VERTIV.

SmartCabinet™

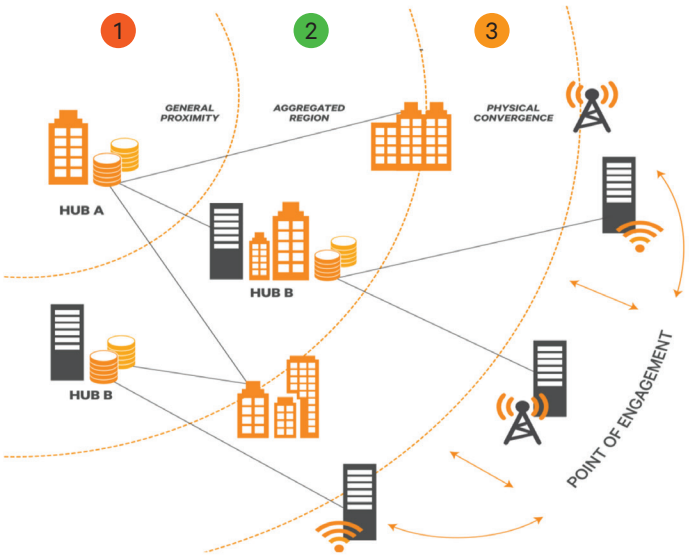
Intelligent, Integrated Containment for IT Infrastructure

THE DIGITAL WORLD IS CHANGING. HOW WE LIVE AND DO BUSINESS. AND VICE VERSA

1 **Traditional**
- Cloud / Data center

2 **Local**
- Aggregation sites
- Metro data centers

3 **Edge**
- Rooms / Building

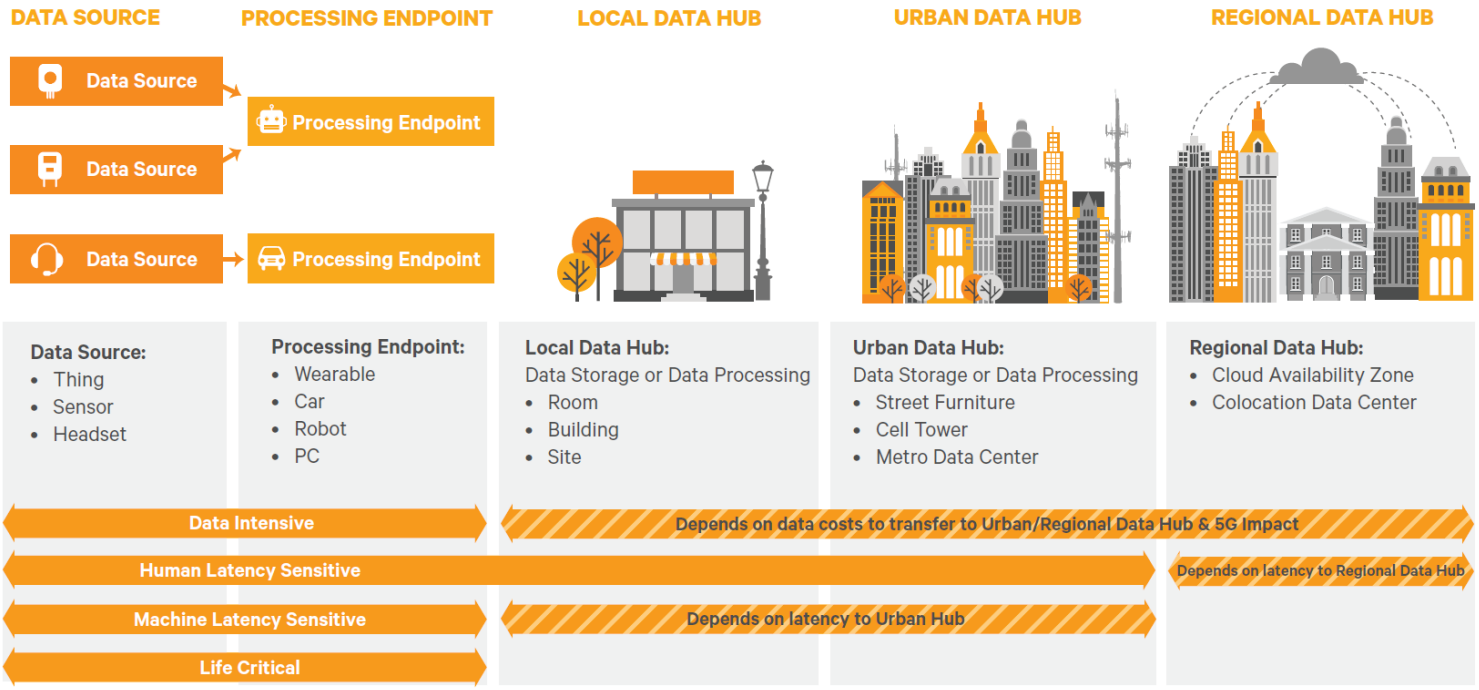


Traditionally, data was generated at the Core and consumed at the Edge.

This model is now changing, with the large and growing number of smart devices and sensors generating a massive amount of information at the Edge.

Just a fraction of the content created at the Edge will be sent to the Core. Most of it will be processed and filtered at Edge sites.

What will enable this major shift?



Vertiv researched and analyzed the technology drivers and requirements of Edge use-cases across a wide range of business segments and verticals. The use-cases were each assigned to one of four archetypes that best characterize its intent and challenges:

- Data Intensive
- Human Latency
- M2M Latency
- Life Critical

KEY CONSIDERATION FOR PREPARING EDGE SPACES

High-efficiency, flexible micro data centers

To support edge deployments, traditional infrastructure approaches need to be revisited. From brick-and-mortar designs, infrastructure deployments will shift to micro data centers which are fully integrated and easily deployable that can be virtually deployed anywhere. These micro data centers provide compute, storage and access to reduce latency and support 5G and IoT applications.

Provision for speed and scalability for future growth

Owing to the expected spike in data brought by 5G applications, the challenge is finding out the scale needed to support these applications. Hence, infrastructure at the edge must be designed for flexibility and scalability. Rack to row-based micro data centers can be scaled up easily depending on the demands and with little floor space required.

Location, location, location

One of the challenges faced by telecom operators is identifying where to setup these edge locations. Because of the capital investment it entails, setting up a new data center may not look attractive for some. But for others, a novel approach would be to set up micro data centers at the base of their cell towers to save on cost and also to optimize on infrastructure investment.

Some would also opt to set up micro data centers in high traffic areas as these are closer to users and would address any latency issues.

Increased intelligence for remote management across multiple sites

As new edge locations are expected to rapidly materialize with 5G, the ability to remotely monitor and manage these locations will become critical because the sheer quantity of locations will be difficult to manage through regular human visits. Data center infrastructure management (DCIM) will be critical to the success of 5G networks at the edge.

Enter SmartCabinet™, a pre-configured, self-contained solution that offers the efficiency, economy, interoperability, and control to implement an exceptional infrastructure strategy.

- **Economical** - Reduces implementation costs compared to conventional solutions
- **Simplified** - Maximize use of existing infrastructure and gets up-and-running in a matter of weeks
- **Controllable** - Enforce add/change policies, speeds IT administration request response times significantly

SmartCabinet™ Split 600mm

SmartCabinet™ Split 800mm

SmartCabinet™ Premium

SmartCabinet™ ECO

SmartCabinet™ - Split

LED Lighting

Power Management Unit (PMU)
Built-in PMU provides power management and distribution to UPS, cooling unit and rack PDU. Comes with surge protection device.

Rack Power Distribution Unit (rPDU)
Features branch level metering and remote on/off control of individual receptacles.

Smart Lock
Provides secure door access via ID card, web interface and key.

Blanking Panel

UPS & Internal Battery
On-line double conversion UPS with internal battery module ensures clean power feeding to critical IT equipment. Power Factor: 1.0.

Emergency Fan
Activates automatically in the event of overheating or cooling unit failure.

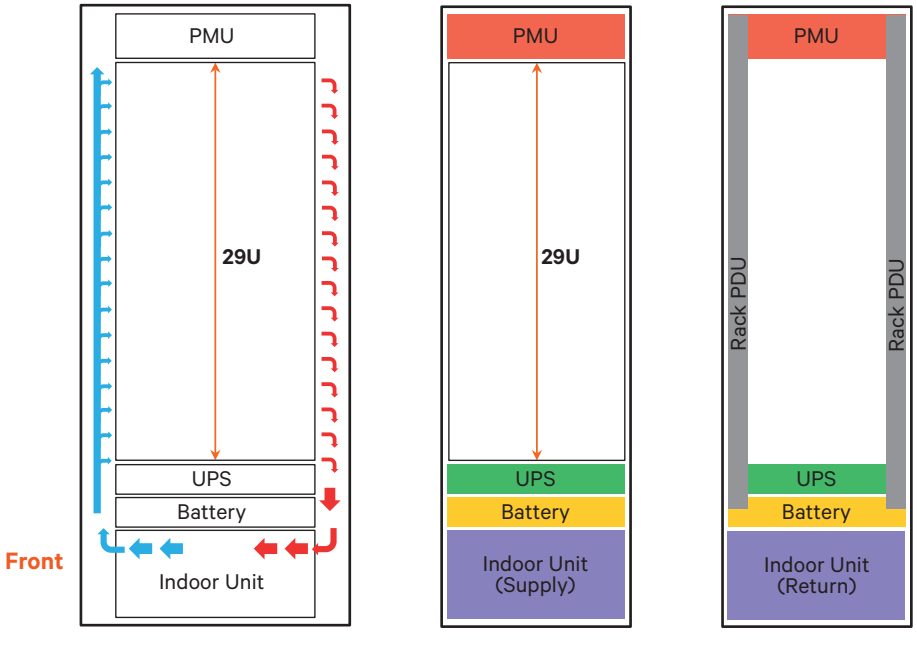
LCD Touchscreen Panel
User-friendly display enables easy access to power, cooling, environment and security information.

Environmental Sensor
Report critical environmental information and alarm notification. Ensure IT equipment is kept in desired condition.

Centralized Management & Monitoring
Enables central management of all intelligent components within the rack.

Cooling Unit
Features cooling modulation, enables cooling on demand and quick adapt to load fluctuation due to focused area within the system.

Water Leak Detector



SmartCabinet™ - Premium

LED Lighting

Cooling Unit
Features cooling modulation, enables cooling on demand and quick adapt to load fluctuation due to focused area within the system.

Smart Lock
Provides secure door access via ID card, web interface and key.

Power Management Block (PMB)
Built-in power management and distribution to UPS, cooling unit and rack PDU. Comes with surge protection device.

UPS & Internal Battery
On-line double conversion UPS with internal battery module ensures clean power feeding to critical IT equipment. Power Factor: 1.0.

LCD Touchscreen Panel
User-friendly display enables easy access to power, cooling, environment and security information.

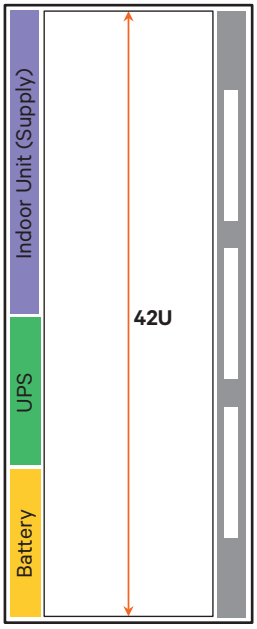
Centralized Management & Monitoring
Enables central management of all intelligent components within the rack.

Environmental Sensor
Report critical environmental information and alarm notification. Ensure IT equipment is kept in desired condition.

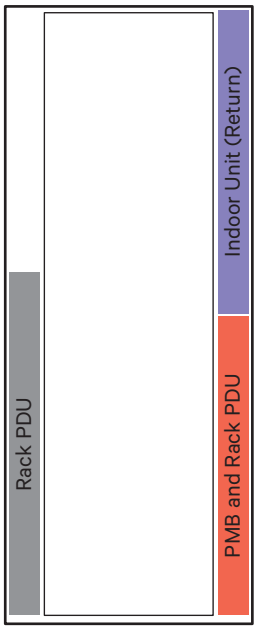
Blanking Panel

Emergency Fan
Activates automatically in the event of overheating or cooling unit failure.

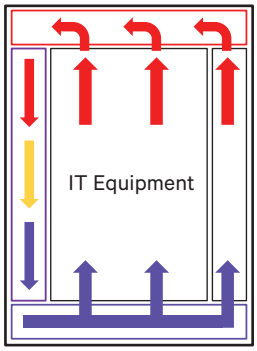
Water Leak Detector



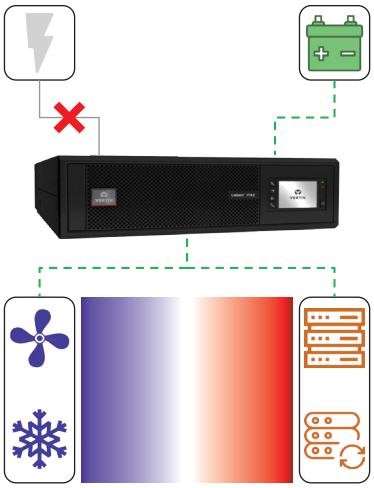
Front View



Rear View



Top View



SmartCabinet™ - ECO

ECO Fan Module
Enables ECO mode and activates intelligently. Provides emergency ventilation in the event of overheating or cooling unit failure.

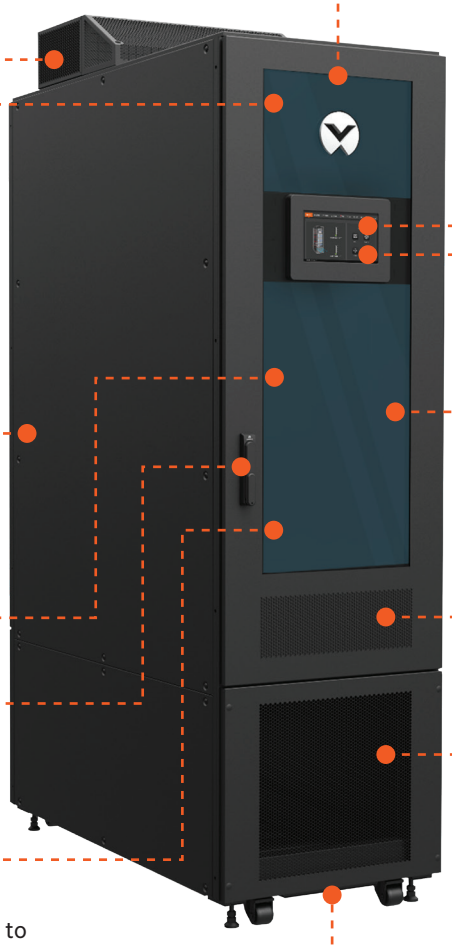
Power Management Unit (PMU)
Built-in PMU provides power management and distribution to UPS, cooling unit and rack PDU. Comes with surge protection device.

Rack Power Distribution Unit (rPDU)
Features branch level metering and remote on/off control of individual receptacles.

Blanking Panel

Smart Lock
Provides secure door access via ID card, web interface and key.

UPS & Internal Battery
On-line double conversion UPS with internal battery module ensures clean power feeding to critical IT equipment. Power Factor: 1.0.



LED Lighting

LCD Touchscreen Panel
User-friendly display enables easy access to power, cooling, environment and security information.

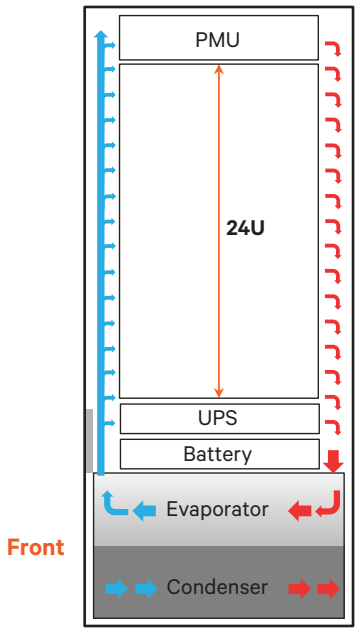
Centralized Management & Monitoring
Enables central management of all intelligent components within rack.

Environmental Sensor
Report critical environmental information and alarm notification. Ensure IT equipment is kept in desired condition.

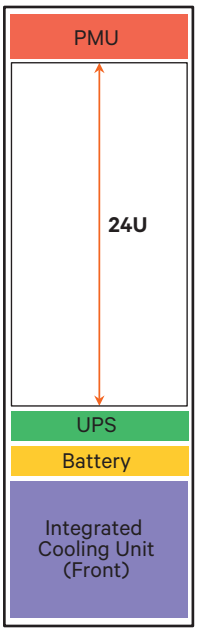
Air Inlet

Cooling Unit
Integrate cooling coil and condenser within the cooling unit for complete heat exchange. Provide variable cooling capacity directly to IT equipment.

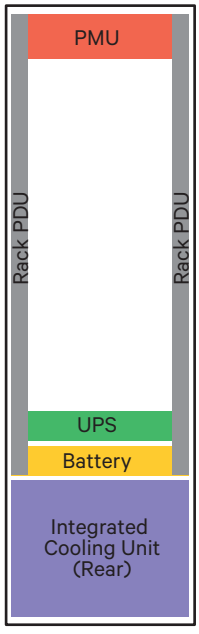
Water Leak Detector



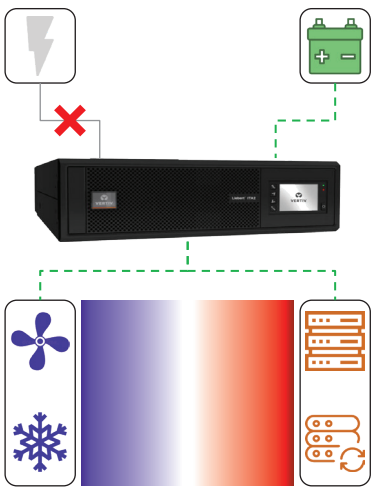
Side View



Front View



Rear View



TECHNICAL SPECIFICATION

Parameter	SmartCabinet™ Split	SmartCabinet™ Premium	SmartCabinet™ ECO
Cabinet Size (H×W×D)	2000x600x1200 (mm) 2000x800x1200 (mm)	2000×800×1100 (mm)	2150×600×1200 (mm)
Usable U Space	29U	42U	24U
Condenser Unit	Outdoor		Integrated
Rack Design	Fully Enclosed Containment		
Display Panel	9 inch LCD Touchscreen		
Cooling Capacity	900 W ~ 3500 W, Variable Speed		
LED Lighting	Front & Rear		
UPS (Liebert ITA2)	5kVA	6kVA	
UPS Power Factor	1.0		
IT System Capacity	≤3kW		
System Input Requirement	50A/1P, 220/230/240Vac		
System Frequency	50Hz & 60Hz		
Power Distribution Units (PDU)	32A input, 18xC13+6xC19, 2pcs	16A input, 14xC13+2xC19, 1 pc (PMB) 16A input, 12xC13+4xC19, 1 pc (PDU)	16A input, 12xC13+4xC19, 2pcs
Refrigerant	R410A		
Emergency Fan	Yes		
Centralized Monitoring & Management	Yes		
Water Leak Detection	1 piece, 5 meters long		
Door Lock System	Smart Lock (Glass Door)		Smart Lock (Glass Door) Mechanical Lock (Steel Door)
Safety Standards	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013		EN 62368:2014+A11:2017
EMC Standards	EN 55022:2010 EN 61000-3-11:2000	EN 55024:2010 EN 61000-3-12:2011	EN 55032:2012 EN 61000-3-12:2011
Noise Level	≤50dB (excluding outdoor condenser)		Normal Operation ≤75dB ECO Mode ≤50dB
Net Weight	<300 kg		<350 kg
High Availability (Cooling)	No	Yes	

Vertiv.com | Asia Pacific

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