



Manage this device with Digi Remote Manager



# DIGI WR31

## Intelligent 4G LTE router designed for critical infrastructure and industrial applications

Digi WR31 is an intelligent 4G LTE router designed for performance and reliability across a range of critical infrastructure and industrial applications. It provides a secure, reliable connection to industrial controllers, process automation equipment and smart grid assets on third party sites or remote locations. Software-defined, multi-carrier networking and global LTE and HSPA+ options make it easy to get connected. This drop-in connectivity gives operators a way to reduce downtime and service calls, and also increase revenue by bringing distributed sites online faster.

### Ideal for connecting:

- Building and process automation controllers
- Smart grid assets (meters, switches, controllers)
- IP cameras and access controllers
- Remote data loggers, flow meters and sensing equipment
- Telco infrastructure
- Traffic and obstruction lighting

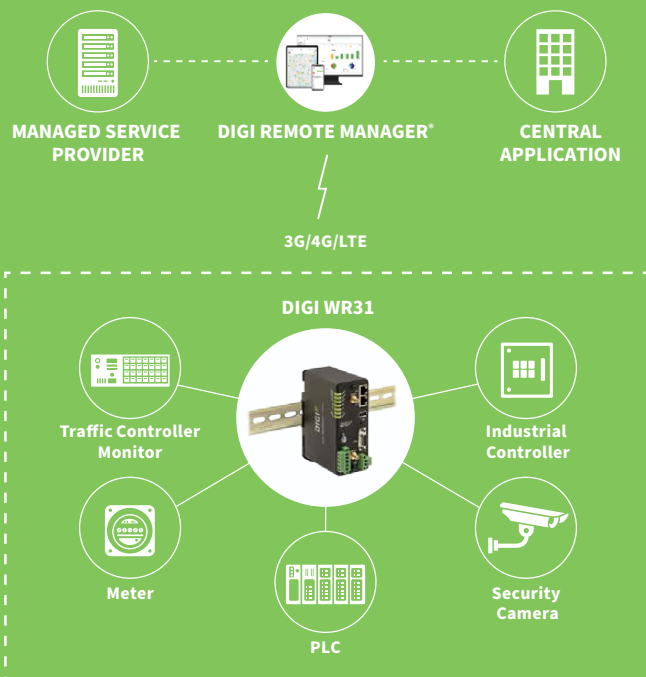
### BENEFITS

- Global HSPA+ and 4G LTE support and certification on major carrier networks around the world
- Ethernet, serial I/O and Modbus bridging
- Extremely resilient cellular connection through Digi's patented **SureLink**<sup>®</sup>, VRRP+ protocol and dual SIM slots
- Dedicated GNSS Receiver supporting GPS, GLONASS, BeiDou, Galileo
- License-free enterprise software: VPN, firewall, logging and authentication
- **Digi Remote Manager**<sup>®</sup> platform for easy setup, mass configuration and management
- Rugged enclosure, optimized for DIN rail or shelf mounting
- C1D2 and ATEX rated; NEMA TS2 temperature rated

### RELATED PRODUCTS



### APPLICATION EXAMPLE



## SPECIFICATIONS

## Digi WR31

## WIRELESS INTERFACES

## CELLULAR

LTE - ANZ/LATAM (L9)	LTE-Advanced Cat 6: 700(B28)/850(B5,B18,B19)/900(B8)/1500(B21)/1800(B3)/1900(B39)/2100(B1)/2600(B7,B38)/2300(B40)/2500(B41) 3G HSPA+: 800/850/900/1700/2100 MHz Transfer rate (max): 300 Mbps down, 50 Mbps up GNSS: 30 channels (16 GPS, 14 GLONASS) simultaneous tracking
LTE - NORTH AMERICA/EMEA (M8)	LTE-Advanced Cat 6: 700(B12,B13,B29)/800(B20,B26)/850(B5)/900(B8)/AWS(B4)/1800(B3)/1900(B2,B25)/2100(B1)/2300(B30)/2500(B41)/2600(B7) 3G HSPA+: 850/900/AWS/1800/1900/2100 MHz Transfer rate (max): 300 Mbps down, 50 Mbps up GNSS: 30 channels (16 GPS, 14 GLONASS) simultaneous tracking
LTE - NORTH AMERICA (M5)	LTE Cat 4: 700(B12,13)/850(B5)/AWS(B4)/1900(B2) 3G HSPA+: 850/1900 MHz Transfer rate (max): 150 Mbps down, 50 Mbps up
LTE - EMEA/APAC (M7)	LTE Cat 4: 800(B20)/900(B8)/1800(B3)/2100(B1)/2600(B7) HSPA: 900/2100 MHz EDGE: 900/1800 MHz Transfer rate (max): 150 Mbps down, 50 Mbps up
LTE 450 - EMEA/APAC (M2)	LTE Cat 3: 450(B31)/800(B20)/1800(B3)/2600 (B7) HSPA+: 900/2100 MHz EDGE: 900/1800 MHz Transfer rate (max): 100 Mbps down, 50 Mbps up
CDMA EV-DO 450 MHZ - EMEA (D5)	3G EVDO Rev B: 450 MHz 2G 1XRTT: 450 MHz Transfer rate (max): 14.7 Mbps down, 5.4 Mbps up

## CONNECTORS

(2) 50 Ω SMA (center pin: female)

## SIM SLOTS

(2) Mini-SIM (2FF)

## SIM SECURITY

Screw-down SIM cover

## GNSS (SELECT MODELS)

Protocol NMEA 0183 V3.0  
 Acquisition Time Hot Start 1 s; Warm Start 29 s; Cold Start 32 s  
 Accuracy Horizontal: < 2 m (50%), < 5 m (90%); Altitude: < 4 m (50%), < 8 m (90%); Velocity: < 0.2 m/s

## SOFTWARE &amp; MANAGEMENT

REMOTE MANAGEMENT	Digi Remote Manager® (cloud based); SNMP v1/v2c/v3 (user installed/managed)
LOCAL MANAGEMENT	WebUI (HTTP/HTTPS); CLI (Telnet, SSH, SMS)
MANAGEMENT/ TROUBLESHOOTING TOOLS	FTP, SFTP, SCP; protocol analyzer with PCAP for Wireshark; event logging with Syslog and SMTP; NTP/SNTP

## WIRED INTERFACES

## ETHERNET

PORTS	(2) RJ-45; 10/100 Mbps (auto-sensing)
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## SERIAL

PORTS	(1) DB-9; DCE
STANDARD	RS-232/422/485
SIGNAL SUPPORT	TXD, RXD, RTS, CTS, DTR, DCD, DSR, RI
FLOW CONTROL	Software (XON/XOFF), hardware supported

## I/O

CONNECTOR	5-pin screw down terminal block
DIGITAL	0-30 VDC, 200 mA max.; (2) I/O, software -selectable
ANALOG	(1) analog I/O; 4-20 mA or 0-10V, software selectable; 12 bit resolution

## USB


PORTS	(1) USB 2.0 Type A
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## PHYSICAL

DIMENSIONS (L X W X H)	12.7 cm x 8.9 cm x 5.1 cm (5 in x 3.5 in x 2 in)
WEIGHT	.5 kg (1.1 lb.)
STATUS LEDs	Power, service, WWAN, 3x signal strength, user programmable
ENCLOSURE/RATING	Aluminum / IP30
MOUNTING	DIN rail mount included

## SPECIFICATIONS

## Digi WR31

POWER REQUIREMENTS	
POWER INPUT	9 – 30 VDC, 18 W min power source required
POWER CONNECTOR	Screw down removable terminal block
POWER CONSUMPTION	4 W typical (Idle); 12 W typical (Peak Tx/Rx)
ENVIRONMENTAL	
HAZARDOUS (CLASS 1 DIV 2)	Yes
OPERATING TEMPERATURE	-34° C to 74° C (-29° F to 165° F); reduced cellular performance may occur above 60° C (140° F)
STORAGE TEMPERATURE	-40° C to 85° C (-40° F to 185° F)
ETHERNET ISOLATION	1.5 kV RMS
SERIAL PORT PROTECTION (ESD)	15 kV
RELATIVE HUMIDITY	5% to 95% (non-condensing)
APPROVALS	
CELLULAR	PTCRB, visit <a href="http://www.digi.com/resources/certifications">www.digi.com/resources/certifications</a> for latest cellular certifications
SAFETY	Hazardous locations: ANSI/ISA-12.12.01-2015, CAN/CSA C22.2 NO.213-15 Ordinary locations: UL 60950-1, 2nd Edition, 2014-10-14; UL 62368: 2014, 2nd Edition ATEX standards: Protection method  3 G Ex nA IIC T4 Gc EN 60079-0:2012+A11:2013, EN 60079-15:2010, DEMKO 15 ATEX 1574X Rev. 1
IECEX STANDARDS	US/UL/ExTR17.0077/00
EMISSIONS/IMMUNITY	CE, FCC Part 15 Class B, AS/NZS CISPR 22, EN55024, EN55022 Class B
WARRANTY	
PRODUCT WARRANTY	3-year*

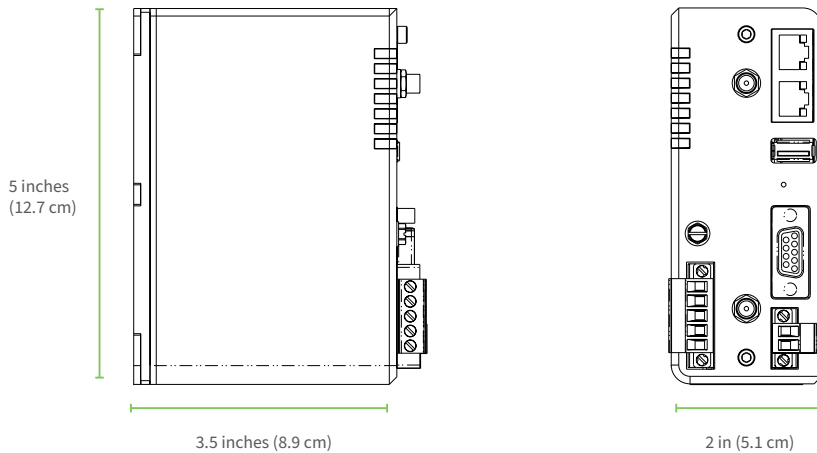
\*Standard 3-year warranty upgradeable to 5 years with purchase of a Digi Remote Manager Premier 5-year subscription applicable to the product purchased only at the time of product purchase and with product registration at that time in Digi Remote Manager.

## ENTERPRISE SOFTWARE

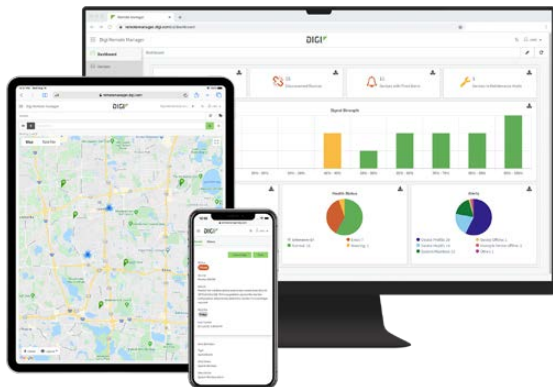
## DESCRIPTION

PROTOCOL SUPPORT	HTTPS, FTP, SFTP, TLS 1.2, SNMP, SNMP (v1/v2c/v3), SSH, Telnet and CLI for web management; remote management via <a href="#">Digi Remote Manager</a> <sup>®</sup> ; SMS management, protocol analyzer, ability to capture PCAP for use with Wireshark; DynDNS, dynamic DNS client compatible with BIND9/No-IP/DynDNS
SECURITY/VPN	IP filtering, stateful inspection firewall with scripting, address and port translation; VPN: IPsec with IKEv1, IKEv2, NAT Traversal; TLS 1.2, FIPS 197, Open VPN client and server; PPTP, L2TP; (5) VPN tunnels (not upgradable); cryptology: 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/FAILOVER	IP pass-through; NAT, NAPT with IP port forwarding; Ethernet bridging; GRE; multicast routing; routing protocols: PPP, PPPoE, RIP (v1, v2) OSPF, SRI, BGP, iGMP routing (multicast); IP failover: VRRP, VRRP+TM; automatic failover/failback to second GSM network/standby APN
OTHER PROTOCOLS	DDHCP; dynamic DNS client compatible with BIND9/No-IP/DynDNS; QoS via TOS/DSCP/WRED; Modbus UDP/TCP to serial; X.25 including XOT, SNA/IP, TPAD and PAD; protocol switch; Modbus bridging for connecting diverse field assets

## PRODUCT IMAGES



## 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](http://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 WR31
WR31-M82A-DE1-TB	Digi WR31 - 4G LTE North America/EMEA, dual Ethernet, RS-232/422/485, Class 1 Div 2 (C1D2)
WR31-L92A-DE1-TB	Digi WR31 - 4G LTE LATAM/ANZ, dual Ethernet, RS-232/422/485, ATEX
WR31-M52A-DE1-TB	Digi WR31 - 4G LTE North America, dual Ethernet, RS-232/422/485, Class 1 Div 2 (C1D2)
WR31-M72A-DE1-TB	Digi WR31 - 4G LTE EMEA/APAC, dual Ethernet, RS-232/422/485, ATEX
WR31-M22A-DE1-TB	Digi WR31 - 4G LTE EMEA/APAC (450MHz), dual Ethernet, RS-232/422/485, ATEX
WR31-D52A-DE1-TB	Digi WR31 - CDMA 450MHz, dual Ethernet, RS-232/422/485, ATEX

PART NUMBERS	ACCESSORIES*
76000926	Antenna - cellular, 3G/4G/LTE
76000954	Antenna base – SMA, 1 m, RG174
76000736	AC power supply - extd temperature, US and EU power cords to 12 VDC - 2.1 mm locking barrel plug
76000966	Mounting bracket – wall mount
76000977	Mounting bracket – DIN rail
76000826	Cable - Ethernet, RJ-45 to RJ-45, 2 m

\*Sold separately, unless otherwise noted.

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

DIGI SERVICE AND SUPPORT / You can purchase with confidence knowing that Digi is always available to serve you with expert technical support and our industry leading warranty. For detailed information visit [www.digi.com/support](http://www.digi.com/support).

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