At-a-Glance

Securely and Reliably Connect All Areas of Your Business

In San Francisco, an integrated, Internet of Things (IoT)-based network with parking, garage, and roadway sensors reduced parking search time by 43 percent. And parking citations dropped by 23 percent.

On the Aegean Motorway in Greece, IoT sensors deliver real-time traffic and weather information, speeding emergency response and improving safety and travel time.

The Internet of Things is driving efficiencies and innovation in industries ranging from energy and utilities to manufacturing, public safety, and transportation. But to realize the potential of IoT, you need reliable, high-quality, high-speed network connections to collect and transmit data from a multitude of deployed devices.

The Cisco® industrial router portfolio includes a range of compact, ruggedized modular platforms on which you can build a highly secure, reliable, and scalable communications infrastructure. These products are certified to meet harsh environmental standards. They support a variety of communications interfaces, such as Ethernet, serial, fiber, cellular, WiFi, Wi-SUN RF mesh, and others.

The Cisco Industrial Router Portfolio

The complete line of industrial routers include:

**Cisco 1000 Series Connected Grid Routers:** Rugged routers designed for harsh environments, like those found in the utilities industry. Ideal for integrating multiple applications, such as advanced metering infrastructure (AMI), distribution automation, distributed energy resources (DER), street lighting, and remote workforce automation, onto a single platform.

**Cisco 2000 Series Connected Grid Routers:** Highly secure, reliable routers for the energy and utilities industries positioned for SCADA monitoring for transmission and distribution.

**Cisco ASR 903 Aggregation Services Routers:** Full-featured, modular, small-footprint, and fully redundant aggregation platforms. They offer service flexibility and deliver Layer 2, IP, and Multiprotocol Label Switching (MPLS) transport for advanced Layer 2 VPN, Layer 3 VPN, and multicast services.

Benefits

- **Reduce downtime and maintain continuous access** to applications, data, and content with highly reliable platforms
- **Prioritize operational traffic** from SCADA networks and allocate network bandwidth using advanced quality-of-service features
- **Lower operational costs** and simplify new device deployments with zero-touch provisioning; manage, monitor, and update devices remotely
- **Improve security** with cyber and physical networkwide security policies, secure VPNs, and stateful firewalls, and gain unparalleled visibility and control
- **Improve application resilience** by distributing intelligence across the network using Cisco IOx, an open, extensible environment for hosting applications
- **Boost efficiency and better decision making** by tracking and monitoring equipment, assets, workers, and important business system components

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Cisco 500 Series WPAN Industrial Routers: Wi-SUN RF Mesh ruggedized router provide unlicensed 915-MHz, ISM-band wireless personal-area network (WPAN) communications that enables IoT applications, including smart metering, distribution automation, street lighting, and remote supervisory control and data acquisition (SCADA) monitoring.

Cisco 809 Industrial Integrated Services Routers: Very compact cellular (3G and 4G/LTE) industrial routers for remote deployment in various industries. They enable reliable and secure cellular connectivity for remote asset monitoring and machine-to-machine (M2M) solutions such as distribution automation, pipeline monitoring, and roadside infrastructure monitoring.

Cisco 819 Integrated Services Routers: Compact, hardened, form factor cellular (3G, WLAN, or 4G options) routers that allow businesses to deploy secure 3G WWAN services and applications, like ATMs, wireless kiosks, digital signage, and more.

Cisco 829 Industrial Integrated Services Routers: Highly ruggedized compact cellular (3G and 4G LTE with GPS and dual SIM) and WLAN (2.4/5GHz) industrial routers supporting for scalable, reliable, and secure management of fleet vehicles and mass transit applications.

Cisco 910 Industrial Router: Highly adaptable routers that you can easily integrate with third-party solutions to deliver smart city applications, such as environmental monitoring, smart parking, smart metering, and more.

Capabilities for Rugged, Industrial Settings
We designed the Cisco industrial routers to withstand harsh operating environments and to offer high-speed connectivity with the scale to handle thousands of devices. Key features include:

- Design for industrial applications, including extended environmental, shock, vibration, and surge ratings; a complete set of power input options; convection cooling; and DIN rail, 19-inch rack or wall mounting.
- Advanced security such as Dynamic Multipoint VPN, stateful firewall, and access control lists to provide multi-layered security architecture across different places in the network.
- Diverse modular interfaces (Ethernet, T1/E1, 3G and 4G LTE cellular, asynch/synch, serial, and others) to interface and backhaul for different existing infrastructures.
- Advanced quality-of-service (QoS) capabilities to support mission-critical communications, such as substation communications or SCADA.
- Cisco IOx, an open, extensible environment for hosting applications at the network edge for distributed intelligence.
- Easy and user-friendly deployment, setup, operation, and management using network management tools such as IoT Field Network Director and Industrial Operations Kit.

Next Steps
To learn more about the Cisco industrial router portfolio, visit: [www.cisco.com/go/iot](http://www.cisco.com/go/iot).