

Vertiv™ Edge Lithium Ion Frequently Asked Questions

Is the warranty on the Vertiv™ Edge Lithium Ion longer than UPSs with lead acid (VRLA) batteries?

The purchase of a Vertiv™ Edge Lithium Ion UPS includes a 5-year warranty.

Are lithium-ion batteries safe?

Lithium-ion batteries in a stationary UPS application are safe and reliable. They use sophisticated battery management systems (BMS) to manage battery charging and to prevent batteries from overheating.

What are the advantages of lithium-ion batteries?

The key benefit of lithium-ion in a UPS application is that it will last up to 3 times as long as a VRLA (Valve Regulated Lead Acid) battery pack. This reduces the cost of ownership and makes UPS installations much easier to manage remotely. The lithium-ion batteries are also much more resilient to elevated temperatures and allow for more power in smaller spaces. Lithium-ion batteries are also much lighter than VRLA batteries making them easier to install.

What is the average useful life of the battery used in the Vertiv™ Edge Lithium Ion?

The lithium-ion battery pack is designed to last 8-10 years, while VRLA batteries last about 3-5 years. The lithium-ion batteries typically last about 10 years up to 25°C.

With lithium-ion carrying more power in less space, will a smaller UPS still provide the same level of protection?

Yes, the smaller physical size of the Vertiv™ Edge Lithium Ion compared to a VRLA UPS was achieved without compromising on protection or quality. The space savings was entirely due to the battery being smaller.

How can I understand if the Vertiv™ Edge Lithium Ion will provide enough runtime at my specific IT design load?

Vertiv has a [battery runtime calculator](#) available on our website to help estimate battery runtimes. These runtimes are estimates only and actual runtimes will vary up or down depending on environmental conditions.

Is there a downside to a UPS with lithium-ion batteries compared to traditional VRLA batteries?

The only downside is that many lithium-ion UPS options are more expensive than VRLA options. However, VRLA UPSs will require battery replacements every 3-5 years so Vertiv™ Edge Lithium Ion UPS in many cases has a much lower total cost of ownership.

How do you calculate total cost of ownership (TCO)?

The easiest way is to use Vertiv's [Lithium-Ion TCO Calculator](#) on our website. In short, you compare the purchase price of a lithium-ion UPS to the price of a VRLA UPS, plus the parts and labor cost to replace the VRLA battery pack 2-3 times. The number of battery replacements required will vary based on ambient temperature, IT load, and the average number of charge/discharge cycles on the battery.

Can this product be transported safely?

Yes, the Vertiv Edge Lithium Ion UPS meets UN 38.3 and UN3480 to safely ship the UPS and lithium-ion batteries by air, land, and sea. Per UN3480, when shipping by air the battery state of charge (SOC) must be ≤30%.

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Are the UPS product and batteries tested for safety compliance?

The UPS has been tested for safety compliance it has the CB report, CE mark and other agency compliance requirements. For the lithium-ion batteries, they have also been CB tested according to IEC 62619 and other relevant normative.

What chemistry of lithium-ion battery is in the Vertiv™ Edge Lithium Ion UPS, and why was it selected?

The lithium-ion battery pack is made of LiFePO₄ as it provides excellent safety and can last up to 10 years or more in ideal operating conditions.

Are lithium-ion battery packs hot-swappable?

Yes, these internal battery packs are hot-swappable and user-replaceable.

Is the Vertiv Edge Lithium Ion available with external battery cabinets for longer runtime?

Scalable runtime is not supported by the Vertiv Edge Lithium Ion UPS at this time.

Is the operating temperature range of Lithium-ion batteries different than VRLA?

Vertiv™ Edge Lithium Ion can operate without power derating between 0 - 40°C like the VRLA UPS. However, from about 25 - 40°C VRLA batteries are susceptible to reduced lifespan making lithium-ion batteries more suitable for elevated temperatures.

Is it possible to use VRLA batteries in the Vertiv Edge Lithium Ion?

Each battery technology requires a different settings in the charger, voltages and internal UPS operation. It is not possible to use VRLA battery kits in a Vertiv Edge Lithium Ion UPS, so that operation must be avoided.

Is the battery recharge time the same with lithium-ion batteries?

Lithium-ion batteries features a faster recharge time than VRLA batteries. In the case of Vertiv Edge Lithium Ion UPS, it can achieve recharge of the internal batteries at 90% of capacity in around 2 hours.

