Future-proof your grid automation with simply better digital substations

Schneider Electric digital substation

schneider-electric.com/digital-substation
Get ready for the new energy world

Boost your substation’s interoperability, connectivity, and security

Maximize the benefits of digital transformation
Get ready for the new energy world

New energy world

Simply better digital substations

Benefits of digital transformation
Discover the challenges of the new energy world.

Address your future challenges, today

The global energy market is a fast-changing environment. The 3D megatrends: digitization, decarbonization, and decentralization are transforming the energy landscape.

To meet the growing energy demand and distributed generation challenges of tomorrow, electrical networks need to evolve into digital grids.

With digital substations that leverage the potential of the Internet of Things, your smart grid transformation will be smoother, easier, and more secure.

Discover the challenges of the new energy world.
Watch the video!
Digitize your grid for greater peace of mind

From connected products and edge control, to apps, analytics, and services, our EcoStruxure™ Grid architecture is improving energy and operational efficiency by translating the IoT potential into real business value.

Our proven, IoT-enabled digital substations, with EcoStruxure Substation Operation inside, will help you easily modernize your grid automation and enjoy the functionalities of a smart, future-ready electrical network.

Our global team of experts will support your digital grid transformation, so you can upgrade and operate your network with greater peace of mind.

Increase network efficiency and sustainability with EcoStruxure™ Grid. Learn more!
Boost your substation’s interoperability, connectivity, and security
Introducing simply better
digital substations

We have redefined our digital substations to answer the emerging challenges of grid operation and better meet your needs, today and tomorrow. With EcoStruxure™ Substation Operation at the core, based on the PACiS technology, our digital substation automation solutions have been designed with the following aspects in mind:

- **Interoperability**, to smoothly integrate in multi-vendor systems
- **Open engineering**, to enable efficient design and system configuration
- **Digitization**, to make data acquisition easier
- **Connectivity**, to simplify data analytics and asset management
- **Cybersecurity**, to increase operational continuity, system resilience, and peace of mind

Transform your network with Ecostruxure™ Substation Operation. Learn more!
Future-proof your digital substations

Interoperability

Designed for smooth integration with third-party equipment and software, our digital substation automation is easier to implement across the existing assets and allow for a wider choice of vendors.

EcoStruxure™ Substation Operation leverages open standards, including IEC 61850, to increase interoperability across communication, engineering, and cybersecurity environments throughout your substation’s life cycle.
Enjoy straightforward application modeling

Open engineering

With the open engineering capabilities of EcoStruxure™ Grid Engineering Advisor, substation design is much simpler and faster.

By facilitating focus on a specific application, the software allows you to model your substation and integrate the automation system with fewer devices inside, helping to prevent issues related to increased network complexity.

The result? A reliable, scalable system delivering optimized performance across a heterogeneous grid and up to 20%* potential savings on your substation engineering costs.

* Based on Schneider Electric customer data.
This is not a guarantee of future performance or performance in your particular circumstances.
Collect more accurate and reliable data

Digitization

Inside our digital substation, all devices are directly connected to a process bus to enable the acquisition of comprehensive and accurate information.

The process bus solution, together with Smart Terminal Blocks, reduces the complexity of wiring inside the substation for easier engineering and maintenance of the automation system. With a simpler internal structure, the hazardous voltage and current get eliminated, improving people and equipment safety.

Thanks to IoT-enabled sensors for smart panels, the substation is monitored 24/7 to deliver enhanced analytic capabilities for better equipment insight.
Turn data into a valuable asset

Connectivity

Advanced connectivity turns digital substations into data hubs supporting efficient grid operation and asset management at the utility level.

To easily turn data into meaningful and actionable insights, we have equipped our digital substations with advanced analytic capabilities. The analytic tools are available through an intuitive user interface, so the operator can easily access the full scope of information.

The substation data are also accessible remotely to provide support during on-site operations.
Improve resilience of your electrical network

Cybersecurity

Digital substation data must be secured against unauthorized access and theft. To help ensure operational security at all levels, our solution comes with embedded multiple cybersecurity layers and is compliant with international and local standards. Add to that our end-to-end cybersecurity services, and you can build a truly resilient system and manage your substation equipment with peace of mind.

Our cybersecurity services include:

- Security assessment and design
- Simplified deployment during commissioning
- Authentication and authorization
- Threat modeling
- Regular audits
- Patch management
Maximize the benefits of digital transformation
Make your grid future-ready with digital substations

Comprehensive substation protection, control, automation, and monitoring are key to efficient grid management. From electrical installation design to operation and maintenance, our digital substations deliver greater efficiency and strengthen communication across your entire network.

Easy to implement and use, the solution provides comprehensive functionalities supporting the digital transformation of your grid. With digital substations, featuring EcoStruxure™ Substation Operation, you get the tools to successfully face the energy challenges of today and tomorrow.

See how our digital substation solutions work.
Watch the video!
Learn more about digital substations, today!

schneider-electric.com/digital-substation