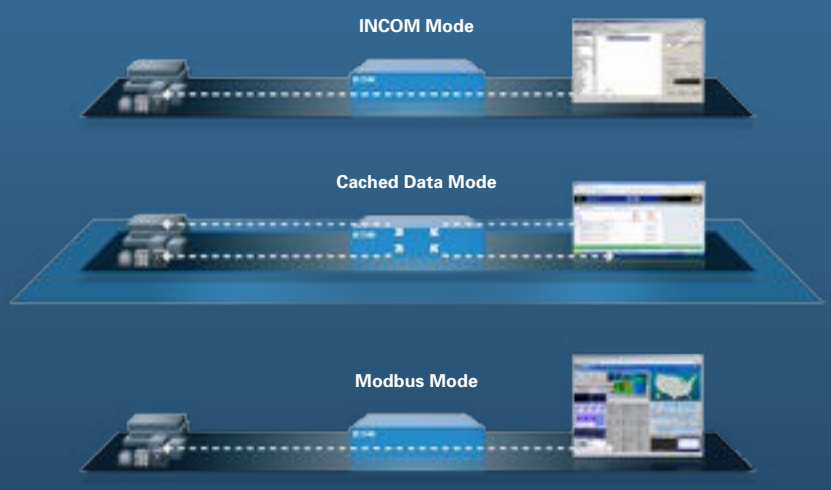
You were seeking a protocol translator. Eaton® delivered a vital data flow processor.

Your power system is a critical, integral part your organization's technological infrastructure. Ensuring availability, efficiency, and reliability, and reducing carbon footprint is high on any priority list. To achieve this, sophisticated data gathering and analysis is a must.

Eaton's Power Xpert Gateway (PXG) bridges the IT and facilities management worlds by bringing electrical equipment, such as switchgear, ATS, panelboards and motor control centers, onto the network. The PXG is an intelligent hardware solution that takes the complexity out of connecting electrical equipment to the network.



Your legacy Eaton and Modbus investments are protected. **PXG works with your existing communications systems, and provides a browser-based solution that will bring new levels of convenience to the way you manage data.**

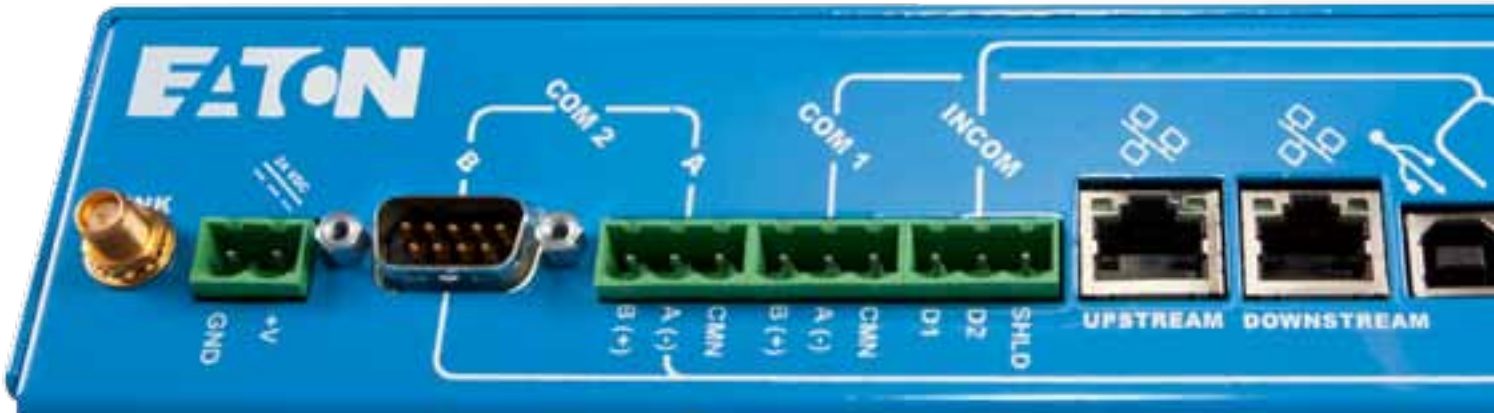
Meet the Power Xpert Gateway 400E/600E/800E

Bridge the IT and facilities management worlds with Power Xpert Gateway.

The Power Xpert Gateway is more than a simple gateway or protocol translator. It can convert one communication protocol or format to another, and act as go-between for two or more networks. More importantly, it functions as an entry and exit point for the networks it connects and performs processing to keep data moving. The Power Xpert Gateway is the central point in a networked communications system, maintaining a number of connections that designate data flow routing for systems and devices.

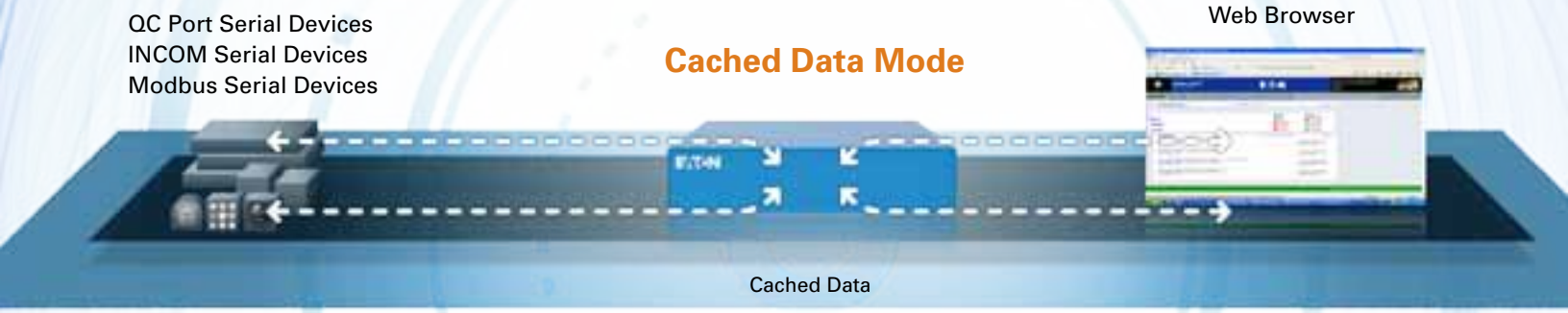
The PXG can be defined as a "gateway server." It has a native Web server and is an out-of-the-box solution that supports up to 96 devices, offering user-selectable events and real-time trending, all viewable through a standard Web browser. It also features email notification of events, waveform capture and data/event logging—all with no special software.

With the addition of energy meters, or using the utility's meters, the PXG enables tracking energy use. It recognizes the interdependence of IT systems and power systems delivering what organizations need to seamlessly bring these worlds together for end-to-end system reliability.

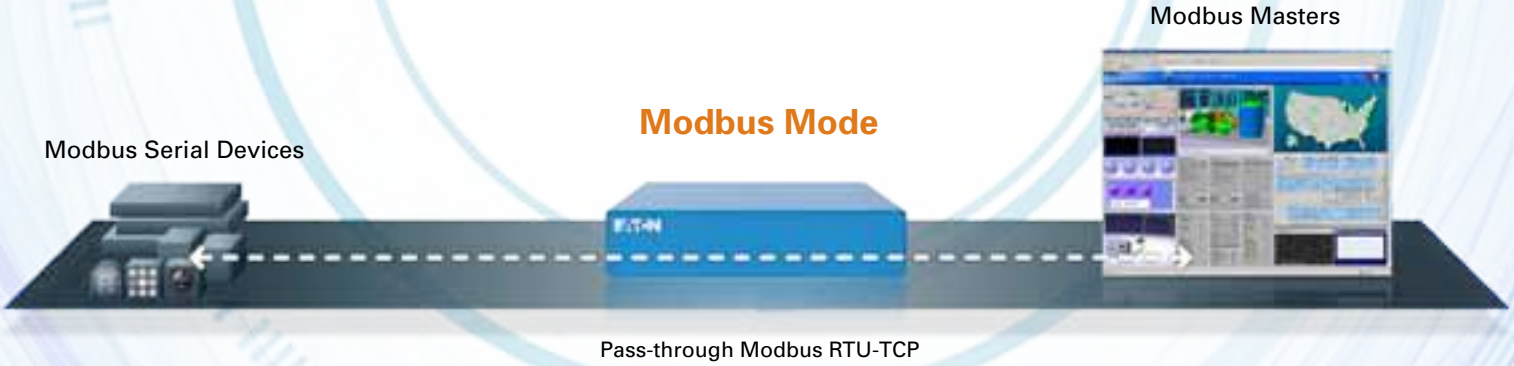


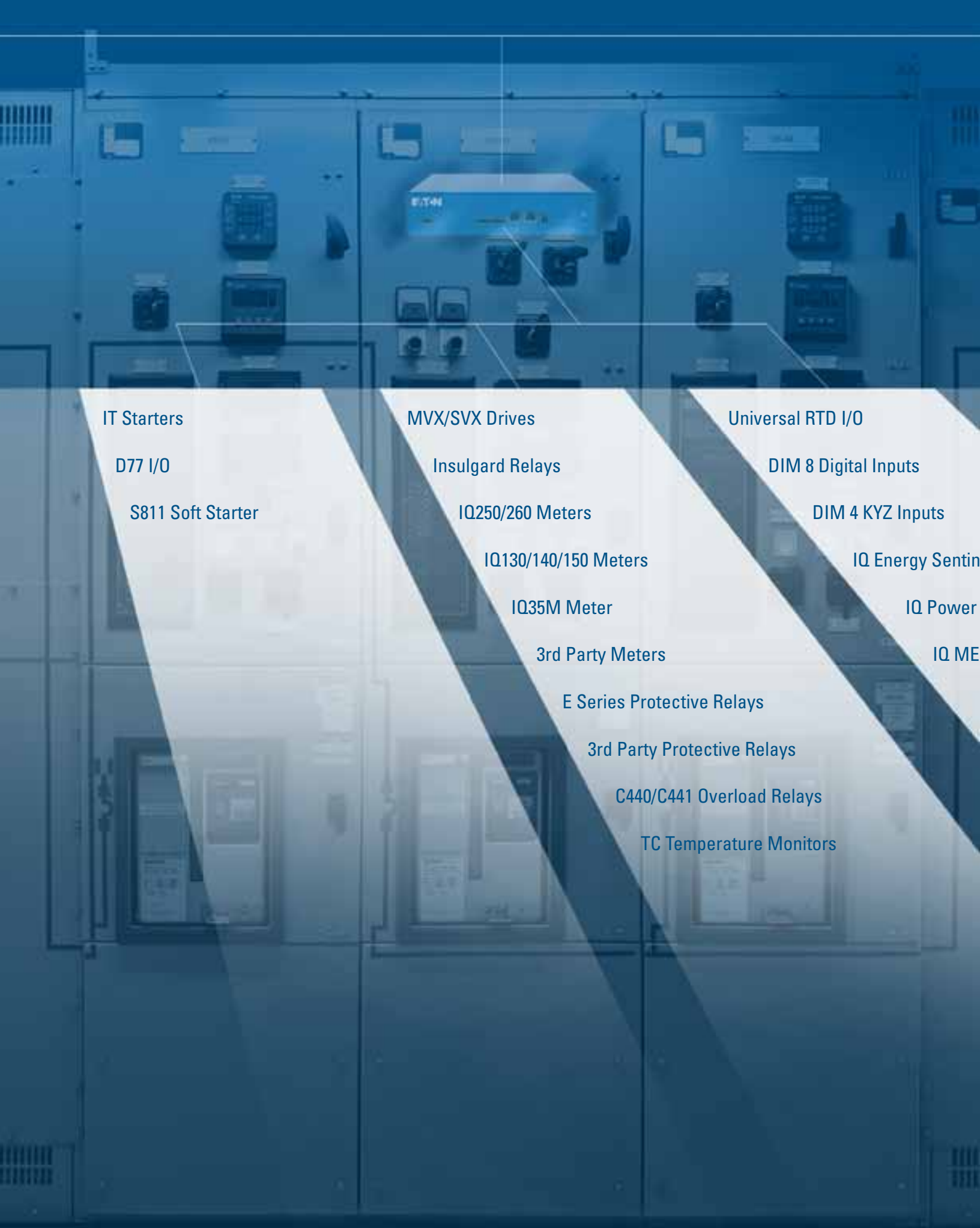
INCOM Mode

Cached Data Mode



Modbus Mode




IT Starters
D77 I/O
S811 Soft Starter
MVX/SVX Drives
Insulgard Relays
IQ250/260 Meters
IQ130/140/150 Meters
IQ35M Meter
3rd Party Meters
E Series Protective Relays
3rd Party Protective Relays
C440/C441 Overload Relays
TC Temperature Monitors
Universal RTD I/O
DIM 8 Digital Inputs
DIM 4 KYZ Inputs
IQ Energy Sentin
IQ Power
IQ ME

Regardless of the device or communication protocol, Eaton's PXG brings everything together.

INCOM and Modbus RTU data is now available through one source.

Eaton Power Distribution Equipment uses serial-based communicating products to monitor power flow through the bus, breakers, and starters. Meters, relays, trip units, and I/O communicate through INCOM, Modbus or QC Port serial networks. These networks can be viewed and recorded in the PXG, giving you more control through one source than ever before.

el Meter

Sentinel Meter

S II Sub Meter

IQ Meters

IQ Analyzer Meters

FP Protective Relays

MP Protective Relays

DT Digi Trip Unit

Optim Trip Units

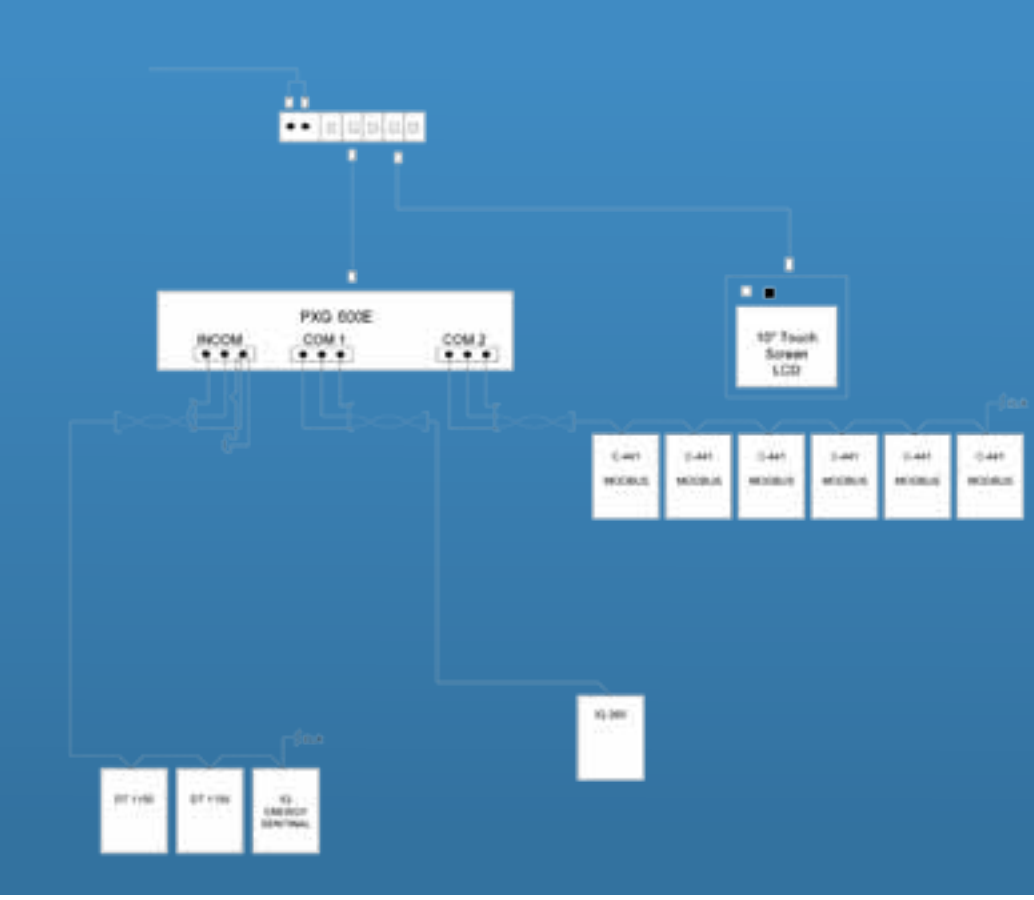
Advantage Starters

ATC Transfer Switches

PM3 Monitor

"The data provided by the gateway will be used by the building automation system to determine how the facility can save energy. The company is also using data from the gateway to compare its actual usage against actual billing from the utility."

–Facility Engineer, High-tech Research Facility



One line diagrams are the most important diagrams to show how an electrical system has been built, providing data such as size, location, ratings and connectivity of system components.

Communications is essential to help monitor electrical system supply and demand. The PXG is the acquisition and consolidation point for the data from serially-communicating devices inside Eaton or other electrical systems.

PXG key features

As the consolidation, processing and viewing point for any number of power or energy devices, the PXG provides you an easy way to monitor your power infrastructure. The flexible product offering allows you to select the model PXG that fits your requirements for real time viewing, data acquisition and logging, email notification on events and alarms, user views and custom event and alarm triggers. Securely view, collect and manipulate data from a Web Browser or an existing or new Building Management System or Network Management System.

User Views and custom events
PXG 800E only

The PXG 800E User Views feature provides a way to customize the presentation of device data into easy-to-understand web pages. Important device data from one of five preset categories can be presented for any number of configured devices. Information is displayed in chart form with links to device pages and any available trended data. A user-uploaded image can also be displayed with the option to configure and place links to individual device pages or external pages on the image itself.

The Custom Events feature of the PXG 800E allows a user the ability to build a rich assortment of events customized to your specific system configurations. A sophisticated Equation Builder can be used to build a simple equation or a complex equation for a single devices parameters or multiple devices configured on the PXG 800E.

3rd party and Eaton client software system compatible

Most facilities feature a multi-vendor environment, with different communication protocols and device configurations. The open communication architecture of the PXG removes the complexity of streamlining communication among these various devices, and makes adding additional products fast and painless.

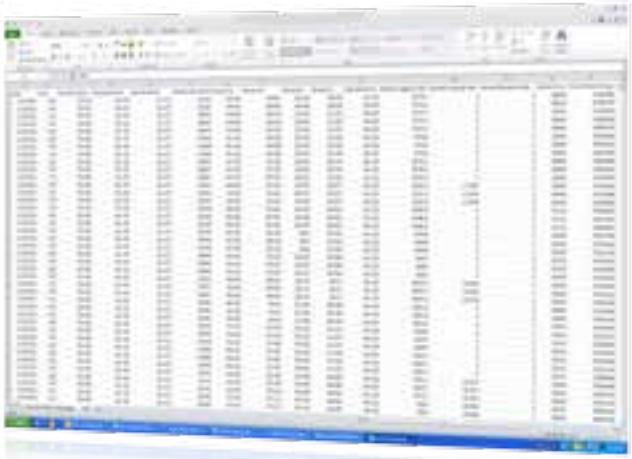
Secure Web browser real-time viewing

The PXG allows you access to all the key parameters of your electrical equipment, viewable through a Web Browser to monitor equipments' real time values, monitor power and energy flow, review notification of alarms and events. Offering two levels of security allows the PXG to be set up to securely view the parameters as well as adjust the configuration of the monitored data.

User-defined events and alarm notification via email

The PXG supports the setting of user-defined events on an individual device basis. This feature is set via the device configuration page. An example of a user-defined event would be a Low and High limit on Phase A Current for a device. You can choose the event limit values and the event names. These event notices behave in the same manner as the device events described above.

You have the ability to customize and direct e-mail notifications to up to ten users in your organization and into Eaton and third-party monitoring software solutions. Select from event notifications, interval logs, data logs, event logs and heartbeat e-mails. This provides yet one more way to effectively and proactively manage your power system.



Data acquisition/logging

The PXG 600E and PXG 800E have data acquisition/logging functionality that allows you to store historical data in the 1 GB of memory in the PXG 600E or 2 GB of memory in the PXG 800E. The log files provide information for trending and developing benchmarks of power and energy usage and the ability to export the data to tools to generate reports using common programs, like Microsoft® Excel® or simple energy reports with the Power Xpert Energy Viewer.

PXG family comparison at a glance.

Model	PXG 400E	PXG 600E	PXG 800E
Total number of supported devices	64	96	96
Maximum number of INCOM devices supported	64	64	64
Protocols supported on downstream devices: (INCOM, Modbus RTU and QCPort)	Yes	Yes	Yes
Number of downstream communication ports	2	3	3
Number of downstream protocols supported simultaneously	2	3	3
USB port for configuration	Yes	Yes	Yes
Two RJ-45 Ethernet ports—10/100Base-T	Yes	Yes	Yes
Modbus TCP/IP protocols supported	Yes	Yes	Yes
SNMP client access v.1	Yes	Yes	Yes
INCOM slave action commands supported	Yes	Yes	Yes
INCOM date and time settings supported	Yes	Yes	Yes
Modbus write commands supported from Modbus master	Yes	Yes	Yes
Device summary screens per main, bus and device	Yes	Yes	Yes
Event notification via the Web interface	Yes	Yes	Yes
Secure Ethernet communications—SSL encryption	Yes	Yes	Yes
Secure communication ports via access control/trusted host list	Yes	Yes	Yes
IPv4 support	Yes	Yes	Yes
Ability to upload additional or modified EDS files	Yes	Yes	Yes
Save and restore configuration file	Yes	Yes	Yes
Device waveform access and storage—COMTRADE file format	–	Yes	Yes
Trend graph displayed	–	Yes	Yes
Data logging—csv file format, downloadable to Excel	–	Yes	Yes
Interval logging—csv file format, downloadable to Excel	–	Yes	Yes
Event logging—csv file format, downloadable to Excel	–	Yes	Yes
E-mail notification on events and threshold alarms	–	Yes	Yes
Custom summary Web page creation	–	–	Yes
Ability to create custom events	–	–	Yes

Power Xpert Gateways let you do more.

If you have Power Xpert Gateways in place, you've got an excellent start to your monitoring or energy management program. However, you may want to consolidate your power and energy data from buildings around the city or around the globe into simple-to-understand information and reports. Eaton's software solutions work in conjunction with the Power Xpert Gateways to provide the information you need to reduce those energy bills.

The Power Xpert Gateways are compatible with Eaton's free Power Xpert Energy Viewer download. It is your energy expert; displaying energy usage summary information in both tabular and graphical format to help you make actionable energy management decisions.

Because of their open architecture, Eaton's Power Xpert Gateways are also compatible with many currently available building management and facility monitoring systems. By using Eaton's gateways as part of an overall solution, like Power Xpert Software, you can easily aggregate the information arriving from different types of device families. The gateways combined with a software solution helps you quickly turn your attention to the most important events and identify reliability issues and cost-saving opportunities. You can create a baseline for one facility or all facilities. You can contrast and compare power and energy usage throughout your organization. In short, Eaton's Power Xpert Gateways assists in providing you the detailed information you need in the short term and the long term to identify energy, cost saving and power quality enhancement opportunities, through control, monitoring and management of your power systems.

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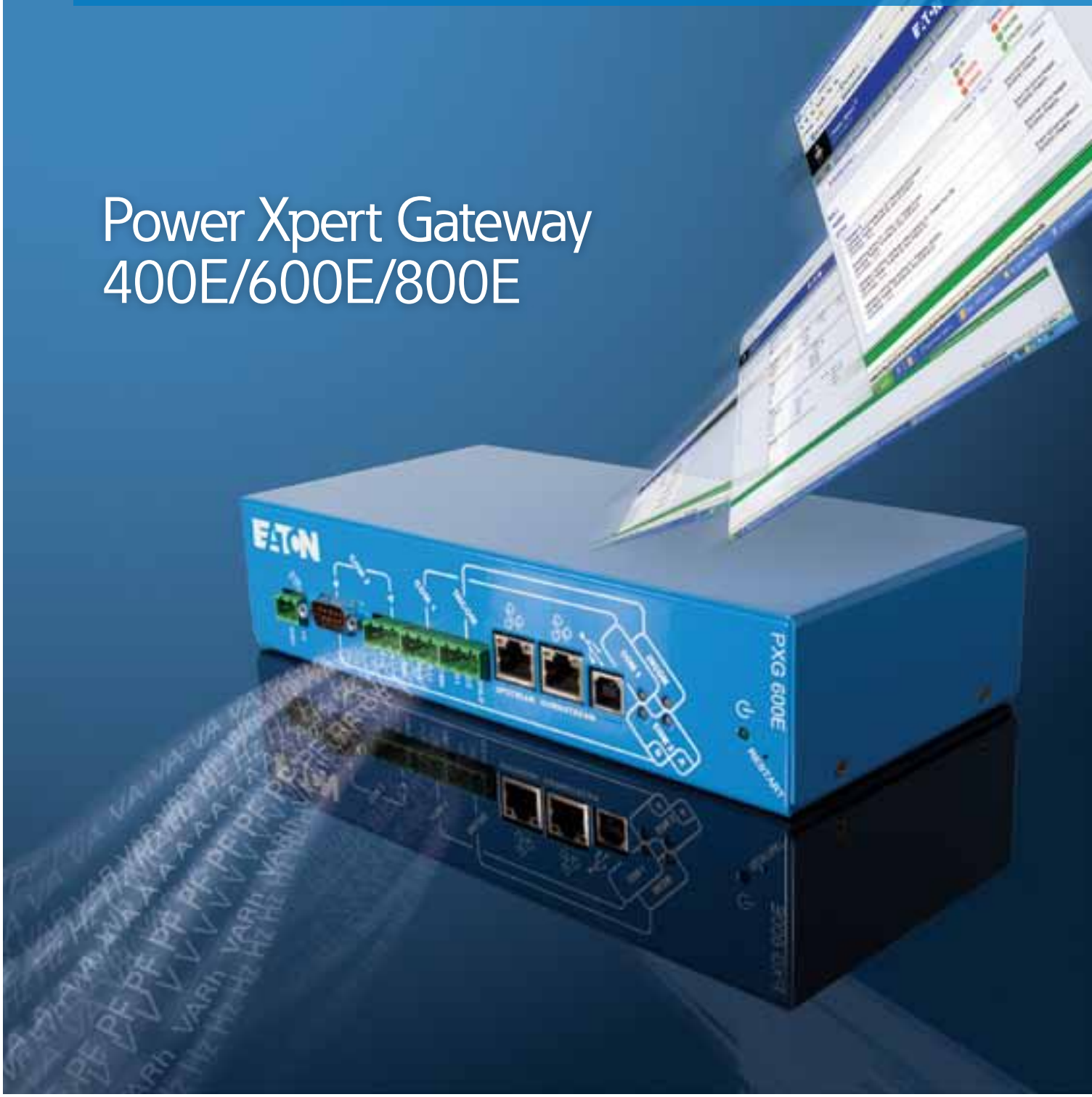
Specifications are subject to change without notice and represent the maximum capabilities of the product with all options installed. This is not a complete feature list. Features and functionality may vary depending on selected options, firmware version and product model. Please refer to the technical data sheet and User Manual for detailed specifications.

Powering Business Worldwide

Power Xpert Architecture

Power Xpert Gateway 400E/600E/800E



Powering Business Worldwide