

## Vertiv™ Integrated Rack Solution

## Reference Design #18

### Premier Commercial and Office 42U 3 Rack Row 20kVA Capacity

#### Solution Requirements

##### Physical Protection

- Safeguard network gear from environmental threats and unauthorized access.
- Prevent dust, debris, and moisture from damaging equipment.

##### 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.
- Recover business critical floor space with IT infrastructure designed with tight spaces in mind.
- 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
- Warehouse
- Retail Stock Room
- Distribution Center
- Factory



#### Integrated Solution Summary

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

## Integrated Solution Includes

Qty	Product Summary	SKU	Description
3	Rack	E428100312Y1Z1X, E428100A12Y1Z1X	DCX 42U x 800mm x 1200mm (H x W x D) Rack
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	Busway	MBX25PP05NNNNBNN, MBX25PP06NNNNBNN, MBX25PPNN1, MBX25PPNNENN, MBX25PPNNNBNN, TB1LKCN23PANBNN, TB1LMCN13PANBNN, 570304G2, 571660G3, 570599G1	Vertiv™ Liebert® 250A TPON - Liebert Busway Feeder, 5ftVertiv™ Liebert® 250A TPON - Liebert Busway Feeder, 6ftVertiv™ Liebert® 250A TPON - Liebert Busway Joint PackVertiv™ Liebert® 250A TPON - Liebert Busway End CapVertiv™ Liebert® End Power Feed Box, Vertical T2 OrientationVertiv™ 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 BracketVertiv™ Liebert® Busway Rack Mount Bracket - DualVertiv™ Liebert® Power Cable Kit - BDC to MBX 225A
1	UPS	EEA11PSD01, 47SA04OCBCM0000, SUEXM10-40UM	Liebert® EXM EC EXM UPS 600mmLiebert® EXM UPS 40kVA Capacity, 20kVA output capacity, Redundant 208V Input/output Enersys 12HX205Internal BatteryLiebert® EXM UPS startup 5x8 for 47SA100CBC00000 & 47SA04OCBCM0000
1	UPS and Battery Maintenance	47MBH36CC1R1DCX, MBSEA131C1BA8X5, SPEXM10-200UM, MPEXM10-200ES1, MUEXM208-40ES1, EED11POD01	Liebert® EXM EXM BDC 20-80kW (600mm)Liebert® EXM Battery MaintenanceLiebert® EXM MBC/BDC/Wallmount Panel Startup 8x5Liebert® EXM MBC/Transformer Maintenance PlanLiebert® EXM UPS Module Maintenance Service Type 40kVALiebert® 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	CR020RA1C7XDFS, E6611SSD01, MCM040E1YDXVRO	Vertiv™ Liebert® 20kW CRV row based Air cooling unit, 600mm wide, 208V
1	Cooling Accessories	555408G1, L301456G15	Vertiv™ Liebert® Fan Control Box Kit with vNSAVertiv™ 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	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	Warranty and Service	vF-D3N-INSTALL, PAPAPS-20K, S10186A, 3WP1ACFANMSL	Vertiv™ V-Row Delivery and installPAP Power Assurance PackageVertiv™ Air-Cooled Warranty InspectionVertiv™ 3rd Year Parts Warranty (MC Condenser)Vertiv™ 2nd through 3rd year compressor only
1	Software	DSV4.5-BASE, DSV4.5-500DEV, 1YRSLV-500DEV	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

\*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	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.

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**.