

Vertiv™ Integrated Rack Solution

Reference Design #17

Enhanced Commercial and Office 42U 3 Rack Row 20kVA Capacity

Solution Requirements

Physical Protection:

- Safeguard network gear from environmental threats and unauthorized access.

Power Protection:

- Prevent business interruption caused by power loss or power fluctuations with battery backup technology.
- Achieve maximum uptime with redundant gear protecting critical application during an unexpected equipment failure.

On-Site Management:

- Simplify deployment and support future growth with infrastructure designed for total compatibility and scalability.
- Streamline deployment and get critical applications up and running faster with on-site services and support.

Remote Management

- Maintain peace of mind one or more remote sites are up and running with real-time notifications.
- Save time by remotely accessing and rebooting unresponsive network equipment without an on-site visit.

Site-Maintenance

- Ensure continuity of business with remote access and management of critical systems.
- Maximize your investment with on-site equipment maintenance and extended warranty protection.

Thermal Management

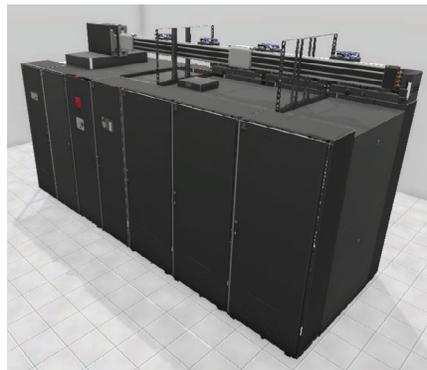
- Cool critical IT gear in high density or high temperature environments.

Form Factor: Row

Objective: Support network connectivity in commercial and office environments.

Recommended Environment

- Indoor unsecure environment with limited climate control providing minimal air conditioning for human comfort where temperature, humidity, and air quality control challenges put IT equipment at risk of damage from uncontrolled heat, dust, and moisture.
- Converted Closet
- Converted Room
- Retail Stock Room
- Distribution Center
- Warehouse
- Factory



Integrated Solution Summary

Capacity	20 kVA / 20 kW
Rack(s)	Qty. 3 - 42U X 800 X 1100 (HXWXD)
Power Protection	Online Double Conversion
Redundancy	N+1 Backup Power, 2N Rack Power Distribution, N Cooling
Power Distribution	208 Volt Three Phase; 30 Amp
Cooling	Included
Containment	Included
Monitoring	Included
Services	Included
Warranty	3 years
Software	Optional Upgrade

Explore all **Commercial and Office** form factors and power configurations available, **Endpoint, Rack, and Row** by visiting the **Solution Builder** on [Vertiv.com](https://www.vertiv.com) or by contacting a **Vertiv Sales Representative**.

Integrated Solution Includes:

Qty:	Product Summary	SKU	Description:
3	Rack	E428100312Y1Z1X E428100A12Y1Z1X	DCX 42U x 800mm x 1200mm (H x W x D) Rack
1	Busway	MBX25PP05NNNBNN MBX25PP06NNNBNN MBX25PPNN1 MBX25PPNNENNB MBX25PPNNNBNN TB1LKCN23PANBNN TB1LMCN13PANBNN 570304G2 571660G3 570599G1	Vertiv™ Liebert® 250A TPON - Liebert Busway Feeder, 5ft Vertiv™ Liebert® 250A TPON - Liebert Busway Feeder, 6ft Vertiv™ Liebert® 250A TPON - Liebert Busway Joint Pack Vertiv™ Liebert® 250A TPON - Liebert Busway End Cap Vertiv™ Liebert® End Power Feed Box, Vertical T2 Orientation Vertiv™ Liebert® TOB consisting of 2 x 30Amp, 22kA 3P MCB + 2 x L15-30R (Twist-Lock Receptacle) Vertiv™ Liebert® TOB consisting of 1 x 30Amp, 22kA 3P MCB + 1 x L21-30R (Twist-Lock Receptacle) Vertiv™ Liebert® Busway End Power Feed Box Bracket Vertiv™ Liebert® Busway Rack Mount Bracket - Dual Vertiv™ Liebert® Power Cable Kit - BDC to MBX 225A
3	Cable and Airflow Management	VRA1003 VRA1004 VRA1005 VRA2000	Vertiv™ cable management accessories including 2U x 4" deep horizontal cable manager single-sided with cover (Qty. 1), tool-less cable management lobster claw (Qty. 10), tool-less cable management - Velcro strap (Qty. 10), 1U 19" black plastic tool-less airflow blanking panel (Qty. 10)
1	UPS	EEA11PSD01 47SA04OCBCM0000 SUEXM10-40UM	Liebert® EXM EC EXM UPS 600mm Liebert® EXM UPS 40kVA Capacity, 20kVA output capacity, Redundant 208V Input/output Enersys 12HX205 Internal Battery Liebert® EXM UPS startup 5x8 for 47SA100CBC00000 & 47SA04OCBCM0000
1	UPS and Battery Maintenance	47MBH36CC1R1DCX MBSEA131C1BA8X5 SPEXM10-200UM MPEXM10-200ES1 MUEXM208-40ES1 EED11P0D01	Liebert® EXM EXM BDC 20-80kW (600mm) Liebert® EXM Battery Maintenance Liebert® EXM MBC/BDC/Wallmount Panel Startup 8x5 Liebert® EXM MBC/Transformer Maintenance Plan Liebert® EXM UPS Module Maintenance Service Type 40kVA Liebert® EXM EC BDC 600mm
6	Rack PDU	UU30009L FSC3N002	Vertiv™ Geist™ U-rPDU switched Universal PDU (UPDU) Vertiv™ Geist™ Facility Side L15-30P 10' cord for UPDU
1	Row Based Air Cooling	CRO20RA1C7XDFS E6611SSD01 MCM040E1YDXVRO	Vertiv™ Liebert® 20kW CRV row based Air cooling unit, 600mm wide, 208V Vertiv™ Liebert® EC CRV600 Dual MoR Vertiv™ Liebert® MCM Condenser 208V
1	Cooling Accessories	555408G1L 301456G15	Vertiv™ Liebert® Fan Control Box Kit with vNSA Vertiv™ Liebert® 120V Lee Temp Kit to be used with MCM040 Condenser
1	Fire Suppression Cabinet	ED611PSD01135	Vertiv™ Fire Cabinet 135 (MoR USA)
1	IT Management	AV3216-001	Vertiv™ Avocent AV3000 Rackmount KVM Over IP Switch CAC 16 Port KVM switches Local and Remote Access
1	Warranty and Service	vF-D3N-INSTALL PAPAPS-20K S10186A 3WP1ACFANMSL 3WC35KWL	Vertiv™ V-Row Delivery and install PAP Power Assurance Package Vertiv™ Air-Cooled Warranty Inspection Vertiv™ 3rd Year Parts Warranty (MC Condenser) Vertiv™ 2nd through 3rd year compressor only

*Additional accessories and components are required and included in the integrated solution. Contact a Vertiv Partner for the complete bill of materials, to receive pricing, and to purchase.

Recommended Upgrades

Qty:	Product Summary	Model #:	Description:
2	IT Management	MPU2032DAC-001 ACS8032-LN-DAC	The Avocent® MergePoint Unity MPU2032DAC-001 is a 32-port, 2 digital KVM path, with dual AC power supply. The MergePoint Unity switch includes both KVM over IP and Serial Console Management technology in a single appliance. This combination provides IT administrators a complete and secure, remote management solution to access and control servers, networking equipment and other devices found in data centers and branch offices.
1	IT Management	ACS8016-LN-DAC	The Vertiv™ Avocent® ACS8000 Serial Console System delivers secure in-band and out-of-band visibility and control to downstream equipment in enterprise data centers, as well as cloud and colocation facilities. This serial console system serves as a secure management gateway and single point of entry keeping you connected to critical IT equipment even in the event of partial or total data center outages. Includes the upgraded Cellular capability.
1	Software	DSV4.5-BASE DSV4.5-500DEV 1YRSLV-500DEV	Avocent® DSView delivers secured web-browser enabled sessions of on-network infrastructure controls. As an IT integrated solution, DSView delivers secured web-browser enabled sessions to Virtual Machines.
1	Software	ENVA-SERVER ENVA-DEV-500 ENVA-STUP-500 ENVA-SERVER-SA ENVA-SA-500	Vertiv™ Environet™ Alert provides industry companies with critical facility monitoring software that is affordable and easy to use. This solution delivers superior monitoring, and alerting.