



Vertiv™ SmartMod™

Modular Data Center
Infrastructure



Vertiv™ SmartMod™ is a flexible platform, optimized for simplified deployment of your critical IT assets.



Front illustration of Vertiv SmartMod

For small room IT deployments up to 10 racks and 100kW or less, Vertiv™ SmartMod™ offers a simple way to install capacity in a fraction of the time a typical IT build might take. With integrated, pre-engineered, and pre-fabricated infrastructure, you can rapidly achieve your objectives. And you don't have to blow the budget, or overbuild based on uncertain future needs – with right-sized systems designed to work together and optimized for constructability and speed to startup, you can build just what you need today, better aligning your capital plans to your business challenges.

SmartMod leverages core Vertiv Critical Power, Thermal Management, and Monitoring & Control technologies.

SmartMod incorporates:

- Modular and scalable Vertiv™ Liebert® EXM UPS power protection

- Close-coupled in-row Liebert CRV thermal management units with intelligent iCOM controls
- Flexible Vertiv™ VR racks
- Vertiv rack PDUs
- Thermal containment to isolate hot aisle and cold aisle airflows for optimum thermal performance
- Automatic Transfer Switch (ATS) to reliably select normal or emergency power sources
- Clean agent fire suppression with optional VESDA early smoke detection
- Overhead infrastructure, including piping, electrical distribution, and fiber ducts

All subsystems are factory installed into a secure, weatherproof and transportable enclosure – simplifying and drastically shortening on site time required to install and startup, and reducing the potential for risk, quality, or schedule delays.

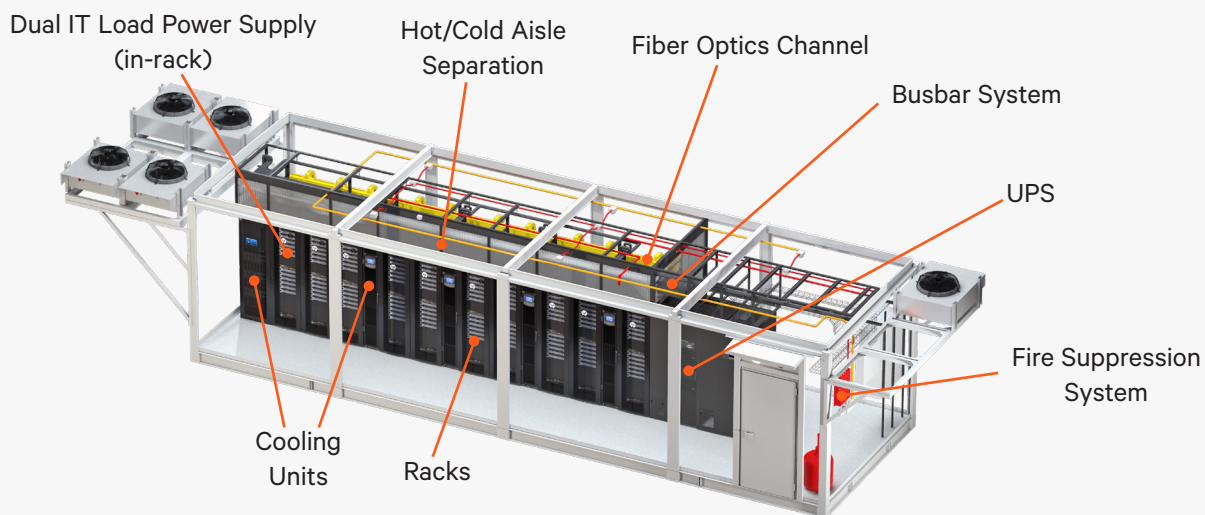
Configuration options are available to provide desired redundancy and battery runtime. In addition, when deploying multiple units or at multiple locations, having a common look and feel, layout, and equipment kit simplifies maintenance and operations activities. And Vertiv backs it all up with the service and support network you have come to expect from us.

Vertiv SmartMod Selection Grid

UPS		N+1 Internal							
Max IT Capacity (kW)		20		40		70		85	
Rack Width		600mm (23.6in)	800mm (31.5in)	600mm (23.6in)	800mm (31.5in)	600mm (23.6in)	800mm (31.5in)	600mm (23.6in)	800mm (31.5in)
2		22-3A-2C-20-208		27-4A-4C-40-208					
3									
4				32-7A-4C-40-208					
5									
6									
7									
8									
9									
10 RACKS				37-10A-4C-40-208		40-10A-5C-70-208		42-10A-6C-85-480	

- Cells that contain exact reference design names reflect an optimized Solution for those parameters
- The reference design may still be valid for design parameters within the colored extended range
- Minor configuration changes are possible (varying rack counts/dimensions, longer battery runtimes, etc.) – check with your Solutions Architects for details and support

Component Overview of SmartMod





Interior view of Vertiv SmartMod

SmartMod Technical Specifications

REFERENCE DESIGN	22-3A-2C-20-208	27-4A-4C-40-208	32-7A-4C-40-208	37-10A-4C-40-208	40-10A-5C-70-208	42-10A-6C-85-480
Enclosure External Dimensions						
Enclosure Length	6426mm (21.1 ft)	8010mm (26.3 ft)	9594mm (31.5 ft)	11178mm (36.7 ft)	11970mm (39.3 ft)	12762mm (41.9 ft)
Overall Length	7810mm (25.6 ft)	10778mm (35.3 ft)	12344mm (40.5 ft)	13944mm (45.8 ft)	16122mm (52.9 ft)	16122mm (52.9 ft)
Enclosure Width	3555mm (11.7 ft)	3555mm (11.7 ft)	3555mm (11.7 ft)	3555mm (11.7 ft)	3555mm (11.7 ft)	3555mm (11.7 ft)
Enclosure Height	3252mm (10.7 ft)	3252mm (10.7 ft)	3252mm (10.7 ft)	3252mm (10.7 ft)	3252mm (10.7 ft)	3252mm (10.7 ft)
Weight	Configuration dependent					
Input AC Parameters						
Region	North America					
Voltage/Frequency	208V/3/60Hz (4W+G)					480V/3/60Hz (4W+G)
IT Racks						
Rack Height	42U (2000mm, 6.6 ft)					
Rack Depth	1100mm (3.6 ft)					
Max QTY of 600mm (23.6 in) OR Max QTY of 800mm (31.5 in) racks	3/2	4/3	7/5	10/7	10/8	10/7
Max System IT Load (@ N+1)	20kW	40kW			70kW	85kW
Electrical						
Bypass Distribution Cabinet	1					
UPS Cabinet (EXM Type)	1					
UPS Module Redundancy	N+1					
UPS Battery Cabinet	n/a	1				
UPS Nameplate Rating (modules)	20kVA (20kVA + 20kVA)	40kVA (40kVA + 20kVA)	40kVA (40kVA + 20kVA)	40kVA (40kVA + 20kVA)	80kVA (80kVA + 20kVA)	100kVA (100kVA + 20kVA)
Battery Backup Time	Configuration dependent (minimum 5min)					
Busbar System	One busbar with Tapoff with two subfeeds (A&B) for each rack					
Rack PDU	2 per rack					
Rack PDU Capacity (max)	30A per phase @ 208V/3/60Hz					
Rack PDU Type	Basic, monitored, or managed					
Mechanical						
Air Conditioning Type	In-row, direct expansion					
Air Conditioning Redundancy	N+1					
Air Conditioning Units	2	4			5	6
Cooling Capacity for IT Load (35°C @ N+1)	20kW	40kW			70kW	85kW
Exterior Ambient Operating Range	-35°C to +45°C					
Fire Detection and Suppression						
Very Early Smoke Detection System	Aspirating detection unit optional					
Fire Detection System	Optical					
Fire Suppression Agent	HFC-227EA (FM-200)					
Cable Trays						
LAN Cable Tray	200mm (7.9 in) wide mesh					
Fiber Optic Tray	4" x 4"					
Spill-over Exit	Single per IT rack					
Lighting						
Lighting Element	LED					

