

While valve regulated lead-acid (VRLA) batteries have long been the industry choice for uninterruptible power systems (UPS), lithium-ion batteries offer additional benefits while still meeting required backup runtime.

Lithium-ion batteries are poised to become the preferred choice for UPSs in IT applications. The batteries last longer and recharge faster, saving time, saving money and reducing risk throughout the lifecycle of the UPS. The benefits of this lightweight solution well justify the upfront investment.

Not all batteries are created equal

There are many different types of lithium-ion battery chemistries available in the market. Eaton utilizes a combination of Lithium Iron Phosphate (LFP) chemistry that creates a stable and safe battery for UPS applications. This type of chemistry does not create oxygen as an off-put should there be a thermal event, eliminating the harsh igniting potential of some lithium-ion battery chemistries.

Safety benefits

- Lithium phosphate battery chemistry is stable and safe
- Battery management system (BMS) actively monitors temperature and charge cycles
- Common vendor for battery and BMS improves integration and safety

Installation benefits

- Save money on battery replacement costs
- 40% weight reduction eases installation
- Shift your refresh cycle to be in line with your IT equipment

Performance benefits

- 2–3X longer life allows you to set it and forget it
- Up to 3X faster charge improves recovery
- BMS provides up-todate insight into battery performance



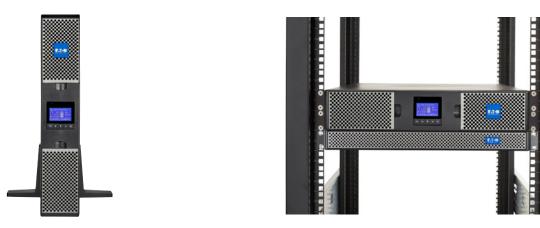
By the numbers: 5P lithium-ion UPS

Characteristic	VRLA battery	Lithium-ion battery	Lithium-ion benefit
Average battery life span	3–5 years	8 years	2x longer life
Recharge time (from 0% to 90% runtime capacity	24 hours	6–8 hours	3x faster recovery
Battery weight	19 lbs.	11 lbs.	40% lighter weight
Battery replacement cost	\$520	\$0	\$0 OpEx expenditure
Warranty	3 years	5 years	1.7X warranty coverage

^{*}One replacement



5P lithium-ion UPS rackmount UPS available in 1500 VA and 1550 VA



9PX lithium-ion UPS tower available in 1-3 kVA

9PX 2U UPS with 1U EBM in 4-post rack

By the numbers: 9PX lithium-ion UPS

Characteristic	VRLA battery	Lithium-ion battery	Lithium-ion benefit
Average battery life span	3–5 years	8-10 years	2–3x longer life
Weight	43–86 lbs.	34.8–52.7 lbs.	20% lighter UPS, 40% lighter EBM
EBM footprint	2U	1U	Increased U space for critical equipment
Warranty	2 years	5 years	2.5x warranty coverage
Battery replacement cost	\$650*	\$0	Reduced TCO

^{*}Battery and labor cost for one replacement

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PredictPulse adds predictive analytics, shifting power monitoring from a reactive to a proactive model

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- Power cap servers to keep critical loads running longer by limiting server power consumption.

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