



DUAL LTE / WI-FI  
MOBILE ACCESS  
ROUTER



# DIGI WR54

Rugged and secure cellular router with dual redundant communications for mission critical industrial and transportation applications

The versatility and performance of the Digi® WR54 router make it ideal for mission critical applications requiring continuous connectivity, field longevity and edge computing. Routing and gateway functions are secured across traditional and wireless communications networks, protocols and interfaces – while bridging local private wired or wireless subnets across a public network – safeguarding message privacy and integrity.

Mission critical communication is achieved through concurrent and independent dual cellular interfaces. System operation is assured with an industrial grade electrical and mechanical design, while an embedded python environment enables quick adaptation to future evolving system requirements.

Each cellular transceiver employs Gobi LTE Advanced technology allowing use on major networks. Dedicated PCIe 2.0 internal data buses deliver 10 GT/s aggregate bandwidth ensuring low latency high bandwidth cellular communications. 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 data such as stored passwords and encryption keys.

## FEATURES AND BENEFITS

- Future built with dual-core 880 MHz MIPS processor and PCIe 2.0 internal bus
- Link failover and load balancing across dual 600 Mbps CAT11 cellular
- High speed 867 Mbps 802.11ac Wi-Fi for WAN or LAN service
- Cryptographic co-processor with secure key generation and storage
- Gigabit WAN/LAN Ethernet switch (4-port)
- Zero-touch fleet-wide configuration using Digi Remote Manager®

## RELATED PRODUCTS



Digi TransPort®  
WR64



Digi TransPort®  
WR44 RR



Digi TransPort®  
WR31

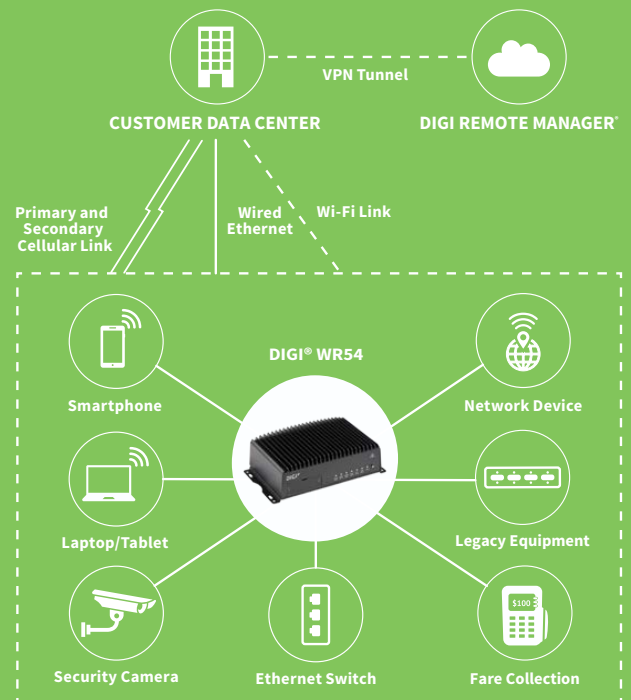


Accessories



Digi Remote  
Manager®

## APPLICATION EXAMPLE



## SPECIFICATIONS

## DIGI® WR54

CELLULAR	
LTE – WORLDWIDE	LTE FDD : 700 (B12,B13,B17, B28, B29) / 800 (B20) / 850 (B5, B26) / 900 (B8) / 1700AWS(B4, B66) / 1800 (B3) / 1900 (B2, B25) / 2100 (B1) / 2300(B30) / 2600(B7) LTE TDD : 2300(B40) / 2500(B41) / 2600(B38) 3G HSPA: 850/900/1700AWS/1800/1900/2100 MHz Transfer rate (max): 600 Mbps down, 75 Mbps up
CONNECTOR	Single cellular models: (2) 50 Ω SMA (center pin: female) Dual cellular models: (4) 50 Ω SMA (center pin: female)
SIM SLOTS	Single cellular models: (2) Mini-SIM (2FF) Dual cellular models: (4) Mini-SIM (2FF)
SIM SECURITY	Screw-down SIM cover
WI-FI	
MODULE	2 x 2 MIMO 2.4/5 GHz 802.11 a/b/g/n/ac, 867 Mbps (max)
HOTSPOT	Captive portal, customizable splash page
AUTHENTICATION	Basic ToS acceptance, Enterprise RADIUS
3RD PARTY SERVICES	Content filtering, embedded advertising
USER MANAGEMENT	Per client usage limit and reporting
MODES	Up to 4 Access Points and 1 Client
SECURITY	None, WPA/WPA2-Personal, WPA/WPA2-Enterprise
CONNECTORS	2 x 50 Ω RP-SMA (Center pin: male)
GPS	
TECHNOLOGY	Multi-constellation: Concurrent reception of up to 3 GNSS (GPS, Galileo, GLONASS, BeiDou)
SENSITIVITY	-163 dB
PROTOCOL	Protocol NMEA 0183 V2.3 sentence output
CONNECTOR	1 x 50 Ω SMA (Center pin: female); +3.3VDC active antenna drive
SOFTWARE AND MANAGEMENT	
REMOTE MANAGEMENT	Digi Remote Manager® (cloud based); SNMP v1/v2c/v3 (user installed/managed)
LOCAL MANAGEMENT	WebUI (HTTP/HTTPS); CLI (Telnet, SSH, SMS)
MANAGEMENT/ TROUBLESHOOTING TOOLS	FTP, SFTP, SCP; Protocol analyzer with PCAP for Wireshark; Event logging with Syslog and SMTP; NTP/SNTP
PROGRAMMING TOOLS/ ENVIRONMENTS	Python v3.6
MEMORY	256 MB RAM, 512 MB file space
ETHERNET	
PORTS	(4) RJ-45; 10/100/1000 Mbps (auto-sensing)
SERIAL	
PORTS	(1) DB09M; RS232 DTE Signal support TXD, RXD, RTS, CTS, DTR, DCD, DSR, RI software (XON/XOFF), hardware supported
USB	
PORTS	(1) USB 3.0 Type A connector
PHYSICAL	
DIMENSIONS (L X W X H)	5.75 in x 8.25 in x 2.5 in (14.61 cm x 20.95 cm x 6.35 cm)
WEIGHT	3.3 lbs (1.5 kg)
STATUS LEDS	Power on, WWAN signal strength, WWAN service
ENCLOSURE	Die-cast aluminium / IP54
POWER REQUIREMENTS	
POWER INPUT	9 - 36 VDC, 30W minimum power source required
POWER CONSUMPTION	13W typical (idle); 20W typical (peak Tx/Rx)
ENVIRONMENTAL	
OPERATING TEMPERATURE	-34° C to +74° C (-29° F to +165° F)
RELATIVE HUMIDITY	5% to 95% (non-condensing)

## SPECIFICATIONS

## DIGI WR54

### APPROVALS

#### CELLULAR

PTCRB

#### SAFETY

EN60950, EN62368

#### VEHICLE

ISO 7637-2/3, ISO 10605, ISO 16750-2 Pulses 4/5a/5b, SAE J1455, SAE J1113, E-Mark

#### ENVIRONMENTAL

MIL-STD-810G

#### EMISSIONS/IMMUNITY

CE, FCC Part 15 Class B, AS/NZS CISPR 22, EN55024, EN55032

### WARRANTY

#### PRODUCT WARRANTY

3 years product warranty (1-year Digi Foundations included)\*

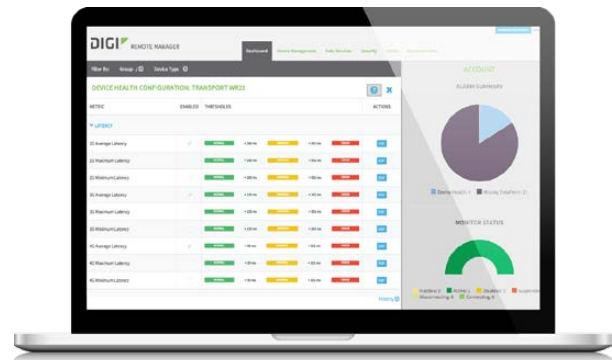
\*Digi Foundations extends the standard three-year warranty to a Limited Lifetime Warranty that provides replacement with a new or similar Digi product for a period of five years from the date of purchase. After five years from the purchase date, the warranty value will revert to a 40 percent credit towards the MSRP of an equivalent product from Digi.

## DIGI REMOTE MANAGER

### Manage and control devices from a central, secure application.

When it comes to the Internet of Things, only the most reliable communication connections will do. With Digi Remote Manager®, you can visually monitor, update and maintain the performance requirements you depend on most, with reports on the following key parameters:

- Cellular connection history
- 3G/4G LTE signal quality
- Public Wi-Fi client usage statistics
- Packet delivery
- Latency
- Cellular data sent and received
- CPU and memory utilization
- Network interface throughput
- Level 1 PCI-DSS validation
- Open APIs available to support application development



### SECURITY

- Certified SSAE-16 facilities
- Over 175 security controls in place to protect data
- Security framework compliance with PCI, HIPPA, NIST and others
- Earned SkyHigh's Cloud Trust Program highest ranking of Enterprise-ready
- PCI certified; Attestation of Compliance

PART NUMBERS	DESCRIPTION
WR54-A106-BDL-S1	Digi WR54 Single LTE, Wi-Fi, Worldwide, 1 year
WR54-A106-BDL-S3	Digi WR54 Single LTE, Wi-Fi, Worldwide, 3 years
WR54-A106-BDL-S5	Digi WR54 Single LTE, Wi-Fi, Worldwide, 5 years
WR54-A206-BDL-S1	Digi WR54 Dual LTE, Wi-Fi, Worldwide, 1 year
WR54-A206-BDL-S3	Digi WR54 Dual LTE, Wi-Fi, Worldwide, 3 years
WR54-A206-BDL-S5	Digi WR54 Dual LTE, Wi-Fi, Worldwide, 5 years

PART NUMBERS	ACCESSORIES
76002084	WR54 Accessory Kit - Single Cellular
76002085	WR54 Accessory Kit - Dual Cellular
76002076	WR54 Power Supply

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