting building and safety guidelines for data centres under NBC 2016 followed by a separate building code.
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- S50** Budget 2026-27 sets the stage for India as a global hub for cloud and AI infrastructure <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2227953®=48&lang=2>
Press Information Bureau, Ministry of Finance · 2026-02 · accessed 2026-09-15 · India · primary · confidence high · A foreign company providing cloud services globally while using data centre services located in India is eligible for a tax holiday extending to 2047.
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- S51** Maharashtra IT and ITes Policy 2023 booklet https://industry.maharashtra.gov.in/sites/default/files/2025-09/it-policy-booklet_1_11zon.pdf
Industries Department, Government of Maharashtra · 2023 · accessed 2026-09-15 · India · regulatory · confidence high · Provisions to build data centre parks and essential-services status for the data centre industry, aiming to make Mumbai the data centre capital of India.
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- S52** National Building Code of India 2016, Part 4 Fire and Life Safety (licensed copy) <https://fireandsafetyequipments.com/wp-content/uploads/2018/09/NBC2016-Part-IV.pdf>
Bureau of Indian Standards (copy hosted by fireandsafetyequipments.com) · 2016 · accessed 2026-09-15 · India · regulatory · confidence medium · Table 7 minimum fire-fighting installations by occupancy; note 2 requires automatic detection in electrical rooms and cabins even where car parks are exempt; the code, not the host, is the authority.
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- S53** IS 2189:2008 Selection, installation and maintenance of automatic fire detection and alarm system, code of practice (fourth revision) <https://archive.org/details/gov.law.is.2189.2008>
Bureau of Indian Standards, via Internet Archive · 2008 · accessed 2026-09-15 · India · regulatory · confidence high · Indian code of practice for fire detection and alarm systems that a rack controller's fire-alarm interface must respect; alarm signalling must indicate location and initiate ancillary services.
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- S54** IGBC Green Data Centre Rating System <https://igbc.in/igbcgreendatacenter>
Indian Green Building Council, CII · 2016 · accessed 2026-09-15 · India · reference · confidence medium · Rating launched 2016 covering design, construction and operations of data centres; monitoring credits sit in the operations chapters.
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- S55** TIA-942 certified data centres in India (certification map) <https://www.epi-certification.com/sites/map/India>
EPI Certification, Singapore · 2026 · accessed 2026-09-15 · India · dataset · confidence high · Live register of ANSI/TIA-942 Design and Facility certificates in India: AdaniConneX Chennai (Rated 4), Airports Authority of India DR Hyderabad, Anant Raj Manesar, BSNL, C-DOT, Coal India, Colt, CtrlS (several, Rated 4), Cyient, CapitaLand, NTT, Equinix, ESDS, RailTel (Mahalaxmi, Noida, Manesar), Sify (many), STT GDC (Bengaluru, Noida, Chennai, Delhi, Pune, Mumbai, Hyderabad), Techno Digital Chennai, Web Werks (Mumbai, Noida, Pune, Hyderabad, Bengaluru), Wipro, Yotta, Nxtra, Reliance IDC (Nagpur, Navi Mumbai, Jamnagar), Trimax.
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- S56** 2021 Equipment Thermal Guidelines for Data Processing Environments, reference card (5th edition) <https://www.ashrae.org/file%20library/technical%20resources/bookstore/supplemental%20files/therm-gdlns-5th-r-e-refcard.pdf>
ASHRAE TC 9.9 · 2021 · accessed 2026-09-15 · Global · reference · confidence high · Recommended envelope 18 to 27 degrees C with dew point -9 to 15 degrees C and maximum 60 percent RH; allowable A1 class 15 to 32 degrees C, 20 to 80 percent RH.
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- S57** Uptime Institute Global Data Center Survey 2025 <https://datacenter.uptimeinstitute.com/rs/711-RIA-145/images/2025.Annual.Survey.Report.pdf>
Uptime Institute · 2025-07-29 · accessed 2026-09-15 · Global · analyst · confidence high · Average modal rack density excluding outliers 7.5 kW in 2025, up from 6.8 kW; 2024 survey average 7.1 kW excluding outliers; few facilities above 30 kW.
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- S58** NBC 2016 Part 4 fire and life safety provisions (summary) <https://infralens.in/knowledge/nbc-2016-part-4-fire-safety>
Infralens · 2026-04-23 · accessed 2026-09-15 · India · reference · confidence low · Secondary summary: addressable smoke detection and manual call points required for buildings above 15 m and for assembly, mercantile and institutional occupancies; detectors in electrical rooms per IS 2189.
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- S59** APC NetBotz Rack Monitor NBRK0250 at Rs 1,00,000 per piece <https://www.indiamart.com/proddetail/apc-netbotz-rack-monitor-nbrk0250-2854977584497.html>
IndiaMART listing by Netspace Infotech, Ahmedabad · 2026 · accessed 2026-09-15 · India · vendor · confidence medium · Observed Indian marketplace price for the NetBotz 250 appliance alone, about 3.6 times the US reseller price after duty, margin and GST.
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- S60** NetBotz product range, Schneider Electric India <https://www.se.com/in/en/product-range/61830-netbotz/>
Schneider Electric India · undated · accessed 2026-09-15 · India · vendor · confidence high · 'Cost-effective and flexible environmental monitoring for all IT environments'; India product page with where-to-buy links.
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- S61** APC distributors in India <https://www.se.com/in/en/work/support/locator/apc-distributors/>
Schneider Electric India · undated · accessed 2026-09-15 · India · vendor · confidence high · Lists Redington (India) Ltd as an APC distributor with a contact number; APC also sells through online resellers.
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- S62** Schneider APC NetBotz Rack Monitor and accessories, trader listing <https://www.maxxcomsys.com/schneider-apc-netbotz-rack-monitor-and-accessories.html>
Maxxcom System Private Limited, Ahmedabad · undated · accessed 2026-09-15 · India · vendor · confidence low · Trader offering NetBotz 250A, 125 kHz and 13.56 MHz rack access handle kits.
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- S63** Valrack Smart Rack authorised partner and GeM government supplier <https://www.sunlitesystems.com/smartrackvalrack.html>
Sunlite Systems Pvt Ltd · undated · accessed 2026-09-15 · India · vendor · confidence low · Reseller positioning Valrack smart racks with environmental monitoring for government offices, banks, schools, universities, hospitals, data centres, telecom and smart-city command centres, sold through GeM.
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- S64** **SR-4281-CKD President Enclosure Smart Rack 42U** <https://www.se.com/in/en/product/SR-4281-CKD/president-enclosure-smart-rack-42u-black-1980h-x-800w-x-1000d-mm/>
Schneider Electric India · undated · accessed 2026-09-15 · India · vendor · confidence high · President-brand smart rack sold on Schneider Electric India's site, showing the rack OEM is now inside the Schneider channel.
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- S65** **Remote monitoring systems and server room monitoring system price list** <https://www.tradeindia.com/manufacturers/remote-monitoring-system.html>
TradeIndia · 2026-08-13 · accessed 2026-09-15 · India · vendor · confidence low · AdvanceTech India (Zirakpur) server room monitoring system at Rs 67,796 per set with one-year warranty; remote monitoring systems at Rs 40,000; Netsys remote monitoring solution Rs 23,000; Adaptek GSM remote monitoring Rs 15,000.
-
- S66** **Data centre solutions price list** <https://www.tradeindia.com/manufacturers/data-center-solutions.html>
TradeIndia · undated · accessed 2026-09-15 · India · vendor · confidence low · ReadyPod smart micro data centre 4 x 42U at Rs 3,80,000; APS Tech smart row data centre Rs 2,00,000; smart cabinet data centre Rs 70,000; Green Powers smart modular DC Rs 2,50,000; Knurr compact rack monitoring system listed without price.
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- S67** **EcoStruxure IT Expert subscription, 25 nodes, 5 years** <https://www.shi.com/product/37293832/EcoStruxure-IT-Expert>
SHI (US reseller) · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · USD 6,581 (MSRP USD 9,595) for a 25-node five-year subscription, about USD 53 per node per year.
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- S68** **Sunbird dcTrack software licence for up to 50 cabinets and 300 cabinets** <https://matrixsolutionsinc.com/sunbird-dctrack-software-and-licence-to-use-for-up-to-50-cabinets/>
Matrix Solutions (US reseller) · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · 50-cabinet licence MSRP USD 34,416 (Matrix USD 32,695); 300-cabinet licence MSRP USD 180,295; 10,000-cabinet MSRP USD 4.04 million; about USD 600 to 690 per cabinet.
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- S69** **Request Nlyte pricing** <https://www.nlyte.com/company/pricing/>
Nlyte Software · 2026-04-16 · accessed 2026-09-15 · Global · vendor · confidence medium · Quote-based; SaaS or perpetual pricing based on racks, assets or facility power.
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- S70** **AKCP distributors** <https://www.akcp.com/akcp-distributors>
AKCP · 2026-06-08 · accessed 2026-09-15 · Global · vendor · confidence medium · India distributor listed as Fluke Infotech; sensorProbe and securityProbe SNMP-based monitoring appliances.
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- S71** **Delta InfraSuite Environmental Management System (EMS) leaflet** <https://www.mpowergroup.in/wp-content/uploads/2023/09/Leaflet-InfraSuite-EMS-en-us-1.pdf>
Delta Electronics, hosted by Mpower Group (India distributor) · 2023-09 · accessed 2026-09-15 · India · vendor · confidence medium · EMS1000/EMS2000 monitor temperature, humidity, water leakage, fire, smoke, unauthorised entry; EMS2000 protocols IPv4/IPv6, HTTPS, SNMP v1/v3, SSH, SFTP, SMTP, syslog, RADIUS; EnviroProbe cascades ten units over RS485.
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- S72** **NetEco6000 DCIM system for data centre infrastructure** <https://digitalpower.huawei.com/en/data-center-facility/neteco6000>
Huawei Digital Power · undated · accessed 2026-09-15 · Global · vendor · confidence medium · DCIM with device monitoring, alarm management, power and cooling link visualisation, energy-efficiency optimisation; bundled with Huawei smart modular data centres.
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- S73** **Smart Rack Controller (SRC) intelligent sensor management** <https://www.raritan.com/products/power/rack-management/intelligent-sensor>
Raritan (Legrand) · undated · accessed 2026-09-15 · Global · vendor · confidence high · Up to 204 plug-and-play sensors, SmartLock door handles, asset tags; alerts via SNMP, email and API; integrates with BMS and DCIM by SNMP, Modbus TCP and JSON-RPC; 100-240 VAC or 48 VDC.
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- S74** **Rack Monitoring System, Knurr RMS III, India catalogue page** <https://www.vertiv.com/en-in/products-catalog/facilities-enclosures-and-racks/racks-and-containment/rack-monitoring-system/>
Vertiv India · undated · accessed 2026-09-15 · India · vendor · confidence high · Zero-U rack monitor with SNMP and web configuration, https, three user levels, Boolean alarm filters, relay/SNMP/email alarms, Modbus TCP, MQTT, NTP; sensors for temperature, humidity, dry contacts and 0-10 V.
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- S75** **Monitoring system CMC III catalogue pages** https://www.rittal.com/imf3/none/5_1923/
Rittal · 2012-11-09 · accessed 2026-09-15 · Global · vendor · confidence medium · CMC III processing unit with integrated temperature and access sensors, CAN-bus sensors (7030.110 temperature, 7030.111 temperature-humidity, 7030.230 transponder reader), smoke, motion, early fire detection, door control; up to 32 sensors on the PU.
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- S76** **HW group product portfolio** <https://www.hw-group.com/>
HW group s.r.o., Prague · 2026 · accessed 2026-09-15 · Europe · vendor · confidence medium · Industrial-grade monitoring: STE2 R2 WiFi/Ethernet temperature-humidity with digital inputs, WLD2 water leak detector with SNMP and PoE, Ares 12 LTE for 14 sensors with GSM/LTE and battery backup, NB-IoT sensors.
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- S77** **AVTECH Room Alert** <https://avtech.com/>
AVTECH Software · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · Room Alert PRO (wired) and MAX (wireless) monitors with temperature, humidity, power, airflow, smoke and flood sensors; cloud Room Alert Account platform.
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- S78** **KentixONE physical security platform** <https://www.kentix.com/en/>
Kentix GmbH · 2026 · accessed 2026-09-15 · Europe · vendor · confidence medium · Eight-in-one platform: access control, intrusion, environmental monitoring, early fire detection, video, network monitoring, external fault reports, power distribution; rack handles and rack readers with Ethernet.
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- S79** **ServersCheck infrastructure environment monitoring** <https://www.serverscheck.com/>
ServersCheck · 2026 · accessed 2026-09-15 · Global · vendor · confidence medium · Claims 13,000+ customers in 138 countries, 30+ sensor products, daisy-chained temperature-humidity sensors, industrial protocols API.
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- S80** **Server rack monitoring with PRTG** <https://www.paessler.com/monitoring/hardware/server-rack-monitoring>
Paessler · 2025-03-18 · accessed 2026-09-15 · Global · vendor · confidence medium · Software-only route: PRTG aggregates SNMP temperature from servers, UPS and third-party sensors (Kentix, Jacarta, APC, HW group, Netatmo, egnite) and has out-of-the-box Rittal CMC III sensors.
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- S81** **Sunbird DCIM home page** <https://www.sunbirdcim.com/>
Sunbird Software · 2026 · accessed 2026-09-15 · Global · vendor · confidence medium · DCIM for AI factories; customer testimonials on power management, capacity planning and temperature visibility.
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- S82** **Sensaphone remote monitoring systems** <https://www.sensaphone.com/>
Sensaphone · 2025 · accessed 2026-09-15 · United States · vendor · confidence low · Low-cost remote monitoring with mobile alerts; positioned at refrigeration, vaccines and equipment status as much as IT rooms.
-
- S83** **Sontay water leak detection system for server room and data centre at Rs 28,000 per unit** <https://www.indiamart.com/proddetail/sontay-water-leak-detection-system-for-server-room-data-center-21641534548.html>
IndiaMART listing, Noida · 2022-05-22 · accessed 2026-09-15 · India · vendor · confidence medium · Controller plus sensing cable for under-floor and plant-room leak detection.
-
- S84** **Water leak detection cable and system price ranges** <https://dir.indiamart.com/impcat/water-leak-sensor-cable.html>
IndiaMART category pages · 2026 · accessed 2026-09-15 · India · vendor · confidence low · Leak sensing cable from Rs 35 per metre (Immanuel Enterprises) to Rs 350 per metre (National Fire Protection System, Mumbai); complete WLD systems from Rs 3,500 (J3 Technology).
-
- S85** **Electromagnetic lock 600 lbs price listings** <https://dir.indiamart.com/impcat/electromagnetic-locks.html>
IndiaMART category and product pages · 2026 · accessed 2026-09-15 · India · vendor · confidence low · Fail-safe 600 lbs EM lock at Rs 900 (Riddhi Siddhi Computers, Mumbai) to Rs 7,500 (Instec India, Dombivli).
-
- S86** **Water leakage detection system for server room at Rs 1,50,000** <https://www.tradeindia.com/products/water-leakage-detection-system-for-server-room-c7312388.html>
TradeIndia listing by Digital Kawach Solutions, New Delhi · undated · accessed 2026-09-15 · India · vendor · confidence low · Top of the Indian leak-detection price ladder for a full server-room system.
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- S87** Any solid recommendations for server room temperature monitoring? (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/2ppy3c/any_solid_recommendations_for_server_room/
Reddit · 2014-12-18 · accessed 2026-09-15 · United States · forum · confidence medium · Buyer thread; NetBotz recommended for small server rooms.
-
- S88** Server room temperature monitoring (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/i5qcnp/server_room_temperature_monitoring/
Reddit · 2020-08-08 · accessed 2026-09-15 · Global · forum · confidence medium · Original poster unhappy with APC temperature monitoring; replies recommend UPS management-card probes with email and SNMP.
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- S89** Any recommendations for temperature monitoring? (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/1i6zhfm/any_recommendations_for_temperature_monitoring/
Reddit · 2025-01-22 · accessed 2026-09-15 · Global · forum · confidence medium · NetBotz 'will fill your inbox up with alerts'; ongoing cost only if cloud alerting is used.
-
- S90** Server Room monitoring temps (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/v1381m/server_room_monitoring_temps/
Reddit · 2022-05-30 · accessed 2026-09-15 · Global · forum · confidence medium · Inbox spam moved to PRTG and PagerDuty; thresholds adjusted repeatedly; Meraki MT sensors; NetBotz has served well.
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- S91** Environmental monitors, what are you all using? (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/kb9lee/environmental_monitors_what_are_you_all_using/
Reddit · 2020-12-11 · accessed 2026-09-15 · Global · forum · confidence medium · Old NetBotz 350 emailed on out-of-range temperature and humidity and caught a water leak and an AC failure.
-
- S92** Server Room Monitoring (e.g. NetBotz, StruxureWare), who do you use? (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/11437z7/server_room_monitoring_eg_netbotz_struxureware/
Reddit · 2023-02-16 · accessed 2026-09-15 · Global · forum · confidence medium · Meraki sensors 'easiest thing to deploy... without any issues, fakes alarms etc'; NetBotz 755 email motion alerts failing.
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- S93** Server room temp monitoring (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/1hz3u0v/server_room_temp_monitoring/
Reddit · 2025-01-11 · accessed 2026-09-15 · Global · forum · confidence medium · Vertiv/Geist Watchdogs bought on eBay; NetBotz; UPS add-in cards.
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- S94** Temperature sensors (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/1n2n2ix/temperature_sensors/
Reddit · 2025 · accessed 2026-09-15 · Global · forum · confidence medium · NetBotz used for leak sensors, MIBs easy to find; AKCP sensorProbe2+ for leaks at air-conditioning units; host IPMI/SNMP inlet temperatures.
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- S95** Server room environment monitoring (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/20zv7a/server_room_environment_monitoring/
Reddit · 2014 · accessed 2026-09-15 · Global · forum · confidence medium · Buyer compared AKCP and AVTECH, bought IT Watchdogs PoE-15; another bought Watchdog 15-PoE, 'easy to setup and fits in with Nagios nicely'.
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- S96** Cheap server room temperature monitoring? and Server Room temperature monitor (r/sysadmin) https://www.reddit.com/r/sysadmin/comments/lgt2xi/cheap_server_room_temperature_monitoring/
Reddit · 2021 · accessed 2026-09-15 · Global · forum · confidence medium · Do-it-yourself substitute: DS18B20 sensor on a Raspberry Pi; PRTG reading host sensors as the free option.
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- S97** Server Room Monitoring (Spiceworks community) <https://community.spiceworks.com/t/server-room-monitoring/759416>
Spiceworks · 2020-04-17 · accessed 2026-09-15 · United States · forum · confidence medium · Replacement-cycle trigger: existing hardware 'will stop working with modern web browsers any day now'; wants temperature, humidity, leaks and door state.
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- S98** Sunbird DCIM software pricing, alternatives and reviews <https://www.capterra.com/p/106991/Sunbird-DCIM>
Capterra · 2026 · accessed 2026-09-15 · Global · forum · confidence medium · Rating 4.7 from 175 reviews; Power IQ from USD 3.99 per month; reviewer praises technical support while resolving dcTrack and Power IQ issues.
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- S99** Reviews and testimonials <https://www.sunbirdcim.com/reviews>
Sunbird DCIM · 2026 · accessed 2026-09-15 · Global · vendor · confidence low · Customer review: cost model 'simple and linearly scales with our hardware footprint'; con: no containerised deployment.
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- S100 Sterling and Wilson Data Center** <https://sterlingandwilsondc.com/>
Sterling and Wilson · 2026 · accessed 2026-09-15 · India · vendor · confidence medium · Claims 28 data centre EPC projects delivered across India, Africa and beyond; a channel to specify monitoring in new builds.
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- S101 Indus Towers among the world's leading independent towercos** <https://insidetowers.com/indus-towers-among-the-worlds-leading-independent-towercos/>
Inside Towers · 2024-11-18 · accessed 2026-09-15 · India · news · confidence medium · Brookfield combined its Indian tower assets under Altius with 260,340 towers; Indus Towers is the other leading independent towerco.
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- S102 Polish data center market 2025-2030: PMR and Atman insight** <https://atman.pl/en/blog-post/polish-data-center-market-2025-2030-pmr-atman-insight/>
Atman (Poland operator) citing PMR · 2025-12-12 · accessed 2026-09-15 · Poland · analyst · confidence low · PMR projects Poland's data centre capacity to triple within six years under a dynamic scenario; utilisation higher in large facilities.
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- S103 Poland data center market size, investment, share and growth** <https://www.arizton.com/market-reports/poland-data-center-market>
Arizton · 2025 · accessed 2026-09-15 · Poland · analyst · confidence low · Core-and-shell IT power capacity over 200.6 MW at September 2025.
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- S104 Beyond.pl data centre with EN 50600 certification** <https://www.beyond.pl/en/newsroom/press-releases/beyond-pl-data-center-with-en-50600-certification/>
Beyond.pl · 2023-05-08 · accessed 2026-09-15 · Poland · news · confidence low · States that the Polish Financial Supervision Authority expects regulated industries' data centres to meet EN 50600 at minimum Class 3.
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- S105 EU CE for electronics: requirements for electronic equipment** <https://blog.qima.com/product-compliance/eu-directives-and-ce-mark-what-you-need-to-know>
QIMA · undated · accessed 2026-09-15 · Europe · reference · confidence medium · RoHS 2011/65/EU applies to most electrical and electronic products; obligations fall on manufacturers, importers and distributors.
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- S106 Low Voltage Directive 2014/35/EU compliance guide and EMC Directive 2014/30/EU** <https://ib-lenhardt.com/kb/faq/low-voltage-directive>
IB-Lenhardt AG · 2025-11-26 · accessed 2026-09-15 · Europe · reference · confidence medium · CE marking mandatory for in-scope electrical equipment under LVD; EMC handled under 2014/30/EU; radio functions under RED.
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- S107 Server room cooling solutions: from emergency fixes to professional monitoring** <https://blog.paessler.com/cooling-an-overheated-server-room-with-fans-a-true-sysadmin-story>
Paessler blog · 2025-11-18 · accessed 2026-09-15 · Global · vendor · confidence low · Anecdote of a server room overheating overnight and a window opened in desperation; monitoring would have detected the rise hours earlier.
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- S108 Server room cooling problems and panel AC solutions** <https://www.annair.co.in/andheri/latest-update/server-room-cooling-problems-panel-ac-solutions/50>
Annair Drychill Tech India Pvt Ltd, Mumbai · 2025-12-29 · accessed 2026-09-15 · India · vendor · confidence low · Indian vendor observation: most server rooms rely on standard split or cassette ACs designed for human comfort; hot spots inside racks; dust and humidity ingress; failures 'often go unnoticed until failure occurs'.
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- S109 Server room temperature monitoring: small data centre 2026** <https://envigilance.com/temperature-monitoring/server-room-temperature-monitoring/>
Envigilance · 2026-01-19 · accessed 2026-09-15 · United States · vendor · confidence low · Anecdote: an entire rack overheated over a weekend when the dedicated AC failed without alerting anyone.
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- S110 Valrack intelligent rack** <https://www.infomac.co.in/product/valrack-intelligent-rack/>
Infomac IT Solutions · 2022-10-06 · accessed 2026-09-15 · India · vendor · confidence low · Reseller listing for Valrack intelligent and smart racks.
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- S111 Number of hospitals in India 2025** <https://www.impactguru.com/info/number-of-hospitals-in-india/>
ImpactGuru, citing National Health Profile (CBHI) · 2025-12-30 · accessed 2026-09-15 · India · reference · confidence low · 23,582 government hospitals and 29,899 PHCs; secondary compilation, to be replaced by the CBHI table when opened.
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- S112 State data centre** https://en.wikipedia.org/wiki/State_data_centre
Wikipedia · 2024-09-16 · accessed 2026-09-15 · India · reference · confidence low · SDCs set up under the National e-Governance Plan; an old status note that 14 states had operational SDCs.
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- S113 State Data Centre (SDC), Directorate of IT, Puducherry** <https://dit.py.gov.in/state-data-centre-sdc>
Government of Puducherry · undated · accessed 2026-09-15 · India · primary · confidence medium · Scheme mechanics: GoI funds the domain-specialist O&M team for five years; Option I state-owned SDC with a composite State-NIC team.
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- S114 Meghalaya State Data Centre (MSDC)** <https://ditmeghalaya.gov.in/sdc.html>
Department of IT, Government of Meghalaya · undated · accessed 2026-09-15 · India · primary · confidence medium · 'Continuously monitored by surveillance mechanisms and administered by 24x7 operations and management staff'; hosts departmental applications on SWAN/NICNET.
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- S115 Bank-wise ATM, POS and card statistics** <https://rbi.org.in/scripts/atmview.aspx>
Reserve Bank of India · 2026 · accessed 2026-09-15 · India · dataset · confidence high · Monthly RBI statistics on ATMs and CRMs by bank; the primary series behind the 2.51 lakh figure.
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- S116 Branch Banking Statistics** <https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Branch+Banking+Statistics>
Reserve Bank of India · 2026 · accessed 2026-09-15 · India · dataset · confidence high · Annual RBI publication with state and district-wise commercial bank branch counts; primary series behind the 1.64 lakh branches figure.
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- S117 State Data Centre programme page** <https://www.meity.gov.in/content/state-data-centre>
Ministry of Electronics and Information Technology · undated · accessed 2026-09-15 · India · primary · confidence low · MeitY programme page for SDCs under NeGP; page content did not render in fetch, count of operational SDCs unresolved.
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- S118 List of Tier-certified data centres** <https://uptimeinstitute.com/tier-certification/tier-certification-list>
Uptime Institute · 2026 · accessed 2026-09-15 · Global · dataset · confidence medium · Register of Tier Certification awards; India entries to be counted in pass two.
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- S119 TIA-942 certified data centres** <https://tiaonline.org/942-datacenters/>
Telecommunications Industry Association · 2025-03-21 · accessed 2026-09-15 · Global · dataset · confidence medium · TIA's own register; includes an ANSI/TIA-942-C Rated 4 constructed facility at STPI Electronic City, Bengaluru (2023-2029).
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- S120 Frequently asked questions on the Cybersecurity and Cyber Resilience Framework (CSCRF)** https://www.sebi.gov.in/sebi_data/faqfiles/jun-2025/1749647139924.pdf
Securities and Exchange Board of India · 2025-06-11 · accessed 2026-09-15 · India · regulatory · confidence high · SEBI FAQ of 11 June 2025 on CSCRF compliance, audit periodicity (Table 21 of section 4) and timelines.
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- S121 Master Direction on Outsourcing of Information Technology Services (RBI/2023-24/102)** <https://fidcindia.org.in/wp-content/uploads/2023/04/RBI-OUTSOURCING-OF-IT-SERVICES-10-04-23.pdf>
Reserve Bank of India, copy hosted by FIDC · 2023-04-10 · accessed 2026-09-15 · India · regulatory · confidence high · Directions of 10 April 2023 on outsourced IT including data centre hosting; incident reporting to the RE within six hours of detection by the third-party provider; data isolation in multi-tenant environments.
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- S122 APC AP9335TH temperature and humidity sensor listing** <https://www.itdevicesonline.com/product-details/116890>
IT Devices Online (US reseller) · 2026 · accessed 2026-09-15 · United States · vendor · confidence low · AP9335TH at USD 138.83 (list USD 207.50); the wired sensor bundled with NetBotz 250.
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- S123 Realtime EM Lock 600 lbs door lock** <https://www.flipkart.com/realtime-em-lock-600-lbs-door-locks/p/itmffutsntugjmdf>
Flipkart · 2026 · accessed 2026-09-15 · India · vendor · confidence low · Rs 2,250 online price for a 600 lbs electromagnetic lock of the type used on rack doors.
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- S124 Data centre racks price listings** <https://dir.indiamart.com/impcat/data-center-racks.html>
IndiaMART category page · 2026-08-23 · accessed 2026-09-15 · India · vendor · confidence low · Vertiv 42U rack with 3.5 kW rack-mount air conditioner (Smart Cabinet 42U) listed at Rs 10,00,000 per piece; Vertiv SR-210 3000 x 1800 mm listing.
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- S125** India data centre capacity to jump 30% in 2026; 500 MW supply boost expected: CBRE report <https://www.businesstoday.in/technology/story/india-data-centre-capacity-to-jump-30-in-2026-500-mw-supply-boost-expected-cbre-report-523529-2026-04-01>
Business Today (reporting CBRE India Alternate Sectors Outlook 2026) · 2026-04-01 · accessed 2026-09-15 · India · news · confidence medium · Re-verified in pass 2: CBRE expects about 500 MW of new supply in 2026 after 440 MW in 2025 and capacity above 1,700 MW; the earlier Times of India URL returned 404 and was replaced.
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- S126** Fuji Electric eyes growth in the Indian data centre market <https://w.media/fuji-electric-eyes-growth-in-the-indian-data-center-market>
W.Media · undated · accessed 2026-09-15 · India · news · confidence low · Fuji Electric India's PDU distributes power while monitoring consumption of each server rack; the company is targeting data-centre growth in India.
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- S127** India Data Center Infrastructure Management (DCIM) market value, size and revenue forecast 2034 <https://www.thereportcubes.com/report-store/dcim-market-india>
The Report Cubes · 2026 · accessed 2026-09-15 · India · analyst · confidence low · India DCIM market USD 107.5 million in 2025 to USD 495.31 million by 2034 at 18.5 percent CAGR; commercial estimate with undisclosed method, used only for triangulation.
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- S128** India data centre rack market size, share and trends outlook, 2031 <https://www.mordorintelligence.com/industry-reports/india-data-center-rack-market>
Mordor Intelligence · 2026 · accessed 2026-09-15 · India · analyst · confidence low · Reports the India rack market at USD 4.21 million in 2025 growing 19 percent to USD 11.96 million by 2031; the unit looks implausibly small for a market shipping tens of thousands of racks a year and is not relied on.
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- S129** MeitY Annual Report 2024-25 <https://www.meity.gov.in/static/uploads/2024/12/10fca4ec462c330211502fed3d24ea83.pdf>
Ministry of Electronics and Information Technology · 2024-12-10 · accessed 2026-09-15 · India · primary · confidence high · NIC National Data Centres at Delhi, Pune, Bhubaneswar and Hyderabad; storage about 100 PB and around 5,000 servers; NDC Delhi and Bhubaneswar ISO 27001:2013 certified; a Tier-III NDC of 200 racks expandable to 400 being built at Guwahati; NIC cloud over 21,000 virtual servers for 1,470 users.
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- S130** MeitY Annual Report 2017-18 <https://www.meity.gov.in/static/uploads/2024/02/35-1.pdf>
Ministry of Electronics and Information Technology · 2018-03-30 · accessed 2026-09-15 · India · primary · confidence high · State Data Centre scheme provisions disaster recovery through storage replication; lists states DR-enabled; STQC ETDCs carry out third-party SDC audits covering infrastructure, O&M, SLA and security.
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- S131** Bank's server room catches fire in Delhi's Greater Kailash; nine tenders rushed to spot <https://www.news18.com/news/india/bank-s-server-room-catches-fire-in-delhis-greater-kailash-9-tenders-rushed-to-spot-7034623.html>
News18 · 2023-02-09 · accessed 2026-09-15 · India · news · confidence medium · Fire in a bank server room in the basement and ground floor, brought under control at 7.15 am; an Indian branch-level incident of the type rack monitoring is sold against.
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- S132** Monitoring tenders in India 2026 (aggregator) <https://www.tenderdetail.com/Indian-tender/monitoring>
TenderDetail · 2026-09 · accessed 2026-09-15 · India · dataset · confidence low · 1,202 live 'monitoring' tenders; includes a Rs 29.86 lakh petroleum PSU bid for 'Rack Monitoring System for bottom loading operations', a homonym (loading-gantry racks) that pollutes keyword searches for IT rack monitoring.
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- S133** RFP for procurement of facility management services for Bank's Data Centre at Navi Mumbai (SBI/GITC/Data Centres & Cloud/2024/2025/1234) https://sbi.bank.in/webfiles/uploads/files_2425/131120241804-RFP%20for%20Facility%20Managment%20Service%20DC%20GITC.pdf
State Bank of India, Global IT Centre, Data Centres and Operations Department · 2024-11-14 · accessed 2026-09-15 · India · primary · confidence high · 144-page RFP; equipment schedule lists WLD system, Access Control System, VESDA, BMS, FAS/FSS, rodent repellent, 132 CCTV cameras, 15 PAC 10 TR and 38 PAC 12 TR units; tasks require 24x7 BMS monitoring, hourly UPS and PDU readings, and monitoring of 'Information Panels like BMS, WLD, CCTV and Fire alarm displays'.
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- S134** Server room temperature and humidity monitoring systems (Jyoti Telecom, Nashik) <https://www.jyotitelecom.org/server-room-temperature-and-humidity-monitoring-system.html>
Jyoti Telecom via IndiaMART storefront · undated · accessed 2026-09-15 · India · vendor · confidence medium · Made-in-India GSM monitors: server room temperature and humidity system Rs 27,500; online cloud version Rs 32,500; water sense detector Rs 27,500; SMS, voice call, email and hooter alerts; 48-hour battery; one-year warranty; one model claims CE.
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- S135** **Server room monitoring (AdvanceTech India Pvt Ltd, Zirakpur)** <https://adrtechindia.com/product/server-room-monitoring/>
AdvanceTech India · 2024-06-08 · accessed 2026-09-15 · India · vendor · confidence low · SMS or missed-call alerts, cloud dashboard and mobile app, customisable sensors; the firm also sells agri-environment loggers, video walls and AV.
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- S136** **USB pendrive temperature and humidity data logger (Dynamic Micro Tech, Mumbai)** <https://www.acpowersaver.com/temperature-monitoring-system.html>
Dynamic Micro Tech via IndiaMART storefront · undated · accessed 2026-09-15 · India · vendor · confidence low · Rs 8,500 stand-alone logger marketed as low-cost server room monitoring; the bottom of the ladder.
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- S137** **Data centre environmental monitoring systems catalogue** <https://www.serverroomenvironments.co.uk/data-centre-environmental-monitoring>
Server Room Environments Ltd (UK reseller of AKCP, HW group, AVTECH, APC) · 2026 · accessed 2026-09-15 · United Kingdom · vendor · confidence medium · Comparison table: AKCP sensorProbeX+ SPX8 (8 to 16 sensor ports, up to 60 dry contacts, SNMP v1/v2/v3, Modbus, RADIUS); HW group Perseus 150/155 (SNMP v3, Modbus RTU, LTE modem); Room Alert 32S (PoE, SNMP v3); NetBotz 750 from GBP 1,815.91; RFID swing-handle access monitored through sensorProbe.
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- S138** **Server room alert: environmental monitoring system (DIY guide)** <https://zbotic.in/server-room-alert-environmental-monitoring-system/>
Zbotic, Mumbai (electronics component retailer) · 2026-04-01 · accessed 2026-09-15 · India · vendor · confidence low · ESP32 build with DHT22/BME280, leak and door sensors, Telegram and Blynk alerts with GSM SMS fallback at under Rs 0.50 per SMS; the Indian DIY substitute in the buyer's own words.
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- S139** **Reserve Bank of India (Commercial Banks – Cybersecurity, Technology: Risk, Resilience and Assurance Framework) Directions, 2026** https://www.rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=13643
Reserve Bank of India · 2026-07-31 · accessed 2026-09-15 · India · regulatory · confidence high · RBI/DoS/2026-27/410, DoS.CO.CSITG.4/31.01.015/2026-27 dated 31 July 2026. Effective 31 July 2026; eight chapters; repeals the scattered circulars including the 2023 IT Governance Master Direction. Section E Physical and Environmental Controls: para 60 physical and environmental controls for critical assets including DC and DR sites; para 61 'The bank shall put in place mechanisms for monitoring of breaches of environmental controls including temperature, water, smoke, access alarms, service availability alerts (power supply, telecommunication, servers), and access logs'; para 62 geographic separation; para 63 e-surveillance of DC and DR. Paras 60 and 61 are also flow-down baseline controls for ATM-switch application service providers.
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- S140** **Reserve Bank of India (Non-Banking Financial Companies – Cybersecurity, Technology: Risk, Resilience and Assurance Framework) Directions, 2026** https://www.rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=13592
Reserve Bank of India · 2026-04 · accessed 2026-09-15 · India · regulatory · confidence high · NBFC counterpart, repeal circular DoS.CO.PPG.66/11.01.005/2026-27 of 31 July 2026. Base layer: policy must cover physical security and restricted access to sensitive areas like the data centre; Middle Layer and above: paras 101 to 103 physical and environmental controls, geographic separation of DC and DR, and e-surveillance of DC and DR sites.
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- S141** **Consolidation of RBI Directions Ver 2.0** <https://vinodkothari.com/2026/04/consolidation-of-rbi-directions-ver-2-0>
Vinod Kothari Consultants · 2026-04-08 · accessed 2026-09-15 · India · reference · confidence medium · Maps the 2026 entity-wise consolidated Directions to the circulars they replace, including the 2023 IT Governance Directions into the NBFC Cybersecurity, Technology: Risk, Resilience and Assurance Framework Directions, 2026.
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- S142** **RBI's new cybersecurity framework is effective from July 31, 2026** <https://skeletons.io/rbi-cybersecurity-risk-resilience-assurance-framework-rk-26>
Skeletons IT Services (blog) · 2026-08-03 · accessed 2026-09-15 · India · reference · confidence low · Secondary commentary: the 2026 commercial-bank framework is prescriptive, mandates a 24x7 CSOC, CISO independence, six-hour DAKSH incident reporting and 19 baseline control areas; NBFCs expected to follow within 12 to 18 months.
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- S143** **RFP for APM and GenAI-based integrated observability platform to create a Resilience Operations Centre (ROC)** http://punjabandsind.bank.in/system/uploads/tender/7935_2026010817201393248.pdf
Punjab and Sind Bank · 2026-01-08 · accessed 2026-09-15 · India · primary · confidence medium · A public-sector bank buying an observability and resilience operations platform in January 2026; evidence of the bank buyer role and of the platform into which physical alarms must feed.
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- S144 Services: pan-India service network, bank branches, ATM sites and remote monitoring** [https://www.india.fujielectric.com/energy/s](https://www.india.fujielectric.com/energy/services)
services
Fuji Electric India Pvt Ltd · undated · accessed 2026-09-15 · India · vendor · confidence medium · 350+ service engineers in 80+ locations, over one lakh installations, 6,000+ products on hospital medical equipment, several thousand bank branches and over 10,000 ATM sites kept live; remote monitoring of 3-phase UPS 24x7.
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- S145 IPEMS: intelligent power and energy management system for ATM sites (IndiaMART listing)** [https://www.indiamart.com/prod](https://www.indiamart.com/prod/tail/ipems-6631856312.html)
tail/ipems-6631856312.html
IndiaMART (Fuji Electric India Private Limited, Chennai) · 2014-02-06 · accessed 2026-09-15 · India · vendor · confidence medium · Consul iPEMS monitors and controls ATM site energy and security remotely: burglar alarm and motion sensors, smoke detector, remote rebooting sockets, SMS and email alerts. Evidence that FUJI's predecessor sold integrated site monitoring to banks.
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- S146 Retail and BFSI solutions** <https://www.india.fujielectric.com/solutions/retail-and-bfsi>
Fuji Electric India Pvt Ltd · undated · accessed 2026-09-15 · India · vendor · confidence medium · UPS, SCVS and lithium-ion Finch UPS for ATMs and BFSI sites.
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- S147 ATM management solutions: FCN launches iPEMS and ATM-Sure (Business Standard, 26 April 2013)** [https://www.india.fuji](https://www.india.fujielectric.com/media-highlights/news/atm-management-solutions)
electric.com/media-highlights/news/atm-management-solutions
Fuji Electric India media highlights · 2013-04-26 · accessed 2026-09-15 · India · news · confidence medium · Modular full-service suite for new and retrofit ATM sites.
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- S148 Client Delivery Order, Production Team, 2025-2026 (monthly delivery plan versus achieved workbook)** [file:///._rax-data/11](file:///._rax-data/114910_Client_delivery_list/Client_Delivery_Order_-PRODN_Team_-_2025-2026.xlsx)
4910_Client_delivery_list/Client_Delivery_Order_-PRODN_Team_-_2025-2026.xlsx
Rax Tech International (internal) · 2026-04-24 · accessed 2026-09-15 · India · internal · confidence high · Monthly sheets April 2025 to April 2026 listing FUJI work orders by DWO number, PO number, expected delivery, unit price, quantities and weekly deliveries; source of the pass-2 FUJI reconstruction.
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- S149 RAX remaining gaps: delivery lateness by account (556 delivery events)** [file:///._rax-data/_](file:///._rax-data/_analysis/RAX-REMAINING-GAPS.md)
analysis/RAX-REMAINING-GAPS.md
Rax internal analysis (RAX-REMAINING-GAPS.md) · 2026-08-05 · accessed 2026-09-15 · India · internal · confidence medium · FUJI deliveries 86.7 percent late with a mean delay of 45.6 days; FUJI Rs 0 to Rs 1.75 crore.
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- S150 RAX progress report: FUJI began with a small product design job** [file:///._rax-data/_](file:///._rax-data/_analysis/RAX-PROGRESS-REPORT.html)
analysis/RAX-PROGRESS-REPORT.html
Rax internal analysis (RAX-PROGRESS-REPORT.html) · 2026-08-05 · accessed 2026-09-15 · India · internal · confidence medium · States that FUJI gave Rax a small design job, was satisfied and returned with a volume order for RMC sets; Rs 1.77 crore in FY2025-26. Stated by Rax, not independently verified.
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- S151 BFSI solutions: powering more than 60,000 ATMs** <https://www.numericups.com/solutions/bfsi>
Numeric UPS (Legrand group) · undated · accessed 2026-09-15 · India · vendor · confidence medium · 60,000+ ATMs powered, 1,000+ MW installed base, 250+ company-owned service centres and 1,200 service professionals.
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- S152 Electronics and Controls: online UPS for banking, IT and smart racks** <https://www.eandcpower.com/>
Electronics & Controls Power Systems · undated · accessed 2026-09-15 · India · vendor · confidence low · UPS used at bank head offices, branches and ATMs and by system integrators in rack systems and smart racks; offers remote monitoring.
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- S153 India's data centre capacity additions jump 59% in H1 2026 (Savills India)** [https://www.communicationstoday.co.in/indias-data-centre-](https://www.communicationstoday.co.in/indias-data-centre-capacity-additions-jump-59-in-h1-2026)
capacity-additions-jump-59-in-h1-2026
Communications Today · 2026-07-22 · accessed 2026-09-15 · India · news · confidence medium · Operational stock 1,819 MW IT at H1 2026; Mumbai 846 MW (46%), Chennai 320 MW (18%), Delhi-NCR 191 MW, Pune 182 MW; stock 36% hyperscale, 55% hyperscale-and-enterprise campuses, 8% enterprise, 1% edge; additions over 600 MW forecast for 2026; over 7 GW by 2030.
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- S154 Report on Trend and Progress of Banking in India 2024-25** [https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/ORTP291220258C89B9E5F3F24](https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/ORTP291220258C89B9E5F3F240AEB82AC25A1707A8C6.PDF)
0AEB82AC25A1707A8C6.PDF
Reserve Bank of India · 2025-12-29 · accessed 2026-09-15 · India · regulatory · confidence high · 1.64 lakh domestic SCB branches at end-March 2025 (up 2.8%); ATMs 2,51,057 at end-March 2025 against 2,53,417 a year earlier.
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- S155** 2025 Year End Review for Department of Telecommunications <https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=2206477®=3&lang=2>
Press Information Bureau, Ministry of Communications · 2025-12-19 · accessed 2026-09-15 · India · primary · confidence high · 8.43 lakh mobile towers and 31.44 lakh BTS as on 31 October 2025.
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- S156** Year End Review 2022: Ministry of Communications <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1884072>
Press Information Bureau · 2022-12 · accessed 2026-09-15 · India · primary · confidence high · 7.4 lakh mobile towers and 23.98 lakh BTS as on 9 December 2022.
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- S157** Best practices and guidelines to physical security of the State Data Centre (Annexure-1 to the SDC guidelines) https://www.meity.gov.in/static/uploads/2024/02/Annexure-1_sdc-1.pdf
Ministry of Electronics and Information Technology · 2008 · accessed 2026-09-15 · India · regulatory · confidence high · Clause 1.5.7 Monitoring System: water leak detection, air-conditioning status and alarm, humidity and temperature on one centralised panel in the NOC, connected to BMS; clause 1.4.2 proximity card access control monitoring each person; PAC alarms include water leakage and smoke and must connect to BMS by an open interface.
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- S158** TIA unveils Revision C of the global data center infrastructure standard (ANSI/TIA-942-C) <https://tiaonline.org/press-release/tia-unveils-revision-c-of-the-global-data-center-infrastructure-standard/>
Telecommunications Industry Association · 2024-05-09 · accessed 2026-09-15 · Global · reference · confidence high · Published 9 May 2024; covers architecture, telecommunications, power, cooling, fire protection, physical security, safety and monitoring for all data-centre types. The clause text is paywalled and was not opened.
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- S159** ISO 27001 Annex A 7.5 Protecting against physical and environmental threats explained <https://hightable.io/iso-27001-annex-a-7-5-protecting-against-physical-and-environmental-threats>
High Table · 2026-08-02 · accessed 2026-09-15 · Global · reference · confidence medium · Quotes the control statement and auditor expectations: leak detection cables, temperature and humidity sensors linked to central alerting, automated environmental logs as ISMS evidence.
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- S160** ISO 27001 Control 7.11: Supporting utilities <https://iseoblue.com/iso-27001/annex-a/control-7-11/>
Iseo Blue · 2026-04-22 · accessed 2026-09-15 · Global · reference · confidence medium · Implementation guidance expects environmental monitoring (temperature, humidity, water) in server and comms rooms and alarms on mains failure and UPS on battery.
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- S161** Compliance brief: addressing the requirements of SEBI CSCRF https://cpl.thalesgroup.com/sites/default/files/content/compliance_brief/2024-in-cscrf-by-sebi-cb.pdf
Thales · 2024 · accessed 2026-09-15 · India · reference · confidence medium · Quotes CSCRF PR.AA standard 10 ('Physical access to assets is managed, monitored, and protected') and guideline 1.e ('perimeter of the critical equipment's room, if any, are physically secured and monitored').
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- S162** Public Procurement (Preference to Make in India) Order 2017, revised order dated 19 July 2024 <https://www.dpiit.gov.in/stat/ic/uploads/2025/07/458478309ccf301ceb58f63d02646f42.pdf>
Department for Promotion of Industry and Internal Trade · 2024-07-19 · accessed 2026-09-15 · India · regulatory · confidence high · Class-I local supplier at minimum 50 percent local content; Class-II at 20 percent; purchase preference in central government procurement above Rs 5 lakh.
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- S163** About Public Procurement Policy for Micro and Small Enterprises Order 2012 https://sambandh.msme.gov.in/PPP_about.aspx
Ministry of MSME (MSME Sambandh) · undated · accessed 2026-09-15 · India · primary · confidence high · Every central ministry, department and PSU to procure at least 25 percent of annual purchases from MSEs.
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- S164** Scheme II (Compulsory Registration Scheme): products under compulsory registration <https://www.bis.gov.in/product-certification/products-under-compulsory-certification/scheme-ii-registration-scheme/>
Bureau of Indian Standards · 2026-01-27 · accessed 2026-09-15 · India · regulatory · confidence high · List includes power adapters for IT equipment, standalone SMPS up to 48 V, CCTV cameras and recorders (with Essential Requirements for CCTV, S.O. 1652(E) of 9 April 2024), smart card readers, UPS up to 10 kVA and ATMs; no category named for rack or environmental monitoring controllers.
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- S165** India data center physical security market size and share analysis 2026-2032 <https://www.mordorintelligence.com/industry-reports/india-data-center-physical-security-market>
Mordor Intelligence · 2026-01-27 · accessed 2026-09-15 · India · analyst · confidence low · USD 74.62 million in 2025, USD 87.63 million in 2026, 17.44 percent CAGR to 2032; video surveillance 45.62 percent of 2025; undisclosed method.
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- S166** India's data-centre allure: costs at least a third lower (Nomura) <https://www.livemint.com/industry/india-data-centre-cost-advantage-hyperscalers-11788406871908.html>
Mint · 2026-09-03 · accessed 2026-09-15 · India · news · confidence medium · Building a facility costs USD 6 to 7 million per MW in India excluding land and computing equipment.
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- S167** Maxbell waterproof 125 kHz Wiegand 26 RFID card reader for door access control at Rs 1,529 <https://www.indiamart.com/proddetail/maxbell-waterproof-125khz-id-wiegand-26-rfid-card-reader-for-door-access-control-2851615529288.html>
IndiaMART (Aladdin Shoppers) · 2026 · accessed 2026-09-15 · India · vendor · confidence low · Wiegand 26 reader of the type the RMC's two reader ports accept.
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- S168** Wiegand 26 proximity card reader ELPRO26 at Rs 2,430 per piece <https://www.indiamart.com/proddetail/wiegand-26-proximity-card-reader-18313883788.html>
IndiaMART (Indosoft Technology, Noida) · 2026 · accessed 2026-09-15 · India · vendor · confidence low · Indian-made Wiegand proximity reader price point.
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- S169** APC NetBotz 13.56 MHz handle kit, rack access handle kit NBHN1356 <https://www.zones.com/site/product/index.html?id=104651663>
Zones · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · USD 1,254.99 per kit; the incumbent's rack-access add-on.
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- S170** NetBotz extended warranty service packages <https://apcguard.com/warranty.asp>
APCGuard (BlueAlly) · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · One-year extended warranty renewal for one NetBotz 3xx/4xx appliance USD 379.99; 500-series USD 519; three-year for 500-series USD 989.
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- S171** Extended warranty service pack, parts and software support, NetBotz 7 Series, 3 years (WBEXTWAR3YR-NB-07) <https://www.cdw.com/product/extended-warranty-service-pack-parts-software-support-for-netbotz-7-seri/5598714>
CDW · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · USD 2,849.99.
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- S172** ENVIROMUX E-2D small enterprise environment monitoring system <https://www.networktechinc.com/environment-monitor-2d.html>
Network Technologies Inc · 2026 · accessed 2026-09-15 · United States · vendor · confidence medium · USD 445 list; SNMP and web monitoring, 2 configurable sensors, 5 digital inputs, 1 relay, IP camera snapshots.
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- S173** Lok Sabha unstarred question no. 235, electricity cut or power outage, answered 3 February 2022 <https://sansad.in/getFile/loksabhaquestions/annex/178/AU235.pdf?source=pqals>
Ministry of Power, Lok Sabha · 2022-02-03 · accessed 2026-09-15 · India · primary · confidence high · State-wise average hours of power outage from the National Power Portal: 2020-21 rural Tamil Nadu 906 hours, Karnataka 1,758, Uttar Pradesh 2,762, Maharashtra 1,107; urban Uttar Pradesh 91, Haryana 219.
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- S174** Smart server rack tenders in India 2026 (40 live, value bands) <https://www.tenderdetail.com/Indian-tender/smart-server-rack-tenders>
TenderDetail · 2026-09 · accessed 2026-09-15 · India · dataset · confidence low · Of 40 live smart-server-rack tenders on 15 September 2026, 28 below Rs 10 lakh, 8 between Rs 10 lakh and Rs 1 crore, 3 between Rs 1 and 10 crore, 1 above Rs 100 crore; award values sit behind paid GeM contract databases.
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- S175** DPDP Rules, 2025 notified (explainer) <https://www.pib.gov.in/PressNoteDetails.aspx?NoteId=156054&ModuleId=3®=3&lang=2>
Press Information Bureau · 2025-11-17 · accessed 2026-09-15 · India · primary · confidence high · DPDP Rules notified 14 November 2025 with an eighteen-month phased compliance period; substantive obligations including security safeguards and breach reporting from May 2027.