Cisco IC3000 Industrial Compute Gateway

The Cisco® IC3000 Industrial Compute Gateway transforms businesses by capturing data from legacy assets and deriving business intelligence at the network edge.

Product overview

The Cisco IC3000 Industrial Compute Gateway extends data intelligence to the edge of the Internet of Things (IoT) network to seamlessly bridge the intent-based network and IoT data fabric in a complete end-to-end solution for applications such as intelligent roadways, smart factories, and so on.

The IC3000 gateway is built with the same industrial success as the Cisco Industrial Ethernet 4000 Series Switches hardware design, but is dedicated to bringing intelligence to the edge. It has two Ethernet ports and two Small Form-Factor Pluggable (SFP) fiber ports in a DIN rail-mounted, ruggedized appliance that provides the widest range of applications for the harshest and most demanding industrial environments.

The IC3000 gateway delivers the next level of computational power, up from IR 809 and IR 829, for applications that demand more processing power for data analytics and real-time critical decision making at the edge of the IoT network. It enables smart roadway applications such as traffic pattern detection, hazardous weather warnings, and road condition detection. With built-in interfaces that support a wide range of industrial standards and a simple development toolkit, the IC3000 enables application developers to unleash their creativity in creating apps that harness the wealth of IoT data.

The Cisco IC3000 Industrial Compute Gateway is fully supported by Cisco IoT Field Network Director for zero-touch deployment, lifecycle management, application management, monitoring, and troubleshooting securely at scale from a single pane of glass. With its support for the Cisco Kinetic™ Edge and Fog Processing Module, which computes data in distributed nodes, it seamlessly integrates with the Cisco Kinetic Data Control Module, which moves the right data from a diverse set of devices to the right cloud-based applications at the right time, according to policy set by the data owner.

Features and benefits

Feature	Benefit
Zero-touch provisioning	Reduces the cost of deploying the IoT edge infrastructure
Application development tools	Provides flexibility for developers to use any programming language or operating system, powered by Cisco IOx
Device and app lifecycle at scale	Enables IT and OT admins to easily manage, monitor, troubleshoot, and upgrade IoT applications centrally using Cisco IoT Field Network Director
End-to-end security	Prevents malicious attacks on mission-critical IoT infrastructure with enterprise-class security

Prominent feature/Differentiator/Capability

End-to-end security

Security is essential to protecting the intellectual property and continuity of your business. As you undertake the digital transformation of your key mission-critical assets and processes, you need to guarantee security while maintaining the flexibility to deploy applications where they derive the most value.

The Cisco IC3000 Industrial Compute Gateway combines hardware and software security features to address these requirements:

- Tamper-proof hardware: The Anti-Counterfeit Technology2 chip guarantees that you are using genuine Cisco hardware.
- Secure application hosting environment: The Cisco IC3000 uses a secure boot mechanism to load only the genuine Cisco Linux Kernel.
- Secure management plane: Hardware certificate-based authentication and a secure communication channel are used between Cisco IoT Field Network Director and the Cisco IC3000. Customers can also bring their own certificates.
- Application integrity: Application signing and verification occur before deployment to the IC3000, plus the IC3000 uses application container isolation.
- Authentication, Authorization, and Accounting (AAA): Role-based access control, authentication using RADIUS and Lightweight Directory Access Protocol (LDAP), and audit trails.

Licensing

Customers can order IC3000 which includes perpetual license for the Cisco IC3000, subscription-based licenses for Cisco Field Network Director, and Power supplies.

IC3000 PID			
IC3000-2C2F-K9	Perpetual		One-time Payment
IOTFND-SOFTWARE-K9	1, 3, 5-year license		Pay monthly, quarterly, annually, with pre-payment options
PWR-IE50W-AC=			Power Supply option1
PWR-IE50W-AC-IEC=			Power Supply option2, with choice of power cords

Product specifications

Table 1. Cisco IC3000 Industrial Compute Gateway model

Product number	Copper 10/100/1000 ports	SFP fiber ports
IC3000-2C2F-K9	2	2

Table 2. Supported Cisco ruggedized SFP ports

Product number	Type
GLC-SX-MM-RGD=	1000 BASE-SX ruggedized
GLC-LX-SM-RGD=	1000 BASE-LX/LH ruggedized
GLC-FE-100FX-RGD=	100 BASE-FX ruggedized
GLC-FE-100LX-RGD=	100 BASE-LX ruggedized

Table 3. Physical product specifications

Description	Specification
Hardware	• 4-core Intel Rangeley (industrial temperature [I-temp]) • 8-GB DRAM (soldered down) • 16-GB onboard flash memory • 128-GB mSATA • SD card slot • Mini-USB connector for console • RJ-45 traditional console connector • Dedicated 10/100/1000 management port • Hardware-based anti-counterfeit, anti-tamper chip • Factory reset option
Alarm	• Alarm I/O: Two alarm inputs to detect dry contact open or closed, one Form C alarm output relay
Dimensions, (H x W x D)	• 5.2 in (13 cm) (H) x 4.4 in (11.2 cm) (W) x 6.3 in (16 cm) (D)
Weight	• 4.2 lb (1.9 kg)
Power supply and ranges	• Dual internal DC • Nominal ± 12 VDC, 24 VDC, or 48 VDC • Maximum range: 9.6 VDC to 60 VDC • Power consumption: 24 watts
MTBF – Mean Time Between Failure	• IC3000-2C2F 376,580 hours

Table 4. Compliance specifications

Type	Standards
Electromagnetic emissions	FCC 47 CFR Part 15 Class A EN 55022A Class A VCCI Class A AS/NZS CISPR 22 Class A CISPR 11 Class A CISPR 22 Class A ICES 003 Class A CNS13438 Class A KN22
Electromagnetic immunity	EN55024 CISPR 24 AS/NZS CISPR 24 KN24

Type	Standards
	EN 61000-4-2 Electro Static Discharge EN 61000-4-3 Radiated RF EN 61000-4-4 Electromagnetic Fast Transients EN 61000-4-5 Surge EN 61000-4-6 Conducted RF EN 61000-4-8 Power Frequency Magnetic Field EN 61000-4-9 Pulse Magnetic Field EN 61000-4-18 Damped Oscillatory Wave EN-61000-4-29 DC Voltage Dips and Interruptions
Industry standards	EN 61000-6-1 Immunity for Light Industrial Environments EN 61000-6-2 Immunity for Industrial Environments EN 61000-6-4 Emission Standard for Industrial Environments EN 61326 Industrial Control EN 61131-2 Programmable Controllers IEEE 1613 Electric Power Stations Communications Networking IEC 61850-3 Electric Substations Communications Networking NEMA TS-2 EN 50121-3-2 EN 50121-4 EN 50155
Safety standards and certifications	**Information technology equipment:** UL/CSA 60950-1 EN 60950-1 CB to IEC 60950-1 with all country deviations NOM to NOM-019-SCFI (through partners and distributor) **Industrial floor (control equipment):** UL 508 CSA C22.2, No 142 UL/CSA 61010-2-201 UL/CSA 61010-1 **Hazardous locations**[*] UL 121201 (Class I, Div 2 A-D) CSA C22.2 No 213 (Class 1, Div 2 A-D) UL/CSA 60079-0, -15 IEC 60079-0, -15 (IECEx test report, Class I, Zone 2, group II gases) EN 60079-0, -15 ATEX certification (Class I, Zone 2, group II gases) [*]Must meet deployment requirements, such as with IP 54 enclosure described in the following document

Warranty information

Please see the warranty information:

WARR-5YR-LTD-HW

WARR-5YR-LTD-HW In French

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- Minimizing network downtime
- Supplementing your existing support staff so they can focus on additional productive activities

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Custom call to action

For more information about the Cisco IC000 Industrial Compute Gateway, visit https://www.cisco.com/go/ic3000 or contact your local account representative.

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