Digi TransPort® WR41

Enterprise Class Cellular Router

Flexible, enterprise class cellular router for remote and mobile networking applications.

Overview

The Digi TransPort WR41 cellular router offers a robust communications solution with true enterprise class routing, security and firewall. This multifunction cellular router features a flexible design with optional integrated Wi-Fi access point (with multi SSID) / Client, USB, serial and single port Ethernet switch, as well as a variety of configuration options including multiple serial ports (async or sync), GPS or I/O telemetry modules.

The Digi TransPort WR41 offers an advanced routing, security and firewall feature set including stateful inspection firewall and integrated VPN. Enterprise class protocols incorporate BGP, GRE, OSPF and VRRP+, a patented technology built upon the popular VRRP failover standard providing true auto-sensing, auto-failure and auto-recovery of any line drop.

Digi TransPort WR41 routers are ideal for PCI compliant applications including advanced security, logging and firewall features.

Digi remote management software provides easy setup, configuration and maintenance of large installations of Digi TransPort devices.

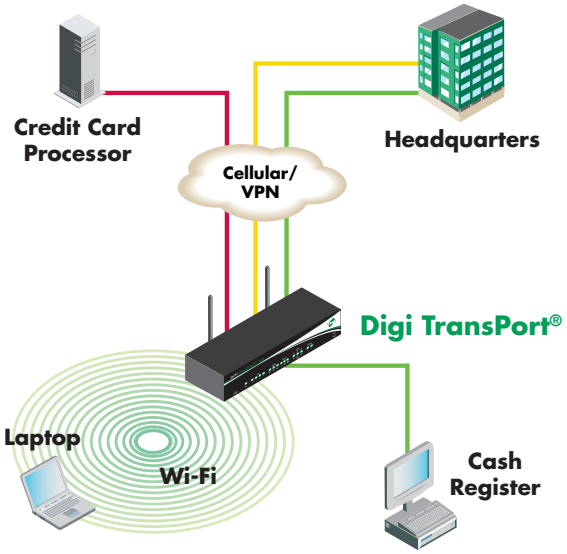
Related Products

WRVPN Concentrators

Digi Remote Management

Accessories

Application Highlight



Features/Benefits

- Enterprise class cellular routers with advanced dynamic routing, security and firewall features
- CAN Bus support and rugged enclosure options
- High speed cellular interfaces
- Optional integrated 802.11a/b/g/n Wi-Fi access point
- Flexible interfaces including serial (async/sync), GPS, USB and telemetry, with flexible DC power options
- Powerful integrated end user programming
- Digi remote management software for easy setup, configuration and maintenance

Specifications	Digi TransPort® WR41
Wireless Interfaces	
WWAN**	
LTE - EMEA (L1)	800/850/900/1800/1900/2100/2600MHz; 3G fall back to 850/900/1900/2100MHz and 2G fall back to 850/900/1800/1900MHz; Transfer Rate (max): 50 Mbps Up, 100 Mbps Down
LTE - North America (L5)	Multi-Carrier (Verizon, AT&T, and Sprint) 700/850/1700(AWS)/1900 MHz; 2G/3G GSM fall back to 850/900/1700AWS/1800/1900/2100MHz; 2G/3G CDMA fall back to 800/1900MHz; Transfer Rate (max): 50 Mbps Up, 100 Mbps Down
LTE – North America (L6)	700/850/1700(AWS)/1900MHz; 2G/3G fall back to 850/1900MHz; Transfer Rate (max): 50 Mbps Up, 100 Mbps Down (Coming Summer 2104)
LTE – Verizon (L8)	700/1700(AWS)MHz; No 2G/3G fall back; Transfer Rate (max): 50 Mbps Up, 100 Mbps Down (Coming Summer 2104)
LTE – Verizon (L9)	700/1700(AWS)MHz; 3G fall back to 850/1900MHz; Transfer Rate (max): 50 Mbps Up, 100 Mbps Down (Coming Summer 2104)
HSPA+ (U9)	850/900/1700 (AWS)/1900/2100MHz; Transfer Rate (max): 5.76 Mbps Up, 21 Mbps Down
GSM-R (R5)	900/1800/1900MHz (TRM-5); GPRS Class 10; Transfer rate (max): 42.8 Kbps Up, 85.6 Kbps Down
Edge (E1)	GPRS/EDGE Class 10; 850/900/1800/1900 MHz; Transfer rate (max): 236 Kbps Up/Down
CDMA EV-DO (Dx)	450 MHz; EV-DO Rev B; R-UIM support; Transfer rate (max): 14.7 Mbps Up; 5.4 Mbps Down
CDMA 1xRTT (Bx)	N/A
Connector	Ux, Lx variants: 2 x 50 Ω SMA (Center pin: female); E1, Dx, Bx variants: 1 x 50 Ω SMA (Center pin: female)
SIM Slots	2
SIM Security	Optional SIM slot cover plate
Wi-Fi*	
Standard	802.11b/g/n
Modes	Access point, Client and support for multiple SSID
Transmit Power	17 dBm ± 2 dBm
Receive Sensitivity	54 Mbps / -70 dBm and 11 Mbps / -83.5 dBm
Security	Open or shared key authentication; WEP (64- and 128-bit) encryption; WPA/WPA2 with RADIUS (WPA Enterprise and pre-shared keys)
Connectors	2 x 50 Ω RP-SMA (Center pin: male)
GPS*	
Channels	50
Sensitivity	-163 dB
Protocol	NMEA 0183 V2.3 sentence output; +3.3 VDC active antenna drive; NMEA stream to local serial port or over TCP/IP
Navigation	Galileo ready
Augmentation	SBAS
Cold Start	< 27 seconds TTFF (90%)
Horizontal Accuracy	< 2.5 meters (90%)
Velocity Accuracy	0.1m/s
Connector	1 x 50 Ω SMA (Center pin: female)
Additional Features	Send GPS via UDP/IP, TCP/IP (up to two destinations) or serial; Customize and/or send data using Python; GPS status query; Time source capable
Other	
XBee	N/A
Satellite	N/A
Wired Interfaces	
Serial	
Ports	1; Expansion cards available to increase serial ports
Standard	RS-232; Expansion cards available in RS-422/485
Async/Sync	Async; Expansion cards available in sync
DTE/DCE	DCE
Signal Support	TXD, RXD, RTS, CTS, DTR, DCD
Flow Control	Software (XON/XOFF), Hardware supported
COM Port Redirector	RealPort®
Connector	RJ-45

* Optional hardware
** Transfer rates are network operator dependent
*** Reduced cellular performance may occur outside of -20° C to +60° C. Standard temperature power supplies may reduce temperature range.
****The enclosure rating is self-declared and has not been formally verified by an independent lab.

Specifications | Digi TransPort® WR41

Wired Interfaces (Continued)	
Ethernet	
Ports	1
Standard/Physical Layer	IEEE 802.3; 10/100 Base-T
Data Rate/Mode/Interface	10/100 Mbit/s; Full or Half duplex; Auto MDI/MDIX
Connector	RJ-45
I/O	
Digital I/O	Extended temperature variants: Input 4 - 28 VDC / Output: 28 VDC 50 mA max
Connector	N/A
USB	
Ports	1
Standard	USB 1.0
Signaling	Full- or low-speed
Connector	Type A
Other	
Expansion Cards	Optional expansion cards available for GPS, fleet, telemetry (digital/analog I/O), ISDN/PSTN, serial and DialServ.
Software/Management	
Remote Management	Device Cloud (cloud based); Digi Remote Manager™ (user installed/managed); SNMP v1/v2c/v3 (user installed/managed)
Local Management	Web Interface (HTTP/HTTPS); CLI (Telnet, SSH, SMS, Serial port)
Management/ Troubleshooting Tools	FTP, SFTP, SCP, Protocol Analyzer with PCAP for Wireshark, Event Logging with Syslog and SMTP, NTP/SNTP
Programming Tools/ Environments	Python, DIA, Digi ESP™
Software Packages (See next page for details)	Option of Standard or Enterprise
Memory	64 MB RAM, 32 MB NOR Flash
Power	
Input	8-48 VDC
Consumption	6W max, 4W typical
Connector	Standard temp variants: Locking barrel; Extended temp variants: 4-pin terminal block (2 pins are used for power; the other 2 pins are not used).
DC Power Cord*	Locking barrel to bare wire or 4-pin connector to bare wire
DC Power Supply*	100-240 VAC 50/60 Hz; Option of standard temperature or extended temperature
Battery Backup	None
Physical	
Dimensions (L x W x H)	4.7 in x 6.8 in x 1.3 in (120 mm x 173 mm x 32 mm)
Weight	1.27 lb (0.53 kg)
Status LEDs	Power, LAN, Wi-Fi, WWAN (Link, Act, SIM), Signal strength, Serial
Material/Rating****	Industrial (Metal)/ IP30
Mounting	Brackets for wall mount & DIN rail sold separately
Environmental	
Operating Temperature * **	Standard temp variants: 0°C TO 40° C; Extended temp Wi-Fi variants: -10° C to +70° C Extended temp non-Wi-Fi variants: -25° C to +70° C
Storage Temperature	-40° C to +85° C
Relative Humidity	0% to 95% (non-condensing) @ 25° C

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Specifications	Digi TransPort® WR41
Environmental (Continued)	
Ethernet Isolation	1.5 kV RMS
Serial Port Protection (ESD)	15 kV
Hazardous (Class 1 Div 2)	N/A
Conformal Coating	N/A
GSM/UMTS	PTCRB, NAPRD.03, GCF-CC, R&TTE, EN 301 511
CDMA/EV-DO	CDG TIA/EIA-690, CDG TIA/EIA-98-E
Cellular Carriers	Certified by most major carriers.
Safety	UL 60950, CSA 22.2 No. 60950, EN60950
Emissions/Immunity	CE, FCC Part 15 Class B, AS/NZS CISPR 22, EN55024, EN55022 Class B (WR44 models with VDSL are Class A)
Industry	E-Marking (72/245/EEC, 2009/19/EC); Automotive Non-Immunity (2004/104/ EC, 2005/49/EC, 2005/83/EC, 2006/28/EC); WR44R also includes: ISO7637-2 Class C, EN 300 019-2-5 (Specification for environmental tests for ground vehicle installations - covers temperature, humidity, vibration and shock)
Warranty	
Product Warranty	5 years

Software Packages	Enterprise	Standard
Protocols	Same as Standard plus Device Cloud; Dynamic DNS client compatible with BIND9/No-IP/DynDNS	HTTP, HTTPS, FTP, SFTP, SSL, SMTP, SNMP (v1/v2c/v3), SSH, Telnet and CLI for web management; remote management via software tool (option); SMS management, protocol analyzer, ability to capture PCAP for use with Wireshark; DynDNS
Security/VPN	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; VPN Tunnels included: WR11/WR21/WR41/ WR44/WR44 R/WR44 RR: 5, WR44-DSL: 20; Maximum VPN Tunnels available: WR11/WR21: 5, WR41: 50, WR44/WR44 R/WR44 RR: 200; 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; Ethernet Port Isolation	IP Filtering
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); IPv6 (firmware upgradable); RSTP (Rapid Spanning Tree Protocol); IP Failover: VRRP, VRRP+TM; Automatic failover/ failback to second GSM network/Standby APN; Verizon NEMO/DMNR for Primary Wireless Access	IP pass-through; NAT, NAPT with IP Port Forwarding
Other Protocols	DHCP; Dynamic DNS client compatible with BIND9/No-IP/DynDNS; QoS via TOS/DSCP/WRED	DHCP; Dynamic DNS client compatible with BIND9/No-IP/DynDNS
Specialty/Legacy Protocols	RealPort®; Modbus UDP/TCP to serial; X.25 including XOT, SNA/IP, TPAD and PAD; Protocol switch*	RealPort®

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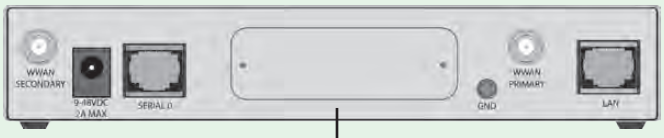
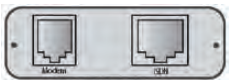
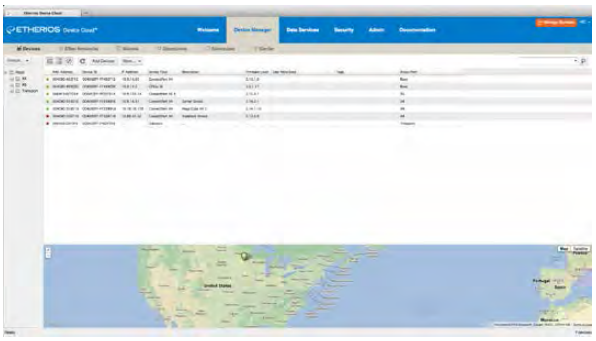
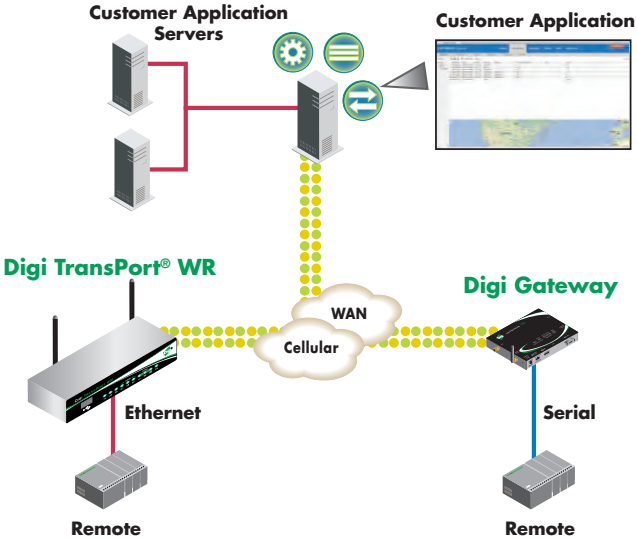
Expansion Cards	Connector	Specification
		
Sync/Async Serial Port (S1)	 1 x DB-25	X.21/RS-422/RS-232 synchronous/ asynchronous serial port
Async Serial Ports (A3)	 3 x RJ-45	3x asynchronous RS-232 serial ports
PSTN (P1)	 1 x RJ-45	PSTN interface that can be used to dial out and receive calls. A PPP session is created over which IP traffic can be sent and received.
DialServ (P3)	 1 x RJ-11 (FXS)	Dial tone simulator to emulate local telco.
ISDN (I1)	 1 x RJ-45	ISDN Basic Rate Interface (BRI) which can be configured either as a TE (terminal endpoint) or as NT-1 (network termination). The option also includes an additional asynchronous serial port via a second RJ-45 port.
ISDN-U/PSTN (I3)	 1 x RJ-11, 1 x RJ-45	ISDN-U interface suitable for the USA plus PSTN interface. Can be configured for Bell-103 modulation in leased line mode as well as a normal PSTN interface.
Telemetry 1 (T1)	 1 x 14-pin terminal block	4 x Opto-isolated digital output ports and 1 x Opto-isolated digital input port. It also provides a relay I/O port, voltage monitoring port, and internal temperature monitoring. Fully programmable via Python for embedded Digi TransPort applications.
Telemetry 2 (T2)	 1 x 14-pin terminal block	4 x Analog and 4 x Digital I/O ports fully programmable via Python for embedded Digi TransPort applications.
GPS (G1)	 1x SMA	Fully-integrated GPS tracking. See main specifications area for details.
Fleet (F1)	 1 x 4-pin, 1 x 15-pin, 1 x SMA	Flexible transportation/fleet focused applications requiring CAN bus, J1708, GPS, Non-isolated digital I/O, Ignition Sense, 3-Axis accelerometer, and power control of Digi TransPort interfaces. Fully programmable via Python for embedded Digi TransPort applications.

Device Management Features

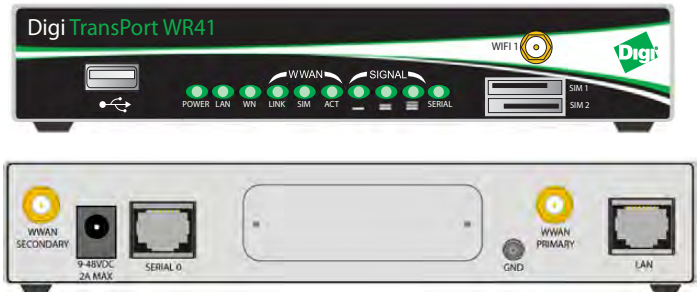
- View of all remote devices and their connection status
- Automatic registration of newly connected devices
- Remote device configuration
- Actions include device grouping and scheduling of operations
- Monitoring of user specified events
- Device statistic and report generation
- Alarm generation and alerting
- Secure access to all devices from web browser, anywhere
- Remote reboot of device and default reset
- Remote device management with Device Cloud

Easy Remote Configuration and Management





Product Images



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