SMARTROW™ PLUS

Intelligent, Integrated Converged Infrastructure solution for Micro Data Center applications

VERTIV

FEATURES

- Fast deployment
- All-in-one design and easy to use
- Suitable for high or low density cooling requirement
- Low PUE, thanks to the high efficiency ITA2 UPS and CRV+ with digital scroll compressor
- Integrated power management
- Local touch panel LCD and remote IP-based monitoring
- Mobile app monitoring
- No raised-floor or room required

The SmartRow™ Plus solutions provide a cost-effective power, thermal management and infrastructure management, to help you achieve your IT objectives regardless of data center size and complexity.

Infrastructure Challenges

Setting up a data center involves lot of complexity with multitude of pain points for IT Manager like :

- Ever increasing real estate price/rental
- Power and cooling cost
- Upgrade challenges with increased demand
- Setting up infrastructure in remote locations

Failure to properly design and deploy physical infrastructure can lead to under utilized systems, stranded capacity and higher operating costs, preventing you from gaining the full advantage of your data center.

BEST SUITED FOR

Banking, Financial and Insurance

Broadcast and Entertainment

Data Center / Colocation / Hosting

Education

Government

Healthcare

Manufacturing

Retail and Wholesale

Telecom

Configurations

SmartRow™ Plus 1+2

SmartRow™ Plus 1+3

SmartRow™ Plus 1+4

SmartRow™ Plus 2+4
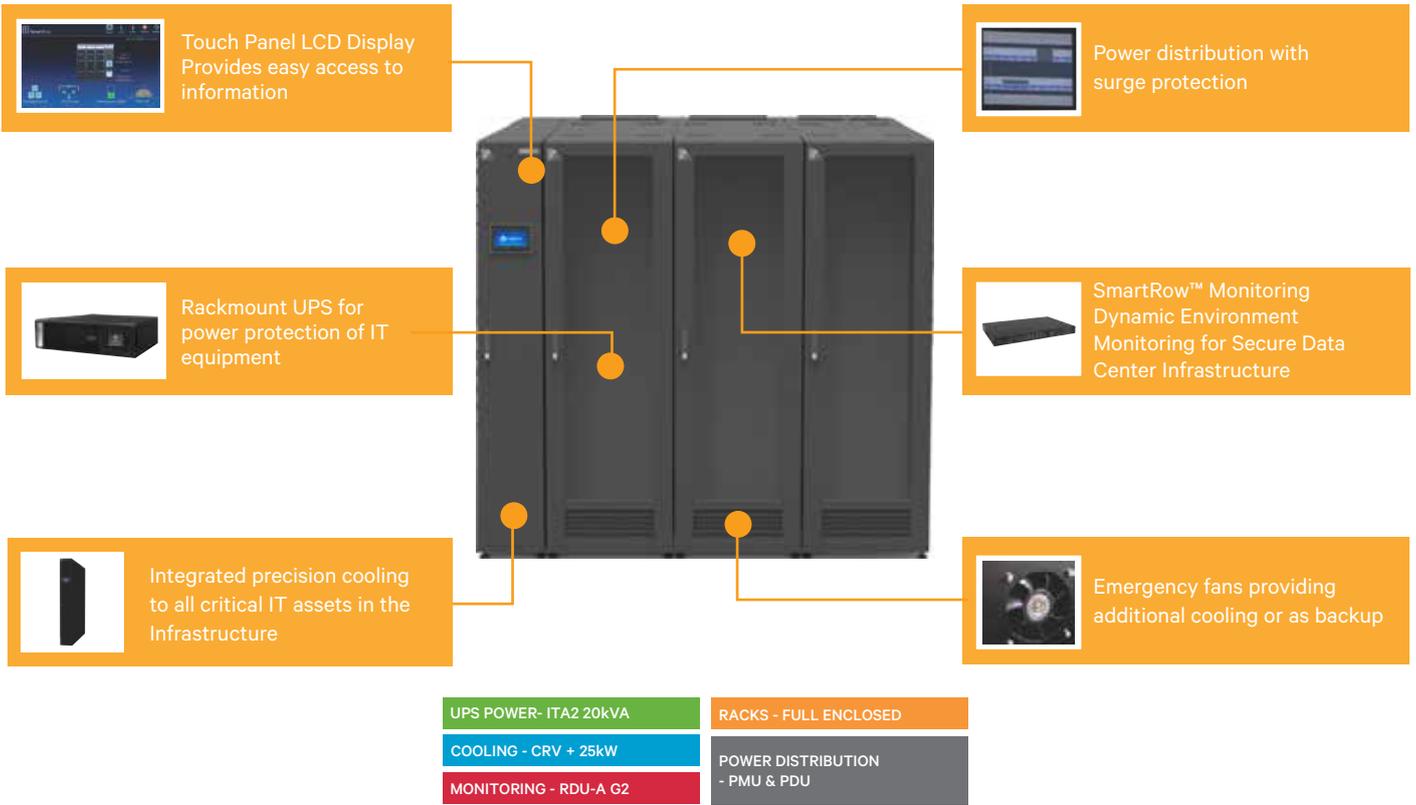
SmartRow™ Plus 2+5

SmartRow™ Plus 2+6

SmartRow™ Plus 2+7

SmartRow™ Plus 2+8

Sample Configuration:
1 Thermal Management + 3 Racks

Key Components

Touch Panel LCD Display
Provides easy access to information

Power distribution with surge protection

Rackmount UPS for power protection of IT equipment

SmartRow™ Monitoring
Dynamic Environment Monitoring for Secure Data Center Infrastructure

Integrated precision cooling to all critical IT assets in the Infrastructure

Emergency fans providing additional cooling or as backup

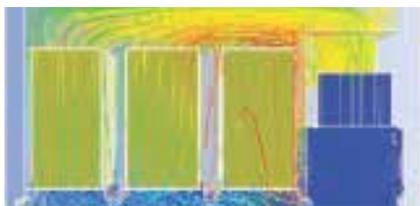| UPS POWER- ITA2 20kVA	RACKS - FULL ENCLOSED
COOLING - CRV + 25kW	POWER DISTRIBUTION - PMU & PDU
MONITORING - RDU-A G2	

Intelligent Infrastructure

Intelligent Security System

- Fire detection and suppression system (optional) – protect core IT equipment from fire with its intelligent
- Intelligent door lock with ID/IC card authorization management (optional)
- Emergency exhaust Fan - provision for exhaust air ventilation in case of cooling failure
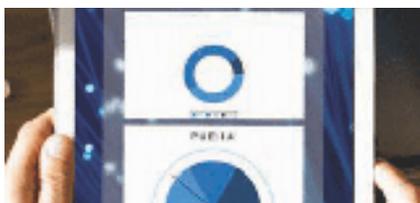

Unified Centralized Infrastructure Monitoring & Management

SmartRow™ Monitoring is powered by the RDU Platform – which allows for all environment sensors & intelligent devices (UPS, Thermal Management, PDU) information to be collected in one display, either in a web browser or the LCD touch screen. In event of cooling failure, emergency fans will be activated.

Full Containment

With the front & rear containment, cooling is optimized and contained within SmartRow™ Plus. Preventing loss of required cooling for the IT equipment to the open space.
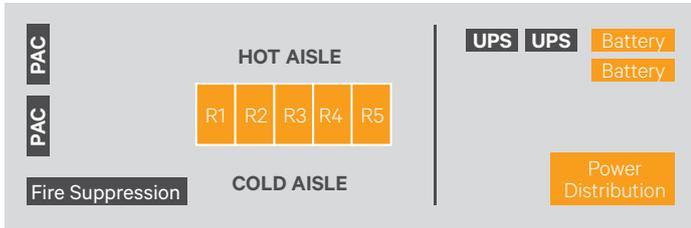

Remote Mobile Apps

Android device compatible mobile applications put your view where your remote site is. The power and convenience to be updated on actual general health of your investment.

The Smart Choice Over Conventional Data Centers

	SmartRow™ Plus	Conventional
Complete, integrated infrastructure	A unique containment that includes all products pertaining to cooling, monitoring, power distribution and management among others that work in conjunction to deliver higher efficiency and availability apart from optimal capacity	Redundant systems where multiple, disparate infrastructure components must be ordered and installed separately, leading to lesser degree of compatibility and lower capacity
Incorporate industry best practices	Implements industry-best and enterprise-grade practices listed below: • Hot aisle/Cold aisle separation • High availability and efficiency • Minimal footprint (read less space) • Modular and scalable architecture • Streamlined monitoring and management • Exemplary local support and services	Infrastructure components may not be designed and configured for best-in-class practices leading to low performance. At times, compromises by choosing one element over other: for example, interchange and choose efficiency over availability.
Lower capital expense	Cost-effective implementation that abstracts the conventional data center needs such as a dedicated cooling system and raised floor to mention a few. Scalable architecture that eliminates the need of building a bigger room for higher capacity for futuristic use resulting in significant savings	Additions made to increase the room-level power, cooling, and distribution to support more IT equipment based on the degree of scalability.
Lower operating expense	Achieve more than 30% annual savings over conventional designs due to high efficiency, integrated cooling, closed aisle system, and effective power management	Dedicated cooling may be less efficient because the entire room temperature and humidity must be controlled.
Compact footprint	Streamlined design leads to less floor space; Thermal Management leverages the benefit of concentrated air flow; comes with an advanced power distribution system	Perimeter cooling and dedicated infrastructure requires significantly greater space utilization leading to less efficient cooling; Multiple power distribution panels are mandatory.
Quick installation	Easy to order and deploy, lesser time required vs conventional data center build	Complex installation owing to cascading requirements, longer time frames, and requirement of external technicians.
Simplified project management	Well connected network of data center experts ensures easy ordering, installation, and servicing	Service and support requires multiple vendors increasing the complexity
Flexibility	All-in-one architecture with 2-6 racks, 25 kW cooling capacity with higher scalability in terms of power, cooling, and supervision.	Adding or changing airflow and power capacity cannot be achieved easily
Monitoring and management	Built-in monitoring and alarm systems (with notifications on power and cooling among other attributes) provide enhanced control	Monitoring and management may not have built-in components and function parts resulting in inadequate control

VERTIV

Business Case:

A simple case study reveals design optimization and advantages of SmartRow™ Plus situation: Deployment of 25kW IT load on non-IT ready room. Below two envelopes show difference in conventional and SmartRow™ Plus deployments.
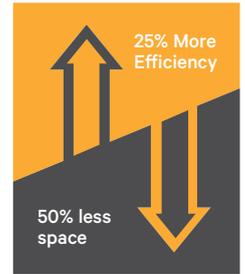

Conventional Data Center:

- 5 Racks with 3–4kVA avg load
- 20kVA – Power density
- PAC – Room Cooling, SAT : 16° C
- Wall mounted power distribution panel
- Fire suppression : Room base
- Room size : 30m^2
- Deployment period : 5 weeks

SmartRow™ Plus

- 3 Racks with 6–7kVA avg load
- 20kVA – Power density
- Cooling – Row Cooling
- Built-in Power Distribution
- Fire suppression : Within the rack
- Room size : 14m^2
- Deployment period : 1 weeks

25% More Efficiency

50% less space

Space Saving

Technical Specifications

CONFIGURATION	1+2	1+3	1+4	2+4	2+5	2+6	2+7	2+8
Features								
Quantity of cooling unit		1				2		
Quantity of IT Racks	2	3	4	4	5	6	7	8
Usable space (RU)	44~58	86~100	128~142	119	161	203	245	287
UPS Capacity	20kVA, standalone or N+1			20kVA, 2N				
Cooling Capacity	25kW							
Emergency Ventilation	YES							
Rack PDU	Metered or Switched, 1 or 2 per rack			Metered or Switched, 2 per rack				
Power Management Unit	1			2				
IT Management	thru Optional KVM							
Fire Suppression	Optional							
Infrastructure Monitoring (local)	Touch panel LCD display							
Infrastructure Monitoring (remote)	Web Interface							

VertivCo.com

Vertiv-SmartRow™-Plus-DS-EN-Asia-V2