

The background of the top section features a dark blue and teal color scheme. On the left, the Siemens logo is displayed in white. The central and right portions of the background show a variety of industrial and digital elements: a rack of server-like equipment, a large monitor displaying a complex interface with charts and data points, and another smaller monitor showing a different set of data. In the upper right, there are glowing green line graphs and data points. The overall aesthetic is high-tech and data-driven.

SIEMENS

Ingenuity for life

Grid Diagnostic Suite – PQ Advisor Premium

Power quality and energy management
in one package

[siemens.com/ioe](https://www.siemens.com/ioe)

The fundamental importance of power quality

Ensuring adequate power quality is essential for utilities and industrial manufacturing companies alike. Especially in industrial processes, power quality issues can involve significant financial risks. Many electrical and electronic components and automation systems in industrial production facilities are sensitive to voltage variations. These are often caused by unexpected sources.

Furthermore, they can also cause faults themselves and feed them back into the supply system. Continuously recorded and evaluated measurements relevant to power quality help to detect disturbing issues and provide an opportunity to correct failures. Some of these failures are not so obvious at first sight.

Leveraging on the advanced features of our power-quality devices like the SICAM Q100/Q200, the PQ Advisor Premium processes data from an entire device fleet. It tracks energy consumption as well as power-quality indicators such as the presence of harmonics or the dynamics of power factors over time. A wide range of visualization methods combined with data analytics help correlate the synchronous time-series data received from a distributed set of data sources.

The PQ Advisor Premium identifies possible sources of power-quality degradation before they lead to defects in sensitive electronic equipment.

PQ Advisor Premium

A MindSphere application which enables power-grid operators and industrial users to monitor power quality data from an entire fleet of PQ devices and energy consumption.

Customer benefits

- Evaluation of power-quality data identifies possible power quality threats
- Quick overview of the main power-quality indicators of the connected power system
- Multi-site support allows data comparison between sites
- Increased data transparency for fast root cause analysis
- Simple and secure access via IoT-connectivity – no configuration required
- Meets highest cybersecurity-standards



Communication architecture based on SICAM GridEdge

As part of our Grid Diagnostic Suite, PQ Advisor Premium benefits from a new communication architecture.

Without additional configuration, power quality devices communicate via the station bus to the new SICAM GridEdge, and from there to the MindSphere cloud. This way we have the best of two worlds: Maximum data transparency on the edge level and a grid-wide data overview in the cloud, all while complying with state-of-the-art cybersecurity-standards by decoupling field devices from the cloud.

SICAM GridEdge – Main benefits

- “Zero Config” approach - plug and play, e.g. configuration effort less than 30 min
- Complete certificate management in SICAM GridEdge
- Support of all SIPROTEC e.g. 7KE85 and PQ devices via IEC 61850
- Support of 3rd party devices via IEC 61850

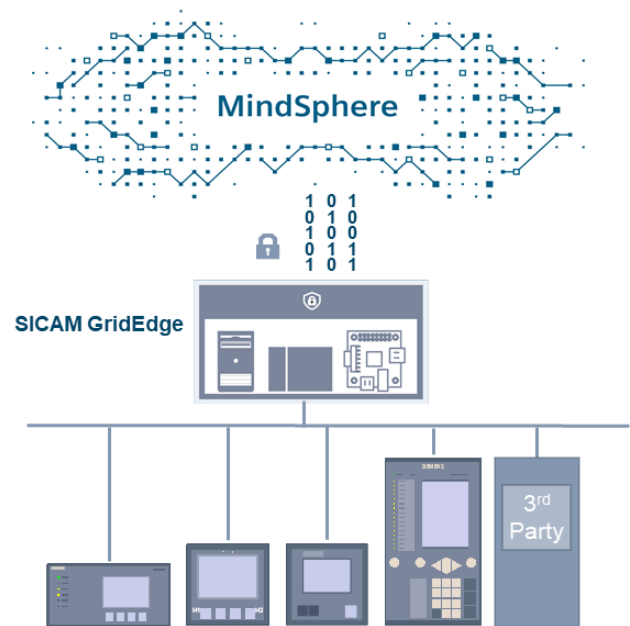
PQ Advisor Premium – Main features

Power Quality

- Monitoring of harmonics, power factor, voltage dips, swells and interruptions, transients, unbalance
- Evaluate EN 50160 grid code
- Identify the status of your power quality in a single dashboard
- Color-code indicators to help focus on the most urgent power quality-topics
- Identify the origin and number of power quality-events

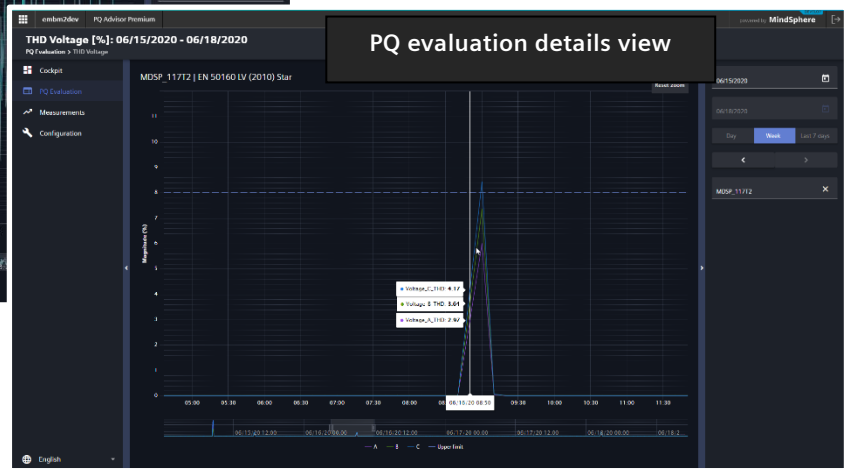
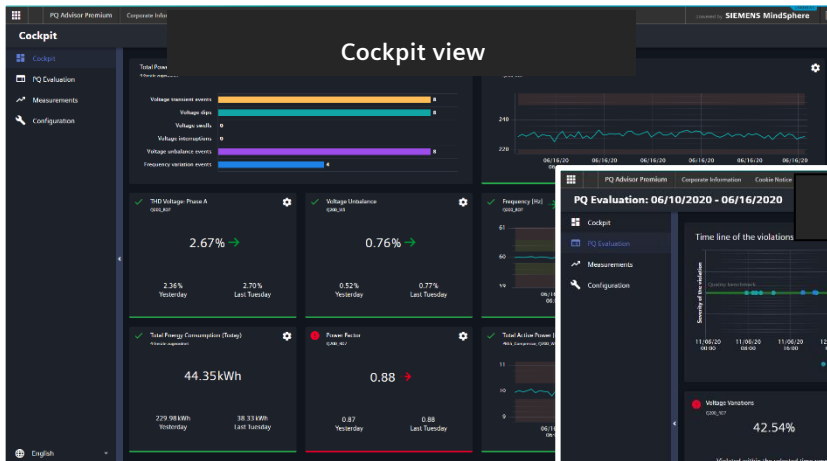
Grid Analytics

- Monitoring of energy, power, over-/ undervoltage, voltage unbalance
- Manage power loading and balancing
- Monitor energy use and aggregate data from all assets
- Access near real-time and historical data





PQ Advisor Premium – Multiple views on a desktop



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