



4G LTE  
M2M ROUTER



# DIGI TRANSPORT® WR31

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

The Digi TransPort WR31 is an intelligent 4G LTE router designed for 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 for connecting diverse field assets
- Extremely resilient cellular connection through Digi's patented SureLink™, VRRP+ protocol, and dual SIM slots
- License-free enterprise software: VPN, firewall, logging and authentication
- Digi Remote Manager provides mass configuration, device management, and troubleshooting tools
- Rugged enclosure, optimized for DIN rail or shelf mounting
- C1D2 and ATEX rated; NEMA TS2 temperature rated

## RELATED PRODUCTS



Digi TransPort®  
WR21



Digi TransPort®  
WR44 R



Digi Connect®  
Sensor+

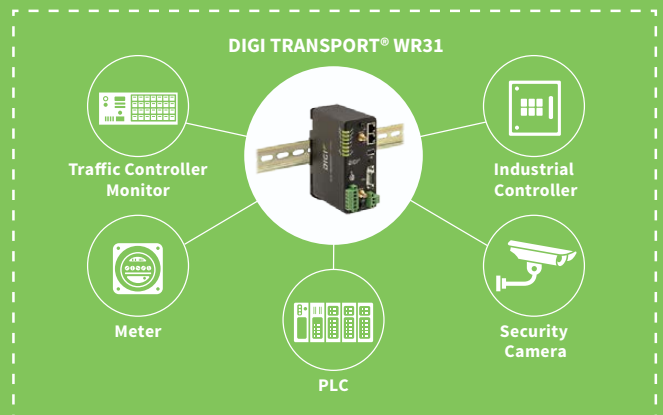
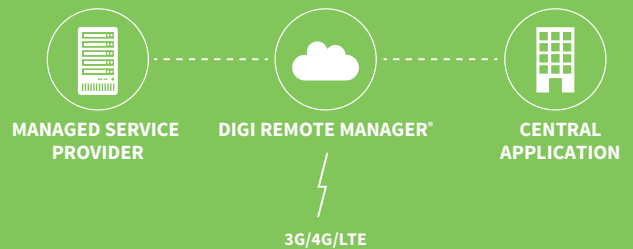


Accessories



Digi Remote  
Manager®

## APPLICATION EXAMPLE



## SPECIFICATIONS

## Digi TransPort® 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 (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

## GLOBAL HSPA+ (U9)

3G HSPA+: 850/900/1700AWS/1900/2100 MHz  
 2G EDGE/GPRS: 850/900/1800/1900 MHz  
 Transfer rate (max): 21 Mbps down, 5.76 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 1s; Warm Start 29s; Cold Start 32s  
 Accuracy Horizontal: < 2m(50%), <5m(90%); Altitude: <4m (50%), <8m (90%); Velocity: <0.2m/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)

## 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, 200mA max.; (2) I/O, software -selectable

## ANALOG

(1) analog I/O; 4-20mA or 0-10V, software selectable; 12 bit resolution

## USB

## PORTS

(1) USB 2.0 Type A

## PHYSICAL

## DIMENSIONS (L X W X H)

5 in x 3.5 in x 2 in (12.7 cm x 8.9 cm x 5.1 cm)

## WEIGHT

1.1 lb. (.5 kg)

## STATUS LEDS

Power, service, WWAN, 3x signal strength, User programmable

## ENCLOSURE/RATING

Aluminum / IP30

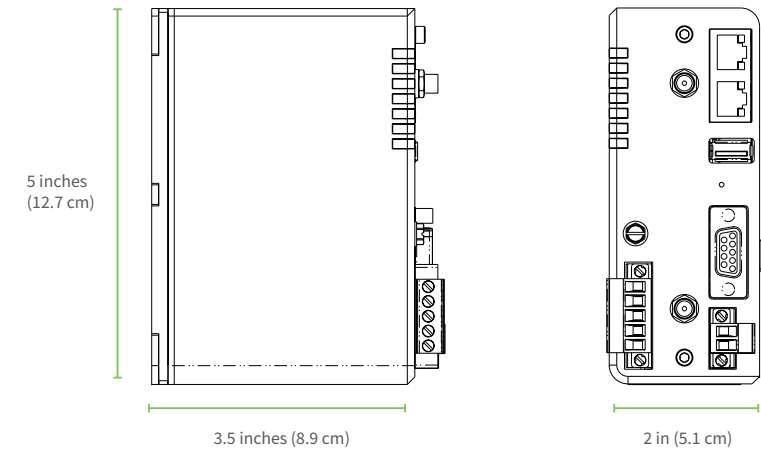
## MOUNTING

DIN rail mount included

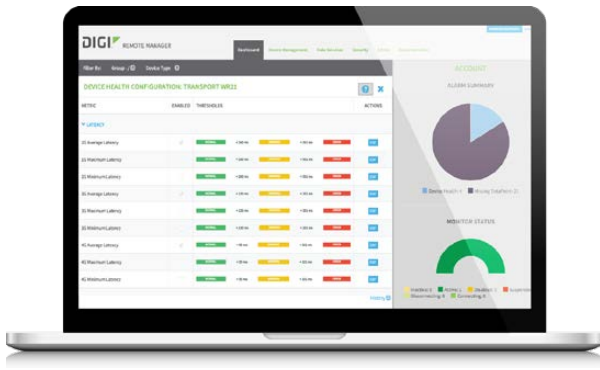
| SPECIFICATIONS               |                                                                                                                                                                                                                                                                                                                                                                                      | Digi TransPort® WR31 |  |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--|
| POWER REQUIREMENTS           |                                                                                                                                                                                                                                                                                                                                                                                      |                      |  |
| POWER INPUT                  | 9 – 30 VDC, 18W min power source required                                                                                                                                                                                                                                                                                                                                            |                      |  |
| POWER CONNECTOR              | Screw down removable terminal block                                                                                                                                                                                                                                                                                                                                                  |                      |  |
| POWER CONSUMPTION            | 4W typical (Idle); 12W 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)                                                                                                                                                                                                                                                                                          |                      |  |
| 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                                                                                                                                                                                                                                                                                                                                                                                |                      |  |
| SAFETY                       | Hazardous locations: ANSI/ISA-12.12.01-2015, CAN/CSA C22.2 NO.213-15<br>Ordinary locations: UL 60950-1, 2nd Edition, 2014-10-14; UL 62368: 2014, 2nd Edition<br>ATEX standards: Protection method  II 3 G Ex nA IIC T4 Gc<br>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             | 5 years                                                                                                                                                                                                                                                                                                                                                                              |                      |  |

| ENTERPRISE SOFTWARE |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | DESCRIPTION |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| PROTOCOL SUPPORT    | HTTP, HTTPS, FTP, SFTP, SSL, SNMP, SNMP (v1/v2c/v3), SSH, Telnet and CLI for web management; Remote management via Digi Remote Manager; 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; SSL, SSLv2, SSLv3, 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); RSTP (Rapid Spanning Tree Protocol); 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®



## CAPABILITIES

- Centralized management of remote devices over 3G/4G/LTE
- Define standard configurations and automatically monitor individual devices for PCI security compliance
- Report and alert on performance statistics, including connection history, signal quality, latency, data usage and packet loss
- No servers or applications to operate and maintain
- Complete tasks for your entire device network in minutes
- Edit configurations and update firmware for your individual devices or groups
- Monitor the status and location of your remote device via a web browser
- Active or deactivate cellular lines and monitor data to ensure you never incur overage charges

## INFRASTRUCTURE

- Hosted in a commercial-grade SAS 70-certified environment
- Superior availability, operating to 99.9% or greater
- Open APIs available to support application development

## SECURITY

- Certified SSAE-16 facilities
- Over 175 security controls in place to protect your data
- Enables compliance with security frameworks like PCI, HIPAA, NIST and more
- Earned SkyHigh's Cloud Trust Program highest ranking of Enterprise-ready
- PCI certified; Attestation of Compliance

| PART NUMBERS     | DIGI TRANSPORT WR31                                                                                 |
|------------------|-----------------------------------------------------------------------------------------------------|
| WR31-M82A-DE1-TB | Digi TransPort WR31 - 4G LTE North America/EMEA, Dual Ethernet, RS232/422/485, Class 1 Div 2 (C1D2) |
| WR31-L92A-DE1-TB | Digi TransPort WR31 - 4G LTE LATAM/ANZ, Dual Ethernet, RS232/422/485, ATEX                          |
| WR31-M52A-DE1-TB | Digi TransPort WR31 - 4G LTE North America, Dual Ethernet, RS232/422/485, Class 1 Div 2 (C1D2)      |
| WR31-M72A-DE1-TB | Digi TransPort WR31 - 4G LTE EMEA/APAC, Dual Ethernet, RS232/422/485, ATEX                          |
| WR31-M22A-DE1-TB | Digi TransPort WR31 - 4G LTE EMEA/APAC (450MHz), Dual Ethernet, RS232/422/485, ATEX                 |
| WR31-U92A-DE1-TB | Digi TransPort WR31 - HSPA+ Global, Dual Ethernet, RS232/422/485, Class 1 Div 2 (C1D2)              |
| WR31-D52A-DE1-TB | Digi TransPort WR31 - CDMA 450MHz, Dual Ethernet, RS232/422/485, ATEX                               |

| PART NUMBERS | ACCESSORIES*                                                                                   |
|--------------|------------------------------------------------------------------------------------------------|
| 76000926     | Antenna - Cellular, 3G/4G/LTE                                                                  |
| 76000954     | Antenna Base – SMA, 1m, RG174                                                                  |
| 76000736     | AC Power Supply - Extd Temperature, US and EU Power Cords to 12VDC - 2.1mm locking barrel plug |
| 76000966     | Mounting Bracket – Wall Mount                                                                  |
| 76000977     | Mounting Bracket – DIN Rail                                                                    |
| 76000826     | Cable - Ethernet, RJ45 to RJ45, 2m                                                             |

\*Sold separately, unless otherwise noted.

**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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**DIGI INTERNATIONAL WORLDWIDE HQ**  
877-912-3444 / 952-912-3444 / [www.digi.com](http://www.digi.com)

**DIGI INTERNATIONAL GERMANY**  
+49-89-540-428-0

**DIGI INTERNATIONAL JAPAN**  
+81-3-5428-0261 / [www.digi-intl.co.jp](http://www.digi-intl.co.jp)

**DIGI INTERNATIONAL SINGAPORE**  
+65-6213-5380

**DIGI INTERNATIONAL CHINA**  
+86-21-50492199 / [www.digi.com.cn](http://www.digi.com.cn)

