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DIGI

ENTERPRISE-CLASS
CELLULAR ROUTERS
FOR RAIL

DIGI TRANSPORT® | WR44 RR

Manage this device with
Digi Remote Manager

DIGI TRANSPORT WR44 RR

Rugged, all-in-one cellular router with 3G/4G GPS designed for use on-board rail vehicles

Digi TransPort® WR44 RR is a rugged enterprise-class cellular router designed for rail environments. Its rail industry ratings, versatility, security features and performance make it ideal for applications such as Positive Train Control (PTC), wayside device communications and on-board passenger Internet access.

Digi TransPort WR44 RR provides a reliable primary high-speed cellular network connection or can act as a secure backup connection to the existing railroad network. It features a flexible communications design with 3G/4G multicarrier cellular, plus integrated Wi-Fi ac/b/g/n; a/n access point, serial and 4-port Ethernet switch. It also

features full on-board train certifications, including AAR S-9401 and EN50155. Communications interfaces include hardened connectors, including M12 for Ethernet and serial, as well as TNC connectors for antenna connections.

Gain critical insights into your deployed devices and manage your network with Digi Remote Manager® (Digi RM) — the command center for your deployment. Digi RM is a cloud-based solution that facilitates easy setup, mass configuration, maintenance and support for hundreds or even thousands of remote devices. Digi RM lets you evaluate, update and configure your Digi enterprise products — and the health of your network — at scale after deployment.

BENEFITS

– Heavy-duty enclosure and connectors designed for shock and high vibration environments

– Enterprise-class routing, VPN and firewall capabilities

– Optional integrated 802.11 ac/b/g/n; a/n Wi-Fi access point

– Dual SIM for carrier redundancy

– Cellular to Wi-Fi autoswitch

– Full on-board train certs including AAR S-9401 and EN50155

– Digi Remote Manager® platform for easy setup, mass configuration and management

APPLICATION EXAMPLE

HEADQUARTERS

Encrypted WAN

DIGI REMOTE MANAGER®

WIRELESS COMMUNICATIONS SOLUTIONS FOR TRAINS

3G/4G/LTE

DIGI TRANSPORT® WR44 RR

Train Schedule/ Advertising

Advertising Mobile Billboard

Surveillance

Ticket/Payment

RELATED PRODUCTS

Digi TransPort® WR11 XT

Digi TransPort® WR21

Digi TransPort® WR44 R

Accessories

Digi Remote Manager®
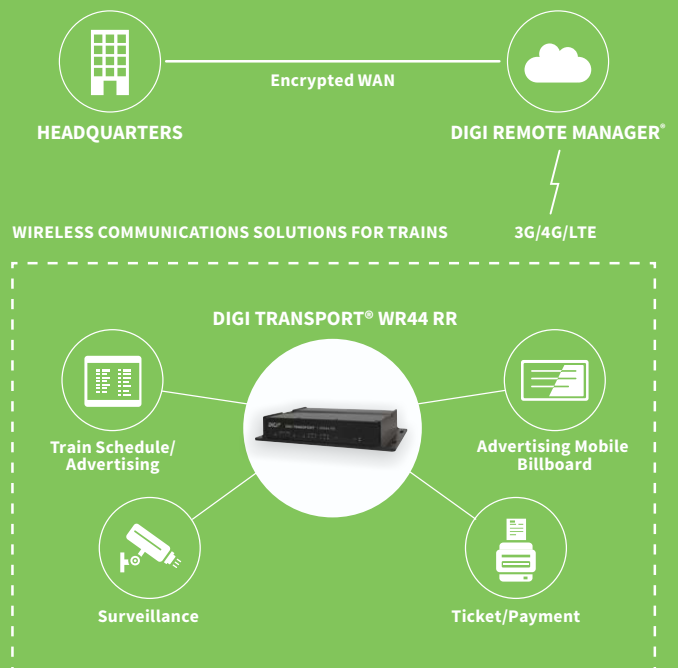
SPECIFICATIONS	Digi TransPort® WR44 RR
WIRELESS INTERFACES	
CELLULAR*	
LTE - NORTH AMERICA/EMEA (M8)	LTE Advanced Cat 6: 700(B12,B13,B29)/800(B20,B26)/850(B5)/900(B8)/AWS(B4)/1800(B3)/1900(B2,B25)/ 2100(B1)/2300(B30)/2500(B41)/2600(B7) 3G HSPA+: 850/900/AWS/1800/1900/2100 MHz Transfer rate (max): 300 Mbps down, 50 Mbps up Approvals: PTCRB, AT&T, Verizon, Vodafone (pending)
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
CONNECTOR	(2) 50 Ω TNC (Center pin: female)
SIM SLOTS	(2) Mini-SIM (2FF)
SIM SECURITY	SIM slot cover plate
WI-FI**	
STANDARD	802.11 ac/a/b/g/n 2.4/5 GHz
MODES	Access point, client and support for multiple SSID
TRANSMIT POWER	16 – 22 dBm, +/- 2 dB
RECEIVE SENSITIVITY	71 – 93 dBm, +/- 2dB
SECURITY	Open or shared key authentication; WEP (64- and 128-bit) encryption; WPA/WPA2 with RADIUS (WPA enterprise and pre-shared keys)
CONNECTORS	(2) 50 Ω RP-TNC (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) 50 Ω RP-TNC (center pin: male)
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
WIRED INTERFACES	
SERIAL	
PORTS	(1) 5-pin A-coded M12 female; DCE
STANDARD	RS-232
SIGNAL SUPPORT	TXD, RXD, RTS, CTS, GND
FLOW CONTROL	Software (XON/XOFF), hardware supported
ETHERNET	
PORTS	(4) 10/100 Mbps (auto-sensing)
CONNECTOR	Option of 4-pin D-coded M12 female or 8-pin A-coded M12 female
I/O	
DIGITAL I/O	Input: 4 - 28 VDC; Output: 28 VDC 50 mA max
CONNECTOR	4-pin A-coded M12 male (2 pins are used for I/O; the other 2 pins are used for DC power)

* Transfer rates are network operator dependent.

** Optional hardware.

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SPECIFICATIONS	Digi TransPort® WR44 RR
MANAGEMENT	
REMOTE MANAGEMENT	Digi Remote Manager® (cloud based); 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
MEMORY	128 MB NAND Flash/64 MB DDR2 SDRAM
POWER	
INPUT	9 – 36 VDC
CONSUMPTION	15 W max, 8.5 W typical
CONNECTOR	4-pin A-coded M12 male (2 pins are used for power; the other 2 pins are used for I/O)
DC POWER CORD**	4-pin A-coded M12 female to bare wire
PHYSICAL	
DIMENSIONS (L X W X H)	29.2 cm x 16.9 cm x 5.2 cm (11.5 in x 6.65 in x 2.05 in)
WEIGHT	2.6 kg (5.7 lbs)
STATUS LEDS	Power, LAN, Wi-Fi, serial, WWAN (link, act, SIM), signal strength
MATERIAL/RATING***	Aluminium alloy/ IP54
MOUNTING	(4) mounting slots on the unit's flange
ENVIRONMENTAL	
OPERATING TEMPERATURE	-40° C to 70° C (-40° F to 158° F); (reduced cellular performance may occur above 60° C/140° F)
STORAGE TEMPERATURE	-40° C to 85° C (-40° F to 185° F)
RELATIVE HUMIDITY	0% to 95% (non-condensing) @ 25° C (77° F)
ETHERNET ISOLATION	2 kV RMS
SERIAL PORT PROTECTION (ESD)	10 kV
CONFORMAL COATING	Available upon request
APPROVALS	
CELLULAR	PTCRB, NAPRD.03, GCF-CC, R&TTE, EN 301 511
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	EN50155, EN45545-2 (all variants); AAR S-9401 (select variants)
WARRANTY	
PRODUCT WARRANTY	3-year****

**Optional hardware.

***The enclosure rating is self-declared and has not been formally verified by an independent lab.

****Standard 3-year warranty upgradeable to 5 years with purchase of a Digi Remote Manager Premier 5-year subscription applicable to the product purchased only at the time of product purchase and with product registration at that time in Digi Remote Manager.

ENTERPRISE SOFTWARE	DESCRIPTION
PROTOCOLS	HTTP, HTTPS, FTP, SFTP, SSL, SMTP, 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, FIPS 197, Open VPN client and server; PPTP, L2TP; (5) VPN tunnels (upgradable to a maximum of 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
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	DHCP; 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

DIGI®

PRODUCT IMAGES

DIGI REMOTE MANAGER®

Digi Remote Manager is the technology platform that brings networks to the next level, allowing networks — and the people who manage them — to work smarter. With Digi Remote Manager you can transform a multitude of dispersed IoT devices into a dynamic, intelligent network. Now you can easily deploy, monitor and diagnose thousands of mission-critical devices from a single point of command — on your desktop, tablet or phone. All the while, its software-defined security diligently safeguards your entire Digi ecosystem.

Learn more at www.digi.com/digi-remote-manager

CAPABILITIES

– Activate, monitor and diagnose your mission-critical devices from a single point of command and control — on your desktop or mobile app
– Schedule key operations — including firmware updates and file management — on a single device or on a group of devices, keeping your network functionality up-to-date and maintaining compliance standards
– Manage edge devices out-of-band via console terminal access
– Keep tabs on device health and connectvity across device deployments of any size
– Create detailed reports and enable real-time alerts for specified conditions
– Integrate device data through open APIs to gain deeper insights and control with third-party applications
– Report and alert on performance statistics, including connection history, signal quality, latency, data usage and packet loss

INFRASTRUCTURE

– Hosted in a commercial-grade cloud server environment that meets SOC 1®, SOC 2® and SOC 3® standards
– Superior availability, operating to 99.9% or greater
– Open APIs available to support application development

SECURITY

– More than 175 security controls in place to protect your data
– Member of the Center for Internet Security® (CIS®)
– Enables compliance with security frameworks like ISO27002, HIPAA, NIST and more
– Earned Skyhigh's CloudTrust™ Program highest rating of Enterprise-Ready

PART NUMBERS	DIGI TRANSPORT® WR44 RR
WR44-M8G4-AE1-MD	Digi TransPort WR44 RR - 4G LTE North America/EMEA, Wi-Fi (802.11ac)
WR44-L9G4-AE1-MD	Digi TransPort WR44 RR - 4G LTE LATAM/ANZ, Wi-Fi (802.11ac)

PART NUMBERS	ACCESSORIES*
76000983	Accessory kit - Digi TransPort WR44 RR

*Sold separately, unless otherwise noted.

PART NUMBERS	DIGI REMOTE MANAGER®
DIGI-RM-STD-1YR	Digi Remote Manager Standard - 1-year subscription
DIGI-RM-PRM-1YR	Digi Remote Manager Premier - 1-year subscription
DIGI-RM-PRM-3YR	Digi Remote Manager Premier - 3-year subscription
DIGI-RM-PRM-5YR	Digi Remote Manager Premier - 5-year subscription

DIGI SERVICE AND SUPPORT / You can purchase with confidence knowing that Digi is always available to serve you with expert technical support and our industry leading warranty. For detailed information visit www.digi.com/support.

91002236
F1/920

909 Ridgebrook Road.,Sparks,Maryland 21152,USA
TEL : +1-410-583-1701 FAX : +1-410-583-1704
E-mail: sales@pulsesupply.com
https://www.pulsesupply.com/digi-iwr