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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

APPLICATION EXAMPLE

MANAGED SERVICE PROVIDER

DIGI REMOTE MANAGER®

CENTRAL APPLICATION

3G/4G/LTE

DIGI TRANSPORT® WR31

Traffic Controller Monitor

Industrial Controller

Meter

PLC

Security Camera

RELATED PRODUCTS

Digi TransPort® WR21

Digi TransPort® WR44 R

Digi Connect® Sensor+

Accessories

Digi Remote Manager®
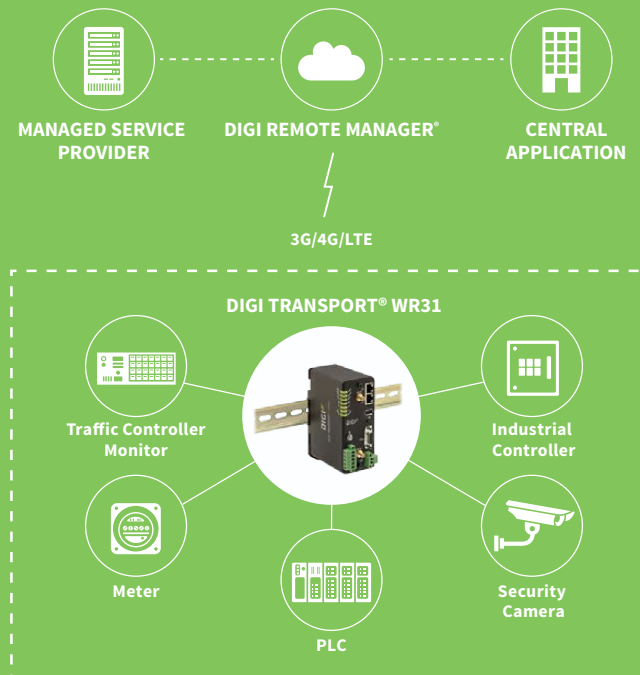
SPECIFICATIONS	Digi TransPort® WR31

| 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 & 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

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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 Ordinary locations: UL 60950-1, 2nd Edition, 2014-10-14; UL 62368: 2014, 2nd Edition ATEX standards: Protection method ⟨Ex⟩ II 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	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

5 inches (12.7 cm)

3.5 inches (8.9 cm)

2 in (5.1 cm)
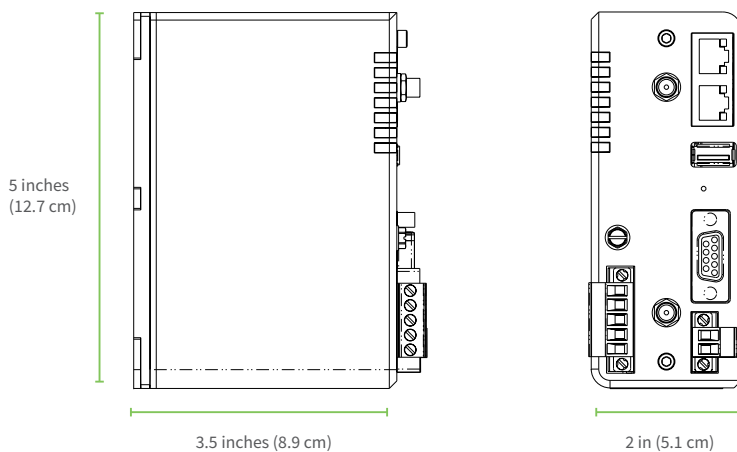
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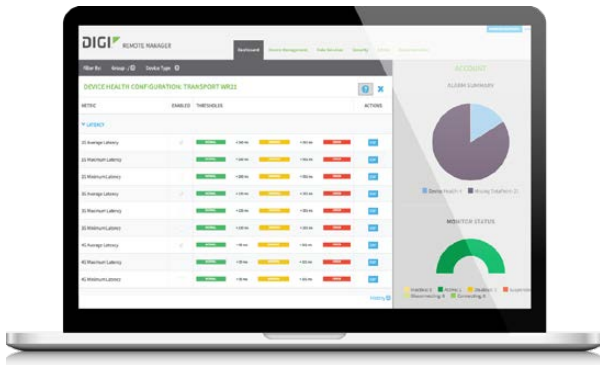
CAPABILITIES

- 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.

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