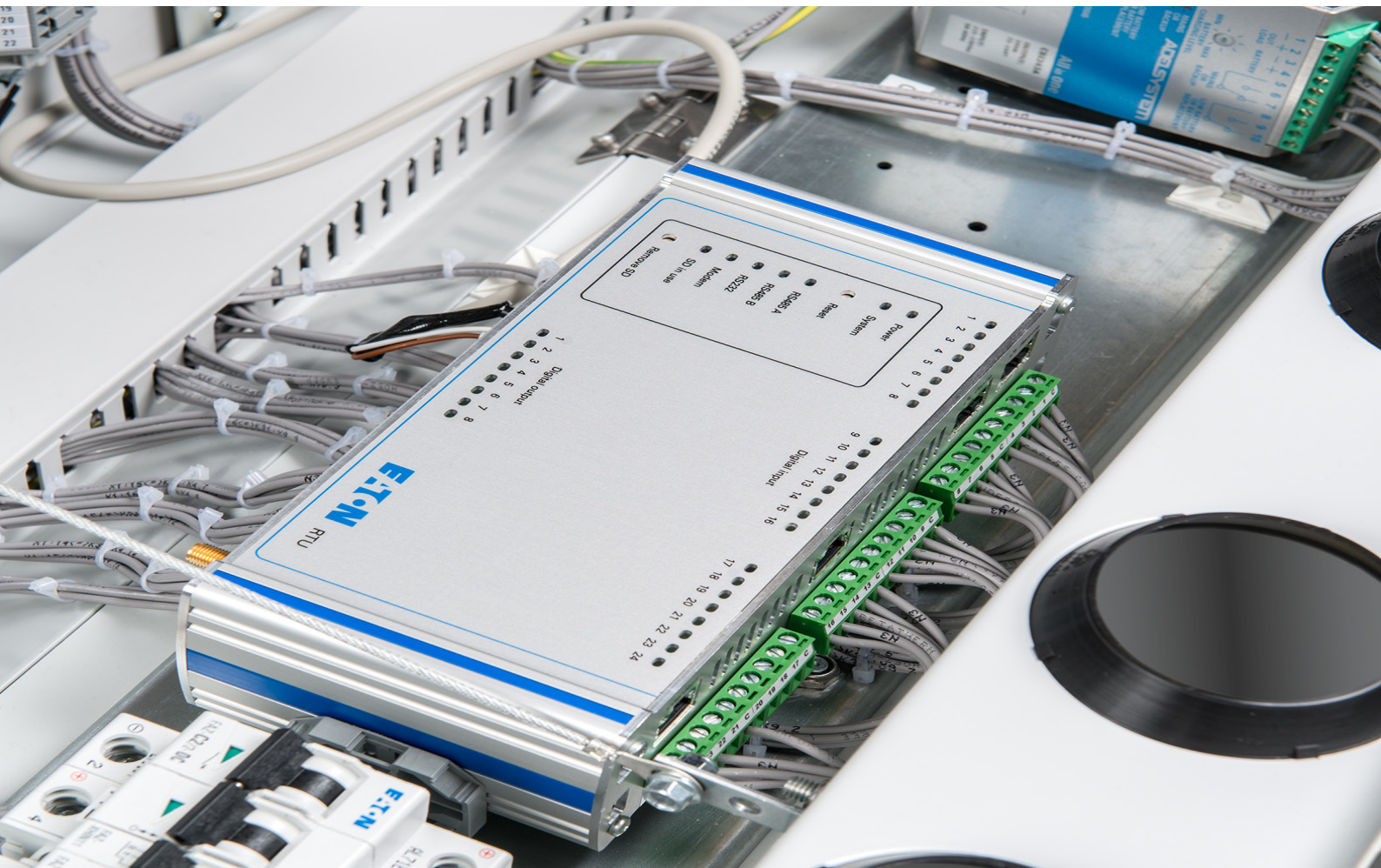


EATON chose straton

Eaton, leader in power distribution, power quality, control and automation, power monitoring, and energy management products and services, has chosen straton to optimize the Xiria with RTU for Smart Grid applications.





Eaton’s electrical business is a global leader in power distribution, power quality, control and automation, power monitoring, and energy management products and services. The company, with more than 100 years of experience, provides energy-efficient solutions that help its customers effectively manage electrical, hydraulic and mechanical power.

With 2011 sales of \$16.0 billion, Eaton is a global technology leader in electrical components, systems and services for power quality, distribution and control; hydraulics components, systems and services for industrial and mobile equipment; aerospace fuel, hydraulic and pneumatic systems for commercial and military use; and truck and automotive drivetrain and powertrain systems for performance, fuel economy and safety. Eaton has approximately 74,000 employees and sells products to customers in more than 150 countries.

KEEP INNOVATING

As a result of changes in the electricity distribution network, optimum management of medium voltage grids is becoming increasingly important. An example of a change is the increasing complexity of energy flows inside the grids as the result of increasing volumes of decentralized energy generation like wind and solar energy. As part of this, the quality and reliability of the energy supply needs to be improved and cost effective long-term

investments must be made. Nowadays, utilities are looking for automated medium voltage solutions to achieve two main goals:

- Improve standard IEEE reliability indices: System Average Interruption Duration Index (SAIDI) and system Average Interruption Frequency Index (SAIFI)
- Obtain an overview of the operational parameters of the electricity grid

“The core business of the Eaton Electrical Solutions and Services business unit is medium and low voltage switchgear. Instead of only selling switches, Eaton has the vision of creating complete solutions for its customers. These automation solutions include remote monitoring, measurement and control functionality and protection, power backup and communication systems.” Jorick Dragt, Systems Architect at Eaton.

ALL-IN-ONE RTU

In order to manage all these market demands, Eaton started to develop its own Remote Terminal Unit (RTU) in 2011 specifically targeting the medium voltage ring main unit market. The device is capable of gathering all the data from the switchgear, the sensors and all auxiliary devices. Using the straton soft-PLC logic, the RTU can filter and combine this data into useful information for Eaton customers. It also gives a great opportunity to tailor the

functionality for each individual customer as every customer has its own specific requirements.

Measurement and control on the medium voltage (MV) and transformer side of a ring main unit will reduce the outage time and the possibility of outages. In more advanced cases with directional fault indicators and some logic, outages can be solved within seconds after a fault occurs. After an anomaly has been detected, the RTU will automatically contact the operating center where the information is shown on a SCADA system and where actions can be taken to solve or prevent problems.

The RTU enables utilities to reduce the duration of power outages. Implementing the automated solution in, for example, an Eaton Xiria ring main unit reduces the downtime in three ways:

- Customers do not have to report an outage by phone anymore
- Service Engineers do not have to drive to the transformer substations
- A diagnosis can be made more efficiently

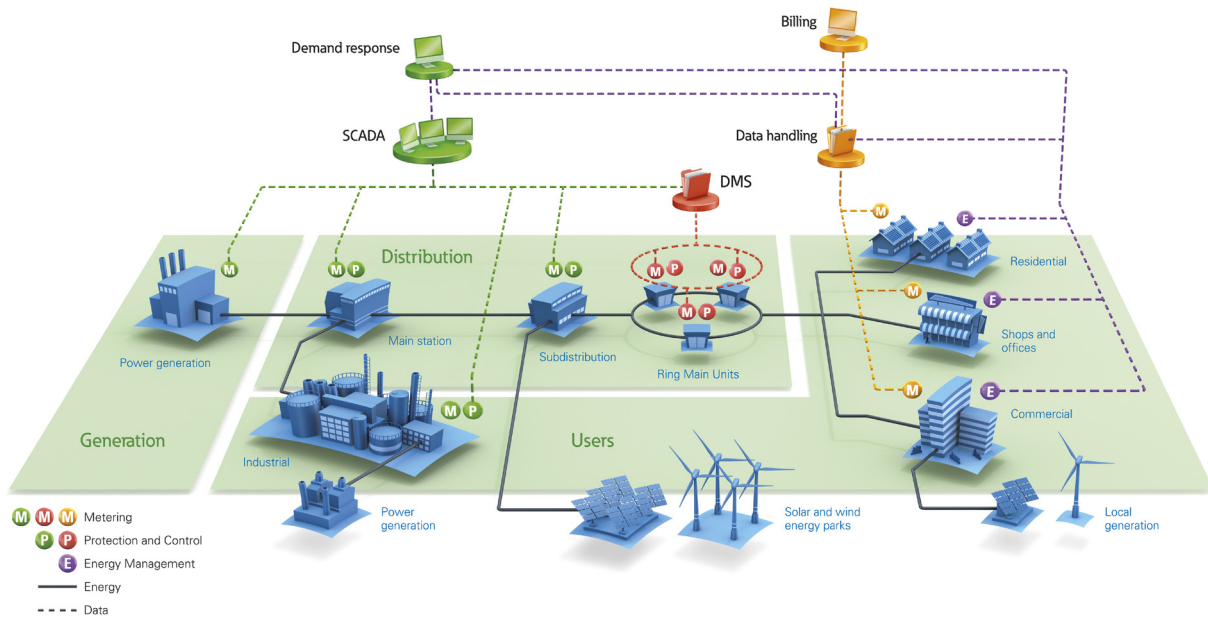
“When we started with the development of the RTU, we were looking for a soft-PLC which has proven itself in the

market already, giving us and our customers the confidence of having a stable platform to work with in this demanding environment. Also the availability of the IEC 60870 and IEC 61850 communication stacks were key criteria in the choice of straton. Altogether this meant that development risks and time were reduced to a minimum and our customers would get proven technology.” Alfonso Prado, Product Manager at Eaton.

The straton runtime used by Eaton is a component from COPALP enabling unlimited possibilities for the OEMs as for end-users. It is portable to any platform including those without an operating system. Runtime versions for specific operating systems like Windows CE, Windows Embedded, Linux, VxWorks and QNX are available off the shelf.

The RTU has an easy to use web based front-end for end-users which can be used to change the general settings, e.g. Firewall, VPN, modem and Ethernet settings.

The straton soft-PLC gives the RTU a powerful and advanced back-end where application engineers can change the entire functionality using the IEC61131-3 programming languages of the RTU making it suitable for the simplest to the most advanced solutions.



“The feedback we get from our customers is outstanding. The RTU is praised for its ‘all-in-one’ capabilities, combining numerous features in one package, which makes it the perfect candidate for many of our customers reducing both the initial and operating costs.” Jorick Dragt, Systems Architect at Eaton.

ADVANTAGES

Eaton now can provide a complete, state of the art solution to their customers which is based not only on very robust hardware but also in its software. Eaton’s customers get a product that they can easily configure, simplifying operations and minimizing costs.

“Choosing straton enabled us to deliver a highly reliable platform which we can use today and which also gives us plenty of room for expansion in the future.” Jorick Dragt, Systems Architect at Eaton.



CONTACT

EATON: www.eaton.eu/electrical

COPALP: www.copalp.com