Digi Transport® 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™, 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® device management tool
- Rugged enclosure, optimized for DIN rail or shelf mounting
- C1D2 and ATEX rated; NEMA TS2 temperature rated
- Digi Foundations™ 1-, 3- or 5-year subscription available

**APPLICATION EXAMPLE**

**RELATED PRODUCTS**
- Digi TransPort® WR21
- Digi TransPort® WR44 R
- Digi Connect® Sensor+
- Accessories
- Digi Remote Manager®
## Digi TransPort® WR31

### Wireless Interfaces

#### Cellular

<table>
<thead>
<tr>
<th>Region</th>
<th>LTE</th>
<th>HSPA+</th>
<th>Transfer Rate (max)</th>
<th>GNSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANZ/LATAM (L9)</td>
<td>Advanced Cat 6: 700(B28)/850(B5,B18,B19)/900(B8)/1500(B21)/1800(B3)/2100(B1)/2600(B7,B38)/2300(B40)/2500(B41)</td>
<td>800/850/900/1700/2100 MHz</td>
<td>300 Mbps down, 50 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
<tr>
<td>NORTH AMERICA (M8)</td>
<td>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)</td>
<td>850/900/AWS/1800/1900/2100 MHz</td>
<td>300 Mbps down, 50 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
<tr>
<td>NORTH AMERICA (M5)</td>
<td>Cat 4: 700(B12,13)/850(B5)/AWS(B4)/1900(B2)</td>
<td>850/1900 MHz</td>
<td>150 Mbps down, 50 Mbps up</td>
<td></td>
</tr>
<tr>
<td>EMEA/APAC (M7)</td>
<td>Cat 4: 800(B20)/900(B8)/1800(B3)/2100(B1)/2600(B7)</td>
<td>900/2100 MHz</td>
<td>150 Mbps down, 50 Mbps up</td>
<td></td>
</tr>
<tr>
<td>450 - EMEA/APAC (M2)</td>
<td>Cat 3: 450(B31)/800(B20)/1800(B3)/2600 (B7)</td>
<td>900/2100 MHz</td>
<td>100 Mbps down, 50 Mbps up</td>
<td></td>
</tr>
<tr>
<td>GLOBAL HSPA+ (U9)</td>
<td>HSPA+: 850/900/1700/AWS/1900/2100 MHz</td>
<td>900/1800 MHz</td>
<td>21 Mbps down, 5.76 Mbps up</td>
<td></td>
</tr>
<tr>
<td>EV-DO 450 MHz - EMEA (D5)</td>
<td>EVDO Rev B: 450 MHz</td>
<td>EDGE: 450 MHz</td>
<td>14.7 Mbps down, 5.4 Mbps up</td>
<td></td>
</tr>
</tbody>
</table>

#### 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

### Connectors

- (2) 50 Ω SMA (center pin: female)
- (2) Mini-SIM (2FF)

### SIM Slots
- Screw-down SIM cover

### SIM Security
- 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 & 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
- (2) RJ-45; 10/100 Mbps (auto-sensing)

#### Serial
- (1) DB-9; DCE

#### Signal Support
- RS-232/422/485

#### Flow Control
- TXD, RXD, RTS, CTS, DTR, DCD, DSR, RI

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

#### USB
- (1) USB 2.0 Type A

### 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.COM

#### Digi TransPort® 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

**SAFETY**
- ATEX standards: Protection method II 3 G Ex nA IIC T4 Gc

**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 + Digi Foundations*

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* Digi Foundations can extend the standard three-year warranty to a Limited Lifetime Warranty that provides replacement with a new or similar Digi product for a period of five years from the date of purchase. After five years from the purchase date, the warranty value will revert to a 40 percent credit towards the MSRP of an equivalent product from Digi.

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**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); 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/FAILOVER**
- IP pass-through; NAT, NAPT with IP port forwarding; Ethernet bridging; GRE; multicast routing; routing protocols: PPP, PPPoE, RIP (v1, v2); OSPF, SPI, 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

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**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

DIGI FOUNDATIONS™

IT’S TIME TO CONNECT WITH CONFIDENCE
The convenient, comprehensive and secure way to integrate IoT communications hardware, device management software, global support and lifetime warranty protection into a connectivity solution to simplify your IoT network growth.

- Digi Remote Manager® (DRM) gives you a single point of contact, command and control with sophisticated remote device monitoring and management tools.
- Digi Expert Support is available around the clock, seven days a week, around the world with experts ready to provide technical support by phone, email or online.
- Digi Limited Lifetime Warranty lowers the total cost of ownership with hardware protection and equipment upgrades to expand your network as needs evolve.

Digi Foundations, with DRM, simplifies network and device management - for hundreds or hundreds-of-thousands of Digi or third-party devices – with options to upgrade as technology evolves. Isn’t it time you got better connected?
For more information visit: digi.com/foundations
### PART NUMBERS

<table>
<thead>
<tr>
<th>Part Numbers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR31-M82A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE North America/EMEA, dual Ethernet, RS-232/422/485, Class 1 Div 2 (C1D2)</td>
</tr>
<tr>
<td>WR31-M52A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE North America, dual Ethernet, RS-232/422/485, Class 1 Div 2 (C1D2)</td>
</tr>
<tr>
<td>WR31-M72A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE EMEA/APAC, dual Ethernet, RS-232/422/485, ATEX</td>
</tr>
<tr>
<td>WR31-M22A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE EMEA/APAC (450MHz), dual Ethernet, RS-232/422/485, ATEX</td>
</tr>
<tr>
<td>WR31-U92A-DE1-TB</td>
<td>Digi TransPort WR31 - HSPA+ Global, dual Ethernet, RS-232/422/485, Class 1 Div 2 (C1D2)</td>
</tr>
<tr>
<td>WR31-D52A-DE1-TB</td>
<td>Digi TransPort WR31 - CDMA 450MHz, dual Ethernet, RS-232/422/485, ATEX</td>
</tr>
</tbody>
</table>

### ACCESSORIES*

<table>
<thead>
<tr>
<th>Part Numbers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>76000926</td>
<td>Antenna - cellular, 3G/4G/LTE</td>
</tr>
<tr>
<td>76000954</td>
<td>Antenna base – SMA, 1 m, RG174</td>
</tr>
<tr>
<td>76000736</td>
<td>AC power supply - extd temperature, US and EU power cords to 12 VDC - 2.1 mm locking barrel plug</td>
</tr>
<tr>
<td>76000966</td>
<td>Mounting bracket – wall mount</td>
</tr>
<tr>
<td>76000977</td>
<td>Mounting bracket – DIN rail</td>
</tr>
<tr>
<td>76000826</td>
<td>Cable - Ethernet, RJ-45 to RJ-45, 2 m</td>
</tr>
</tbody>
</table>

*Sold separately, unless otherwise noted.

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**FOR MORE INFORMATION PLEASE VISIT DIGI.COM**