



Product brochure

Vertiv™ SmartRun

Integrated overhead IT solution

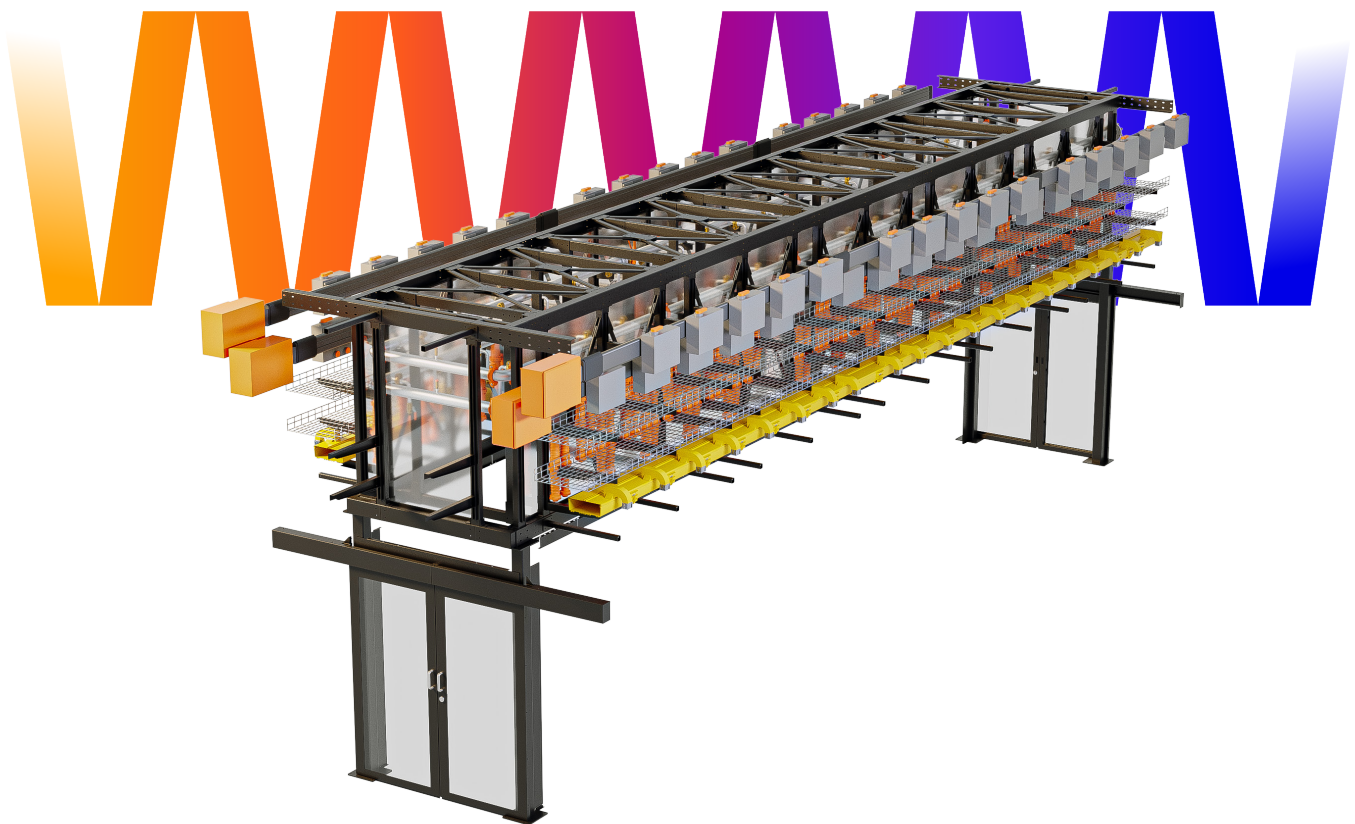




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About Vertiv

Vertiv (NYSE: VRT) brings together hardware, software, analytics and ongoing services to enable its customers' vital applications to run continuously, perform optimally and grow with their business needs. Vertiv solves the most important challenges facing today's data centers, communication networks and commercial and industrial facilities with a portfolio of power, cooling and IT infrastructure solutions and services that extends from the cloud to the edge of the network.

Headquartered in Columbus, Ohio, USA, Vertiv does business in more than 130 countries. For more information, and for the latest news and content from Vertiv, visit [Vertiv.com](https://www.vertiv.com).

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Vertiv™ infrastructure solutions at-a-glance

Vertiv™ Infrastructure Solutions offers you comprehensive support for designing data centers, utilizing the entire Vertiv™ product lineup to deliver seamlessly integrated solutions. By combining our extensive portfolio and expertise, we create prefabricated and modular solutions tailored both for AI and traditional data centers. With a platform-based approach, we eliminate the challenges of selecting individual products and managing on-site integration, enabling you to build an efficient, resilient, and future-ready data center infrastructure.



Global presence with localized volume manufacturing facilities



Simplified and Scalable assembly for straightforward on-site installation



Full owners of the process from design to onsite installation



High quality Factory Integration with schedule and cost certainty



Energy Efficient Design allows for lower site PUE and reduced environmental impact while controlling costs

Vertiv™ Infrastructure Solutions bring over two decades of experience in deploying prefabricated and modular solutions across the world to different industries and customer profiles.

Accelerating Deployment Cycles	- Repeatable factory-integration to reduce deployment up to 50% and 50% less on-site work (including commissioning) - Global supply-chain and service delivery footprint
Maximizing Building Blocks & Space Optimization	- Modular and hybrid solutions in multi-MW sizes - Module design-practice unlocks up to 30% space
Reduce Field Work and Improve Build Quality	Productizing non-repeatable field work in the factory, improving build-quality and customer's total cost of ownership up to 25%

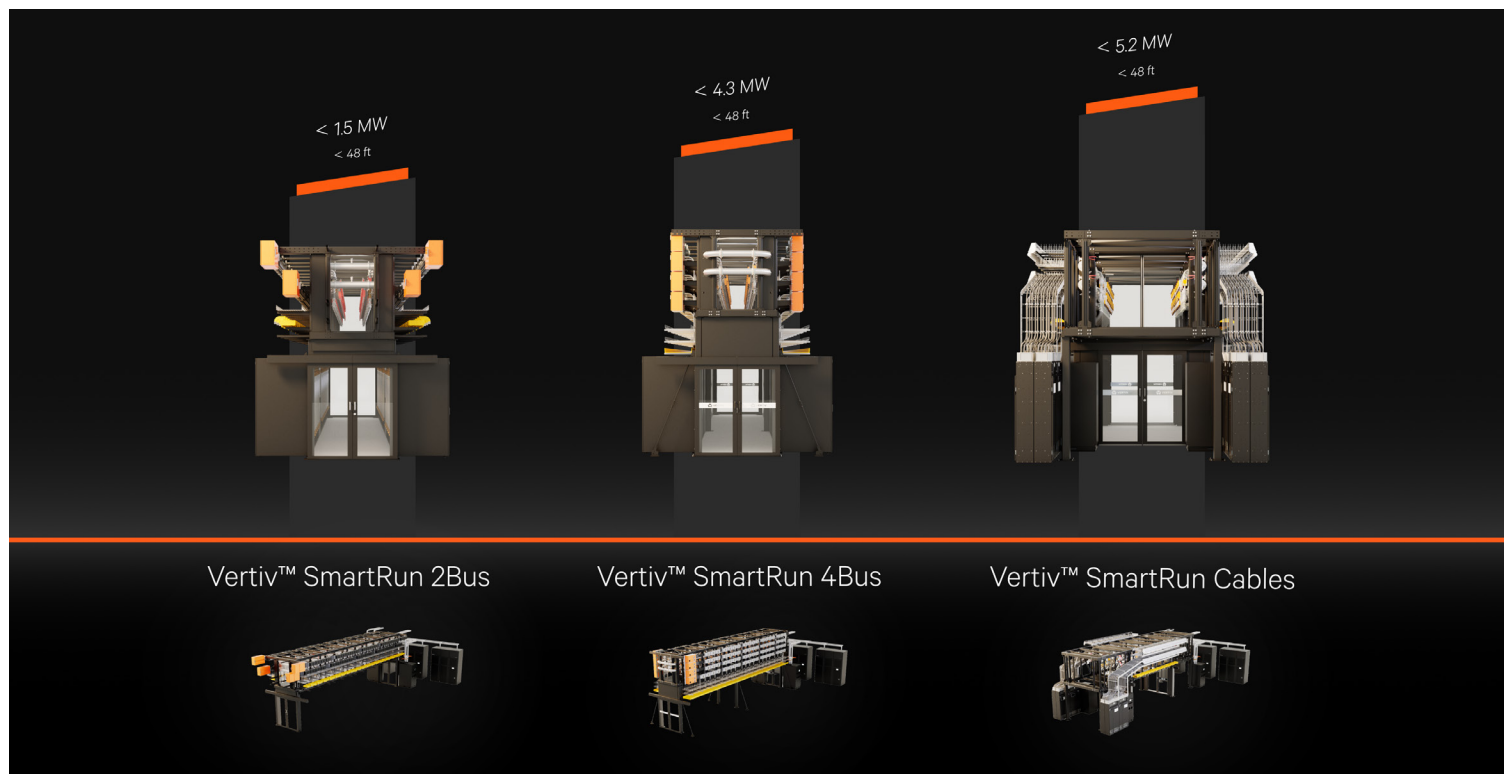
Scan QR code and visit [Vertiv Infrastructure Solution](#) page.



Vertiv™ SmartRun: simplifying overhead infrastructure for modern data centers

Vertiv™ SmartRun is a prefabricated overhead infrastructure solution engineered to accelerate deployment, reduce on-site complexity, and deliver repeatable, scalable performance in data center whitespace. Designed and built by Vertiv, the Vertiv™ SmartRun integrates critical systems—busway, aisle containment, liquid cooling piping and cabling—into a single, lift-and-set deployment model that transforms how infrastructure is installed above the rack.

Data center providers are demanding speed—yet today's on-site construction is plagued by delays, complex coordination, and material waste of up to 10–15%. Vertiv™ SmartRun addresses these challenges by **reducing on-site installation time by up to 85%, and lowering total deployment costs of aisle-based systems by up to 40%**, solving both the schedule risk and the first cost barrier.



Vertiv™ SmartRun key benefits

- **One Integrated System, One Purchase:** No more sourcing busway, piping, and aisle containment separately - Vertiv™ SmartRun is delivered as a unified solution, fully engineered and pre-integrated.
- **Streamlined Logistics & Procurement:** Single-source procurement and limited shipments simplify project receipting and vendor management.
- **Accelerated Deployment:** Up to 85% faster deployment on-site compared to traditional stick-built infrastructure.
- **Reduced On-Site Labor:** Prefabricated assemblies minimize labor hours and reduce skilled trade dependencies.
- **Lower Capex:** Cuts total cost of aisle-based infrastructure deployment by up to 40%.
- **Guaranteed Timelines:** Vertiv manufacturing and project management enables predictable delivery and execution.



- **Rapid Installation with Single-Lift Deployment:** Modules are shipped ready to install with a forklift or lift assist—minimizing disruption and maximizing speed.
- **Scalable Modularity:** Configurable to fit a wide range of data center layouts and performance requirements.
- **Global Reach, Local Execution:** Vertiv's worldwide manufacturing and service footprint enables rapid, consistent deployments anywhere.

Perfect for:

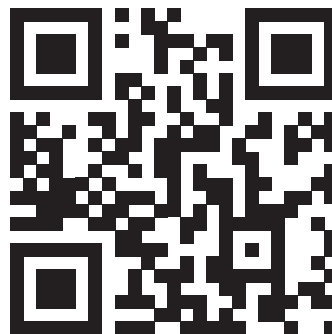
- Hyperscale data centers
- Colocation facilities
- AI infrastructure deployments
- High-performance computing environments

Vertiv™ SmartRun key features:

- **Modular & Adaptable:** Vertiv™ SmartRun connects like building blocks, allowing flexible layouts for both new and existing spaces.
- **Easy Indoor Delivery:** Designed to move smoothly through standard doors and hallways without special equipment or disassembly.
- **Flexible Installation:** Can be securely mounted to the floor or suspended overhead, depending on space and design needs.
- **Ready for Liquid Cooling:** Built to integrate seamlessly with advanced cooling systems to manage high-performance heat loads.
- **Supports High Power Use:** Compatible with a variety of power setups, making it ideal for demanding, high-density environments.
- **Built-In Containment:** Includes airflow management features that improve cooling efficiency and system performance.
- **Clean Cable Management:** Features structured pathways for data and power, keeping infrastructure neat, scalable, and easy to service.



[Learn more about Vertiv™ SmartRun](#)



[Explore a 3D model of Vertiv™ SmartRun](#)

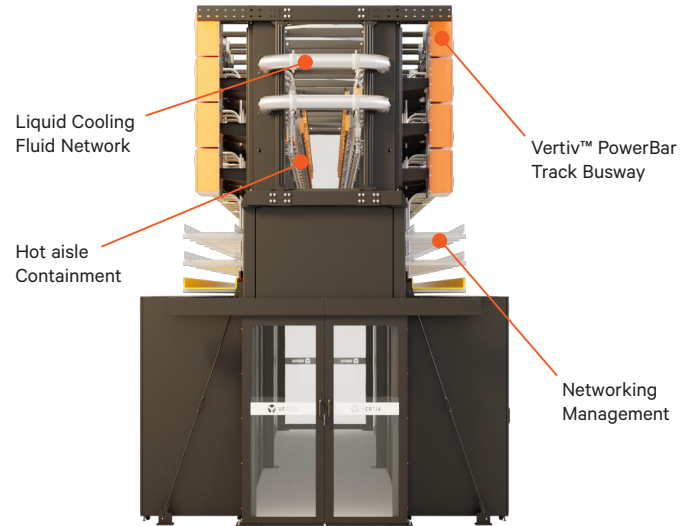
Vertiv™ SmartRun: All-in-one Design

Power distribution: scalable and flexible

- Supports Vertiv™ PowerBar Track Open Channel Busway enabling Vertiv™ SmartRun with up to 8000A
- Enables RPP and Power Cable Distribution applications with power management tray allowing solutions up to 9600A
- Up to 600V power systems with scalable PowerBar Track tap-off boxes enabling 334kW concurrent maintainable rack spaces
- Flexible redundancy options: N, N+1, 4N/3, 2N power distribution architectures for concurrent maintainability
- Up to 3 tiers of network management cable tray per row of racks



Vertiv™ SmartRun 4Bus



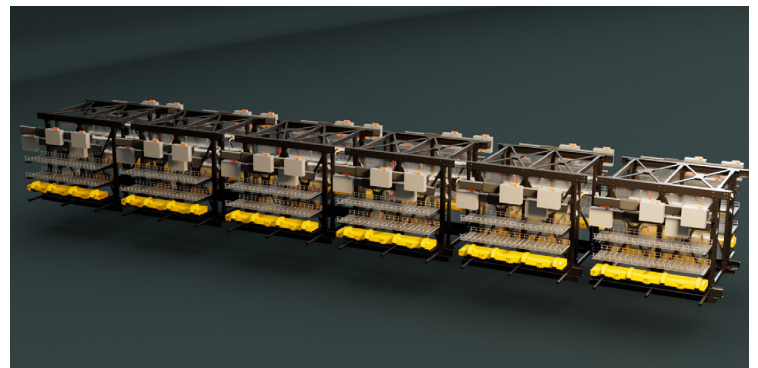
Frontal view of Vertiv™ SmartRun 4Bus with racks

Hot aisle containment: premium and scalable

- Polycarbonate hot aisle containment tied directly into the customer building cooling for cooling efficiency management
- Designed to perfectly fit racks of different heights, with adjustable filler panels to seal gaps where racks haven't been installed, maintaining airtight containment
- Premium sliding Vertiv doors feature a high-end, seamless design for easy access

Liquid cooling: precision-controlled network

- Integrated technology cooling system (TCS) featuring Stainless steel piping enabling liquid cooled rack spaces
- TCS liquid branches supplied with independent rack isolation valves and energy control valving for fast acting shutoff capability for a fully monitored and controlled liquid cooling system
- Single Vertiv™ SmartRun supports up to 6MW of liquid cooling enabling high density AI clusters and rack spaces
- Includes leak detection infrastructure allowing real-time identification of potential fluid leaks protecting IT hardware from failures



Vertiv™ SmartRun to be configured and manufactured via scalable lengths of 8ft (2.4m) blocks. All blocks assembled together to form Vertiv SmartRun in Vertiv manufacturing facilities.

Configurability and scalability

- Manufacture to length via 8ft (2.4m) building blocks for shippable pods up to 48ft (14.6m) and up to 46 total rack spaces
- Connect SmartRuns together end-to-end on-site unlocking clusters up to 96ft long totaling up to 92 rack spaces
- Ready for high seismic deployments, pre-designed for 95% global coverage
- Supporting up to 29,000lbs of datacenter infrastructure via industrial premium steel frame construction solving the complete whitespace design with additional attachments of Vertiv™ CDUs, Vertiv™ RPP's and Vertiv™ SmartIT Racks.



Building faster requires delivering smarter

More Manufacturing = Less Construction



Vertiv 48ft SmartRun being packaged and transported via drop trailer

*“Reduces on-site deployment time by **up to 85%**”*



Vertiv 48ft SmartRun being deployed and delivered to a tilt-up concrete building with leave-out panel and staging area for large module receipting

***Up to 40%** Reduction in overall cost of deployment.*

Building faster

Building datacenters faster requires simplifying on-site construction by manufacturing more in Vertiv Facilities. Manufacturing elements that would typically be site installed and transferring the works into Vertiv Manufacturing Facilities.

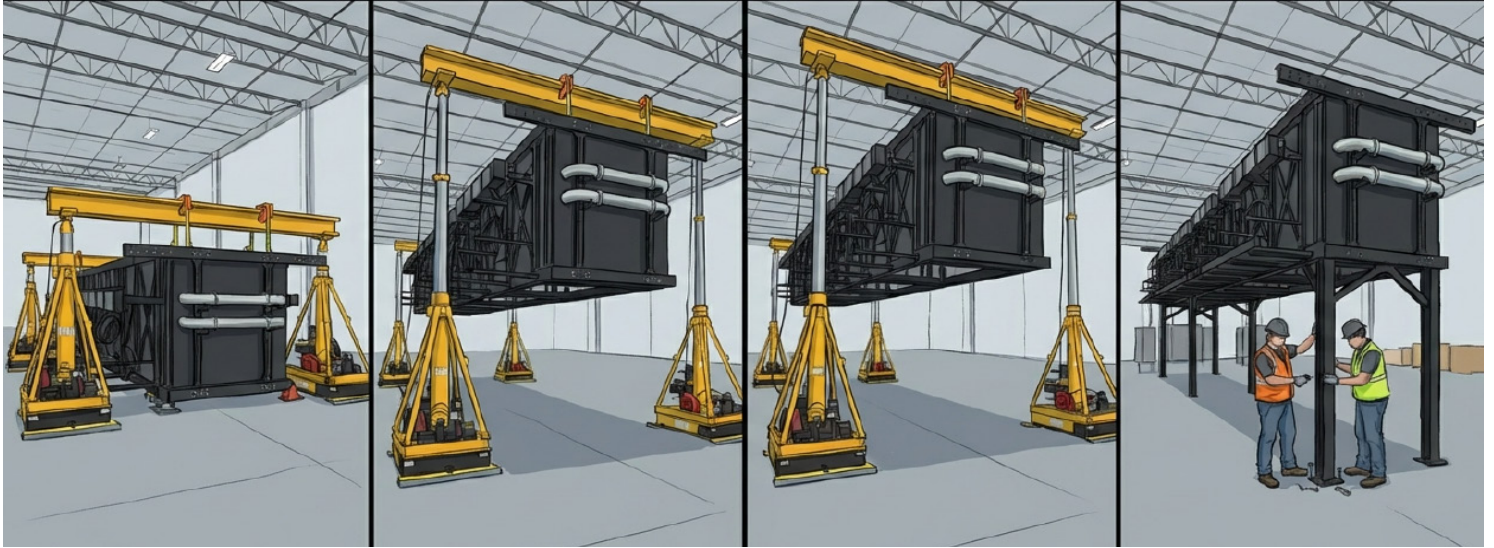
This increased manufacturing increases the speed and most importantly the quality and consistency of the solutions that arrive and are constructed on-site.

Delivering Smarter

Building more in the manufacturing facilities synonymously requires building Smarter on-site. This requires datacenter owners, programs and construction teams to evaluate and plan for the capability receipt large datacenter products or modules. This quick evaluation capability allows the owner and contractor to the most expedited and simplified datacenter deployment and take the most work off-site.

Vertiv Installation Services

The performance of your critical infrastructure depends on the precision of its installation. Vertiv™ Services eliminates the coordination gap between the manufacturer and the contractor, delivering a true factory-to-ceiling solution.



White-Glove Installation Services

Logistics & Receipting

Coordinate delivery, offload preassembled sections using cranes or forklifts as required, verify received materials, and stage components to support site install.

Rigging & Lifting

Specialized rigging services support the lifting of Vertiv™ SmartRun on to posts in accordance with approved structural calculations and site requirements.

Assembly & Connection

Technicians perform final torquing and alignment for internal mechanical and electrical connections (including liquid cooled piping), and door installation—supporting full system readiness.

Assembly & Connection

Final activities include inspections, continuity and grounding checks, pressure testing, valve and quick connect verification, and documentation handover.

Local Presence, Global Scale

Vertiv supports Vertiv™ SmartRun installations with a globally distributed services organization designed to respond across the globe.

Global Field Engineering Network

Vertiv maintains a large, geographically distributed field engineering workforce operating across more than 130 countries, helping provide access to trained expertise where and when it's needed.

Consistency of Execution

From new builds to retrofit projects, factory trained teams follow standardized installation and commissioning practices to support consistent execution across sites and regions.

Technical Support

A global support model enables 24/7 access to technical resources, helping address critical power and cooling issues as they arise.

Worldwide

~320

service centers

~5,000

field service engineers

~400

tech response





Vertiv™ liquid cooling services at-a-glance

Liquid cooling transforms the data center from a static, aircooled environment into a dynamic fluid ecosystem. Managing fluid chemistry, pressure dynamics, and material compatibility requires specialized expertise beyond general mechanical contracting.

Vertiv Services provides OEM-certified engineering and lifecycle services that support the deployment, commissioning, and ongoing operation of SmartRun and liquid cooling infrastructure for high-density and high-performance computing environments.

Expert Turnkey Services

Comprehensive liquid cooling services support high-density computing environments, spanning site assessment, solution design support, and performance optimization. Vertiv's thermal experts assist with AI and high-performance computing facility upgrades, supporting scalable, efficient operation from deployment through ongoing maintenance.

Expert Turnkey Services

PurgeRite™ fluid management services support liquid cooling system readiness through engineered flushing, purging, filtration, and closed loop water treatment—helping data center teams prepare hydronic systems for commissioning and AI driven high-density operations.



Consultation & Assessment

Perform design consultation and assesment customized to specific site requirements:

- Site visit • Product selection • System planning/design • System layout • Integration drawings • Computational fluid dynamic (CFD) Digital Twin modeling

Installation & Integration

Manage project and perform assembly services:

- Rack assembly • Busway installation • Rack PDU installation • Aisle containment • Integration from CDU to chip via overhead and rack manifolds • Removal of old equipment • New Vertiv™ unit installation

Hassle-free design, deployment and management for forward-looking data centers in every location.

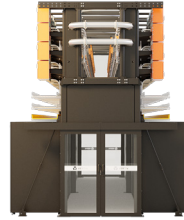
Comissioning

OEM commisioning and startup service:

- Site Acceptance Inspection • Startup • Site Acceptance Testing • Integration System Testing • Training

Recurring Services

- Preventive Maintenance Visits • Parts/Labor Coverage • Emergency Response • Technical Support • Fluid management (Fluid sampling and testing; system discharge and recharge, fluid quality remediation)



Design Specifications

Vertiv™ SmartRun 2Bus

Vertiv™ SmartRun 4Bus

Vertiv™ SmartRun Cables

Architecture

Specifications

Specifications

Specifications

Max Lift/Transport Size LxWxH	Up to 48' x 13' x 6.5' (14.4 x 4 x 2 m)	Up to 48' x 14' x 8.8' (13 x 4 x 2.7 m)	Up to 48' x 13' x 6.5' (14.4 x 4 x 2 m)
Number of Rack Spaces	Up to 46 Racks		
Modular Scalable Length	8 ft (2.4 m)		
Minimum Height to Drop Ceiling	14.6 ft (4.4 m)	16.9 ft (5.2 m)	14.6 ft (4.4 m)
Rack Height/Post Height	Up to 52U Rack, 8ft (2.4 m) Post Height		
Hot Aisle Width	6 ft (1.8 m)		

Structural

Total Unit Weight Capacity	Up to 750 lbs / ft (1115 kg / m)	Up to 915 lbs / ft (1360 kg / m)	Up to 885 lbs / ft (1315 kg / m)
Infrastructure Weight Capacity	Up to 465 lbs / ft (690 kg / m)	Up to 605 lbs / ft (900 kg / m)	Up to 555 lbs / ft (825 kg / m)
Mounting	Post / Floor Standing		
Seismic zone	Designs up to Zone 4		
	Up to Category C Standard; D & E by Request		

Thermal

Liquid Thermal Capacity per Pod (kW) ¹	6 MW		
Main Header Size	Up to 8" (DN200)		
Technology Cooling Loop Architecture	Ring or Straight		
Piping Material	Stainless Steel		
Thermal Monitoring	Pressure, Flow, Leak Detection Temperature		
CDU Utility Skid	Designed via ETO		

Electrical

Power Distribution Unit	Vertiv™ PowerBar Track Busway		Power Cable Distribution
Total Unit Amperage	Up to 4000A	Up to 8000A	9600A
Voltage	Up to 600V		
Redundancy	N or 2N	N, 2N, 4N/3	Designed via ETO
Phase Configurations	3Ph + 100% N (TPN)		
RPP Utility Skid	N/A	Designed via ETO	

Auxillary

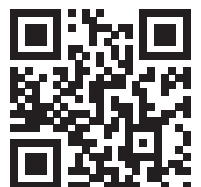
Cable Tray Qty	Up to 3 Tiers		
Monitoring and Controls	Modbus, Bacnet, TCP, PLC		
Lighting	40FC, 80CRI, 4000k		
Containment	Polycarbonate Paneling with Sliding Doors		
Color	Black		

¹ 80:20 Liquid:Air, 1.5 LPM/kW, 8ft/sec, PG25

Engineering to Order (ETO) Options Available upon request



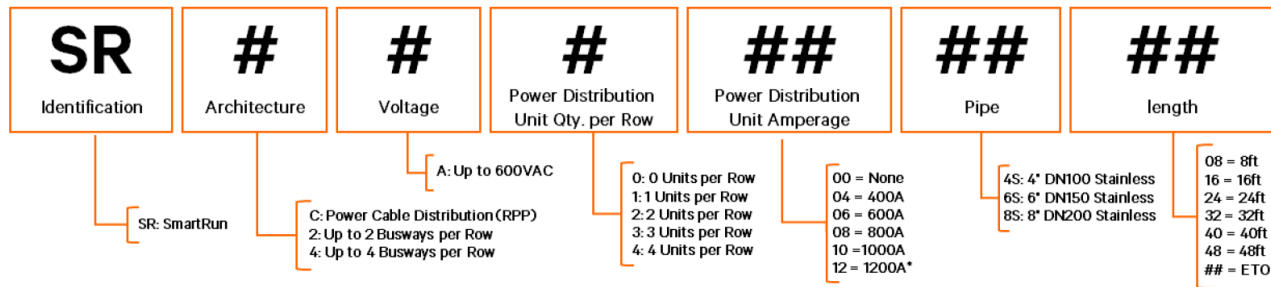
[Learn more about Vertiv™ SmartRun](#)



[Explore a 3D model of Vertiv™ SmartRun](#)



Configure a Vertiv™ SmartRun



Vertiv™ SmartRun Sku Decoder, *RPP only No Busway

Vertiv™ SmartRun 2Bus - Two PowerBar Track Busbars per Row

The standard for N and 2N redundant architectures, Vertiv™ SmartRun 2Bus delivers up to **4000A** via up to two independent PowerBar Track busway runs. Vertiv™ SmartRun 2Bus dual busbar runs allow up to two Tap boxes per rack space providing the perfect balance of modularity and power, seamlessly supporting a mix of storage, networking, and liquid-cooled AI compute in a single row.

Vertiv™ SmartRun 2Bus MW Capacity	N Redundancy			2N Redundancy		
SKU Description (IT Rows x Units x AMPS, Pipe)	400 V	415 V	480 V	400 V	415 V	480 V
SR2A2046S## 2X2X400A BUSWAY, 6" Pipe	1.1MW	1.1MW	1.3MW	0.6MW	0.6MW	0.7MW
SR2A2066S## 2X2X600A BUSWAY, 6" Pipe	1.7MW	1.7MW	2.0MW	0.8MW	0.9MW	1.0MW
SR2A2086S## 2X2X800A BUSWAY, 6" Pipe	2.2MW	2.3MW	2.7MW	1.1MW	1.1MW	1.3MW
SR2A2108S## 2X2X1000A BUSWAY, 8" Pipe	2.8MW	2.9MW	3.3MW	1.4MW	1.4MW	1.7MW

to be configure to length ability within Standard 8ft (2.4 m Segments)



Vertiv™ SmartRun 2Bus with up to Two PowerBar Track Busbars per Row

Vertiv™ SmartRun 4Bus – Four PowerBar Track Busbars per Row

The solution for emerging 4N/3 redundant power topologies, Vertiv™ SmartRun 4Bus supports the most intense AI workloads with up to **8000A** via four independent PowerTrack busway runs. Vertiv™ SmartRun 4Bus architecture allows up to four Tap boxes per rack space, enabling concurrently maintainable densities of 345kW without compromising the inherent modularity of the system.

Vertiv™ SmartRun 4Bus MW Capacity	N Redundancy			4N/3 Redundancy			2N Redundancy		
SKU Description (IT Rows x Units x AMPS, Pipe)	400 V	415 V	480 V	400 V	415 V	480 V	400 V	415 V	480 V
SR4A4046S## 2X4X400A BUSWAY, 6" Pipe	2.2MW	2.3MW	2.7MW	1.7MW	1.7MW	2.0MW	1.1MW	1.1MW	1.3MW
SR4A4068S## 2X4X600A BUSWAY, 8" Pipe	3.3MW	3.4MW	4.0MW	2.5MW	2.6MW	3.0MW	1.7MW	1.7MW	2.0MW
SR4A4088S## 2X4X800A BUSWAY, 8" Pipe	4.4MW	4.6MW	5.3MW	3.3MW	3.4MW	4.0MW	2.2MW	2.3MW	2.7MW
SR4A4108S## 2X4X1000A BUSWAY, 8" Pipe	5.5MW	5.7MW	6.6MW	4.2MW	4.3MW	5.0MW	2.8MW	2.9MW	3.3MW

to be configure to length ability within Standard 8ft (2.4 m Segments)



Vertiv™ SmartRun 4Bus with up to Four PowerBar Track Busbars per Row

Vertiv™ SmartRun Cables – Power Cable Distribution Solution

Optimized for static, ultra-dense deployments where raw power takes precedence over future flexibility, Vertiv™ SmartRun Cables centralizes over-current protection in Vertiv™ RPP units or Switchgear for eye-level serviceability. This configuration routes custom power cables directly to the rack via power cable tray allowing concurrently maintainable pod densities of up to **9600A**.

Vertiv™ SmartRun Cables MW Capacity	N Redundancy			4N/3 Redundancy			2N Redundancy		
SKU Description (IT Rows x Units x Amps, Pipe)	400 V	415 V	480 V	400 V	415 V	480 V	400 V	415 V	480 V
SR0A4046S## 2X4X400A RPP, 6" Pipe	2.2MW	2.3MW	2.7MW	1.7MW	1.7MW	2.0MW	1.1MW	1.1MW	1.3MW
SR0A4068S## 2X4X600A RPP, 8" Pipe	3.3MW	3.4MW	4.0MW	2.5MW	2.6MW	3.0MW	1.7MW	1.7MW	2.0MW
SR0A4088S## 2X4X800A RPP, 8" Pipe	4.4MW	4.6MW	5.3MW	3.3MW	3.4MW	4.0MW	2.2MW	2.3MW	2.7MW
SR0A4108S## 2X4X1000A RPP, 8" Pipe	5.5MW	5.7MW	6.6MW	4.2MW	4.3MW	5.0MW	2.8MW	2.9MW	3.3MW
SR0A4128S## 2X4X1200A RPP, 8" Pipe	6.6MW	6.9MW	8.0MW	5.0MW	5.2MW	6.0MW	3.3MW	3.4MW	4.0MW
SR0A2148S## 2X2X1400A Switchboard, 8" Pipe	3.9MW	4.0MW	4.7MW	2.9MW	3.0MW	3.5MW	1.9MW	2.0MW	2.3MW
SR0A2168S## 2X2X1600A Switchboard, 8" Pipe	4.4MW	4.6MW	5.3MW	3.3MW	3.4MW	4.0MW	2.2MW	2.3MW	2.7MW

to be configure to length ability within Standard 8ft (2.4 m Segments)

RPP, Switchgear, Skidded Power Distribution Equipment Configured Separately if Requested



Vertiv™ SmartRun Cables with RPPs at end of Row

Vertiv™ SmartRun offering not limited to the skus shown

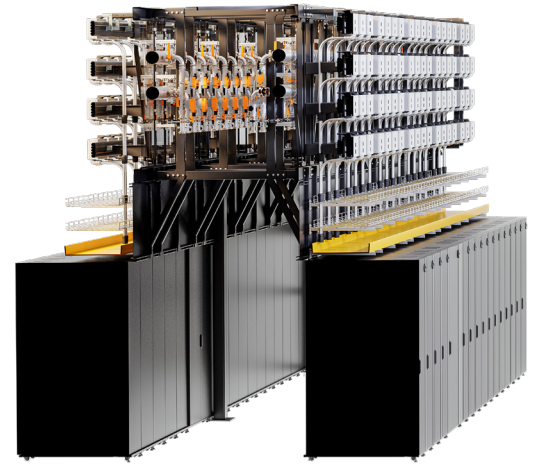
Vertiv™ SmartRun Rack Tap-Kits

Defined Per Rack Space

Vertiv™ Rack Tap Kits serve as the critical bridge between the SmartRun infrastructure and your IT load. Consisting of a Vertiv™ PowerBar Track Tap Box and a Vertiv™ Coolchip Liquid Branch, each kit is uniquely configured to the specific power and cooling demands of that individual rack space.

Ultimate Modularity

This architecture enables extreme mixed-density deployments. A single Vertiv™ SmartRun row can simultaneously support 20kW air-cooled racks and 400kW liquid-cooled GPU clusters side-by-side.



Vertiv™ SmartRun Rack Tap Kits

Rack Tap-Kit Specifications

Vertiv™ SmartRun 2Bus

Vertiv™ SmartRun 4Bus

Vertiv™ SmartRun Cables

Electrical Tap Box

Specifications

Specifications

Specifications

Amperage per Rack Space

Up to 320A

Up to 640A

Designed via ETO

Short Circuit Current Rating (SCCR)

Up to 35 kA

Peak Value (kA)

Up to 73.5 kA

Short Circuit Conditional Rating (KAIC)

Up to 100 kAIC

Rack Power Connection Location

Top of Rack or Back of Rack

Tap Boxes Per Rack Space

Up to 2

Up to 4

NA

Power Feeds Per Rack Space

Up to 4

Up to 8

Designed via ETO

Thermal Liquid Branch

Liquid Capacity per Rack Space (kW)

300kW

Rack Fluid Connection Location

Top of Rack or Back of Rack

Branch Rack Connection

Up to 2" Quick Connection

Flow Control Device

Energy valve

Note: Rack Tap Kits can be ordered factory-installed on Vertiv™ SmartRun units for plug-and-play deployment. Engineering to Order (ETO) Options Available upon request.



Vertiv™ PowerBar
Track Tap Boxes

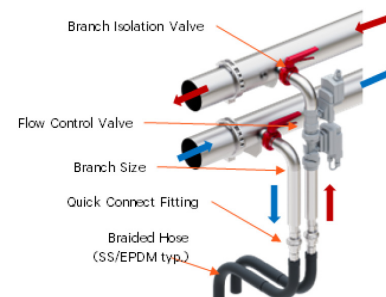
Vertiv™ PowerBar Track Tap Boxes deliver up to 200A of localized protection for high-density rack spaces. Featuring a finger-safe, hot-swappable design, they offer ultimate modularity across the PowerBar Track busbar.

For Vertiv SmartRun Power Cable applications, fault protection is centralized upstream (Switchgear/RPP), allowing for a streamlined tap design with drop cords factory-sized to your exact specifications.



Vertiv™ Panel with Breakers

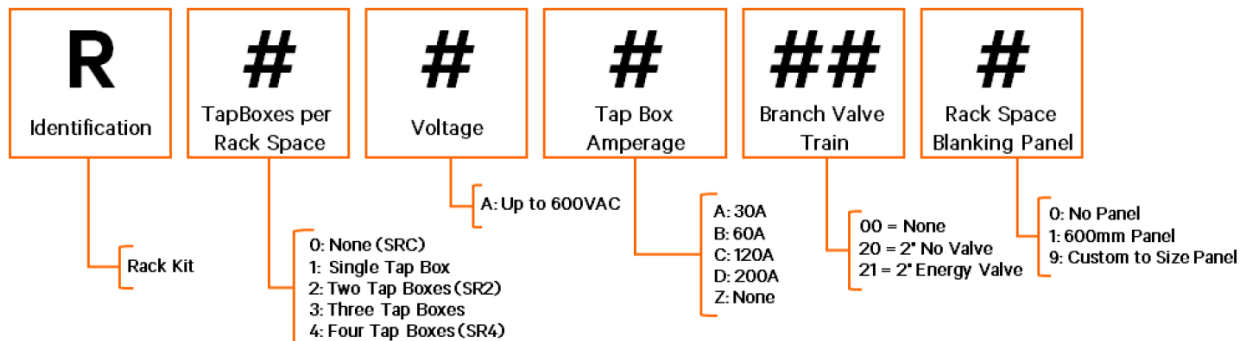
Vertiv™ Coolchip Manifold Rack Branches align with server racks at 600mm increments all equipped with rack isolation valves. Standard 2-inch branches support up to 300kW of liquid cooling. Branches can ship complete flow control, fast-acting shutoff, quick-connects and hose kits for rapid installation to Liquid Cooled server Racks.



Vertiv™ Coolchip Manifold Branch



Configure a Vertiv™ SmartRun Rack Tap-Kit



Vertiv™ SmartRun Sku Decoder

Vertiv™ SmartRun 2Bus Rack Tap Kits – Balanced Redundancy

Utilizing dual independent power feeds, Vertiv™ SmartRun 2Bus Rack kits support concurrently maintainable densities of up to **133kW** per rack space. This configuration provides the ideal balance of power and modularity for mixed-density rows.

Maximum IT Load per Rack Space		N Redundancy			2N Redundancy		
Sku	Sku Description	400 V	415 V	480 V	400 V	415 V	480 V
R2AA000	Qty. 2, 30A TapBoxes, No Liquid	33kW	34kW	40kW	17kW	17kW	20kW
R2AB210	Qty. 2, 60A TapBoxes, Liquid Branch w/Energy Valve	66kW	69kW	80kW	33kW	34kW	40kW
R2AC210	Qty. 2, 120A TapBoxes, Liquid Branch w/Energy Valve	133kW	138kW	159kW	66kW	69kW	80kW
R2AD210	Qty. 2, 200A TapBoxes, Liquid Branch w/Energy Valve	221kW	230W	266kW	111kW	115kW	133kW

Vertiv™ SmartRun 4Bus Rack Tap Kits – Extreme AI Density

Vertiv™ SmartRun 4Bus allows Rack Tap kits to aggregate four independent power feeds to deliver concurrently maintainable densities of up to **400kW** per rack space with Liquid Cooling Control Valve Branches. Designed for the most intensive AI clusters without compromising serviceability.

Maximum IT Load per Rack Space		N Redundancy			4N/3 Redundancy			2N Redundancy		
Sku	Sku Description	400 V	415 V	480 V	400 V	415 V	480 V	400 V	415 V	480 V
R4AA210	Qty. 4, 30A TapBoxes, Liquid Branch w/Energy Valve	66kW	69kW	80kW	50kW	52kW	60kW	33kW	34kW	40kW
R4AB210	Qty. 4, 60A TapBoxes, Liquid Branch w/Energy Valve	133kW	138kW	159kW	100kW	103kW	120kW	66kW	69kW	80kW
R4AC210	Qty. 4, 120A TapBoxes, Liquid Branch w/Energy Valve	266kW	276kW	319kW	199kW	207kW	239kW	133kW	138kW	159kW
R4AD210	Qty. 4, 200A TapBoxes, Liquid Branch w/Energy Valve	443kW	459kW	531kW	332kW	345kW	399kW	221kW	230kW	266kW

Vertiv™ SmartRun Cable Rack Tap Kits - Tray Cabled AI Density

For static, fixed-load applications, Vertiv™ SmartRun Power Cable Rack kits include no busway tap-off box and only a liquid cooling control valve branch allowing up to **300kW** of liquid cooling capacity per rack space. All over-current power protection to be configured with the upstream Vertiv™ RPP, Vertiv™ PDU, or Vertiv™ Switchgear Unit.

Maximum IT Load per Rack Space			
Sku	Sku Description	Rack kW	For Vertiv™ Connect Architectures, Overcurrent power protection to be configured with the RPP, Switchgear or upstream power distribution equipment.
R0AZ21	No Tap Box, Liquid Branch w/Energy Valve	300kW	

Vertiv™ SmartRun offering not limited to the skus shown

Vertiv™ SmartRun Reference Design - 4.3MW AI Pod, 50MW Datahall

1. Defining the Specification

"I have a tenant looking at a 50MW datahall of 4MW pods with a 4N/3 power topology around 32ft. They plan to deploy either 143kW or 228kW racks alongside standard 15-20kW network gear, but they haven't finalized the floorplan yet. I need a solution flexible enough to handle that density swing without knowing the exact rack sequence. Can you give me a couple of options that would work here? We need to start tracking and evaluating pricing"

Layout 1: 150kW Racks					Layout 2: 240kW Racks					Layout 3: 330kW Racks				
Rack Space	6ft	Rack Space			Rack Space	6ft	Rack Space			Rack Space	6ft	Rack Space		
1	150kw	Hot Aisle	150kw	2	1	240kw	Hot Aisle	240kw	2	1	330kw	Hot Aisle	330kw	2
3	150kw		150kw	4	3	240kw		240kw	4	3	330kw		330kw	4
5	150kw		150kw	6	5	240kw		240kw	6	5	330kw		330kw	6
7	150kw		150kw	8	7	240kw		240kw	8	7	330kw		330kw	8
9	150kw	Hot Aisle	150kw	10	9	240kw	Hot Aisle	240kw	10	9	20kw	Hot Aisle	20kw	10
11	150kw		150kw	12	11	240kw		240kw	12	11	20kw		20kw	12
13	150kw		150kw	14	13	240kw		240kw	14	13	20kw		20kw	14
15	150kw		150kw	16	15	240kw		240kw	16	15	20kw		20kw	16
17	150kw	Hot Aisle	150kw	18	17	20kw	Hot Aisle	20kw	18	17	20kw	Hot Aisle	20kw	18
19	150kw		150kw	20	19	20kw		20kw	20	19	20kw		20kw	20
21	150kw		150kw	22	21	20kw		20kw	22	21	20kw		20kw	22
23	150kw		150kw	24	23	20kw		20kw	24	23	20kw		20kw	24
25	150kw	Hot Aisle	150kw	26	25	20kw	Hot Aisle	20kw	26	25	20kw	Hot Aisle	20kw	26
27	20kw		20kw	28	27	20kw		20kw	28	27	20kw		20kw	28
29	20kw		20kw	30	29	20kw		20kw	30	29	20kw		20kw	30
31	20kw		20kw	32	31	20kw		20kw	32	31	20kw		20kw	32
Row 1 Total Row 2					Row 1 Total Row 2					Row 1 Total Row 2				
IT Load 2010kw 4020kw 2010kw					IT Load 2080kw 4160kw 2080kw					IT Load 1560kw 3120kw 1560kw				
Liquid kW 1658kw 3315kw 1658kw					Liquid kW 1632kw 3264kw 1632kw					Liquid kW 1122kw 2244kw 1122kw				
Air kW 353kw 705kw 353kw					Air kW 448kw 896kw 448kw					Air kW 438kw 876kw 438kw				

Vertiv™ SmartRun Architecture	
Critical IT Load	4.3MW
600mm Racks Spaces	32
Redundancy	4N/3
Total Amperage	8000A
Liquid Cooling Capacity	6MW

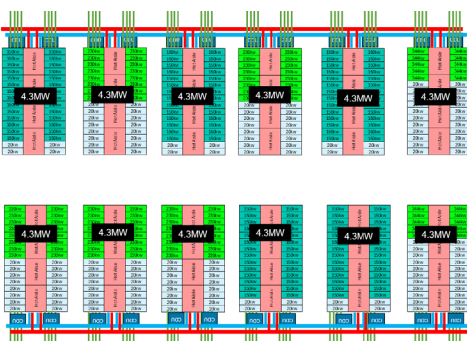
2. Align to Vertiv™ SmartRun

Vertiv™ SmartRun #1	Description	SR
SmartRun Type	4N/3	4
Voltage	VAC	A
Qty of Busway or RPPs per Row	4	4
Amperage of Busways or RPP	1000A	10
Pipe Size	8" Stainless	8S
Length	32 ft	32

3. Assigning Rack Tap Kits

Layout 1: Rack Kits			Layout 2: Rack Kits			Layout 3: Rack Kits		
Rack kW	Rack Kit	Qty	Rack kW	Rack Kit	Qty	Rack kW	Rack Kit	Qty
Up to 52kW	R4AA000	0	Up to 52kW	R4AA000	16	Up to 52kW	R4AA000	24
Up to 103kW	R4AB210	0	Up to 103kW	R4AB210	0	Up to 103kW	R4AB210	0
Up to 207kW	R4AC210	26	Up to 207kW	R4AC210	0	Up to 207kW	R4AC210	0
Up to 345kW	R4AD210	6	Up to 345kW	R4AD210	16	Up to 345kW	R4AD210	8

4. Configure a Datahall Bill of Material



Example 50MW datahall of IT load consisting of Qty. 12 4.3MW Vertiv™ SmartRuns with various configurations

Vertiv™ SmartRun	SKU	Qty
Layout 1: 150kW Racks		
Up to 52kW Rack Kit	R4AA000	0
Up to 103kW Rack Kit	R4AB210	0
Up to 207kW Rack Kit	R4AC210	26
Up to 345kW Rack Kit	R4AD210	6
Layout 2: 240kW Racks		
Up to 52kW Rack Kit	R4AA000	16
Up to 103kW Rack Kit	R4AB210	0
Up to 207kW Rack Kit	R4AC210	0
Up to 345kW Rack Kit	R4AD210	16
Layout 3: 330kW Racks		
Up to 52kW Rack Kit	R4AA000	24
Up to 103kW Rack Kit	R4AB210	0
Up to 207kW Rack Kit	R4AC210	0
Up to 345kW Rack Kit	R4AD210	8



Vertiv™ SmartRun 4Bus



Vertiv™ SmartRun 4Bus

Vertiv™ SmartRun DSX

— AI Factory Whitespace Solution

Vertiv SmartRun DSX becomes the **highest-payload manufactured whitespace system on the market**, engineered to accommodate the increased infrastructure demands of AI factories—including greater network density, higher power distribution requirements, larger liquid-cooling systems and significantly higher structural payloads. The DSX configuration is designed around the requirements of **the most AI-intensive next-generation compute platforms**, providing the infrastructure capacity and flexibility needed to support high-density AI rack deployments while allowing for future increases in power, cooling and networking.

Up to 85%

Faster time-to-token generation onsite

#1

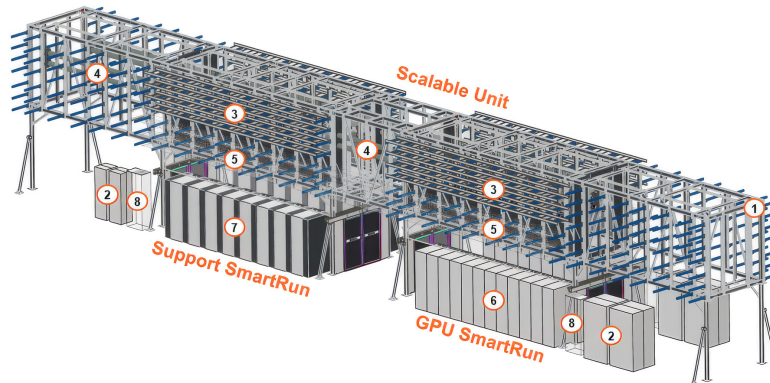
Highest Payload Overhead System

1

Owner - Designer, Vendor, Service Team

Vertiv™ SmartRun

1. Steel construction
 2. RPP
 3. Power Cable trays
 4. SFN
 5. Optical and Copper cable tray
- Other**
6. Compute racks
 7. Support racks
 8. BMS rack



The Challenge

- **Ultra-long HAC structures:** AI deployments can require significantly longer hot aisle containment structures, creating increased demands on structural continuity, utility routing and system integration.
- **Increased structural payload:** Higher-density networking and infrastructure cabling adds substantial weight to the overhead system, increasing the required structural capacity and mounting provisions.
- **Multiple electrical architectures:** AI facilities may require two distinct electrical voltage systems to support compute and network/storage infrastructure within the same deployment.
- **Compute and network/storage separation:** High-compute GPU racks and network/storage racks have different infrastructure requirements and must be supported within a coordinated overhead architecture.
- **~5 MW of compute density:** The scale of compute drives substantially higher requirements for both electrical distribution and liquid-cooling capacity.

The Solution

- **Integrated GPU + Partner SmartRun architecture:** GPU SmartRun and Partner SmartRun can be paralleled and bridged into a continuous structure, sharing a common liquid-cooling loop. This enables **ultra-long HAC deployments** while supporting **two distinct electrical voltage systems** within one coordinated architecture.
- **Ultra Frame for extreme infrastructure payloads:** The Ultra Frame provides increased structural capacity and additional mounting space for power, networking and thermal infrastructure, enabling the system to support approximately **5 MW of compute power and associated liquid-cooling capacity**.
- **Designed around AI infrastructure density:** The architecture separates high-compute GPU racks from network/storage racks while providing the infrastructure capacity, routing flexibility and structural support required to accommodate the rapidly increasing payload of next-generation AI deployments.

Solution Summary

Compute SmartRun - SRCA0008S30

SmartRun Cables with 8" Pipe and 30 ft Long from Door-to-Door. Equipped with 7 tiers of Power and Network Cable Tray to Support 4.5 MW of IT Compute via 480 V

Rack Kit - ROAZ210 (Qty 24)

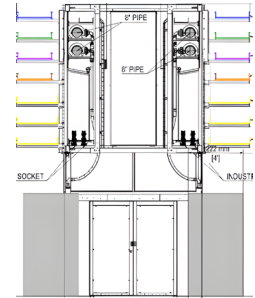
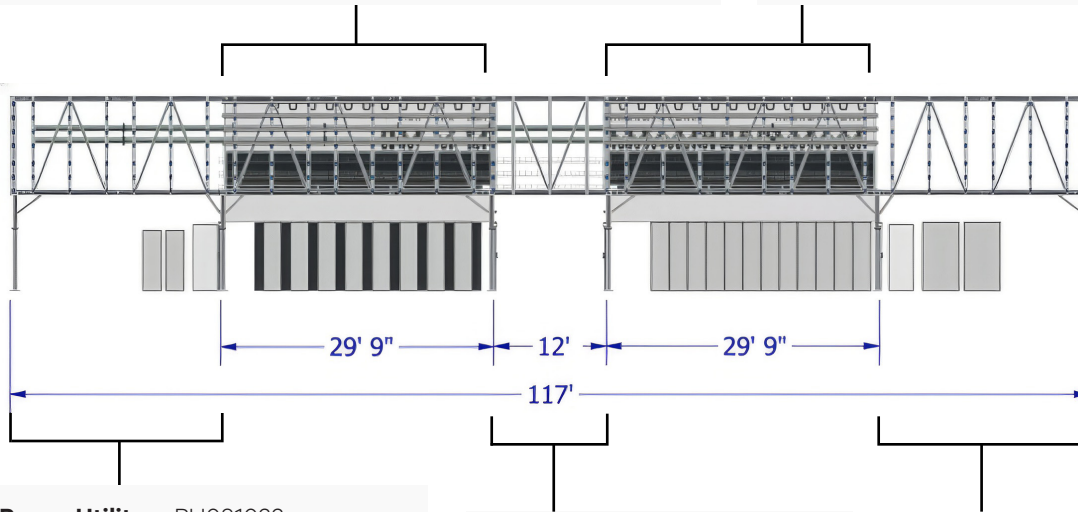
Supports High Density Liquid Cooling Racks with Energy Valve Trains, Fast Acting Shutoff Valves and Rack Hose Kits

Partner SmartRun - SRCA0008S30

SmartRun Cables with 8" Pipe and 30 ft Long from Door-to-Door. Equipped with 7 tiers of Power and Network Cable Tray to Support 500 kW of IT Compute via 415 V

Rack Kit - ROAZ210 (Qty 10)

Supports High Density Liquid Cooling Racks with Energy Valve Trains, Fast Acting Shutoff Valves and Rack Hose Kits



Power Utility - PU081022

End of Row Unit Containing Qty 8, 1000 A RPP Units to Support 4N/3 Power Distribution to Support Racks with 100 A Breakers

Bridge Utility - BU000012

Connects Partner/Support SmartRun Pipe Header and Tray

Power Utility - PU080222

End of Row Unit Containing Qty 8 250 Amp RPP Units to Support 4N/3 Power Distribution to Support Racks with 30 A Breakers

KEY SPECIFICATIONS

Specification	Compute SmartRun	Partner SmartRun
Type	SmartRun Cables	SmartRun Cables
Length	52 ft	52 ft
Pod Capacity	4.2 MW	0.5 MW
Power	8x1000 A Power Stations	8x250 A RPPs
Voltage	480 VAC	415 VAC
Pipe Header	Shared 8" DN200 Pipe Header	
Total Rack Positions	28	28
Liquid Available Rack Positions	Up to 24	Up to 10
Rack Density	Up to 300 kW	Up to 40 kW

