



Digi IX40

5G edge computing industrial IoT cellular router solution, purpose-built for Industry 4.0

Digi IX40 is a 5G edge computing industrial IoT router solution to empower rapid processing, analysis, and integration of industrial asset data on 5G public and private cellular networks — easy to deploy and centrally managed via **Digi Remote Manager**® (Digi RM), which is included in your **Digi 360** solution. (See page 2.)

Purpose-built for **Industry 4.0**, Digi IX40 supports the 5G connectivity and edge intelligence needed to enable numerous use cases ranging from predictive maintenance and asset monitoring to machine learning and advanced robotics. It seamlessly connects multiple machines, whether wired or wireless, in the most demanding environments, optimizing integration of cloud-delivered operational technology (OT) services with information technology (IT) to streamline complex operations and scale IT infrastructure.

With its all-in-one design, strong computing power and integrated memory, Digi IX40 offers substantial capabilities for real-time data processing, edge computing and advanced precision while reducing complexity and total cost of ownership. **Digi Containers** facilitate potent and cost-effective applications, providing additional flexibility and scalability for Industry 4.0, energy, smart cities and other uses.

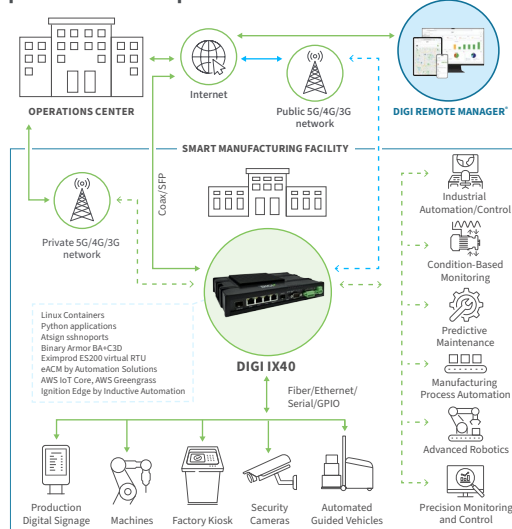
The Digi IX40 solution offers **FirstNet Capable**™ models designed to meet the demands of critical applications where reliability is essential for industrial use cases and emergency response. Additional use cases include manufacturing process automation, precision monitoring and control, industrial automation, utilities and traffic management.

Gain critical insights and manage your network with Digi RM — the cloud-based command center for your deployment. Digi RM also provides secure terminal access for out-of-band management of edge devices via serial port and command-line interface.

Key features, benefits and applications

- Global 5G and LTE support and certification on major carriers
- **Digi Containers** to enable powerful, cost-efficient applications
- Integrated industrial edge computing capabilities for hosting containerized applications and custom solutions
- Support for CBRS and global private 5G networking deployments
- Ethernet, SFP, serial, I/O and Modbus bridging
- Extremely resilient cellular connection through Digi's patented **SureLink**®, VRRP+ protocol and dual SIM slots
- GNSS receiver supporting GPS, GLONASS, BeiDou and Galileo
- License-free enterprise software: VPN, firewall, logging and authentication
- Meets U.S. government **FIPS 140-2** cybersecurity standard
- Includes the **Digi 360** solution with warranty, customer care and **Digi Remote Manager** cloud management, enabling easy setup, mass configuration and management
- Rugged enclosure with options for DIN rail or shelf mounting
- **Digi WAN Bonding** for WAN aggregation and immediate failover

Application example



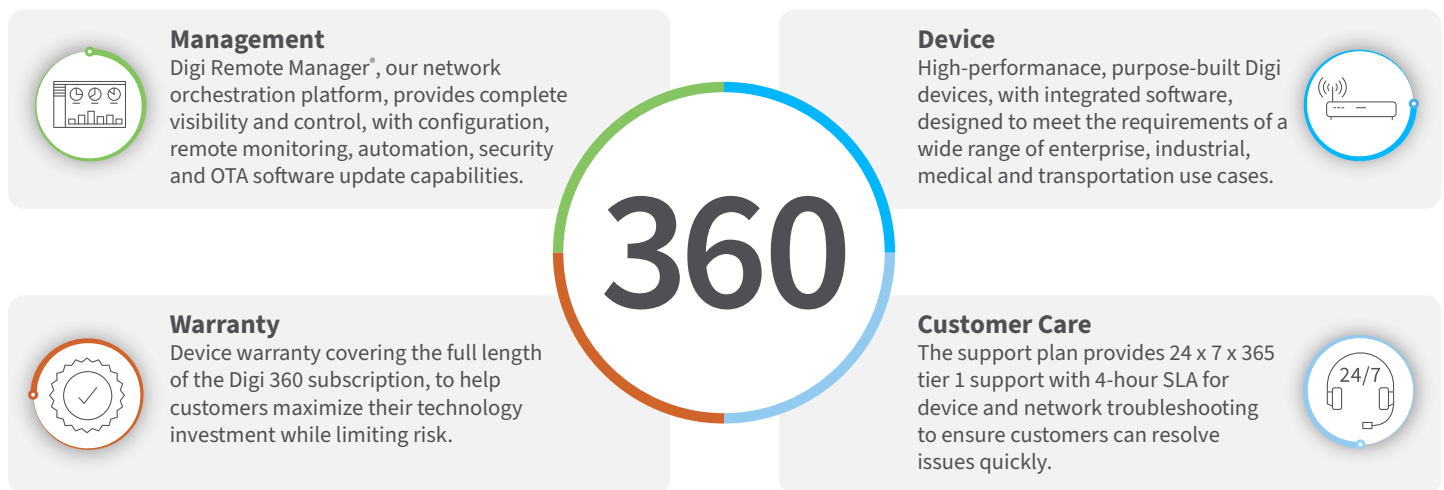
Related Digi industrial IoT software and solutions



DIGI IX40 WITH DIGI 360

Digi 360

Digi 360 offers comprehensive IoT packaged solutions, including purpose-built devices, software and services to help customers optimize their IoT investments and maximize ROI. These solutions are designed to simplify IoT complexity, and ease the challenges enterprises face in configuring, deploying and managing their IoT initiatives. Your Digi 360 subscription is included with the purchase of **Digi IX40**, complete with Digi Remote Manager, warranty and customer care. [Learn more at digi.com/digi360](https://www.digi.com/digi360).



Value-Added Services

Digi Containers



Digi Remote Manager enables deployment of custom applications via containers

Digi Containers simplify and centralize the process of building, deploying and running custom applications on devices managed with **Digi Remote Manager** as the central portal. Containers with custom programs or Python applications can be loaded via Digi RM on any device running the **Digi Accelerated Linux** operating system (DAL OS).

As an add-on service to Digi Remote Manager, Digi Containers are a powerful capability implemented via Lightweight Linux Containers (LXC). LXC tools enable developers to package up a custom application, with its dependencies and configuration, into a lightweight, portable bundle that shares only the running kernel with the host device.

Digi WAN Bonding



Resilient connectivity and maximum performance across multiple connections

Digi WAN Bonding combines multiple connections into a seamless and resilient connectivity solution that ensures optimal performance and maximum uptime anywhere around the world.

Digi devices provide a range of connectivity options including cellular failover with features such as **Digi SureLink**, policy-based routing and interface bonding. These features are excellent at preventing any external network failures from causing downtime.

*Digi Containers and Digi WAN Bonding are available as value-added services with Digi Remote Manager.

DIGI IX40 WITH DIGI 360

Digi 360 Management and Security

Digi Accelerated Linux (DAL OS)

DAL OS is Digi's standard operating system integrated into Digi **Enterprise (EX)**, **Industrial (IX)** and **Transportation (TX)** routers, **console servers** and **USB-connected devices**. Developed for speed and simplicity, DAL OS enables advanced capabilities that support today's demanding applications. [Learn more at digi.com/DAL](https://www.digi.com/DAL).

Digi Remote Manager (Digi RM)

Digi Remote Manager is a proven technology platform that brings networks to the next level, empowering networks — and the people who manage them — to work smarter. Digi RM transforms a multitude of dispersed IoT devices into a dynamic, intelligent network. It's easy to deploy, monitor and diagnose thousands of mission-critical devices from a single point of command on a desktop, tablet or phone. All the while, software-defined security diligently safeguards your entire Digi ecosystem. [Learn more at digi.com/digi-remote-manager](https://www.digi.com/digi-remote-manager).

Digi RM infrastructure and security

- Hosted in a commercial-grade cloud server environment that meets SOC 1°, SOC 2° and SOC 3° standards
- Superior availability, operating at 99.9% or greater uptime
- Open APIs are available to support application development
- Comprehensive security controls to protect your data
- Member of the Center for Internet Security® (CIS®)
- Enables compliance with security frameworks like ISO27002, HIPAA, NIST and more
- Earned Skyhigh's CloudTrust™ Program highest rating of Enterprise-Ready

Digi TrustFence

The Digi TrustFence device security framework simplifies the process of securing multiple connected devices.



Designed for mission-critical applications, **Digi TrustFence**® enables users to easily integrate device security, device identity, and data privacy capabilities into product design.

Digi TrustFence security for IoT devices is designed to grow and adapt with new and evolving threats.

[Learn more at digi.com/trustfence](https://www.digi.com/trustfence).



DAL OS and Digi RM capabilities

- **DAL OS with Digi Remote Manager:** Remote console access, configuration templates, HTTP proxy, device event logs, configurable maintenance window
- **Serial:** Modbus, serial-over-TCP/UDP
- **Customization:** Python 3, Python pip, PyCharm integration, shell scripting, containers, MQTT client
- **Troubleshooting:** iPerf and nttcp bandwidth testing, Find Me tool
- **GNSS:** NMEA/TAIP location forwarding to servers, geo-fencing
- Activate, monitor and diagnose your mission-critical devices through a single portal
- Schedule key operations — including firmware updates and file management — on a single device or on a group of devices, keeping your network functionality up-to-date and maintaining compliance standards
- Manage edge devices out-of-band via console terminal access
- Monitor equipment health and connectivity across deployments
- Create detailed reports and real-time alerts for specified conditions
- Integrate device data through open APIs to gain deeper insights and control with third-party applications
- Report and alert on performance statistics, including connection history, signal quality, latency, data usage and packet loss

Built-in Security. Delivered.

- **Secure boot:** Programs and code running on the device are validated to be from an approved source or manufacturer
- **Protected hardware ports:** Internal and external I/O ports are hardened and access-controlled to prevent unwanted intrusion
- **Authentication:** Data authentication and device identity management options, with updated user and password settings
- **Secure connections:** Latest encryption protocols for data in motion and over-the-air (OTA) transmissions to ensure integrity
- **Ongoing monitoring and support:** Ongoing threat measurement and monitoring services, with external security audits

DIGI IX40 WITH DIGI 360

Specifications



Manage and configure Digi IX40
with Digi Remote Manager

SPECIFICATIONS

DIGI IX40 WITH DIGI 360*

WIRELESS INTERFACES

CELLULAR / WWAN**

IX40-05: 5G NSA, 5G SA***, 4G LTE-ADVANCED PRO CAT 19	5G NR bands: n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48 CBRS, n66, n71, n75, n76, n77, n78, n79, C-band 4G LTE-Advanced Pro bands: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14 FirstNet®, B17, B20, B25, B26, B28, B29, B30, B32, B38, B40, B41, B42, B43, B46, B48 CBRS, B66, B71 3G bands: B1, B2, B3, B4, B5, B6, B8, B19
IX40-04: 4G LTE-ADVANCED PRO CAT 12, 3G HSPA+	4G LTE-Advanced Pro bands: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B38, B39, B40, B41, B42, B43, B48 CBRS, B66, B71 3G bands: B1, B2, B4, B5, B6, B8, B9, B19
CONNECTORS	(2) or (4) 50 Ω SMA center pin: female
SIM SLOTS	(2) SIM Nano-SIM (4FF) holders
SIM SECURITY	SIM slot cover plate included

GNSS

TECHNOLOGY	GNSS Gen 9 with band L1 LNA for passive antenna use
ANTENNA	Upper L-band: GPS L1; Glonass G1; Beidou B1; Galileo E1 IX40-04: supports passive GNSS antennas rated at 1.5 – 3 dBi only IX40-05: supports passive GNSS antennas rated at 1.5 – 3 dBi or active antennas with 7.5 – 26 dB gain
PROTOCOL	NMEA 4.11 and TAIP
CONNECTOR	(1) 50 Ω SMA center pin: female

WIRED INTERFACES

ETHERNET

PORTS / CONNECTOR	(4) RJ-45; 10/100/1000 Mbps Base-T (auto-sensing); IEEE 802.3; configurable as WAN or LAN
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I/O

PORTS / CONNECTOR	(2) Digital input/outputs; (2) analog inputs (0 - 10 V; 4 - 20 mA; 12-bit resolution)
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SFP

PORTS / CONNECTOR	(2) 1 Gb capable SFP sockets
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SERIAL

PORTS / CONNECTOR	(1) RS-232/422/485; DB-9 male (DTE)
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SOFTWARE AND MANAGEMENT*

REMOTE MANAGEMENT	Digi Remote Manager (cloud based); SNMP v1/v2c/v3 (user installed/managed), SMS
LOCAL MANAGEMENT	Web UI (HTTPS); CLI (SSH, serial)
MANAGEMENT TOOLS	SFTP, SCP; protocol analyzer with PCAP for Wireshark; event logging with Syslog

PROCESSOR

APPLICATION PROCESSOR	1.6 GHz quad-core i.MX 8M Plus ARM® Cortex®-A53 processor
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MEMORY

RAM / FLASH	1 GB / 8 GB
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PHYSICAL

DIMENSIONS	234 mm x 154 mm x 41 mm (9.21 in x 6.06 in x 1.61 in)
WEIGHT	1.14 kg (2.51 lb)
STATUS LEDS	Power, WWAN, Ethernet (link, activity)
ENCLOSURE / RATING	Glass-filled polyphenylene sulphide; IP30 -40 °C to 85 °C (-40 °F to 185 °F)

*Includes the [Digi 360](#) solution for [Digi IX40](#) (1-year) with [Digi Remote Manager](#), [warranty](#) and [customer care](#).

**Visit digi.com/resources/certifications for latest approvals and updates.

***Contact your network operator regarding 5G SA support on their network. Digi IX40-05 supports up to 2xCC (2x 5G SA Carrier Components).

DIGI IX40 WITH DIGI 360

Specifications and Technologies



Manage and configure Digi IX40
with Digi Remote Manager

SPECIFICATIONS	DIGI IX40 WITH DIGI 360*
POWER REQUIREMENTS	
POWER INPUT	12 – 30 VDC, reverse polarity protection
POWER CONNECTOR	Screw down removable terminal block
POWER CONSUMPTION	4.5 W (light traffic), 8 W (peak data), 3.5 W (idle traffic)
ENVIRONMENTAL	
OPERATING TEMPERATURE	–40 °C to 75 °C (–40 °F to 167 °F); reduced cellular performance may occur above 70 °C (158 °F)
STORAGE TEMPERATURE	–45 °C to 85 °C (–49 °F to 185 °F)
RELATIVE HUMIDITY	0% to 95% (non-condensing) at 25 °C (77 °F)
APPROVALS**	
CELLULAR	PTCRB, AT&T, FirstNet Capable™, T-Mobile, Verizon
SAFETY / SECURITY	IEC 62368-1, CB scheme, FIPS 140-2
EMISSIONS / IMMUNITY	FCC Part 15 Subpart B, ISSED, CE, RED, UKCA
WARRANTY***	
PRODUCT WARRANTY	1-year

* Includes the **Digi 360** solution for **Digi IX40** (1-year) with **Digi Remote Manager**, **warranty** and **customer care**.

**Visit digi.com/resources/certifications for latest approvals and updates.

***Product warranty can be extended with **Digi 360** extensions or renewals.

ENTERPRISE SOFTWARE	DESCRIPTION
PROTOCOL SUPPORT	HTTPS, TLS, SCP (client and server), SFTP, SNMP (v3), SSH, Telnet and CLI for web management; remote management via Digi Remote Manager ; protocol analyzer, ability to capture PCAP for use with Wireshark; DynDNS, Dynamic DNS client compatible with No-IP/DynDNS; Captive portal, Intelliflow; Nagios, DNS server, NTP server, Multicast, mDNS, IPerf
SECURITY / VPN	IP filtering, stateful inspection firewall with scripting, address and port translation; VPN: IPSec with IKEv1, IKEv2, NAT Traversal; SSLv3, FIPS 197, Open VPN client and server; L2TP; VPN tunnels; cryptography: SHA-1, MD5, RSA; encryption: DES, 3DES and AES up to 256-bit (CBC mode for IPSec); authentication: RADIUS, TACACS+, SCEP for X.509; certificates; content filtering (via 3rd party); MAC address filtering; VLAN support
ROUTING	IP pass-through; NAT, NAPT with IP port forwarding; Ethernet bridging; GRE; multicast routing; routing protocols: PPP, PPPoE, RIP (v1, v2) OSPF, BGP, iGMP routing (multicast); IP failover: VRRP, VRRP+TM; automatic failover/failback to second GSM network/standby APN; Digi SureLink
EMISSIONS / IMMUNITY	DHCP; Dynamic DNS client compatible with No-IP/DynDNS; QoS via TOS/DSCP; Modbus UDP/TCP to serial; Modbus bridging for connecting diverse field assets

*For a comprehensive list of operating system features, please visit digi.com/solutions/by-technology/dal-operating-system/features.

Featured Technologies



*FirstNet® and the FirstNet logo are registered trademarks and service marks of the First Responder Network Authority. All other trademarks are the property of their respective owners.

DIGI IX40 WITH DIGI 360

Product Photos

Digi IX40 Photos



Digi IX40 — front



Digi IX40 — back



DIGI IX40 WITH DIGI 360

Part Numbers

PART NUMBERS	DIGI IX40 WITH DIGI 360*
IX40-05	Digi IX40 — 5G with LTE-Advanced Pro Cat 19 4x4 and 3G fallback, quad Ethernet, RS-232/422/485, GNSS, FirstNet Capable™
IX40-04	Digi IX40 — 4G LTE-Advanced Pro Cat 12 with 3G fallback, quad Ethernet, RS-232/422/485, GNSS

*Includes [Digi 360](#) solution for [Digi IX40](#) (1-year) with [Digi Remote Manager](#), [warranty](#) and [customer care](#).

PART NUMBERS	AVAILABLE ACCESSORIES**
76002147	Digi IX40 5G Industrial Starter Kit — includes 30 W power supply and 4 wideband cellular antennas
76002148	Digi IX40 LTE Industrial Starter Kit — includes 30 W power supply and 2 wideband cellular antennas
76002093	DIN rail mounting bracket kit

**Sold separately, unless otherwise noted.

PART NUMBERS	DIGI 360 EXTENSIONS AND RENEWALS
DIGI360-IX40-EXT-2YR	Digi 360 extension for two additional years for Digi IX40
DIGI360-IX40-EXT-4YR	Digi 360 extension for four additional years for Digi IX40
DIGI360-IX40-REN-1YR	Digi 360 renewal for one additional year for Digi IX40
DIGI360-IX40-REN-3YR	Digi 360 renewal for three additional years for Digi IX40
DIGI360-IX40-REN-5YR	Digi 360 renewal for five additional years for Digi IX40

PART NUMBERS	VALUE-ADDED SERVICES
DIGI-RM-PRM-CS	Digi Containers subscription — 1-year subscription
DIGI-SRV-WB-TIER1-1YR	Digi WAN Bonding subscription with 100 Mbps max throughput — 1-year subscription
DIGI-SRV-WB-TIER2-1YR	Digi WAN Bonding subscription with 200 Mbps max throughput — 1-year subscription
DIGI-SRV-WB-TIER3-1YR	Digi WAN Bonding subscription with 1 Gbps max throughput — 1-year subscription

For more information, please visit digi.com.



For more information about Digi IX40,
visit digi.com/ix40.

877-912-3444 | 952-912-3444

