

# Vertiv™ UPS Solutions for Desktop AI Supercomputers



## Desktop Power for Desktop AI



NVIDIA DGX Spark

As the first mini DGX system, NVIDIA DGX Spark brought AI supercomputing to the desktop, creating an entire new category of

AI workstations based on the NVIDIA GB10 Superchip. Currently Dell, ASUS, HP, Lenovo, and Gigabyte are all shipping GB10 mini systems, with more on the way.



Dell ProMax with GB10



ASUS GX10



HP ZGX Nano G1n



Lenovo Thinkstation PGX



GIGABYTE TOP ATOM

## What are the power needs of my Desktop AI Supercomputer?

Vertiv's GB10 system testing is based on the NVIDIA DGX Spark, however the power requirements of all GB10 powered Desktop AI systems are typically the same. Real world usage shows a typical power draw under 30W at idle, just under 140W under typical load and 170W under heavy load. When using a display, it is safe to assume an additional 40-50W, depending on the size and type of screen used.

For purposes of UPS capacity sizing, we are going to use 300W per workstation as our baseline. This accounts for the total system power while providing enough headroom for inrush during the bootup process. For runtime estimation we are assuming a 200W load, which is typical for a workstation and single display under normal use. Multiple displays or USB-C powered accessories may impact runtimes.

### Which Desktop UPS should I choose?

Vertiv™ GB10 based desktop systems are fully compatible with Vertiv's complete range of Desktop UPS products. Given the critical nature of processing data in AI applications, Vertiv recommends using a Line Interactive UPS. Line Interactive models with Step Approximated Sinewaves would be considered a good desktop solution, while a Line Interactive Pure Sinewave UPS would be the better desktop solution. Customers looking for a higher degree of power protection or extended runtimes may opt for a Network and Server grade UPS as the best solution. These units offer enterprise class features such as remote monitoring and management in addition to high performance power protection.

#### Good



#### Vertiv™ PowerUPS 200 Standard Series

- 850-1500VA
- Line Interactive Topology
- Step Approximated Sinewave Output
- Color LCD display
- 8-10 Outlets

#### Better



#### Vertiv™ PowerUPS 200 Premium Series 1500VA

- Line Interactive Topology
- Pure Sinewave output
- Color rotatable LCD display
- 10 outlets

#### Best



#### Vertiv™ Libert® PS15 Minitower 750-1500VA

- Line Interactive Topology
- Network and Server grade UPS
- Pure Sinewave output
- VRLA or Lithium Batteries
- Advanced LCD display
- Optional RDU-120 network card.
- 6-8 total outlets including 2-3 controllable outlets



## Vertiv™ UPS Solutions for Desktop AI Supercomputers

	Capacity	Estimated Runtime for one Desktop AI System & Display	Outlets	Dimensions	Topology	Battery	Warranty
<b>Good:</b> Vertiv™ PowerUPS 200 Standard							
PSA6-850LVT	850VA / 530W	12 Mins	(6) 5-15R Battery Backed (2) 5-15R Surge Only	4.72 x 11.42 x 11.34 in (120 x 288 x 290)mm	Line-Interactive	VRLA	2 years
PSA6-1000LVT	1000VA / 625W	14 Mins	(6) 5-15R Battery Backed (2) 5-15R Surge Only	4.72 x 11.42 x 11.34 in (120 x 288 x 290)mm	Line-Interactive	VRLA	2 years
PSA6-1350LVT	1350VA / 850W	31 Mins	(7) 5-15R Battery Backed, (3) 5-15R Surge Only	4.72 x 16.93 x 11.42 in (120 x 430 x 290) mm	Line-Interactive	VRLA	2 years
PSA6-1500LVT	1440VA 935W	36 Mins	(7) 5-15R Battery Backed, (3) 5-15R Surge Only	4.72 x 16.93 x 11.42 in (120 x 430 x 290) mm	Line-Interactive	VRLA	2 years
<b>Better:</b> Vertiv™ PowerUPS 200 Premium							
PSA6S-1500LVT	1440VA / 915W	38 Mins	(3) NEMA 5-15R(2) NEMA 5-15R (Programmable)	5.7 x 14.8 x 8.7 in (145 x 376 x 220) mm	Line-Interactive	VRLA	2 years
<b>Best:</b> Vertiv™ Liebert® PSI5 Mini Tower							
PSI5-750MT120	750 VA / 675W	33 Mins	(3) NEMA 5-15R (2) NEMA 5-15R (Programmable)	5.7 x 14.8 x 8.7 in (145 x 376 x 220) mm	Line-Interactive	VRLA	2 years
PSI5-1100MT120	1100 VA / 990W	46 Mins	(3) NEMA 5-15R (2) NEMA 5-15R (Programmable)	5.7 x 14.8 x 8.7 in (145 x 376 x 220) mm	Line-Interactive	VRLA	2 years
PSI5-1500MT120	1440 VA / 1350W	80 Mins	(3) NEMA 5-15R (3) NEMA 5-15R (Programmable)	5.7 x 19.1 x 8.7 in (145 x 484 x 220) mm	Line-Interactive	VRLA	2 years
PSI5-1500MT120LI	1500VA / 1350W	81 Mins	(3) NEMA 5-15R (3) NEMA 5-15R (Programmable)	6.3 x 15.6 x 8.7 in (158 x 397 x 220) mm	Line-Interactive	Lithium	3 years

**Runtime data and compatibility testing is based on the DGX Spark, however all Vertiv™ GB10 based desktops have similar power requirements.**

Vertiv™ GB10 Desktop systems are also used in clustered environments. When estimating runtime for these applications assume 200W for each workstation.

If other hardware also needs to be backed up, you will need to include that load as well. Once you determine the total load, runtime information can be found on the UPS product pages at Vertiv.com

Contact [Vertiv Support](#) for additional sizing assistance.



*\*Estimated runtime assumes a DGX Spark with one display drawing 200W. Depending on your application your actual runtime may vary. DGX Sparks running headless or sitting idle will see longer runtimes than indicated. Systems with additional USB-C accessories may see less.*

For complete details on the [Vertiv™ PowerUPS 200](#), [Vertiv™ Liebert® PSI5](#), and [Vertiv™ Liebert® PSI5 Lithium-Ion](#) families of UPS products, please refer to their respective family pages on Vertiv.com

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