DIGI

5G

FIRSTNET®
Built with AT&T
READY

DIGI TX64 5G RAIL

5G railway-rated cellular router customized for both on-board heavy and light rail railways and metros

Ideal for challenging rail transportation environments, Digi TX64 5G Rail router offers 5G/4G/3G cellular connectivity with true enterprise class routing, security, firewall and integrated VPN. It offers a flexible interface design with an integrated Wi-Fi access point and client, USB, serial, inertial-guided GNSS, Bluetooth® and 4-port Gigabit Ethernet switch, as well as a variety of configuration options.

5G is a game-changer for the rail industry. Until now, the speeds needed to securely move massive amounts of data quickly were reserved for wired networks. But today, with the rapid expansion of 5G (with LTE fallback), this fully rail-certified device delivers 5G performance, either as a primary or failover connection. Customers and suppliers

alike will begin to expect 5G connectivity whether it is for other on-board equipment applications or the information being provided to riders. Paving the way for compatibility with FRMCS standards, this first industry-standard 5G rail-rated device prepares you for the future today.

Digi TX64 5G Rail is equipped with precision train positioning via an Untethered Dead Reckoning (UDR) module that reports location data more accurately by taking into account acceleration, speed and angular rate. Regardless of issues with traditional GNSS in certain weather conditions or tunnels, UDR allows you to monitor the train's exact positioning and speed, optimize each train's location and prevent collisions without the use of additional onboard systems.

FEATURES AND BENEFITS

– High-speed 5G NR cellular radio with 4G LTE-Advanced Pro Cat 20 and 3G fallback
– FirstNet Ready™ for primary responder communication
– WR44 RR drop-in replacement and upgrade
– Wired Gigabit M12 Ethernet (4-port) for onboard systems
– Dual concurrent 867 Mbps 802.11ac Wi-Fi interfaces
– Untethered dead reckoning combines GNSS with inertial sensors
– Securely deploy, monitor and control devices with **Digi Remote Manager®**
– Cryptographic co-processor with secure key generation and storage

APPLICATION EXAMPLE

CUSTOMER DATA CENTER

VPN Tunnel

DIGI REMOTE MANAGER®

Primary and Secondary Cellular Link

Wired Ethernet

Wi-Fi Link

PUBLIC NETWORK

PRIVATE NETWORK

Passenger Internet

220/900 MHz Radios

DIGI TX64 5G RAIL

Security Cameras

Passenger Internet

Event Recorder

RELATED PRODUCTS

Digi TX64 5G

Digi TX54

Digi WR44 RR

Digi IX20

Digi Remote Manager®

SPECIFICATIONS	DIGI TX64 5G RAIL
WIRELESS INTERFACES	
WWAN*	
5G SUB-6 GHZ WITH 4G LTE AND 3G FALLBACK - WORLDWIDE	5G Sub-6: n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79; 4G LTE: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14 - FirstNet®, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66, B71 3G HSPA+/WCDMA: B1, B2, B3, B4, B5, B6, B8, B9, B19
CONNECTOR	(4) 50 Ω TNC (center pin: female)
SIM SLOTS	(2) mini-SIM (2FF)
SIM SECURITY	SIM slot cover plate included
WI-FI	
DUAL MODULES	Private backhaul: 2 x 2 MU-MIMO 5 GHz 802.11 a/n/ac Wave 2, 867 Mbps (max) Public Wi-Fi: 2 x 2 MIMO 2.4/5 GHz 802.11 a/b/g/n/ac, 867 Mbps (max)
HOTSPOT	Captive portal, customizable splash page
AUTHENTICATION	Basic T & C acceptance, Enterprise RADIUS, Shared Password, HotspotSystem
3RD PARTY SERVICES	Content filtering, embedded advertising
MODES	Up to 8 access points and 1 client per Wi-Fi module (16+2 total) with Digi Accelerated Linux (DAL OS)
CONNECTORS	Private backhaul: (2) 50 Ω RP-TNC (center pin: male) Public Wi-Fi: (2) 50 Ω RP-TNC (center pin: male)
GNSS	
TECHNOLOGY	Untethered Dead Reckoning using inertial sensors (accelerometer, gyroscope); multi-constellation (GPS, Galileo, GLONASS, BeiDou)
SENSITIVITY	-163 dB
PROTOCOL	NMEA 0183 V 2.3 sentence output
CONNECTOR	(1) 50 Ω RP-TNC (center pin: female); +3.3 VDC active antenna drive
HARDWARE	
SERIAL	
PORTS / CONNECTOR	(1) RS-232; DB-9 male
ETHERNET	
PORTS / CONNECTOR	(4); M12 X-CODE
STANDARD	IEEE 802.3; 10/100/1000 Base-T
USB	
PORTS	2
STANDARD	USB 3.0, Type A
MEMORY	
RAM	2 GB
FLASH	8 GB (CFAST card)
PHYSICAL	
DIMENSIONS	260 mm x 196 mm x 51 mm (10.2 in x 7.8 in x 2 in)
WEIGHT	3.9 kg (8.6 lbs)
STATUS LEDS	Power, WWAN signal, WWAN service, Wi-Fi service (per module), GNSS service, LAN (link, activty)
ENCLOSURE	IP66 aluminum alloy
POWER	
POWER INPUT	9 - 36 VDC, 60 W minimum power source required
POWER CONSUMPTION	28 W typical (idle); 41 W (peak RF Tx/Rx)
ENVIRONMENTAL	
MOUNTING	Slotted mounting flanges, grounding stud
OPERATING TEMPERATURE	-34° C to 74° C (-29.2° F to 165.2° F)
STORAGE TEMPERATURE	-40° C to 85° C (-40° F to 185° F)
RELATIVE HUMIDITY	0% to 95% (non-condensing) @ 25° C (77° F)

*Transfer rates are network operator dependent

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SPECIFICATIONS	DIGI TX64 5G RAIL
APPROVALS	
CELLULAR	PTCRB, AT&T, FirstNet Ready™, T-Mobile, Verizon (pending); visit **www.digi.com/resources/certifications** for latest cellular certifications
SHOCK / VIBRATION	MIL-STD-810G: Vibration (Method 414.6C-10, Category 11), Shock (Method 516.6, Procedure I)
EMISSIONS / IMMUNITY	FCC Part 15 Class B, EN 50121-3-2, IEC 61000-4-2/4-3, CISPR 16-2-3
ENVIRONMENTAL / INDUSTRIAL	EN50155, IEC 60068-2-1/2-2/2-30, ISO 7637-2/3, ISO 16750-2 load dump
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.

ENTERPRISE SOFTWARE	DESCRIPTION
PROTOCOL SUPPORT	HTTPS, FTP client, TLS v1.2, SCP (client and server), SFTP, SNMP (v2/v3), SSH; remote management via **Digi Remote Manager®**; protocol analyzer, ability to capture PCAP for use with Wireshark; DynDNS; dynamic DNS client compatible with BIND9/No-IP/DynDNS; captive portal, Intelliflow;.509 certificate management; dead reckoning
SECURITY	IP filtering, stateful firewall, custom firewall rules (iptables), address and port translation; Authentication: RADIUS, TACACS+; certificates; MAC address filtering; VLAN support
VPN	IPSec with IKEv1, IKEv2, NAT Traversal; OpenVPN client and server; GRE VPN tunnels; Cryptology: SHA-1/256/384/512, MD5, RSA; Encryption: 3DES and AES up to 256-bit (CBC mode for IPsec); Diffie Hellman: DH groups 1-32 (CURVE448)
ROUTING/FAILOVER	IP pass-through; NAT, NAPT with IP port forwarding; Ethernet bridging; Ethernet bonding; GRE; multicast routing; Routing protocols: RIP (v1, v2) OSPF, IPv6 RIP-NG, OSPFv3, BGP; IP failover: VRRP; automatic failover; **Digi SureLink®**
OTHER PROTOCOLS	DHCP; dynamic DNS client compatible with No-IP/DynDNS; Nagios, DNS server, NTP server, mDNS, IPerf
LOCAL MANAGEMENT	Web interface (HTTPS); CLI (SSH, serial port); SNMP v2/v3 read-only; custom factory configuration
MANAGEMENT / TROUBLESHOOTING PROTOCOLS	Protocol analyzer with PCAP for Wireshark, event and system logging (with syslog), accessible from Digi Remote Manager, SFTP or SCP, CLI, Web UI, Intelliflow
PROGRAMMING TOOLS / ENVIRONMENTS	Python v3 (regularly updated to newest version)

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

PRODUCT IMAGES

FRONT

BACK

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**

CAPABILITIES

- Activate, monitor and diagnose your mission-critical devices from a single point of command and control — on your desktop or mobile app
- 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

- More than 175 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

PART NUMBERS	DIGI REMOTE MANAGER®
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

PART NUMBERS	DIGI TX64 5G RAIL
TX64-R210	Digi TX64 5G Rail router - dual cellular 5G / LTE-Advanced Pro Cat 20, dual Wi-Fi, UDR, global

PART NUMBERS	DIGI TX64 5G RAIL - PRIMARY RESPONDER
TX64-R210-PR	Digi TX64 5G Rail router - dual cellular 5G / LTE-Advanced Pro Cat 20, dual Wi-Fi, UDR, global, primary responder, FirstNet Ready

PART NUMBERS*	ACCESSORIES
76002108	Digi TX64 Rail power, M12 T-code female connector, 5 m
76002109	Digi TX64 Rail Ethernet to WR44 RR adapter cable

*Sold separately, unless otherwise noted.

FOR MORE INFORMATION PLEASE VISIT DIGI.COM

*FirstNet ® and FirstNet Ready™ are registered trademarks and service marks of the First Responder Network Authority.

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