Cisco Industrial Ethernet Switching Portfolio

Resilient, Easy-to-Deploy Switches Enable Scaling Internet of Things

A manufacturer sees its build-to-order cycle times improve by up to 25 percent with a more flexible, integrated plant and IT infrastructure. A transportation department with sensors deployed throughout its track and train system is alerted to a malfunction on its track-signaling system days before it can cause a serious accident. And an electrical utility identifies fault locations and restores service 20 percent faster than before.

This is what’s possible when Cisco Industrial Ethernet (IE) switches are deployed as part of an integrated, converged information technology (IT) and operational technology (OT) network. One that also prepares you to capture new opportunities and achieve greater efficiencies as your network expands dramatically with end devices and sensors in the age of the Internet of Things (IoT).

According to IDC, “As of the end of 2013, there were 9.1 billion IoT units installed, which we expect to grow at a 17.5% CAGR to 28.1 billion in 2020.”

The ruggedized Cisco IE switches form the networking infrastructure foundation for a wide array of technology industrial applications and processes, such as:

• Factory automation
• Intelligent transportation systems
• Substation automation
• Mining operations
• Oil and gas refining and delivery systems
• Surveillance and remote-monitoring functions

Industrial Ethernet Switches: Resilient, Secure, and Zero-Touch Deployment

Cisco IE switches blend reliability with high availability technology to help you quickly scale your rapidly increasing network endpoints and applications while maintaining network-wide resilience. Cisco’s network-as-a-sensor approach integrates cybersecurity throughout the network, maximizing security visibility and control and providing valuable insights into traffic flows, while continuously monitoring all network activity.

1 IDCWorldwide and Regional Internet of Things (IoT) 2014–2020 Forecast: A Virtuous Circle of Proven Value and Demand, doc #248451, May 2014
Cisco IE Ethernet switch models include:

- **Cisco IE 1000 Series Switches**: Very compact fixed lightly managed switching platform that includes various models providing up to 10 Ethernet interfaces including GE fiber uplinks options and multiple PoE/PoE+ ports.

- **Cisco IE 2000 Series Switches**: Compact fixed switching platform available in two form factors – DIN rail mounting or wall or pole mounting qualified for Ingress Protection 67 (Cisco IE 2000 IP67 model). The 2000 models offer up to 16 10/100Base-T, or Fast Ethernet, interfaces, and two Gigabit Ethernet interfaces. The IE 2000U is designed for specific electrical utility applications.

- **Cisco IE 3000 Series Switches**: Multilayer switching modular platform that includes a main module and expansion modules so you can scale the configuration up to 26 Ethernet interfaces. A fixed 19-inch, one-rack unit model is also available, the Cisco IE 3010 Series Switches.

- **Cisco 2500 Series Connected Grid Switches**: A series of 19-inch, one-rack unit fixed-configuration switches designed for electrical utility applications.

- **Cisco IE 4000 Series Switches**: Industry’s first DIN rail-mounted 40 Gigabit Ethernet switch platform that offers high bandwidth and low latency. Available in various models with up to 20 Gigabit Ethernet interfaces.

- **Cisco IE 4010 Series Switches**: 19-inch, one-rack unit switches with 28 GE interfaces and up to 24 PoE/PoE+ enabled ports.

- **Cisco IE 5000 Series Switches**: A 19-inch one-rack unit multi-10 Gbps aggregation switch equipped with 24 Gigabit Ethernet ports plus 4 10-Gigabit or 4 1-Gigabit ports, making it ideal for the aggregation and/or backbones in large-scale industrial networks.

**Next Steps**

Cisco has the infrastructure expertise and strategic partnerships needed to converge business IT and operational technology, spur faster decision making, and enable new business models, without compromising reliability, security, or network response time. To find out more about the Cisco Industrial Ethernet switch series, visit [www.cisco.com/go/ie](http://www.cisco.com/go/ie) and contact your Cisco representative.