



DUAL LTE / DUAL  
WI-FI MOBILE  
ACCESS ROUTER



# DIGI WR54

Rugged and secure cellular router for mission critical industrial and transportation applications, including FirstNet Ready™ models for public safety networks

The versatility and performance of Digi® WR54 routers make them ideal for mission critical applications requiring continuous connectivity, field longevity and edge computing. FirstNet Ready™ Digi WR54 provides secure routing and gateway functionality across wired and wireless communication networks. Local private subnets are bridged across public networks to safeguard privacy and integrity.

Digi WR54 is available with dual Wi-Fi radios to segment passenger Wi-Fi from fare collection, data, video and other applications, and offers FirstNet Ready™ models with both single and dual cellular modules. FirstNet® is a public/private partnership managed by the U.S. Dept. of Commerce that develops and operates a nationwide first responder network.

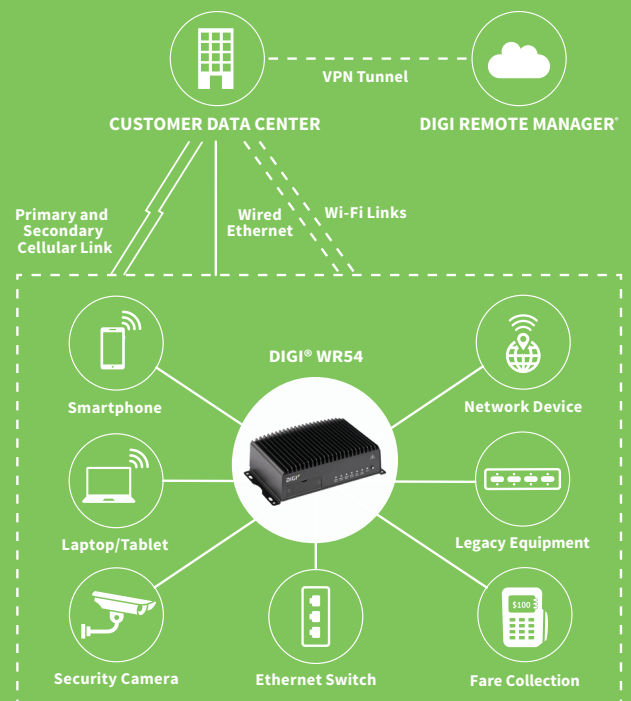
Designed to meet the demands of first responders, Digi WR54 includes concurrent and independent dual cellular interfaces that prioritize critical communications. Industrial-grade design supports the most rugged conditions, including vibration and temperature changes. An embedded Python environment also enables quick adaptation to evolving system requirements.

Four Gigabit Ethernet ports connect other IP-capable systems, each configurable as an isolated secure LAN, or all four can function as a Layer 2 switch. Digi TrustFence®, a suite of hardware and firmware features, ensures the integrity of Digi WR54 security functions. A cryptographic co-processor protects particularly sensitive information.

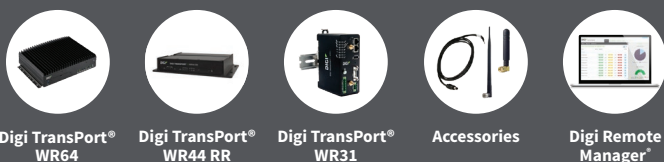
## FEATURES AND BENEFITS

- [FirstNet Ready™](#) models include Digi WR54 A146/A246 with single or dual cellular modules
- Global models Digi WR54 A106/A206 with single or dual cellular radios
- Future-built with dual-core 880 MHz MIPS processor and PCIe 2.0 internal bus
- Segmented private vs. public data communication across dual 600 Mbps Cat 11 cellular modules
- High-speed 867 Mbps 802.11ac Wi-Fi for WAN or LAN service and dual Wi-Fi radios in Digi WR54-A112
- Cryptographic co-processor with secure key generation
- Zero-touch configuration using Digi Remote Manager®

## APPLICATION EXAMPLE



## RELATED PRODUCTS



## SPECIFICATIONS

## DIGI® WR54

CELLULAR	
<b>LTE – WORLDWIDE</b>	LTE – WORLDWIDE LTE FDD: B1, B2, B3, B4, B5, B7, B8, B12, B13, B17, B20, B25, B26, B28, B29, B30 (Rx only), B66; LTE TDD: B38, B40, B41 3G HSPA+: B1, B2, B4, B5, B8 Transfer rate (max): 600 Mbps down, 75 Mbps up (Cat 11)
<b>LTE – UNITED STATES / CANADA (FIRSTNET READY™)</b>	LTE FDD: B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B14, B18, B19, B20, B26, B29, B30, B32, B41, B42, B43, B46, B48, B66 3G HSPA: B1, B2, B4, B5, B6, B8, B9, B19 Transfer rate (max): 600 Mbps down, 150 Mbps up (Cat 12)
<b>CONNECTOR</b>	Single cellular models: (2) 50 Ω SMA (center pin: female) Dual cellular models: (4) 50 Ω SMA (center pin: female)
<b>SIM SLOTS</b>	Single cellular models: (2) Mini-SIM (2FF) Dual cellular models: (4) Mini-SIM (2FF)
<b>SIM SECURITY</b>	Screw-down SIM cover
WI-FI	
<b>MODULE</b>	2 x 2 MIMO 2.4/5 GHz 802.11 a/b/g/n/ac, 867 Mbps (max); dual Wi-Fi modules in WR54-A112
<b>HOTSPOT</b>	Captive portal, customizable splash page
<b>AUTHENTICATION</b>	Basic ToS acceptance, enterprise RADIUS
<b>THIRD-PARTY SERVICES</b>	Content filtering, embedded advertising
<b>MODES</b>	Up to 4 access points and 1 client per Wi-Fi module (8+2 total)
<b>SECURITY</b>	None, WPA/WPA2-personal, WPA/WPA2-enterprise
<b>CONNECTORS</b>	2 x 50 Ω RP-SMA (center pin: male)
GPS	
<b>TECHNOLOGY</b>	Multi-constellation: concurrent reception of up to 3 GNSS (GPS, Galileo, GLONASS, BeiDou)
<b>SENSITIVITY</b>	-163 dB
<b>PROTOCOL</b>	Protocol NMEA 0183 V2.3 sentence output
<b>CONNECTOR</b>	1 x 50 Ω SMA (center pin: female); +3.3 VDC active antenna drive
SOFTWARE AND MANAGEMENT	
<b>PROTOCOLS</b>	IPv4/IPv6, DMNR, QoS, NTP, Dynamic DNS, Syslog
<b>SECURITY</b>	Stateful firewall, VPN (IPsec and OpenVPN), PKI and RADIUS
<b>REMOTE MANAGEMENT</b>	Digi Remote Manager® (cloud based); SNMP v1/v2c/v3
<b>LOCAL MANAGEMENT</b>	Web interface (HTTP/HTTPS); CLI (SSH, serial port)
<b>MANAGEMENT/ TROUBLESHOOTING TOOLS</b>	Protocol analyzer with PCAP for Wireshark, event and system logging (with Syslog), accessible from Digi Remote Manager, SFTP or SCP
<b>PROGRAMMING TOOLS/ ENVIRONMENTS</b>	Python v3.5
ETHERNET	
<b>PORTS</b>	(4) RJ-45; 10/100/1000 Mbps (auto-sensing)
SERIAL	
<b>PORTS</b>	(1) DB9-M; RS-232 DTE Signal support TXD, RXD, RTS, CTS, DTR, DCD, DSR, RI software (XON/XOFF), hardware supported
USB	
<b>PORTS</b>	(1) USB 3.0 Type A connector
PHYSICAL	
<b>DIMENSIONS (L X W X H)</b>	14.61 cm x 20.95 cm x 6.35 cm (5.75 in x 8.25 in x 2.5 in)
<b>WEIGHT</b>	1.5 kg (3.3 lbs)
<b>STATUS LEDS</b>	Power on, WWAN signal strength, WWAN service
<b>ENCLOSURE</b>	Die-cast aluminium / IP54
POWER REQUIREMENTS	
<b>POWER INPUT</b>	9 - 36 VDC, 30 W minimum power source required
<b>POWER CONSUMPTION</b>	13 W typical (idle); 20 W typical (peak Tx/Rx)

## SPECIFICATIONS

## DIGI WR54

### ENVIRONMENTAL

<b>OPERATING TEMPERATURE</b>	-34° C to 74° C (-29° F to 165° F)
<b>RELATIVE HUMIDITY</b>	5% to 95% (non-condensing)

### APPROVALS

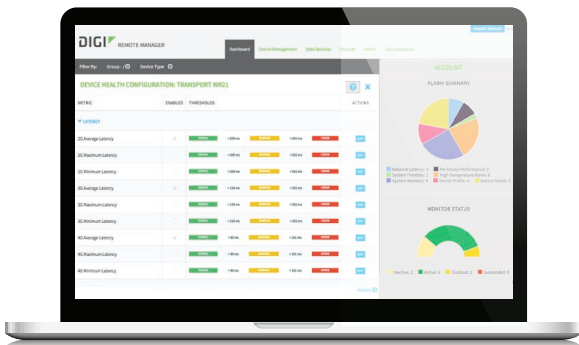
<b>CELLULAR</b>	PTCRB, AT&T, Sprint (WR54-A146 and WR54-A246 only), Verizon
<b>SAFETY</b>	EN60950, EN62368
<b>VEHICLE</b>	ISO 7637-2/3, ISO 10605, ISO 16750-2 Pulses 4/5a/5b, SAE J1455, SAE J1113, E-Mark*
<b>ENVIRONMENTAL</b>	MIL-STD-810G
<b>EMISSIONS/IMMUNITY</b>	CE, FCC Part 15 Class B, AS/NZS CISPR 22, EN55024, EN55032

### WARRANTY

<b>PRODUCT WARRANTY</b>	3-year product warranty
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\*Only on WR54-A106, WR54-A112 and WR54-A206 models.

## DIGI REMOTE MANAGER®



### INFRASTRUCTURE

- Hosted in a commercial-grade SAS 70-certified environment
- Superior availability, operating to 99.9% or greater
- Open APIs available to support application development

### 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 and maintain
- Complete tasks for your entire device network in minutes
- Edit configurations and update firmware for your individual devices or groups
- Monitor the status and location of your remote device via a web browser
- Activate or deactivate cellular lines and monitor data to ensure you never incur overage charges

### SECURITY

- Certified SSAE-16 facilities
- 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

PART NUMBERS	DESCRIPTION
WR54-A106	Digi WR54 single LTE, Wi-Fi, worldwide
WR54-A112	Digi WR54 single LTE, dual Wi-Fi, worldwide
WR54-A206	Digi WR54 dual LTE, Wi-Fi, worldwide
WR54-A146	Digi WR54 single LTE, Wi-Fi, North America, FirstNet Ready™
WR54-A246	Digi WR54 dual LTE, Wi-Fi, North America, FirstNet Ready™

PART NUMBERS	ACCESSORIES*
76002084	Digi WR54 accessory kit - single cellular
76002085	Digi WR54 accessory kit - dual cellular
76002086	Digi WR54 accessory kit - dual Wi-Fi
76002076	Digi WR54 power supply

\*Sold separately, unless otherwise noted.

FOR MORE INFORMATION  
PLEASE VISIT [DIGI.COM](http://DIGI.COM)

**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](http://www.digi.com/support).

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