As the multibillion-dollar upgrade of the nation’s electrical infrastructure to a smart grid gains momentum, companies need to adopt common networking standards to develop highly secure infrastructures that better optimize energy production, distribution and consumption.

The Anixter Difference

A smart grid saves energy, reduces costs and increases reliability by efficiently delivering power from suppliers to consumers. Implementing a smart grid poses many challenges, from selecting the right products and technologies to deploying the project on time and on budget. With a wide breadth of products, technical expertise and global supply chain capabilities, Anixter can help power and energy customers address these challenges and maintain the responsiveness of a local distributor coupled with the strength of a global company.

Anixter has the products and expertise to assist you with any request:

- High-performance data networks
- Sophisticated security systems to protect people and assets
- Electrical and electronic wire and cable used for power and control
- Industrial communication products needed for harsh environments

Our Offering

Anixter is dedicated to keeping customers current on the latest products, applications, standards and emerging technologies.

Electrical and Electronic Wire and Cable

Anixter carries the largest and broadest inventory of wire and cable in the world. From control cable to specialty wire and cable products, we can provide you with the right products, when, how and where you need them.

Communications Solutions

From copper and fiber cabling systems to data center power and cooling solutions, Anixter has the knowledge and products to make data centers secure, productive, power efficient and future ready. We have a broad infrastructure offering to fit the communications needs of the data center now and into the future.

Industrial Communication Products

Whether you are trying to connect a legacy communication product, designing or retrofitting a substation’s communications network or choosing the right communication media, Anixter has the expertise and an extensive industrial-rated communications offering in both cabling and active products to meet your needs.

Security Solutions

If you are protecting critical infrastructures, key resources or commercial assets from theft, vandalism or sabotage, a robust perimeter security solution is a necessary first layer of defense. Anixter works with customers to select the best products and services for their unique security needs.

Support and Supply Products

Anixter stocks products to route, protect, terminate, identify and ground any power application.

Supply Chain Solutions

Anixter’s Supply Chain Solutions address the key components of a project to maximize installation productivity, improve the speed of deployment, mitigate risk and lower the total cost of the project.
From the data center to the substation, this diagram highlights the areas that Anixter serves with the latest products and technical expertise.

**Data Center Solutions**

Designing and managing a data center that can handle the increasing demands of your network can be a challenge. To optimize the performance of a data center today and for the future, many pieces need to be considered, including the latest communications products and technologies.

**Structured Cabling Solutions**
- Copper and optical cabling
- Patch cords and patch panels
- Preterminated solutions
- Intelligent patching

**Power and Cooling Solutions**
- Power distribution units (PDU)
- Intelligent power strips
- Uninterrupted power supplies (UPS)
- Passive, precision and in-row cooling solutions

**Accessories**
- Racks, cabinets and shelving
- Cable management
- Overhead duct and ladder rack
- Grounding and bonding

**Management and Monitoring Solutions**
- TZ Praetorian™ Cabinet Locking System
- KVM switches and console managers
- Environmental monitoring and management products
- CSU/DSU

**Infrastructure Solutions (Inside the Substation)**

Anixter carries the largest inventory of wire, cable and related supplies in the world. Anixter’s experts are here to assist you with your infrastructure questions. Whether you need help selecting an Ethernet cable to connect your smart grid-enabled substation or selecting a shield to reduce electromagnetic interference, our engineers and resources can help you achieve the performance goals for your project while saving you time and money.

**Wire and Cable Products**
- Control and power cable
- Medium voltage (5 kV to 35 kV)
- Grounding and bare copper cables
- Hook-up and lead wire
- Instrumentation and thermocouple cables
- Specialty wire and cable products

**Support and Supply Products**
- Cable management
- Terminations, splices and lugs
- Grounding products
- Enclosures

**Industrial Communication Products**
- Industrial Ethernet cabling and connectivity
- Industrial fiber (preterminated and bulk)
- Industrial-rated active networking components
- Industrial-rated gateway products

**Security Solutions**

For industries looking to reduce their vulnerabilities, prevent loss of revenue and comply with governmental regulations, knowledge of the latest products, applications and emerging technologies is crucial. Because Anixter helps customers select the best products and services for their unique applications, businesses can better meet their security and infrastructure needs.

**Video surveillance**
- Access control
- Biometrics
- Sensors, contacts, motion detectors
- Intercoms

**Support and Supply Products**
- IR illuminators
- Media converters
- Network servers, switches and storage
- Wireless transmission systems
- Fiber and copper transmission systems
Smart Grid Solutions

For industries looking to reduce their vulnerabilities, prevent loss of revenue and comply with governmental regulations, knowledge of the latest products and technologies is crucial. Because Anixter helps customers select the best products and services while saving you time and money.

Infrastructure Solutions (Inside the Substation)

Anixter carries the largest inventory of wire, cable and related supplies in the world. Anixter's experts are here to assist you with your infrastructure questions. Whether you need help selecting an Ethernet cable to connect your smart grid-enabled substation or selecting a shield to reduce electromagnetic interference, our engineers and resources can help you achieve the performance goals for your project with cost savings time and money.

Security Solutions

For industries looking to reduce their vulnerabilities, prevent loss of revenue and comply with governmental regulations, knowledge of the latest products and technologies in cyber security is crucial. Because Anixter helps customers select the best products and services for their unique applications, businesses can better meet their security and infrastructure needs.

Power and Cooling Solutions

Designing and managing a data center that can meet the increasing demands of your network can be a challenge. To optimize the performance of data centers today and for the future, many pieces need to be considered, including the latest communications products and technologies.

Structured Cabling Solutions

- Copper and optical cabling
- Patch cords and patch panels
- Power distribution units
- Intelligent patching
- Accessories
  - Racks, cabinets and shelving
  - Cable management
  - Grounding and bonding

Water and Cable Products

For industries looking to reduce their vulnerabilities, prevent loss of revenue and comply with governmental regulations, knowledge of the latest products and technologies in cyber security is crucial. Because Anixter helps customers select the best products and services for their unique applications, businesses can better meet their security and infrastructure needs.

Support and Supply Products

- Intelligent patching
- Preterminated solutions
- Patch cords and patch panels
- Copper and optical cabling
- Structured Cabling Solutions

Communication Connection – This is the high-level, point-to-point connections of the communication networks within the smart grid. There are multiple paths that this network can follow.

Support and Supply Products

- Intelligent patching
- Preterminated solutions
- Patch cords and patch panels
- Copper and optical cabling
- Structured Cabling Solutions

Power and Control Connection – This is the high-level, point-to-point connections of the power and control cables within the grid.

Smart Grid Solutions

Smart Grid Technology

As the multibillion-dollar upgrade of the nation’s electrical infrastructure to a smart grid gains momentum, companies need to adopt common networking standards to develop a highly secure infrastructure that better optimizes energy production, distribution and consumption. Building a smart grid is more than just an overhaul of the current communications systems used by utilities today. Smart grid implementation will impact many utilities’ information, control and operation systems. Utilities also must consider the data storage, physical security and cyber security requirements.

The smart grid is more than just smart meters, wind turbines, solar panels and plug-in hybrid electric vehicles. It is about using technology to help drive energy efficiency. The implementation of the smart grid will allow for a more flexible electrical infrastructure, which will pave the way for future technologies that will harness all the capabilities of an intelligent network.

Smart Grid Benefits

- Real-time information — The smart grid will provide consumers with more detailed information about their power consumption and pricing.
- Increased efficiency — By providing more visibility to consumption patterns and network inefficiencies, the goal is to level energy consumption by minimizing peaks and valleys. This is important to utilities because if a spike in demand does occur, it produces more costs and pollution by adding an auxiliary power plant.
- Increased reliability — The smart grid will allow rerouting and redundancy similar to communications networks, which will result in quicker recovery from outages.
- Environmental impact — The smart grid will reduce the need for peaker power plants and allow for an expansion of renewable energy (e.g., wind and solar).

Our Expertise

Anixter brings IP infrastructure, power and instrumentation cable expertise to the power and energy market. With product and technical knowledge, Anixter helps specify solutions and make informed purchasing decisions around smart grid technologies, applications and relevant standards for the following industry sectors:

- Utilities, municipalities and cooperatives
- EPCs and engineering firms
- Integrators
  - Security
  - Network
  - Control
- Contractors
  - Data
  - Electrical
  - General
  - Specialty
- Renewable energy

Our Manufacturer Partners

Anixter partners with best-in-class manufacturers to provide you with the products and technologies you need.
Supply Chain Solutions — Addressing Site Deployment Challenges

For customers around the world, Anixter combines superior product offerings with unparalleled technological expertise and innovative Supply Chain Solutions. Anixter can develop a customized supply chain program to help take cost out of your business while maximizing efficiency for your deployment.

The Challenge

The following model represents typical challenges of managing multiple sources of product and delivery points:
- Multiple manufacturers
- Multiple ways to get product to the job site
- Multiple aggregators (contractor, integrator, distributor, etc.) involved

This model gets more complicated as more components (manufacturers, sites or floors) are added.

Every line on this diagram represents a point of risk: cost, coordination or failure. A model like this cannot seamlessly meet project demands. In fact, if project demands increase, the bottlenecks in service, support and cost become more noticeable.

The Anixter Solution

Material management challenges risk the on-time completion of a project. Working with a supply chain partner allows customers to effectively manage materials for one or multiple projects, deliver them according to an integrator’s/contractor’s construction schedule and scale to meet customer demands. Anixter’s Supply Chain Services enable integrators/contractors to focus on core competencies of design, integration and construction.

Anixter’s Supply Chain Solutions minimize the risk involved in deployment by delivering:
- The right products at the right place in the right quantity in the right condition at the right time
- Process coordination for materials, manufacturers and multiple sites
- Maximum installation productivity to minimize delay/wait time
- The elimination of disruptions to regular operations.

READY™ Deployment Services by Anixter map our distribution and Supply Chain Solutions to the construction or deployment process of any technology project. We combine sourcing, inventory management, kitting, labeling, packaging and deployment services to simplify and address the material management challenges at the job site(s). READY! Deployment Services by Anixter will help you improve the speed of deployment, lower your total cost of deployment and ensure your product specifications are delivered as planned.