



QEd 3000

The Smart Substation Platform for virtualization and edge processing



Empowering the Medium-Voltage Grid through Digital Transformation

As **distributed generation** and **new loads** increase network dynamics, medium-voltage grids are becoming more complex and harder to manage. **Severe weather events** further **stress aging infrastructure**, causing more frequent faults and outages.

Utilities need faster and more adaptive control to detect and isolate faults, restore service automatically, and maintain protection and power quality under any condition.

At the same time, **growing exposure to cyber threats requires enhanced resilience** and robust protection of critical assets.

Discover the Solution

QEd 3000(Quantum Edge Device) is the **innovative digital platform** that **brings real-time intelligence and control to the grid edge**. Designed for flexibility and scalability, it virtualizes traditional devices, enabling multiple applications to run simultaneously on a single, powerful edge computing unit.

With QEd, utilities can seamlessly collect, process and **analyze field data directly at the source**, unlocking faster decision-making, predictive maintenance and advanced automation. Its embedded virtualization technology supports a wide range of use cases, from LV monitoring to MV automation up to DER management, **empowering utilities to boost reliability, efficiency and resilience**.

By transforming raw data into actionable insights, QEd **accelerates the digital transformation of the grid, making operations smarter, greener and future-ready**.



Edge Intelligence

Turns field data into real-time intelligence, enabling advanced analytics and boosting grid efficiency



Built-in Virtualization

Multiple Apps running on a single unit, saving space and cost while maximizing performance



Interoperability

Leveraging on standard communication protocols, it ensures compatibility with central systems and other field devices

Covered use cases

Where **edge intelligence** meets **real impact**. Powering a **smarter**, more **reliable grid**, **today**.

MV Monitoring and Remote Control

Real-time visibility, fault identification and remote control of MV assets enable faster fault isolation, quicker service restoration and reduced field interventions, **boosting grid reliability, safety and operational efficiency**.

MV Protection

In the event of abnormal conditions, the system instantly detects the issue and acts autonomously, isolating the fault and safeguarding both assets and people. It's a smart, automatic response that ensures maximum safety and service continuity **without the need for manual intervention**.

Recloser Controller

Monitoring of MV grid status and **remote operation of MV reclosers, allowing to perform actions e.g. opening / closing MV, isolating faults and restoring service directly from the control center**, without the need for on site intervention.

Chronometric Automation

Smart time-based automation **restores power in under 3 minutes without control center intervention**, improving reliability and service continuity with minimal investment in substation equipment.

Logic Automation (FLISR)

Ultra-fast fault management **restores power in under 3 second**, ensuring seamless service continuity for end users. It **automatically detects, isolates, and reconfigures the network**, delivering maximum reliability and minimal disruption without manual intervention.

...and more

Virtualization technology and edge intelligence unlock a wide range of additional use cases, from **smart meter data concentration** and **LV feeder monitoring** to **transformer supervision, LV voltage regulation** as well as **DER management**.

Business Impact



SAIDI Optimization

up to **40-50% SAIDI** reduction thanks to remote control and automation



SAIFI Reduction

up to **30-50% SAIFI** reduction thanks to FLISR automation



OPEX Efficiency

up to **35-50% OPEX** efficiency through remote intervention and device management processes