

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/I/O or I/O only modules.

These routers are ideal for transportation and mobile applications. Flexible power options include 11-58 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



VPN Concentrators

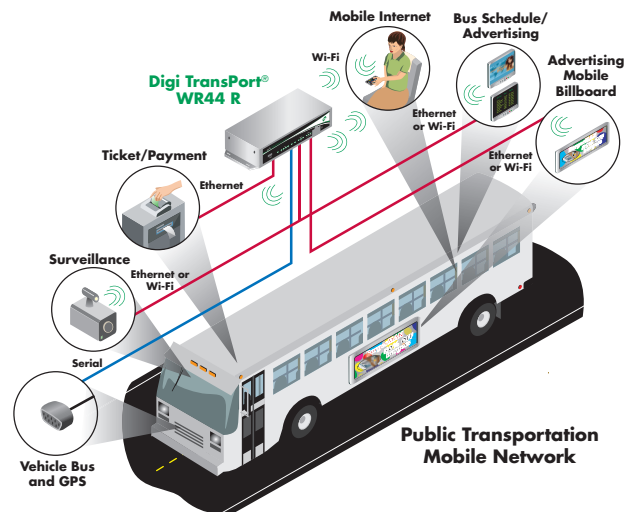


Remote Management Solutions



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
- Optional integrated 802.11b/g Wi-Fi access point 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 - Verizon (L2)	700 MHz (Band 13); 2G/3G fall back to CDMA 850/1900 MHz; Transfer rate (max): 50Mbps Up, 100 Mbps Down
LTE - AT&T (L3)	700 MHz (Band 17)/AWS; 3G fall back to HSPA 850/AWS/1900/2100 MHz; 2G fallback to 850/900/1800/1900 MHz; Transfer rate (max): 50 Mbps Up, 100 Mbps Down
LTE - EMEA (L4)	800/900/1800/2100/2600 MHz; 3G fall back to HSPA+ 900/2100 MHz; 2G fallback to 900/1800/1900 MHz
GSM/CDMA Gobi (U8)	GSM and CDMA supported on the same module via Gobi diversity; UMTS/HSPA/HSPA+ (850/900/1700 AWS/1800/1900/2100 MHz with Rx Diversity); EV-DO Rev A (800/1900 MHz with Rx Diversity); Transfer Rate (max): 5.76 Mbps Up, 14.4 Mbps Down
Edge (E1)	GPRS/EDGE Class 10; 850/900/1800/1900 MHz; Transfer rate (max): 236 Kbps Up/Down
CDMA 450 (Cx)	450 MHz; R-UIM support; Transfer rate (max): 1.8 Mbps Up, 3.1 Mbps Down
Connector	U8, Lx variants: 2 x 50 Ω SMA (Center pin: female); E1, Cx, 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; 802.11b/g/n (coming soon)
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)
Connector2	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/RS-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
COM Port Redirector	RealPort®
Connector	DB-9

Ethernet	
Ports	4
Standard	IEEE 802.3

* Optional Hardware

** Transfer rates are theoretical and network operator dependent

*** Reduced cellular performance may occur outside of -20° C to +60° C. Standard Temperature power supplies may reduce temperature range.

Specifications

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Wired Interfaces (Continued)

Ethernet	
Physical Layer	10/100 Base-T
Data Rate	10/100 Mbit/s
Mode	Full or Half duplex
Interface	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 (2 pins are used for I/O; the other 2 pins are used for DC power)

USB	
Ports	1
Standard	USB 1.0; USB 2.0
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. See page 5 for more information.
DSL	N/A
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

Software/Management	
Remote Management	Device Manager (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
Software Packages (see page 4 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
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)	5.7 in x 8.3 in x 1.6 in (145 mm x 210 mm x 40 mm)
Weight	1.98 lb (0.9 kg)
Status LEDs	Power, 4x LAN, Wi-Fi, Serial/DSL, WWAN (Link, Act, SIM), 3x Signal Strength
Enclosure Material/Rating	Aluminium Alloy/ IP50
Mounting	4x mounting slots on the unit's flange

Environmental	
Operating Temperature ***	Non-Wi-Fi variants: -40° C to +75° C; Wi-Fi variants: -20° C to +75° 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	Available upon request

* Optional hardware

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Specifications

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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
Industry	E-Marking (72/245/EEC, 2009/19/EC); Automotive Non-Immunity (2004/104/EC, 2005/49/EC, 2005/83/EC, 2006/28/EC)

Warranty

Product Warranty	3 years
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Software Packages

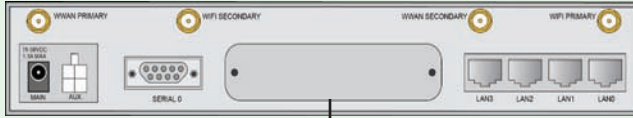
Enterprise






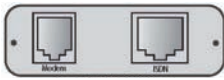

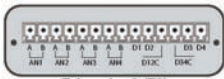


Protocols	Same as Standard plus Device Cloud by Etherios™; Dynamic DNS client compatible with BIND9/No-IP/DynDNS
Security/VPN	Stateful inspection firewall with scripting, address and port translation; VPN: IPsec with IKEv1, IKEv2, NAT Traversal; SSL, SSLv2, SSLv3, FIPS 197, Open VPN client and server; PPTP, L2TP; VPN Tunnels: 5 included. Additional available: WR44RR (200 max.); 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
Routing /Failover	IP pass-through; NAT, NATP 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
Specialty/Legacy Protocols	RealPort®; Modbus UDP/TCP to serial; X.25 including XOT, SNA/IP, TPAD and PAD; Protocol switch*
Other Protocols	DHCP; Dynamic DNS client compatible with BIND9/No-IP/DynDNS; QoS via TOS/DSCP/WRED

Expansion Cards

Connector

Specification

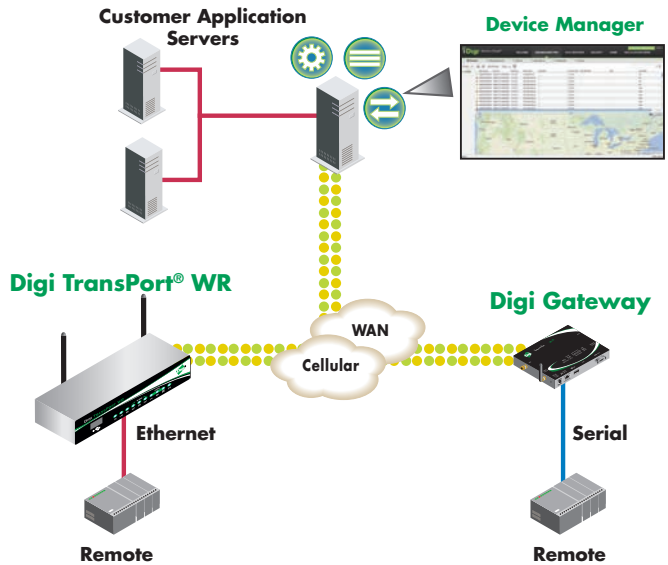
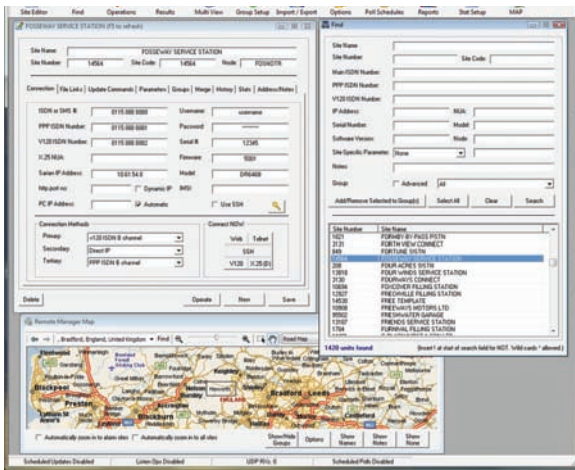


<p>Sync/Async Serial Port (S1)</p>	 <p>1 x DB-25</p>	<p>X.21/RS-422/RS-232 synchronous/asynchronous serial port</p>
<p>Async Serial Ports (A3)</p>	 <p>3 x RJ-45</p>	<p>3x asynchronous RS-232 serial ports</p>
<p>PSTN (P1)</p>	 <p>1 x RJ-45</p>	<p>PSTN interface that can be used to dial out and receive calls. A PPP session is created over which IP traffic can be sent and received.</p>
<p>DialServ (P3)</p>	 <p>1 x RJ-11 (FXS)</p>	<p>Dial tone simulator to emulate local telco.</p>
<p>ISDN (I1)</p>	 <p>1 x RJ-45</p>	<p>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.</p>
<p>ISDN-U/PSTN (I3)</p>	 <p>1 x RJ-11, 1 x RJ-45</p>	<p>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.</p>
<p>Telemetry 1 (T1)</p>	 <p>1 x 14-pin terminal block</p>	<p>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.</p>
<p>Telemetry 2 (T2)</p>	 <p>1 x 14-pin terminal block</p>	<p>4 x Analog and 4 x Digital I/O ports fully programmable via Python for embedded Digi TransPort applications.</p>
<p>GPS (G1)</p>	 <p>1x SMA</p>	<p>Fully-integrated GPS tracking. See main specifications area for details.</p>
<p>Fleet (F1)</p>	 <p>1 x 4-pin, 1 x 15-pin, 1 x SMA</p>	<p>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.</p>

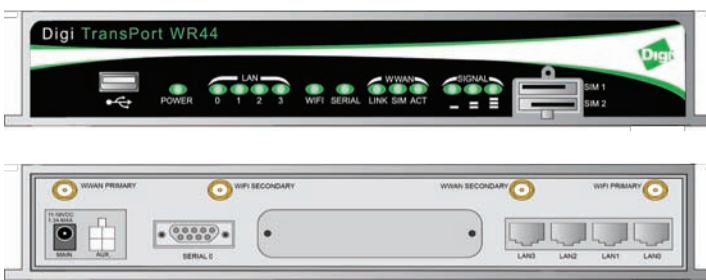
Device Management Features

- 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 Manager

Easy Remote Configuration and Management



Product Images



Visit www.digi.com for part numbers.

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