DIGI EX50

5G go-to enterprise solution for primary or backup wireless connectivity

Business has forever changed with millions of employees working remotely. The Digi EX50 5G cellular router with 5G/4G dual connectivity provides your business with a fast, secure and resilient enterprise-grade network that changes the work-from-anywhere experience for good.

Digi EX50 is an ideal choice for your business as you adapt to the new normal. The small form factor of Digi EX50 makes it the 5G go-to enterprise solution where the work is happening: at the headquarters for backup connectivity, at the branch for cost-optimized primary connectivity, or at the IT-managed home office for secure, all-in-one connectivity with Wi-Fi.

Part of Digi enterprise solutions, this router comes with industry-leading software, including Digi Accelerated Linux (DAL OS), Digi TrustFence® security framework, and the Digi Remote Manager® configuration and management platform. These tools deliver security, reliability and system-wide management of your entire infrastructure.

Dual-SIM slots provide carrier flexibility and wireless failover, and with 4G LTE and 3G fallback, you're covered in areas where 5G is not yet deployed. The latest generation Wi-Fi 6 radios in the Digi EX50 router operate simultaneously for higher speed, capacity, quality of service and range than previous Wi-Fi products. Dual 2.5 Gigabit Ethernet ports break the Gigabit barrier and deliver 5G speeds for future-ready networks.

Digi EX50 is ideal for indoor use-cases with an extended operating temperature range, such as smart factories, warehouses, construction sites or infrastructure sheds. Digi EX50 also supports CBRS, C-band and FirstNet® for additional flexibility and use-cases including critical communications.

An available serial port with Cisco straight-through pinout enables secure out-of-band management of other on-site equipment. To simplify installation, Digi EX50 can be directly powered by an active PoE+ switch or a DC IN barrel connector as the primary or backup power source for redundancy.
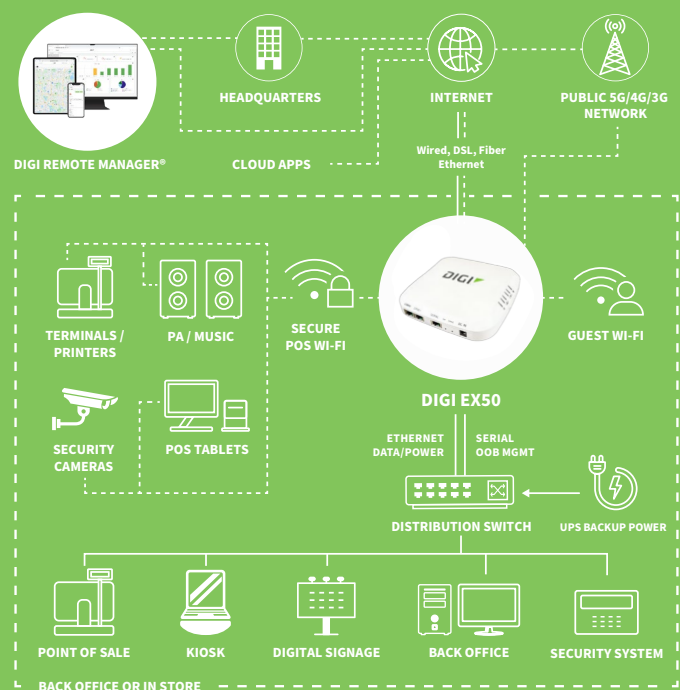
FEATURES AND BENEFITS

– Future-proof and ready for new use cases such as 5G network slicing, SD-WAN, 4K/8K cameras and AR/VR
– High-speed 5G NR and 4G LTE-Advanced Pro Cat 20 dual connectivity CBRS, C-band, FirstNet Capable™ cellular radio
– Enterprise-grade Wi-Fi 6 and dual 2.5 Gigabit Ethernet
– Active PoE+ switch or DC IN for primary and backup power
– Extended operating temperature range for wider use-cases
– Standards-based Power over Ethernet simplifies installation
– Multiple mounting options and accessories
– Serial port for remote, out-of-band management
– Securely deploy, monitor and control devices with Digi Remote Manager®
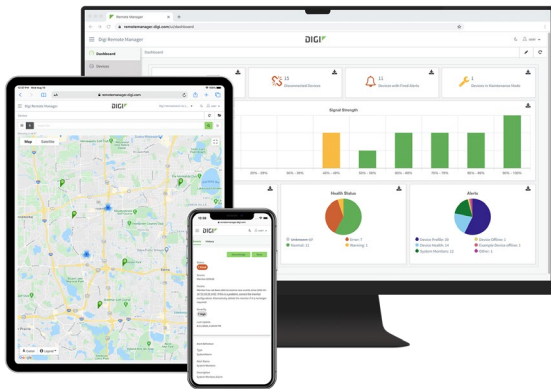
APPLICATION EXAMPLE

RELATED PRODUCTS

Digi EX12   Digi EX15   Digi IX10   Digi IX20   Digi Remote Manager

DIGI ACCELERATED LINUX (DAL OS) AND DIGI REMOTE MANAGER

CAPABILITIES

- DAL OS with Digi Remote Manager: remote console access, Profile Configuration Manager, HTTP proxy, device event logs, configurable maintenance window
- I/O ports: pulse counter, custom Digi device Python library
- Serial: Digi RealPort®, Modbus, serial-over-TCP/UDP
- Customization: Python 3, Python pip, PyCharm integration, shell scripting, containers, MQTT client
- Troubleshooting tools: iPerf and nuttcp bandwidth testing, Find Me tool
- GNSS: NMEA/TAIP location forwarding to multiple servers, geo-fencing
- Activate, monitor and diagnose your mission-critical devices from a single point of command and control
- 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
- Keep tabs on device health and connectivity across device deployments of any size
- Create detailed reports and enable 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

INFRASTRUCTURE

- Hosted in a commercial-grade cloud server environment that meets SOC 1®, SOC 2® and SOC 3® standards
- Superior availability, operating to 99.9% or greater
- Open APIs available to support application development

SECURITY

- Comprehensive security controls in place 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

DAL OS

DAL OS is Digi's standard operating system integrated into 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 www.digi.com/DAL

DIGI REMOTE MANAGER

Digi Remote Manager® is the technology platform that brings networks to the next level, allowing networks — and the people who manage them — to work smarter. With Digi Remote Manager you can transform a multitude of dispersed IoT devices into a dynamic, intelligent network. Now you can easily deploy, monitor and diagnose thousands of mission-critical devices from a single point of command — on your desktop, tablet or phone. All the while, its software-defined security diligently safeguards your entire Digi ecosystem.

Learn more at www.digi.com/digi-remote-manager

DIGI TRUSTFENCE

Digi TrustFence® is a device-security framework that simplifies the process of securing connected devices.

BUILT-IN SECURITY. DELIVERED.

Designed for mission-critical applications, Digi TrustFence enables you to easily integrate device security, device identity, and data privacy capabilities into your product design. Digi TrustFence designs security into IoT devices that can grow and adapt with new and evolving threats.

Learn more at www.digi.com/trustfence

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 local intrusion.

AUTHENTICATION

- Digi TrustFence provides data authentication and device identity management options. Furthermore, TrustFence ensures that products are not shipped with default user and password settings.

SECURE CONNECTIONS

- Digi TrustFence utilizes the latest encryption protocols for data in motion and over-the-air (OTA) transmissions to ensure the integrity of data flowing across a network.

ONGOING MONITORING AND SUPPORT

- Digi provides ongoing threat measurement and monitoring services and performs external security audits and proactively communicates with customers regarding upcoming threats.

SPECIFICATIONS	DIGI EX50
CELLULAR CONNECTIVITY	
5G NR	Bands: n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48 CBRS, n66, n71, n77 C-band, n78, n79
4G LTE-ADVANCED PRO	Bands: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14 FirstNet®, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46 LAA, B48 CBRS, B66, B71
3G HSPA+	Bands: B1, B2, B4, B5, B6, B8, B9, B19
ANTENNA CONNECTORS	(4) 50 Ω SMA (center pin: female)
SIM SLOTS	(2) Mini-SIM (2FF); software selectable, hardware switchable; SIM slot cover plate
SOFTWARE AND MANAGEMENT	
SOFTWARE	Digi Accelerated Linux (DAL OS); secure, reliable, intelligent, customizable
REMOTE MANAGEMENT	Digi Remote Manager®; security, management, updates, alerts, scheduling and intelligence
LOCAL MANAGEMENT	Web Interface (HTTPS); Command Line Interface (SSH, serial port)
PERFORMANCE	
ETHERNET THROUGHPUT	2.5 Gbps
CELLULAR THROUGHPUT	1.4 Gbps
IPSEC VPN THROUGHPUT	500 Mbps
VPN TUNNELS	10 tunnels
CLIENT COUNT	50 clients (typical)
PROCESSOR	
APPLICATION PROCESSOR	ARM® Cortex®-A53, 1.8 GHz, quad-core, 64-bit
MEMORY	512 MB RAM, 512 MB flash
ETHERNET	
PORTS	(2) RJ-45; 10/100/1000/2500 Mbps (auto-sensing)
WI-FI	
RADIOS	Wi-Fi 6 / 802.11ax, enterprise-grade, dual-band simultaneous, 2x2 MIMO; 2.4 GHz: 802.11b/g/n/ax; 2.4 GHz and 5 GHz: 802.11a/n/ac/ax
ANTENNAS	Integrated 2x2 MIMO, 2.4 GHz with 8 dBi gain, 5 GHz with 5 dBi gain
SECURITY	Open, Enhanced Open, WPA, WPA2, WPA3; Personal, Enterprise
MODES	(4) Wi-Fi access points; (2) Wi-Fi clients; (50) Wi-Fi users (typical)
SERIAL	
PORTS	(1) RS-232 (RJ-45); Cisco straight-through pinout; for out-of-band management of network appliances and servers
PHYSICAL	
DIMENSIONS (L x W x H)	158 mm x 158 mm x 35 mm (6.2 in x 6.2 in x 1.4 in)
WEIGHT	600 g (21 oz)
STATUS LEDs	(14) total for easy visual troubleshooting; Power, LAN, WAN, Wi-Fi 2.4/5, Online, Cellular Signal, Cellular Service, SIM 1/2
ENCLOSURE	Hybrid (die-cast aluminum + ABS plastic); Kensington Security Slot
POWER REQUIREMENTS	
DC BARREL INPUT	19 VDC / 2.5 A barrel connector, 2.5 mm pin, center-positive; can be used as primary or backup power source for seamless redundancy
POWER OVER ETHERNET	Standards-based, IEEE 802.3at, PoE+ (25.5 W); can be used as primary or backup power source for seamless redundancy
POWER CONSUMPTION	8 W (idle), 15 W (typical), 25 W (maximum)
ENVIRONMENTAL	
OPERATING TEMPERATURE	−30 °C to 60 °C (−22 °F to 140 °F) with Power over Ethernet or industrial-rated power supply; 0 °C to 40 °C (32 °F to 104 °F) with included commercial-rated power supply
RELATIVE HUMIDITY	5% to 95% (non-condensing)
APPROVALS	
CELLULAR	Visit www.digi.com/resources/certifications for latest certifications
EMISSIONS / IMMUNITY	CE; RED; FCC Part 15 Subpart B; CAN ICES-003
SAFETY	IEC62368-1, CB, EN62311
WARRANTY	
PRODUCT WARRANTY	3-year*

*Standard 3-year warranty upgradeable to 5 years with purchase of a Digi Remote Manager Premier 5-year subscription applicable to the product purchased only at the time of product purchase and with product registration at that time in Digi Remote Manager.
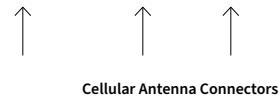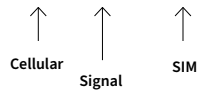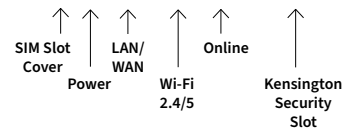
PRODUCT IMAGES

DIGI EX50 TOP

35 mm

158 mm

158 mm

DIGI EX50 FRONT

WAN

LAN/
PoE+

Serial

SIM
Select

Erase

DC
Power
Input

DIGI EX50 BACK

Cellular Antenna Connectors

DIGI EX50 LEFT SIDE

Cellular

Signal

SIM

DIGI EX50 RIGHT SIDE

SIM Slot
Cover

Power

LAN/
WAN

Wi-Fi
2.4/5

Online

Kensington
Security
Slot

PART NUMBERS	DIGI EX50
EX50-WXS6-GLB	Digi EX50 — Global, 5G NR Sub-6 GHz with 4G/3G fallback, Wi-Fi 6 2x2 MIMO DBS, dual 2.5 GbE, RS-232, FirstNet Capable™, with accessories*

*Includes DC power supply, mounting hardware, Ethernet and serial cables.
FirstNet® and FirstNet Capable™ are registered trademarks and service marks of the First Responder Network Authority.

PART NUMBERS	AVAILABLE ACCESSORIES**
76002154	Digi EX50 EU power cord
76002153	Digi EX50 UK power cord

*Sold separately, unless otherwise noted.

PART NUMBERS	DIGI REMOTE MANAGER AND VALUE-ADDED SERVICES
DIGI REMOTE MANAGER SUBSCRIPTIONS	
DIGI-RM-STD-1YR	Digi Remote Manager Standard — 1-year subscription
DIGI-RM-PRM-1YR	Digi Remote Manager Premier — 1-year subscription
DIGI-RM-PRM-3YR	Digi Remote Manager Premier — 3-year subscription
DIGI-RM-PRM-5YR	Digi Remote Manager Premier — 5-year subscription
VALUE-ADDED SUBSCRIPTIONS	
DIGI-RM-PRM-CS	Digi Containers subscription
DIGI-SRV-WB-TIER1-1YR	Digi WAN Bonding subscription with 100 Mbps max throughput
DIGI-SRV-WB-TIER2-1YR	Digi WAN Bonding subscription with 200 Mbps max throughput
DIGI-SRV-WB-TIER3-1YR	Digi WAN Bonding subscription with 1 Gbps max throughput

FOR MORE INFORMATION PLEASE VISIT DIGI.COM

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