



Brochure

# Vertiv™ PowerBar Track

A key component of scalable power distribution within the Vertiv™ 360AI portfolio.



## Introduction

Vertiv™ PowerBar Track systems deliver a dynamic power distribution solution tailored for AI-driven and high-performance computing environments. As AI workloads become increasingly complex, data centers require power distribution systems that can adapt to shifting power demands. The Vertiv PowerBar Track systems offer exactly that — scalable, reliable power distribution in a flexible architecture that optimizes space and energy efficiency.

Applications: Data Centres- White Space (Colo and hyperscale)

### Benefits

- Innovative high amp open track busway
- High power capacity for demanding workloads
- Scalable and flexible power distribution for future growth
- Compact, space-saving design without compromising performance
- Energy efficiency that reduces operational costs
- Reliable performance that supports business continuity
- Modular design allows tap-off units to be added anywhere along the busway
- Can be integrated with Vertiv™ PowerBoard Switchgear and Switchboard and other Vertiv™ products
- A key component of scalable power distribution within the Vertiv™ 360AI portfolio

### Features and certifications

- UL857 listed
- High density, high conductivity copper and up to 55% conductivity aluminium conductors available
- Live plug-n-play with the add-on capability of IP2X certified tap-off boxes
- Available from 250A to 2000A
- Metering option using RJ45 Ethernet plug-in connections available
- Tap-off options up to 250Amp
- Tap-off boxes have mechanical and electrical interlocks utilizing an “earth-first, break-last” safety feature
- Pending Patents:
  - High Amperage Open track busway
  - Multi stack joint pack
  - Double joint block



*Vertiv™ PowerBar Track Double stack*



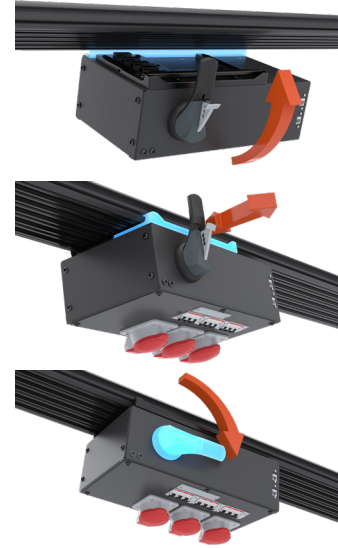
	Copper			Aluminum		
<b>Rated current (A)</b>	250	400	600	400	800	1000
Rated operational voltage (V)	600	600	600	600	600	600
Rated insulation voltage (V)	1000	1000	1000	1000	1000	1000
<b>Short circuit</b>						
Short Circuit Current Rating (RMS sym. 3 cycle) @ 600Vac	22	22	22	22	35	50
Protected Short Circuit Current Rating (RMS sym. 3 cycle) @ 480Vac	50	100	65	100	65	--
<b>Environmental</b>						
Operating ambient temperature	32° to 104°F	32° to 104°F	32° to 104°F	32° to 104°F	32° to 104°F	32° to 104°F
Protection rating	IP2X, CE	IP2X, CE	IP2X, CE	IP2X, CE	IP2X, CE	IP2X, CE
Environmental standards	RoHS, REACH	RoHS, REACH	RoHS, REACH	RoHS, REACH	RoHS, REACH	RoHS, REACH
<b>Phase conductor</b>						
Cross Sectional Area (in <sup>2</sup> )	0.189	0.326	0.395	0.344	1.249	1.745
<b>Neutral conductor</b>						
Cross Sectional Area (in <sup>2</sup> )	0.189	0.326	0.395	0.344	1.249	1.745
<b>Isolated ground conductor</b>						
100% Earth Cross Sectional Area (in <sup>2</sup> )	0.189	0.326	0.395	0.344	1.249	1.745
<b>Housing ground path</b>						
Cross Sectional Area - 4Bar (in <sup>2</sup> )	2.73	2.73	3.444	1.572	1.885	2.048
Cross Sectional Area - 5Bar (in <sup>2</sup> )	3.139	3.139	3.942	1.785	2.097	2.262
<b>Overall dimensions</b>						
Height x Width of 4 Bar System (in)	6.89 x 1.73	6.89 x 1.73	7.09 x 2.05	6.81 x 1.97	7.874 x 3.189	7.874 x 4.094
Height x Width of 5 Bar System (in)	8.27 x 1.73	8.27 x 1.73	8.46 x 2.05	8.07 x 1.97	9.13 x 3.19	9.13 x 4.09
<b>Weight</b>						
Weight of 4 Bar System (lb/ft)	4.3	6.4	8.8	5.38	11.43	15.26
Weight of 5 Bar System (lb/ft)	5.3	8	10.9	6.72	14.11	18.62
<b>Resistance</b>						
Resistance (mΩ/ft) at 68°F (20°C)	0.0509	0.0293	0.029	0.0561	0.0137	0.0121
<b>Reactance</b>						
Reactance (mΩ/ft) at 60 Hz	0.0418	0.0323	0.0347	0.0433	0.0207	0.0186
<b>Impedance</b>						
Impedance (mΩ/ft) @ 68°F (20°C) at 60 Hz	0.0655	0.0433	0.0451	0.0707	0.025	0.0222
<b>Voltage drop at full load 60Hz</b>						
Power Factor = 0.7 (V/m)	0.0308	0.0341	0.0439	0.0558	0.0375	0.0408
Power Factor = 0.8 (V/m)	0.0314	0.0341	0.0436	0.0573	0.0369	0.0397
Power Factor = 0.9 (V/m)	0.0311	0.0332	0.0421	0.0573	0.0344	0.0369
Power Factor = 1.0 (V/m)	0.0256	0.0259	0.032	0.0494	0.0244	0.0253

\*Additional information to be added for:  
 1000A and 1200A- Copper  
 1600A and 2000A- Aluminum

## Tap-off boxes

All tap-off boxes have an ‘earth-first, break-last’ safety feature and can be safely installed anywhere along the length using Vertiv™ PowerBar Tracks SafeWork Technology.

1. The boxes interlock onto the busway with a ground strip. This secures that the ground is the first point of contact with the busway system during installation.
2. The mechanical interlock secures the unit to the bar using high tensile strength lockable hardware which cannot be fitted incorrectly.
3. Once fitted to the bar, the engager handle can be turned. This lifts the contacts into the busway and has a positive lock once fully rotated.



*Vertiv™ PowerBar Track tap-off boxes- single stack*

### Tap-off benefits

- Change power requirements easily.
- Plug and play to rack/rack PDU.
- No interruption to existing critical loads.
- No electrician required for installation.
- Amps and receptacles sized to meet server needs.
- Relocate and reuse tap-off boxes anywhere along the busway to maximize investment.
- Straight lengths can be supplied at any length up to 13ft.

### Lengths and joints

- The Vertiv™ PowerBar Track joint pack securely locks two distribution lengths together with a traditional busway bolted joint. No special tooling is required and joints may be disassembled and reassembled easily.
- Vertiv™ PowerBar Track uses custom designed thermally and electrically secure joint packs.
- Vertiv can provide standard cable end boxes with options for cable entry from various points.
- Distribution lengths are designed as an open track system; tap off units can be plugged in anywhere along the length of the busway. The opening is finger safe meeting a rating of IP2X.



*Vertiv™ PowerBar Track tap-off boxes- double stack*



*Vertiv™ PowerBar Track joint pack- double stack*



## Service

As infrastructures scale and growth plans change, Vertiv™ Services has capacity to adjust and maintain pace to reduce costs and downtime. Vertiv comprehensive Services allow these critical infrastructure elements to be maintained according to industry standards and perform at their optimum level.

Vertiv's field service technicians are equipped with proprietary service documentation that provides access to the latest method of procedures. Backed by OEM technical support, engineering and product and firmware enhancements, Vertiv service can effectively manage risks, potential events can be avoided and rapid solutions can be deployed.

Vertiv™ PowerBar Track services are performed by factory trained and authorized technicians, following a step-by-step startup procedure to bring the busway system up to normal operation. Technician **Standby Support Services** allows for seamless commissioning and integrated system test (IST). A Vertiv startup or standby services validates the optional service warranty.

To provide the continued, optimum operation for the busway, Vertiv Services offers flexible **Preventive Maintenance** programs. **Warranty programs** and **Renewable Service Contracts** combine with continuous, proactive maintenance, to increase uptime confidence, minimize total cost of ownership, while increasing reliability.

Vertiv Service programs are as flexible as the Vertiv PowerBar Track Busway they support, from startup to decommission.

### Vertiv Service- Vertiv PowerBar Track Busway Startup and Tests

Level	Service	Description
L1	Site Arrival Inspection	Equipment inspection and configuration verification
L2	Visual and Mechanical Inspection	Mechanical and electrical inspections and checks
L3	System Acceptance Test and Startup	System phasing, power, voltages, current tolerances and continuity
L4	Standby Commissioning Support	Commissioning service support availability
L5	Standby Integrated System Test	Integrated System Test service support availability
L6	System Training	Contractor/Customer installation training

Vertiv Service optional warranties supplement and extend the factory warranties to provide complete coverage of the Vertiv PowerBar Track Busway system. After the warranty period, renewable contracts are available to increase the uptime of the Busway. Contact a Vertiv Service Sales representative for more information.

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## Scale smarter, power further

Vertiv™ PowerBar Track is a key component of scalable power distribution for high-density deployments. It integrates seamlessly with Vertiv™ racks, power, cooling, and control systems to deliver safe, efficient, and flexible power, enabling high-density AI workloads with reliability and adaptability.

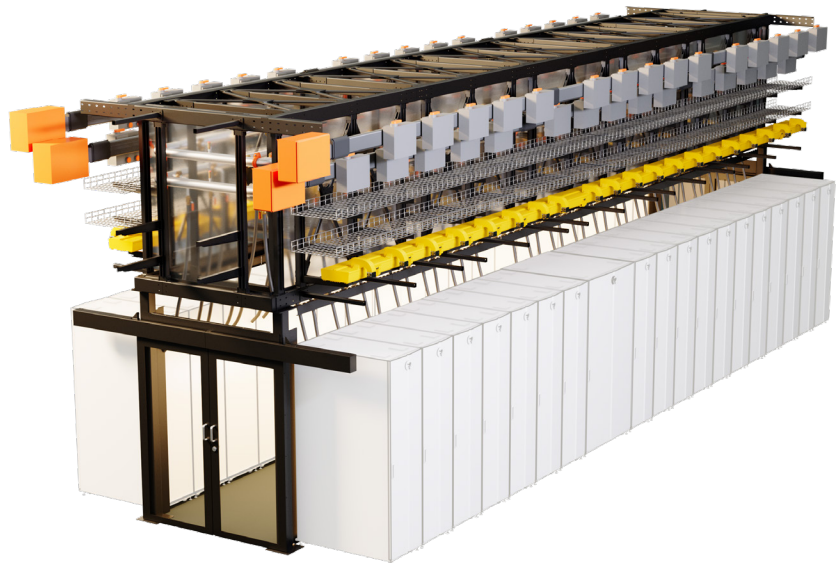
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### Unified intelligence

The [Vertiv™ Unify](#) software solution simplifies data center operations by consolidating power, thermal, and building management systems into a single unified interface, reducing complexity and risk while enhancing visibility and control across the entire critical infrastructure chain. It offers seamless integration with Vertiv™ PowerBar Track to provide advanced metering which lets the user monitor, integrate display and real-time power data within the data center and allows users to measure the total load of the busway and tap-off boxes.

### Modular prefabricated infrastructure system

[Vertiv™ SmartRun](#) is a prefabricated overhead IT infrastructure system designed for end-to-end speed and simplicity. It integrates high-density power distribution, liquid cooling, networking and containment infrastructure in an all-in-one deliverable platform.



Vertiv™ SmartRun

## Rack-level flexibility

### Vertiv™ Racks

Vertiv PowerBar Track delivers overhead modular power exactly where racks are deployed. Combined with [Vertiv™ Racks](#) optimized for airflow, density, and accessibility, this allows for fast reconfiguration, simplified expansion, and continued growth.



## High-density cooling synergy

### Vertiv™ CoolChip CDU

Vertiv™ PowerBar Track scales power as rack densities grow, while [Vertiv CoolChip CDU](#) enables higher compute performance for AI and HPC environments, delivering efficient and reliable cooling capacity for effective heat removal at the chip.

### Rear door heat exchangers

Pairing Vertiv PowerBar Track and rear door heat exchangers delivers reliable power and cooling, with the rear door enabling a room-neutral cooling solution that supports high density environments without requiring entire data hall redesigns.

## End-to-end power path

### Vertiv™ PowerBoard Switchgear

[Vertiv™ PowerBoard Switchgear](#) provides centralized protection, isolation, and control of incoming power. Vertiv™ PowerBar Track distributes power overhead with modular flexibility, creating a safe, scalable, and space-efficient architecture from source to rack.

### Vertiv™ Trinergy™ UPS

[Vertiv™ Trinergy™](#) provides high-efficiency, resilient power protection, while Vertiv PowerBar Track delivers that conditioned power dynamically across the data hall, enabling expansion without infrastructure rework. modular way that can adapt as IT loads change. Together, they support high availability, efficient energy use, and easy expansion without reworking the downstream power infrastructure.

## Unified power distribution for scalable AI infrastructure

Together, Vertiv's power, cooling, monitoring, and infrastructure solutions create a fully integrated ecosystem that supports:



Higher rack densities



Faster deployment



Improved energy efficiency



Seamless scalability

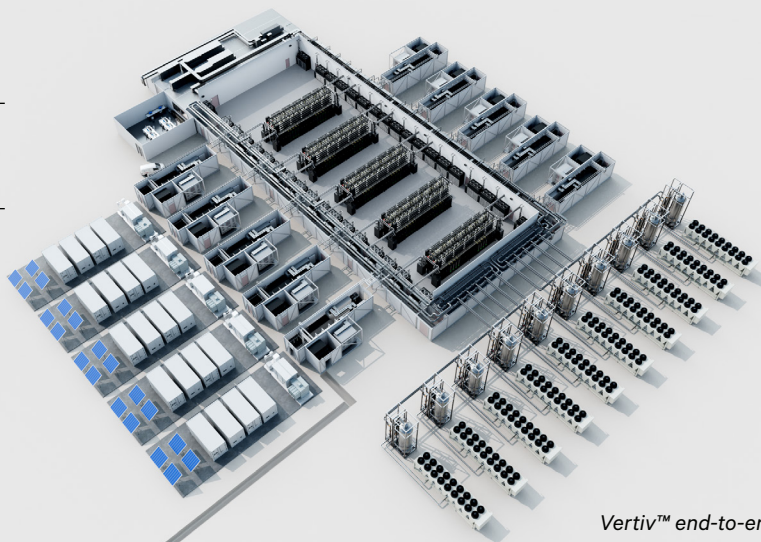


Mission-critical reliability

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Access complete power.

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