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
- 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

APPLICATION EXAMPLE
### Digi TransPort® WR31

#### WIRELESS INTERFACES

**CELLULAR**

<table>
<thead>
<tr>
<th>Region</th>
<th>Standards</th>
<th>Transfer Rate (max)</th>
<th>GNSS Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTE - ANZ/LATAM (L9)</td>
<td>LTE-Advanced CAT 6: 700(B28)/850(B5,B18,B19)/900(B8)/1500(B21)/1800(B3)/1900(B39)/2100(B1)/2600(B7)/2300(B40)/2500(B41) 3G HSPA+: 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>LTE - NORTH AMERICA (M8)</td>
<td>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+: 850/900/1700/1900/2100 MHz</td>
<td>300 Mbps down, 50 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
<tr>
<td>LTE - NORTH AMERICA (M5)</td>
<td>LTE CAT 4: 700(B12,13)/850(B5)/AWS(B4)/1900(B2) 3G HSPA+: 850/1900 MHz</td>
<td>150 Mbps down, 50 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
<tr>
<td>LTE - EMEA/APAC (M7)</td>
<td>LTE CAT 4: 800(B20)/900(B8)/1800(B3)/2100(B1)/2600(B7) HSPA: 900/2100 MHz EDGE: 900/1800 MHz</td>
<td>150 Mbps down, 50 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
<tr>
<td>LTE 450 - EMEA/APAC (M2)</td>
<td>LTE CAT 3: 450(B31)/800(B20)/1800(B3)/2600 (B7) HSPA+: 900/2100 MHz EDGE: 900/1800 MHz</td>
<td>100 Mbps down, 50 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
<tr>
<td>GLOBAL HSPA+ (U9)</td>
<td>3G HSPA+: 850/900/1700AWS/1900/2100 MHz 2G EDGE/GPRS: 850/900/1800/1900 MHz</td>
<td>21 Mbps down, 5.76 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
<tr>
<td>CDMA EV-DO 450 MHz - EMEA (D5)</td>
<td>3G EVDO Rev B: 450 MHz 2G 1XRTT: 450 MHz 2G 1XRTT: 450 MHz</td>
<td>14.7 Mbps down, 5.4 Mbps up</td>
<td>30 channels (16 GPS, 14 GLONASS) simultaneous tracking</td>
</tr>
</tbody>
</table>

**SIM SLOTS**

- (2) Mini-SIM (2FF)
- 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 & 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

**STANDARD**

- RS-232/422/485

**SIGNAL SUPPORT**

- TXD, RXD, RTS, CTS, DTR, DCD, DSR, RI

**FLOW CONTROL**

- Software (XON/XOFF), hardware supported

**I/O**

- 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**

- (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
  ATEX standards: Protection method Ex 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 years + Digi Foundations*

#### Description

**Enterprise Software**

- **Protocol Support**:
  - HTTP, HTTPS, FTP, SFTP, SSL, 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, SSLv3, FIPS 197, Open VPN client and server; PPTP, L2TP; (5) VPN tunnels (not upgradable); Cryptology: SHA-1, MDS, 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

**Product Images**

- [5 inches (12.7 cm)](image)
- [3.5 inches (8.9 cm)](image)
- [2 in (5.1 cm)](image)
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

<table>
<thead>
<tr>
<th>PART NUMBERS</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>WR31-M82A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE North America/EMEA, Dual Ethernet, RS232/422/485, Class 1 Div 2 (C1D2)</td>
</tr>
<tr>
<td>WR31-L92A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE LATAM/ANZ, Dual Ethernet, RS232/422/485, ATEX</td>
</tr>
<tr>
<td>WR31-M52A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE North America, Dual Ethernet, RS232/422/485, Class 1 Div 2 (C1D2)</td>
</tr>
<tr>
<td>WR31-M72A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE EMEA/APAC, Dual Ethernet, RS232/422/485, ATEX</td>
</tr>
<tr>
<td>WR31-M22A-DE1-TB</td>
<td>Digi TransPort WR31 - 4G LTE EMEA/APAC (450MHz), Dual Ethernet, RS232/422/485, ATEX</td>
</tr>
<tr>
<td>WR31-U92A-DE1-TB</td>
<td>Digi TransPort WR31 - HSPA+ Global, Dual Ethernet, RS232/422/485, Class 1 Div 2 (C1D2)</td>
</tr>
<tr>
<td>WR31-D52A-DE1-TB</td>
<td>Digi TransPort WR31 - CDMA 450MHz, Dual Ethernet, RS232/422/485, ATEX</td>
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</table>

PART NUMBERS

DIGI FOUNDATIONS ADD-ONS

<table>
<thead>
<tr>
<th>PART NUMBERS</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>DGF-BDL-PREM-1YR</td>
<td>Digi Foundations add-on bundle 1 year</td>
</tr>
<tr>
<td>DGF-BDL-PREM-3YR</td>
<td>Digi Foundations add-on bundle 3 years</td>
</tr>
<tr>
<td>DGF-BDL-PREM-5YR</td>
<td>Digi Foundations add-on bundle 5 years</td>
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</tbody>
</table>

PART NUMBERS

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, 1m, RG174</td>
</tr>
<tr>
<td>76000736</td>
<td>AC Power Supply - Ext Temperature, US and EU Power Cords to 12VDC - 2.1mm 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, RJ45 to RJ45, 2m</td>
</tr>
</tbody>
</table>

*Sold separately, unless otherwise noted.

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