

# Rittal – The System.

Faster – better – everywhere.

## ► Edge Data Center Solutions



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# If tomorrow starts today, how fast do you have to be?

Edge data centre for innovative IoT solutions.

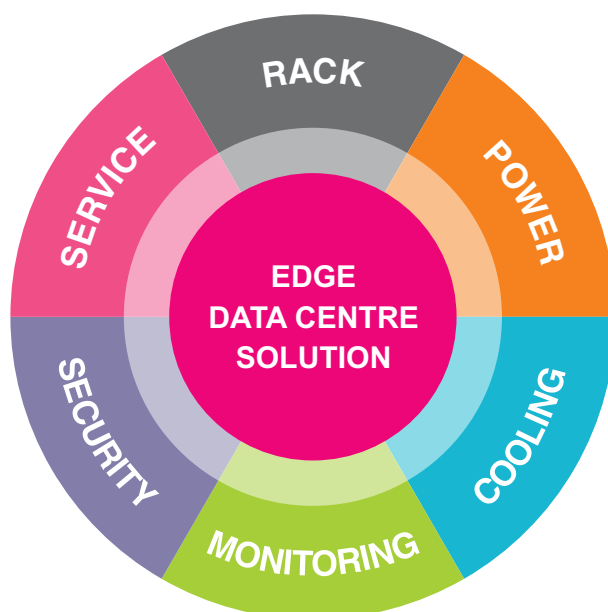


With drivers of technology such as Industry 4.0 and the Internet of Things (IoT) not only is the amount of data increasing, so is the demand for quickly available computing capacity close to the source of the data.

“Edge computing” is the buzzword here. Rittal provides turnkey solutions with pre-configured, standardised and

scalable infrastructure for the rapid construction of Edge data centres.

This way, manufacturing companies can quickly and easily achieve new IT environments for digital processes to adapt their IT to the new challenges.



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# Solution Overview



1. Rack Cooling Solution (N + N)
2. Rack Fire Detection & Suppression Systems
3. Server/Network Rack with IP PDU
4. Monitoring system with sensors
  - Temperature & Humidity Sensor
  - Water Leak Detector
  - Automatic Door Opening Kit
  - Various option for Access Control Sensor :
    - Numeric Coded Lock
    - Unique key
    - RFID Card Reader (Transponder reader)
    - Biometric with Numeric Coded Lock
  - GSM Device for SMS & Email Alerts
5. Electrical Power Distribution
  - Raw Power Distribution Board
  - UPS Power Distribution Board
6. Rack Mount UPS with 15 mins battery backup

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# Introducing Rittal Edge Data Centre Solutions – Faster, Better, Everywhere

The Edge Data Centre is an innovative integrated data center infrastructure solution by Rittal, specifically designed for mission critical server room applications. Ease of manageability and growth potential are some of the biggest benefits of going with an integrated infrastructure.

## Why Rittal Edge Solution?

### Benefits

- Complete DC infrastructure solution offering Cooling, Fire detection & Suppression, UPS, Access Control & Remote Monitoring all integrated together inside a rack, resulting in less footprint and hence increased cost savings.
- “Zero U” rack based Cooling Solution with horizontal uniform cold air distribution with (N + N) redundancy.
- “One U” rack based Fire Detection (VESDA) & Suppression (Novec 1230 Gas) system
- Pre-designed and integrated package that is ready to be assembled at customer premises with rapid deployment in 3 - 4 weeks from order placing.
- IP-54 Racks ensure protection against ingress of dust and water
- No separate room required for Edge DC solution.
- High availability designs (N+N) for power and cooling Incorporates best practices from international standards like ASHRAE TC 9.9, NFPA 75 etc.
- Low Total Cost of Ownership, can be deployed in Modules of 1/2/4/6 racks, hence saving initial capital infrastructure required. Customer can enhance Edge DC infrastructure as computing requirement increases in future.
- Modular solution helps in easy relocation of site with less downtime.



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## Rittal 42U Server / Network Rack: DK-PS

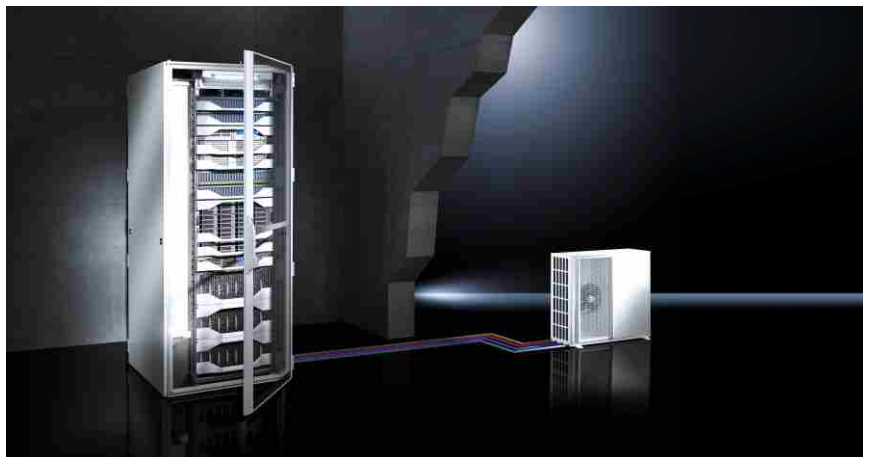
### Key Features:

- Enclosure rated for IP54
- Safe load carrying capacity of 1400 kg on enclosure frame and 1000 kgs on 19 inch mounting angles
- Sturdy frame having 9X folding profile welded construction
- Unique 3-Point Locking System with Ergo form handle & unique safety key for front & back door
- Front glazed door having 4 mm thick toughened glass for safety
- Increased corrosion resistance using state of art paint technology (Nano ceramic coat, EC dip coat & powder coated painting)
- Scalable & Modular enclosures
- Compliance to EIA 310 and IEC 297 standards.
- UL Approved

## Rittal Cooling Solution: DX based closed loop cooling solution

### Key Features:

- "Zero U" space required in Rack, for mounting
- High efficiency, closed loop circuit, "front to back" cooling solution up to 8kW per cooling unit with ambient temperature range +10° C to +50° C.
- Lateral, uniform cold air cfm distribution from 1U to 42U in front of the 19" equipment
- No loss of vertical "U" space inside the 19" Rack



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## Rittal Monitoring Solution : Computer Multi Control III

### Key Features:

- Monitoring of various physical parameters in rack like temperature, humidity, access, smoke, energy etc.
- All monitored data and alarms can be sent via network by sending e-mail and sms alerts

### CMC III sensors for direct connection

The following sensors may be connected to the CMC III device depending on customer requirement:

- Temperature / Humidity Sensor
- Airflow Sensor
- Smoke Detector
- Access Control Sensor
- Water Leak Sensor
- Auto Door Control Unit (Two connections)
- Rack based fire extinguisher system
- Rack based very early smoke detection system
- SMS & Email notifications via GSM module



Security



Humidity



Heat



Vandalism



Monitor



Smoke

## Rittal Fire Suppression Solution : DET-AC

### Key Features:

- 1U 19" rack mount solution for early fire detection & automatic fire extinguishing using eco-friendly NOVEC 1230 clean agent gas.
- Built-in emergency power supply for 4 hours



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## Rittal's standard offerings

Scale & density of IT load	IT Load capability from 4 kVA to 30 kVA using 1/2/4/6 racks
Racks – DKPS	<p>Closed loop cooling solutions from Rittal offer "front to back" air routing typical of IT applications and regulate the server inlet temperature to the set value.</p> <p>IDU &amp; ODU units with cooling capacity of 4/8 kW are provided in (N+N) configuration.</p> <p>Refrigerant copper piping with elastomeric nitrile rubber insulation between each sets of outdoor &amp; indoor unit are provided. Piping is properly supported by MS clamps.</p>
Automatic rack based fire suppression system – DET-AC	Edge DC has a 1U rack mounted intelligent fire suppression system. It comes with Novec 1230 clean agent based modular type fire suppression system.
Main electrical panel & cabling	Entire power distribution from main DB to UPS and cooling units shall be done by Rittal. Customer only needs to provide main incoming power cable.
CMC III remote monitoring system	Rittal's CMC III monitoring solution continuously collects critical information from network connected devices, access control, temperature, humidity, water leak, door sensors and other dry contact monitoring. Based on pre-set parameters, automated alerts and messages are sent to the intended recipients using GSM module.
Uninterrupted power supply (Reputed make)	Rittal offers true online double conversion rack mount UPS with smallest footprint, up to 95% efficiency and 0.9 output power factor. Edge DC integrated solutions are with default N+N configuration. Battery backup time of 15 / 30 mins is available as per customer requirements.
Access control system (Reputed make)	Edge DC uses advanced technology in access control - biometric reader which is connected to CMC access control unit. Rack doors have electromagnetic lock (2 nos. for each door) to permit only authorized persons to open the door through finger print reader. Existing access control systems can also be integrated.
Camera surveillance (Optional) (Reputed make)	IP based CCTV surveillance camera to record and monitor data centre activity.
Customer service support	24 x 7 support provided all over India vide Rittal's extensive service network.

Note: For detailed scope of supply and customisation, please contact our sales office.



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- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

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