

# ANIXTER



Products. Technology. Services. Delivered Globally.

## RAILROAD COMMUNICATIONS AND SIGNAL SOLUTIONS

## THE ANIXTER DIFFERENCE

Anixter understands the complexities involved in the deployment of multisite rail projects. By bringing experience, a broad range of products and unparalleled supply chain expertise, Anixter provides assistance that will improve safety, performance and reliability throughout a project's deployment. With a hub-and-spoke warehouse network that can quickly scale from daily operations to high-turnaround deployments, Anixter provides the flexibility needed to work hand-in-hand with different manufacturers, installers and technical consultants.

Anixter partners with leading manufacturers to provide customers with the highest quality and most innovative products available, including trackside poles, antennas, grounding wires, coaxial cable and surge protection. With a strength in supply chain management and materials logistics, Anixter partners with leading railroad companies to deliver products when and how they are needed, including kitting and just-in-time deployment.

To better serve the rail transportation markets in North America, Anixter uses dedicated teams to support product and supply chain needs for Class I and passenger rail customers. Anixter also has teams to support the needs of specialty railroad contractors and integrators.



## RAILROAD COMMUNICATIONS AND SIGNALS

The thousands of miles of railroad tracks that run across North America are vital to the economic support of people and businesses. Essential to these vital networks are the daily maintenance and operating efforts that provide safety and the avoidance of disruptions. The deployment of new initiatives, such as Positive Train Control (PTC), that use the latest products and technologies are necessary to keep rail networks running in the most secure and efficient manner.

### POSITIVE TRAIN CONTROL

Positive Train Control is a federal directive that will help prevent train-to-train collisions and derailments. With the Rail Safety Improvement Act of 2008 mandating the widespread installation of PTC systems by 2015, railroads will need to deploy new systems that will interoperate with each other. By using radio, microwave, GPS and other technologies, these new systems use a complex and sophisticated communications and signal network to identify where a train is at all times. Towers, poles and antennas that run alongside the tracks relay important information to other trains, stations and dispatchers.



Anixter has a broad infrastructure offering to fit your current and future railroad communications and signal needs.

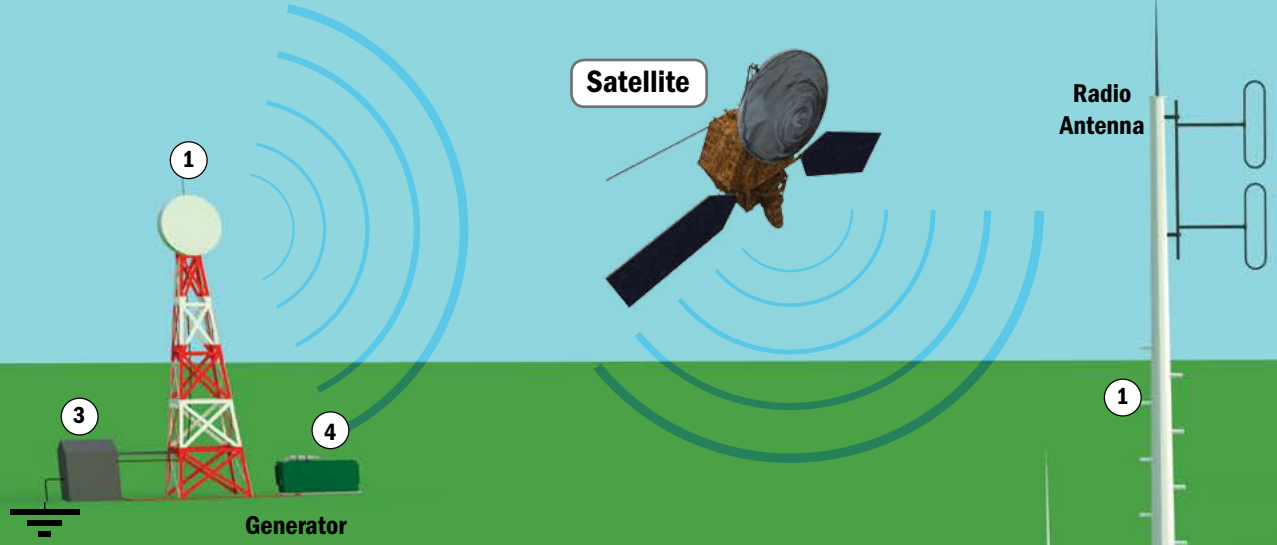
## TECHNICAL EXPERTISE

With years of experience in railway wire and cable products, communications solutions and security technologies, Anixter's sales specialists and technical experts provide customers with world-class technical resources, products and support. Anixter brings customers a variety of technical and engineering expertise:

- Product training for maintainers and installers
- Product selection assistance
- Customer specification reviews
- Codes and standards interpretation and assistance with standards documentation
- Submittal documents
- Evaluation of product and proof of concept processes







**1 Communications Infrastructure (RF and Microwave)**

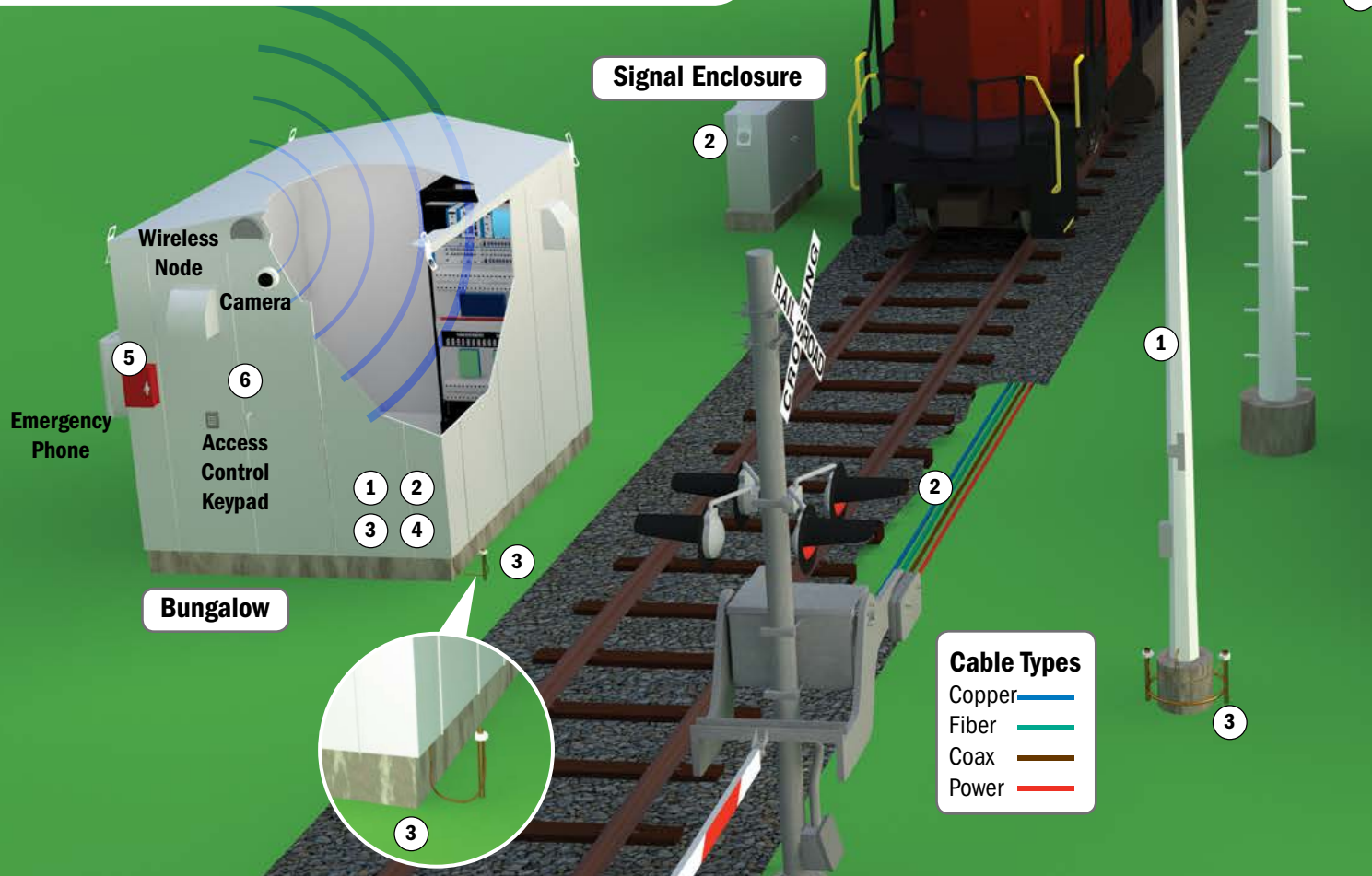
- Coax cable, heliax and waveguide
- N connectors, BNC and TNC
- Patch cords and patch panels
- Antennas, mounts and ice bridges
- Racks, cabinets and enclosures (indoor)
- Enclosures and equipment cases (outdoor)
- Monopoles, masts, hinged poles and towers
- Cable management
- Outside plant and pole line hardware
- Coax jumpers

**2 Signals (Lights, Crossings, Heat Sensors and Retarders)**

- Low-voltage wire and cable
- Lugs and connectors
- Fiber optic cables
- Terminal strips

**3 Grounding Systems**

- Wire and cable
- Lightning and transient voltage surge protection
- Ground and buss bars and ground rods
- Lugs, clamps and connectors



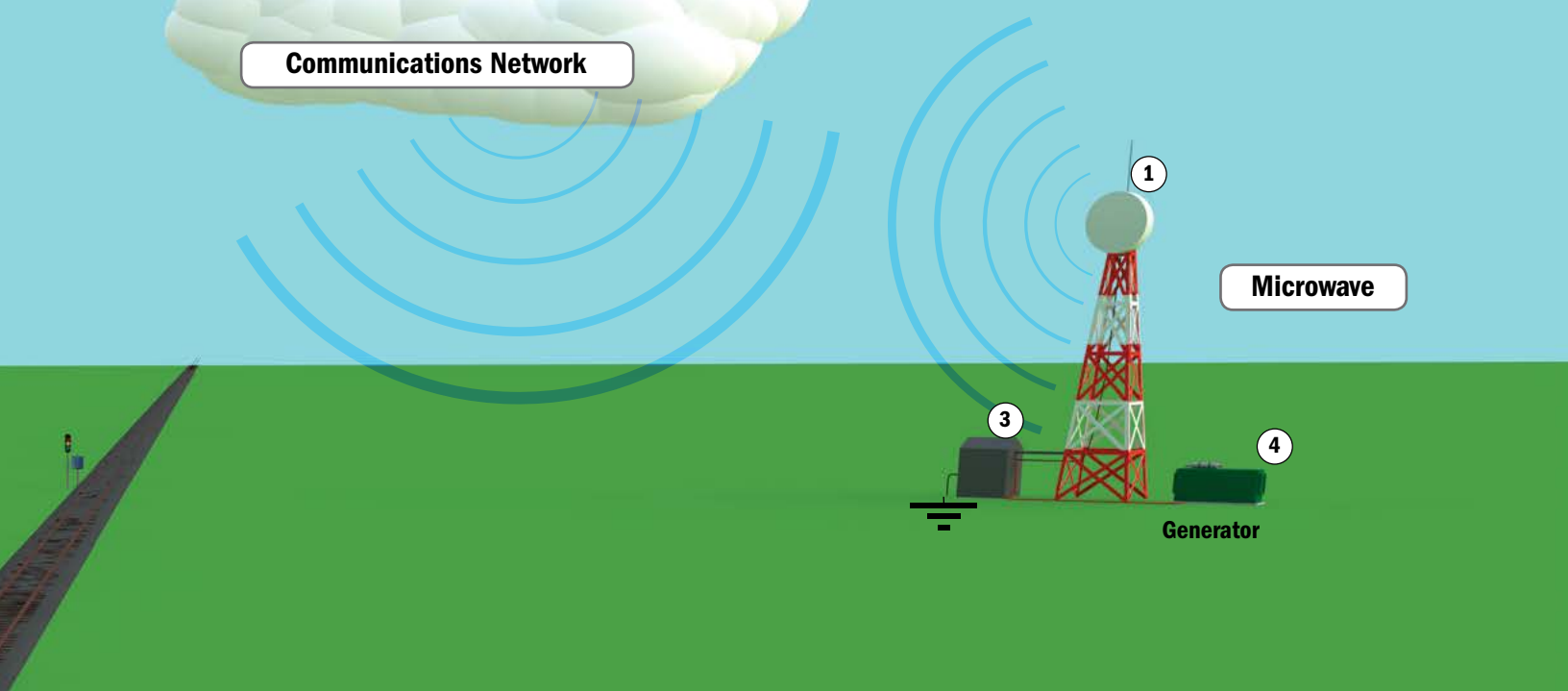
**Cable Types**

- Copper
- Fiber
- Coax
- Power



## Communications Network

## Microwave



## Camera

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## Solar Panel

## Operations Center

## Data Center

## Wireless Node

## Motion Sensor

## Access Control Card Reader

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### Power and Cooling Solutions

- Low-voltage wire and cable
- UPS, line conditioners and batteries
- Flexible wires: SO, W, GGC and DLO
- Generator sets
- Power cable

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### Network Infrastructure (Voice, Data and Video)

- High-performance copper and fiber optic cabling
- Racks and cabinets
- Connectors, patch panels and adapters
- Cable runway and raceway
- Building entrance protectors
- Blocks and brackets
- Hardened Ethernet switches
- PoE injectors and splitters
- DSU/CSU, T1 extenders
- Emergency phones
- Modems
- Wi-fi and mesh wireless solutions
- Media converters and transceivers

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### Security Solutions (Analog and Network)

- Perimeter security
- Access control and door locking hardware
- Low-voltage cable
- Cameras (color, day/night, thermal and infrared)
- Recording and management platforms
- Analytics
- Servers and storage
- Security consoles
- Sound, paging and mass communications

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### TOOLS AND TEST EQUIPMENT

- Network testers
- OTDRs
- Multimeters
- Crimp tools
- Tie wraps
- Shrink tubing
- Velcro
- Lockout and tagout safety
- Fish tape
- Electrical tape
- Labels
- Splice enclosures

# SUPPLY CHAIN SOLUTIONS



READY!<sup>SM</sup> Deployment Services 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 material management challenges at the job site(s). READY!

Deployment Services by Anixter help customers improve the speed to deployment, lower total cost of deployment and deliver product specifications as planned.

Maintenance of Equipment (MOE) and Maintenance of Way (MOW) use many different items from Anixter's portfolio of products and services. Anixter's part number rationalization service eliminates duplicate items from different manufacturers, purges obsolete parts and helps to exhaust unneeded inventory. Supply Chain Solutions from Anixter provides many benefits:

- Rationalize parts
- Eliminate excess stock
- Complete projects on schedule
- Leverage spend
- Reduce overall costs
- Minimize risk



## RAIL CASE STUDIES

**Customer:** Class I Railroad

**Challenge:** A railroad company deploying a large-scale, multisite PTC system needed a supply chain partner to source and manage a challenging deployment that required remote storage and coordinated deliveries. The multiyear project required a precise coordination of product deliveries to meet the chosen contractors' and internal installation teams' build-out schedules.

### **SOLUTION: READY! DEPLOYMENT SERVICES**

Through its READY! Deployment Services, Anixter created a flexible and scalable deployment plan that involved shipping poles via pole cradles mounted in the customer's gondola cars to the wayside locations. Complete product kits were then shipped to job-site trailers located at strategic points in the subdivisions. As each subdivision was completed, Anixter removed the trailers and used reverse logistics for any remaining materials.

Anixter's scalability was critical during this type of high-velocity deployment project, which is continuously impacted by a variable schedule with finite milestones and completion dates. By using multiple distribution centers to kit materials at the peak of the project, Anixter was able to simultaneously support deployment of several subdivisions at the same time.

**Customer:** Class I Railroad

**Challenge:** To improve safety, the railroad company wanted to eliminate the use of a hot flame source required in the welding process for joining grounding system components (conductors, ground rods, etc.). The current exothermic grounding systems were degrading and/or losing continuity over time; therefore, the company needed to evaluate new grounding technology and implement a better grounding solution.

### **SOLUTION: TECHNICAL EXPERTISE, SUPPLY CHAIN SOLUTIONS**

Anixter researched and conducted a rigorous product evaluation process of several manufacturers' solutions to determine if the quality of the grounding system exceeded industry standards. Due diligence suggested that greater safety and higher long-term performance could be achieved by using a direct-burial compression-style grounding system. After determining the components required for various applications, such as PTC base stations, wayside upgrades and telecom maintenance, Anixter stocked and kitted the products in its local distribution center. Complete kits were readily available and shipped to the appropriate job site in a just-in-time fashion. Anixter also facilitated creation of training modules for the customer's telecom and C&S workers as part of their continuing education efforts.



**ANIXTER**



**The Right  
Products Where  
and When You  
Need Them.**

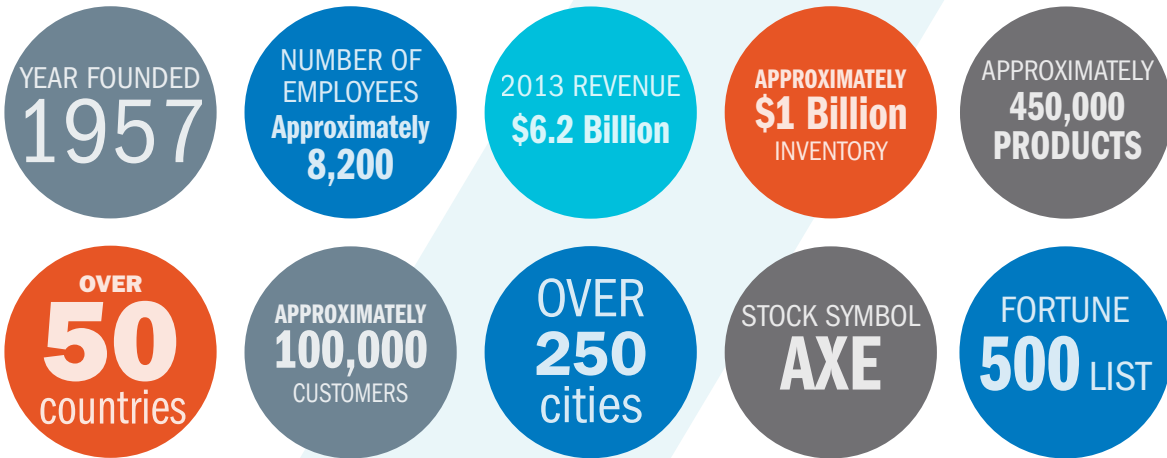
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## Association and Committee Memberships

- Telecommunications Industry Association (TIA)
- International Organization for Standardization (ISO)
- Institute of Electrical & Electronics Engineers (IEEE)
- ONVIF
- Building Industry Consulting Services International (BICSI)
- Security Industry Association (SIA)
- Control Systems Integrators Association (CSIA)
- Railway Systems Suppliers, Inc. (RSSI)
- Association for Passive Optical LAN (APOLAN)

## Technical Certifications

- ASIS CPP (Certified Protection Professional)
- More than 90 Registered BICSI RCDDs
- PSPs (Physical Security Professional Certification)
- CCNAs (Cisco Certified Network Associate)



**About Anixter:** [anixter.com/aboutus](http://anixter.com/aboutus)  
**Legal Statement:** [anixter.com/legalstatement](http://anixter.com/legalstatement)

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