

Future-proof solutions  
to accelerate  
the digitalization  
of power grids

QEd  
Quantum  
Edge<sup>®</sup>  
device



gridspertise  
accelerating your electric future

# QEd Quantum Edge<sup>®</sup> device



## THE CHALLENGE

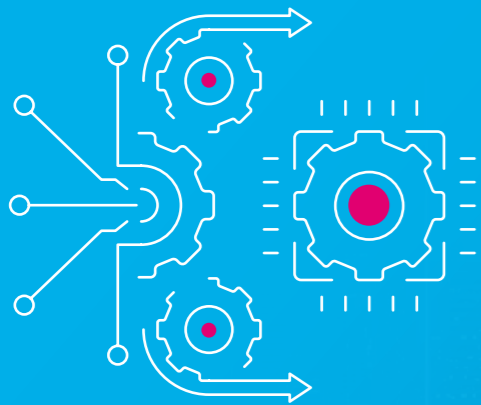
Growing **electrification** as well as **distributed generation** are increasing the **complexity of power flows managed by the grid.**

Power distribution networks need to go through a great technological transformation to increase flexibility, grid resilience and quality of service.



# Distributing intelligence at the edge unlocks new potential for grid operations

## Edge Intelligence



QEd's distributed computational capabilities enable to extend the typical centralized systems functions to run operations closer to the sources of data in near real time. This is particularly relevant when it comes to manage grid observability and DER integration .

## Virtualization



QEd's virtualization technology enables increasing functionalities without adding new devices. The traditional equipment of your substation can now be digitalized into an edge platform through virtual apps, cutting down installation space and costs, as well as optimizing maintenance, logistics and safety.

## Open platform



The QEd leverages on an open platform, which allows the DSO to adopt the applications included from the first installation, to purchase new applications over time, as well as to develop customized applications based on current and future needs.

# QEd Accessories

## Remote I/Os units

QEd ecosystem relies on external I/Os modules to extend the number of digital inputs and outputs while enabling a perfect interoperability with third parties electrical equipment (MV switchgears, external RTU, etc). Furthermore a special I/Os module has been designed to connect QEd with Enel-like MV equipment.

## Remote Merging Units

Merging units with embedded I/Os are part of the QEd ecosystem providing unmatched flexibility for real-time measurements acquisition from different MV LPITs (Low Power Instrument Transformers) including the Gridspertise Smart Termination sensors.



## Power Supply Battery Charger (PSBC)

Is the QEd module enabling batteries charging and managing the supply switch in case of loss of primary voltage source; PSBC also provide the integration with local PV panel and micro wind turbine to supply QEd Ecosystem with green energy.

## Environment Module

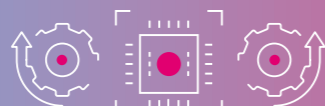
This module allows QEd to gather environmental data (like temperature, humidity, flooding and ozone) and electrical parameter from MV/LV transformer (including internal temperature and current) generating a mathematical model to get an accurate estimation of its wear out.

# Edge Beat

A cutting-edge Remote Asset Management Platform to enhance operational efficiency and reduce OPEX associated with grid management. With EdgeBeat DSOs can conveniently engage with all QEDs installed within their grids.

Key functionalities provided by the EdgeBeat platform include:

Status monitoring and diagnostic alarm/event tracking.



Visualization of installed applications providing valuable insights regarding their deployment.

Remote application management ensuring seamless control over the software environment.

Downloading new application versions ensuring access to the most up-to-date functionalities and features.

Hot Back-up for the cloud-based download of complete machine parameterization, minimizing downtime, and improving overall system resilience.

EdgeBeat empowers DSOs to remotely interact with QEDs, providing comprehensive monitoring, application management, and backup capabilities.

# Join our Co-Creation Program!

Gridspertise has launched a Co-Creation Program to collaborate with pioneering DSO customers and other players from the network ecosystem with the aim to develop new applications and enrich QED functionalities.

Are you a DSO, an App developer or a Hardware manufacturer interested in our co-creation program?

Join us!

Are you ready  
for the electric future?

[www.gridspertise.com](http://www.gridspertise.com)



For information about our  
products scan the QR code

