

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 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

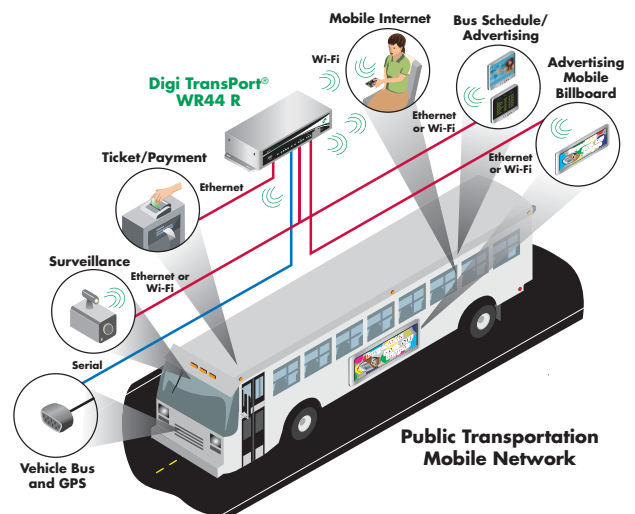


Remote Management Solutions



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

Interfaces

Serial

Async Port Type	1 DB-9 RS-232 built-in; 3 RJ-45 RS-232 (option)
Sync Port Type	1 Sync/Async DB-25 RS-232/422/485 (option)
Signal Support	TXD, RXD, RTS, CTS, DTR, DSR, DCD, RI (No DSR/RI for RJ-45 ports on 3-port serial card; RS-422/485 and sync signals available on request)
Flow Control	Software (XON/XOFF), Hardware supported

Ethernet

Ports	4-port auto switch with auto MDI/MDX options (configurable non-switch/mini-switch modes)
Specifications	IEEE 802.3 10/100 Base-T (auto-sensing); Full or Half duplex

Other

Wi-Fi (option)	802.11b/g access point and client mode; Open or shared key authentication; WEP (64 and 128 bit) encryption; WPA/WPA2 with Radius (WPA Enterprise and pre-shared keys); Support for multiple access point mode; 2 x 50 Ω RP-SMA (Center pin: on device: male; on antenna: female; external); Transmit power: 17 dBm ± 2 dBm; Receive sensitivity: 54 Mbps OFDM, 10% PER, -70 dBm, 11 Mbps CCK, 8% PER, -83.5 dBm
GPS (option)	50 channel GPS engine (-163 dB sens.); NMEA 0183 V2.3 sentence output; 50 Ω SMA (Center pin - on device: female; on antenna: male) with +3.3 VDC active antenna drive; NMEA stream to local serial port or over TCP/IP; Galileo ready
Telemetry	1 x DI plus 1 x DIO built-in (via optional Molex connector); I/O telemetry module option (1 relay, 1 digital in, 4 digital out)
USB Host Port	1 Type A connector for expansion; Support for full or low speed
Miscellaneous (option)	ISDN (BRI) - v.120, X.75, v.110; Digi DialServ™ (dial tone simulator); PSTN

General Features

Status LEDs	DTE, Ethernet, Power on, Cellular link/activity, Signal strength, Wi-Fi
Mounting	Wall mount
Security/VPN	RADIUS, TACACS+, SSL, SSLv2, SSLv3, FIPS 197, L2TP, (5 tunnels included - 50 max. on WR41, 200 max. on WR44); IPSec with IKEv1, IKEv2, ISAKMP; DES, 3DES and AES up to 256-bit encryption; Simple Certificate Enrollment Protocol (SCEP) for X.509 certificates, Open VPN client and server, PPTP; IPSec/PPP/L2TP VPN Server support; IP pass-through; Content Filtering (via 3rd party)
Router/Firewall	Bridging, NAT/NAT-Traversal, NAPT forwarding; PPP, PPPoE, GRE; IP Routing Protocols: PPP, GRE, RIP (v1 & v2), OSPF, SRI, BGP; IP Failover: VRRP, VRRP+™; VLAN support; STP (Spanning Tree Protocol); Stateful inspection firewall with scripting; Modbus over UDP/TCP; DHCP; Dynamic DNS client compatible with BIND9/No-IP/DynDNS; Automatic failover/failback to second GSM network/Standby APN; Optional IPv6
Sync/Specialty	Protocol switch; Sync tunneling: LAPB, RAW SNA, SNAIP, SLSw, IP/PPP over X.25; X.25/X.28; TPAD, APACS30, X.25, X.28, PAD, X.29, X.31, X.21, XOT, SSL
Management	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 files for use with Wireshark
Local Programming	Python, Modbus TCP
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 (0.9Kg)
Other	Standard dual SIM (SIM protection cover option); Conformal coating (option)

RF Features

GSM Models

GPRS	GPRS Class 10, Quadband 850/900/1800/1900 MHz
EDGE	GPRS Class 10/EDGE class 10, Quadband 850/900/1800/1900 MHz
HSDPA/HSUPA/UMTS	850/900/1900/2100 MHz with Rx Diversity
Antenna	HSDPA/HSUPA/UMTS: 2 X 50 Ω SMA (Center pin - on device: female; on antenna: male), GPRS/EDGE: 1 X 50 Ω SMA (Center pin - on device: female; on antenna: male)

CDMA Models

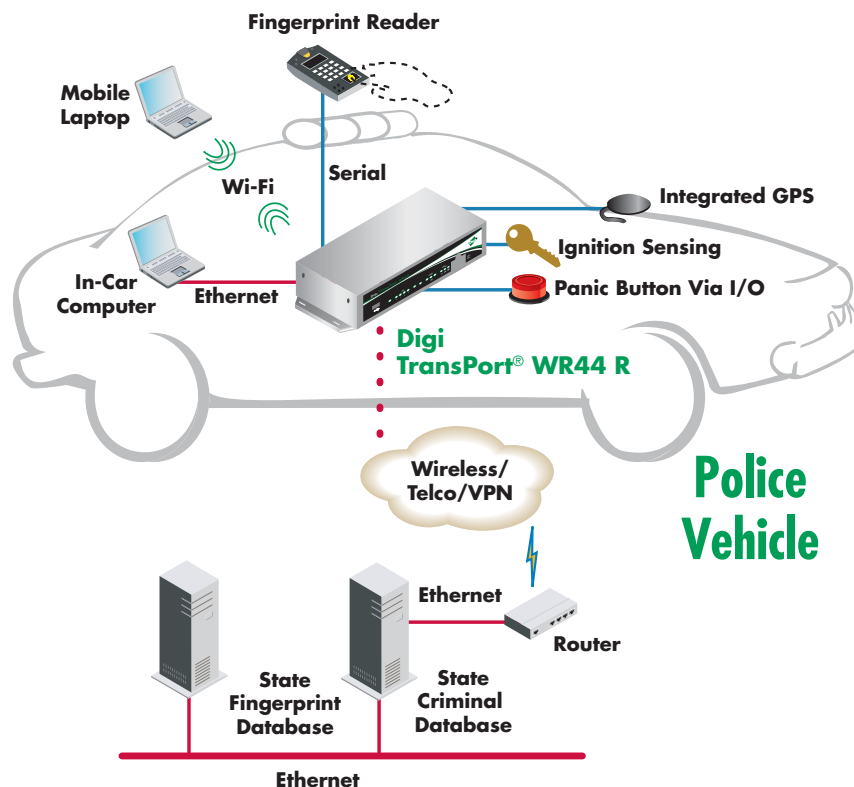
CDMA/EV-DO Rev A	Dualband 800/1900 MHz with Rx Diversity; Optional multi-mode GSM/EV-DO Gobi support; 450 MHz, 3.1 Mbps down / 1.8 Mbps up, R-UI-M support
Antenna	2 x 50 Ω SMA (Center pin - on device: female; on antenna: male)

Specifications

Digi TransPort® WR44 R

Power Requirements	
Power Input	11-58 VDC
Power Supply	100-240 VAC 50/60 Hz with barrel connector, Optional Molex connector with bare wire leads
Power Consumption	15 W @ 12 VDC to WR44 R
Environmental	
Operating Temperature	-40° C to +75° C; -20° C to +75° C (Wi-Fi models only); Reduced cellular performance may occur above +60° C
Relative Humidity	20% to 95% (non-condensing)
Ethernet Isolation	1.5 kV
Serial Port Protection (ESD)	15 kV
Approvals	
Mobile Certifications - GSM/UMTS	PTCRB, NAPRD.03, GCF-CC, R&TTE, EN 301 511
Mobile Certifications - CDMA/EV-DO	CDG TIA/EIA-690, CDG TIA/EIA-98-E
Wireless Carrier Certifications	Certified by most major carriers. See www.digi.com for current listing.
Safety	UL 60950, CSA 22.2 No. 60950, EN60950
Emissions/Immunity	CE, FCC Part 15 Class B (FCC identifier GGL-R1902G), AS/NZS CISPR 22, EN55024, EN55022 Class A
Vehicle Related Certifications	E-Marking (72/245/EEC, 2009/19/EC) Automotive Non-Immunity (2004/104/EC, 2005/49/EC, 2005/83/EC, 2006/28/EC) EN 300 019-2-5 (Specification for environmental tests for ground vehicle installations - covers temperature, humidity, vibration and shock)

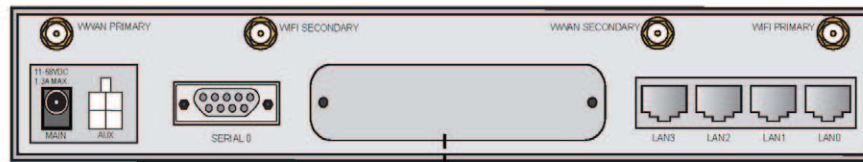
Transportation: Digi TransPort WR44 R



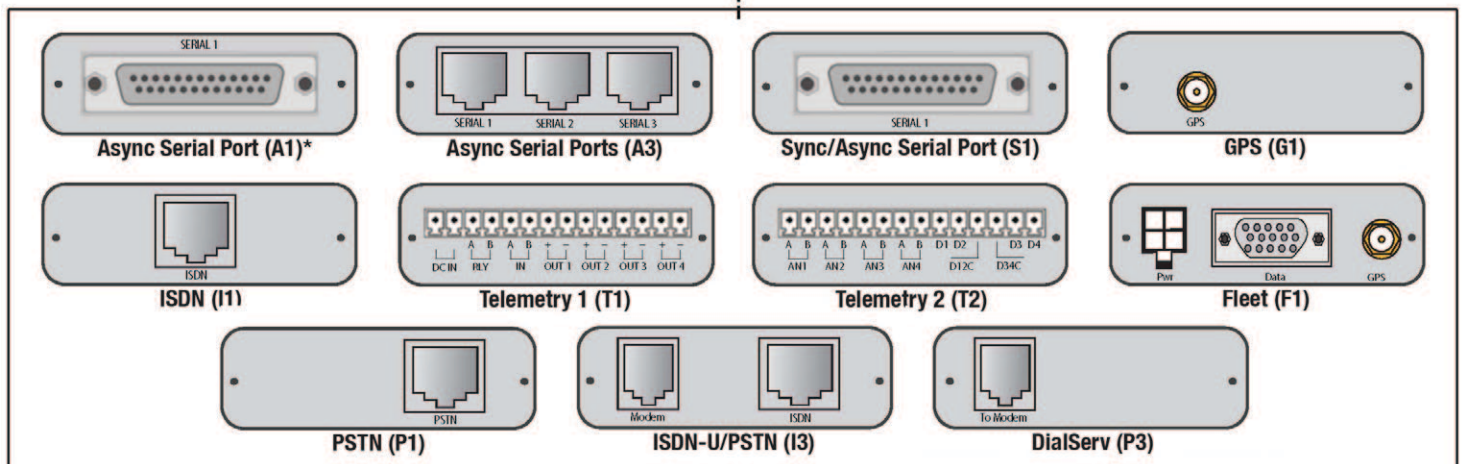
Bridging enterprise class router functionality and rugged features for transportation environments, the Digi TransPort WR44 R supports entire enterprise mobile networks including Wi-Fi access point, VLAN, integrated VPN, serial and Ethernet ports, and “auto-switch” from 3G to Wi-Fi client for least-cost routing when faster/less expensive networks are available. It is ideal for public transportation and public safety applications.

Hardware Interface Population Options for Digi TransPort® WR41/44 Products

Interface Name	Interface Type	Technical Description
Sync/Async Serial Port (S1)	1 x DB-25	X.21/RS422/RS232 synchronous/asynchronous serial port
Async Serial Port (A1)*	1 x DB-25	Asynchronous serial port
Async Serial Ports (A3)	3 x RJ-45	Asynchronous 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. Includes: • 1x PSTN cable
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 opto-isolated digital input ports and 1 opto-isolated digital output ports. It also provides a relay I/O port, a voltage monitoring port and internal temperature monitoring. Fully programmable via Python for embedded Digi TransPort applications. Includes: • 1 x mating connector
Telemetry 2 (T2)	1 x 14 pin terminal block	4 Analog/4 Digital I/O fully programmable via Python for embedded Digi TransPort applications. Includes: • 1 x mating connector
GPS (G1)	1 x SMA	Provides internal GPS capability Includes: • 1 x magnetic-mount antenna
Fleet (F1)	1 x 15-pin, 1 x SMA, 1 x 4-pin	Flexible transportation/fleet focused applications requiring GPS, CAN bus, J1708, 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. Includes: • 1 x magnetic-mount antenna • 1 x power cord



Digi TransPort WR44 R and WR41 use the same hardware interface expansion slot.



* A1 option for Digi TransPort WR41 only

Visit www.digi.com for part numbers.

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