

Use case  
Data center



## Eaton keeps your data center online for the long term



As computing power demands increase, the need for “always on,” reliable storage is critical. The challenge for any data center isn’t just to create the server to store the data, it’s also to keep the server running at all times to avoid any data loss or emergencies for customers, even during a power outage. In doing so, data center operators have elected to require local power generation to ensure long term non-grid power supply.

With local generator or fuel cell power generation tied into the power distribution scheme, the backup time required of the UPS energy storage reduces from hours or minutes to seconds. This time measured in seconds is to bridge the gap from when utility power drops to when the long term, local power generation is ready to handle the load requirements.

UPS backup power solutions have traditionally meant low cost, high-maintenance batteries, or a less efficient mechanical flywheel with spontaneous, unplanned maintenance events. Recent

developments in various battery chemistries offer higher energy dense products, but still have periodic maintenance and face restrictions on the environments in which they can be installed. The higher energy density may not be advantageous for the short backup times that are more frequently being requested.

Flywheels market similar features as supercapacitors including low annual maintenance and high-power density. But, reports have been made about the immense costs of unplanned events requiring lengthy repairs.

Eaton’s XLM supercapacitors offer a backup power solution that is highly reliable, lightweight, and virtually maintenance-free. With a low total cost of ownership and greater scalability, data center operators get a greater return on their assets.

The XLM module features high power electrochemical double layer capacitor (EDLC) cells paired in series along with

proprietary materials to match front terminal batteries that OEM and service technicians are familiar with.

Eaton’s supercapacitors run on lifetimes up to 20 years. With wide operating temperatures from -40 °C to +85 °C, data center owners and operators reduce their cooling costs by raising their average ambient temperature. Not only does this reduce cooling energy costs but also the potential to reduce overall upfront HVAC equipment costs.

The XLM supercapacitor module helps keep data centers in operation without the loss of data or damage to equipment caused by power quality problems. Integrated with a UPS, the XLM reduces the total cost of ownership, from floor space and weight factors to reduction in operations and maintenance costs. The XLM is an optimal energy storage product for individuals desiring compact, low-maintenance bridge power.

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