DIGI

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.
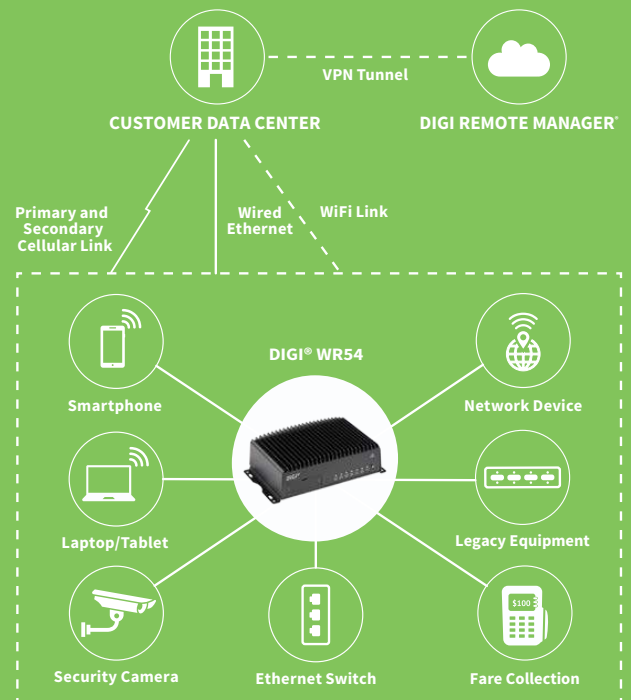
Each cellular transceiver employs Gobi LTE Advanced technology allowing use on major networks. Dedicated PCIe 2.0 internal data buses deliver 10 GT/s aggregate bandwidth ensuring low latency high bandwidth cellular communications. Four gigabit Ethernet ports connect other IP capable systems, each configurable 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®

APPLICATION EXAMPLE

VPN Tunnel

CUSTOMER DATA CENTER

DIGI REMOTE MANAGER®

Primary and Secondary Cellular Link

Wired Ethernet

WiFi Link

DIGI® WR54

Smartphone

Network Device

Laptop/Tablet

Legacy Equipment

Security Camera

Ethernet Switch

Fare Collection

RELATED PRODUCTS

Digi® WR64

Digi® WR44 RR

Digi® WR31

Accessories

Digi Remote Manager®

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)

DIGI®

SPECIFICATIONS — DIGI WR54

APPROVALS	
CELLULAR	PTCRB
SAFETY	UL 60950, CSA 22.2 No. 60950, EN60950, EN62368
VEHICLE	ISO-7637-2, 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

DIGI REMOTE MANAGER

Manage and control devices from a central, secure platform.

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	TransPort WR54 Single LTE, Wi-Fi, Worldwide
WR54-A206	TransPort WR54 Dual LTE, Wi-Fi, Worldwide

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

The information provided in this document is preliminary and may be subject to change without notice.

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