

APPLICATION GUIDE

Digital Electricity™ Application Note **Industrial Internet of Things (IIoT)**

The Scenario

Industry 4.0 is a driving force behind the Digital Transformation of the modern industrial world. Never have we seen such a revolution to develop an ecosystem to collect, monitor, and analyze data from industrial operations. Analysis of such data helps to increase efficiencies, reduce costs, and improve safety and security.

The Challenge

Ethernet IP protocols are driving fiber deeper in the network towards the edge, and there is a clear migration of sensors and devices toward an Ethernet/IP platform. IIoT PoE switches and Industrial Edge Compute elements need to exist in “work cell areas” at the network edge to ensure Ultra Low Latency (ULL) for critical or potentially life-threatening applications. Access to reliable and resilient class 1 power at the industrial edge is costly due to licensed specialized contractor labor and takes valuable time to secure proper permitting. Backup power at the industrial edge with UPS or batteries is bulky, creates heat loading on the facility's HVAC system, and requires

frequent battery maintenance. In addition, traditional class 1 circuits installed with rigid conduit and junction boxes lack the adaptability to support fast and easy Moves, Adds, and Changes (MACs) required in the modern manufacturing environment to support a constantly changing production scheduling landscape.

“Fault Managed Power Systems (FMPS) is an enabling technology that has the power to dramatically accelerate industry 4.0 digitization.

The Solution

Digital Electricity™ (DE) from VoltServer is a Fault Managed Power Solution (FMPS) recognized by the IEC and UL as an efficient, flexible, and cost-effective “Electrical Service Panel to Edge” powering solution offering an alternative to local venue powering.

