Digi TransPort® WR44 R

Enterprise Class Cellular Routers for Rugged Applications

All-in-one cellular router with advanced routing/VPN features, designed specifically for use in rugged environments.

Overview

The Digi TransPort WR44 R is a rugged, all-in-one 3G/4G mobile communications solution with true enterprise class routing, security and firewall. Featuring a heavy-duty cast aluminum enclosure, the Digi TransPort WR44 R offers a flexible interface design with an optional integrated Wi-Fi access point (with multi SSID), USB, serial and 4-port Ethernet switch, as well as a variety of configuration options including multiple serial ports (async or sync), GPS, GPS/CAN/IO or I/O only modules.

These routers are ideal for transportation and mobile applications. Flexible power options include 9-36 VDC locking barrel or automotive Molex connectors for direct integration into vehicle applications. Also ideal for mobile applications is the cellular to Wi-Fi autoswitch feature, which uses the highest speed/lowest cost WAN network available.

All Digi TransPort products offer an advanced routing, security and firewall feature set including stateful inspection firewall and integrated VPN. Enterprise class protocols incorporate BGP, OSPF and VRRP+. Advanced features allow the Digi TransPort to be used as a component of a PCI compliant network.

Digi's remote management solutions feature easy setup, configuration and maintenance of large installations of Digi TransPort devices.
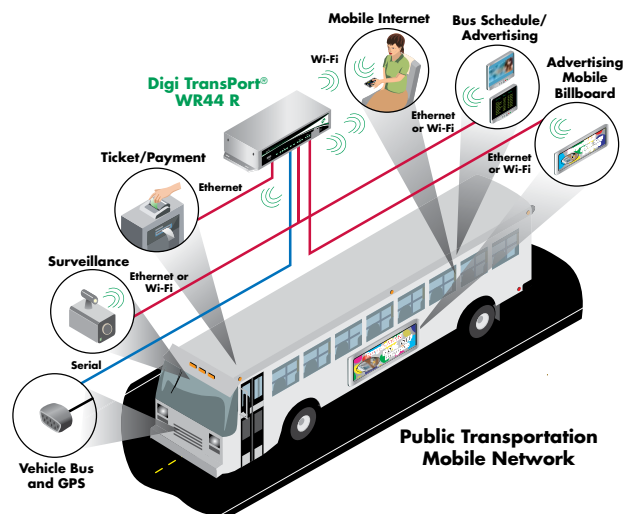
Related Products

Digi TransPort WR21 **Digi Remote Management** **Accessories**

Application Highlight

Features/Benefits

- **Rugged, enterprise-class cellular routers with advanced dynamic routing, security and firewall features**
- **Heavy-duty cast aluminum enclosure for reliable performance in rugged environments**
- **Integrated 802.11b/g/n Wi-Fi access point (optional) and 4-port Ethernet switch**
- **Flexible interfaces including multiple serial, GPS, CAN, and telemetry I/O with flexible DC power options**
- **Cellular to Wi-Fi autoswitch feature automatically uses the highest speed/lowest cost WAN network available**
- **Digi's remote management solutions include software for easy setup, configuration and maintenance**

Specifications | Digi TransPort® WR44 R

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
LTE – Verizon (L8)	700/1700(AWS)MHz; No 2G/3G fall back; Transfer Rate (max): 50 Mbps Up, 100 Mbps Down
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	SIM slot cover plate included

Wi-Fi*

Standard	802.11b/g/n; Option of dual Wi-Fi modules
Modes	Access point, Client and support for multiple SSID
Transmit Power	20 dBm + 1.0/-1.5 dBm
Receive Sensitivity	54 Mbps / <-72 dBm and 11 Mbps / -90 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, DSR, RI
Flow Control	Software (XON/XOFF), Hardware supported

* Optional hardware
** Transfer rates are network operator dependent
*** Reduced cellular performance may occur outside of -20° C to +50° 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® WR44 R
Wired Interfaces	
Serial (Continued)	
COM Port Redirector	RealPort®
Connector	DB-9 female
Ethernet	
Ports	4
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	Input 4 - 28 VDC / Output: 28 VDC 50 mA max
Connector	4-pin Molex (1 pin for input; 1 pin for I/O; the other 2 pins are used for DC power)
USB	
Ports	1
Standard	USB 2.0
Signaling	Full- or low-speed
Connector	Type A
DSL*	
Technology	VDSL2, ADSL2+, ADSL2, ADSL
Standard	Option of Annex A/M or B
Connector	RJ-11
Protocol	RFC 2364 PPPoA, RFC 2516 PPPoE, RFC 2684 Bridged Ethernet, RFC 1483 Routed IP (all either LLC or VC-Mux); PPP and ATM PVC support
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)	Enterprise
Memory	128 MB NAND Flash/64 MB DDR2 SDRAM
Power	
Input	9 – 36 VDC
Consumption	15W max, 8.5W typical
Connector	Locking barrel and 4-pin terminal block (2 pins are used for power; the other 2 pins are used for I/O).
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

* Optional hardware
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Specifications	Digi TransPort® WR44 R
Power	
Dimensions (L x W x H)	5.5 in x 10 in x 1.9 in (140 mm x 254 mm x 48 mm)
Weight	2.4 lbs (1.1 kg)
Status LEDs	Power, LAN, Wi-Fi, Serial/DSL, WWAN (Link, Act, SIM), Signal strength
Material/Rating****	Aluminium Alloy/ IP30
Mounting	4x mounting slots on the unit's flange
Environmental	
Operating Temperature *** ‡	Non-Wi-Fi varients: -40° C to +60° C Wi-Fi varients: -20° C to +60° C
Storage Temperature	-40° C to +85° C
Relative Humidity	0% to 95% (non-condensing) @ 25° C
Ethernet Isolation	1.5 kV RMS
Serial Port Protection (ESD)	15 kV
Hazardous (Class 1 Div 2)	N/A
Conformal Coating	N/A
Approvals	
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); 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	3 years

Software Packages	Enterprise
Protocols	Same as Standard plus Device Cloud by Etherios™; Dynamic DNS client compatible with BIND9/No-IP/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: 5 included. Additional available: WR21 (5 max.), WR41 (50 max.), WR44/WR44R/WR44RR (200 max.); Cryptology: SHA-1, MD5, RSA; Encryption: DES, 3DES and AES up to 256-bit; Authentication: RADIUS, TACACS+, SCEP for X.509 certificates; Content Filtering (via 3rd party) ; MAC Address Filtering; VLAN support; Ethernet Port Isolation
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
Other Protocols	DHCP; Dynamic DNS client compatible with BIND9/No-IP/DynDNS; QoS via TOS/DSCP/WRED
Specialty/Legacy Protocols	RealPort®; Modbus UDP/TCP to serial; X.25 including XOT, SNA/IP, TPAD and PAD; Protocol switch*
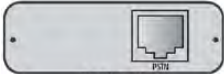
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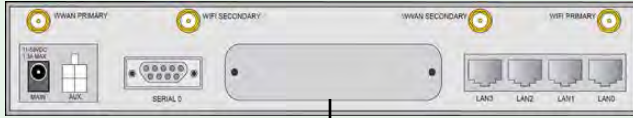****The enclosure rating is self-declared and has not been formally verified by an independent lab.
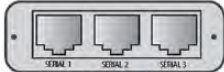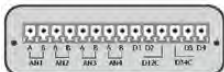‡ Product specifications for operating temperature updated on February 5, 2015 and applies to current versions of the product currently in the field.

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.

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 & maintain
- Complete tasks for your entire device network in minutes
- Edit configurations & 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 multiple commercial-grade SAS 70 certified facilities in North America and Europe
- Superior availability, operating to 99.9% or greater
- Open APIs available to support application development

Security

- Certified SSAE-16 and ISO27001 facilities
- Member of the Cloud Security Alliance
- 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

Product Images

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