

AirLink® RX55: Industrial IoT Router with Edge Compute

The AirLink® RX55 is optimized for Industrial IoT with ultra-low power consumption and a rugged design for extreme conditions. With advanced networking and industry standard container support capabilities, the RX55 delivers intelligence securely at the edge for mission-critical applications on both public and private networks.

- AirLink® RX55**

 - 4G LTE-A
 - 1 Gigabit Ethernet
 - GNSS
 - AirLinkOS with AirLink Complete
 - Dual 1x1 WiFi 5
 - Single/Dual Serial
 - IP64 Rated



AirLink® RX55 – Router Specifications

KEY FEATURES

Cellular Radios	4G LTE-A
Wi-Fi	Dual 1x1 Wi-Fi 5
Ethernet	1x Gigabit Ethernet Port (RJ45)
Serial	Dual RS-232 serial port (DB9) – Base Model (with optional Y-cable) Single RS-232 serial port (DB9) – Wi-Fi & Wi-Fi Plus Model
GNSS	30 Channel GNSS
CAN	Wi-Fi & Wi-Fi Plus Model

KEY FEATURES

I/O	1 GPIO
USB	USB 2.0 Micro-B
IP Rating	Sealed Aluminum Housing (IP64 Rated)
Services	AirLink Complete
Operating System	AirLink OS
Management System	ALMS

Region	North America	EMEA & APAC
CELLULAR		
Technology	LTE-A	LTE-A
Cellular	4G, 3G	4G, 3G
Peak Downlink (Theoretical)	300 Mbps	300 Mbps
Peak Uplink (Theoretical)	150 Mbps	150 Mbps
Category	Cat-7	Cat-7
Region	NAM	EMEA, APAC
Radio	EM7411	EM7421
MIMO	2x2	2x2
Connectors	SMA	SMA
SIM	Dual SIM (Mini-2FF)	Dual SIM (Mini-2FF)

FREQUENCY BANDS

4G LTE Bands	B2, B4, B5, B7, B12, B13, B14, B25, B26, B41, B42, B43, B48, B66, B71	B1, B3, B7, B8, B20, B28, B32, B38, B40, B41, B42, B43
3G HSPA+ Bands	B2, B4, B5	B1, B5, B8

WIRELESS CERTIFICATION

Regulatory	FCC, IC, PTCRB	GCF, CE, RED, RCM
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Carrier**WIRELESS CERTIFICATION**Verizon, AT&T, T-Mobile
Planned: Bell, Telus, Rogers

Planned: Telstra

Public Safety

FirstNet®

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Part Numbers1104927 Base
1104928 Wi-Fi
1104934 Wi-Fi Plus1104929 Base
1104930 Wi-Fi
1104933 Wi-Fi Plus**WI-FI (OPTIONAL)****Wi-Fi Standard**

Wi-Fi 5 802.11ac

Access Point

Dual

Client (Depot/WAN)

Yes

Client & AP

Yes

Peak Throughput (Theoretical)

433 Mbps

MIMO

Dual 1×1

Security

WPA2 Enterprise

Clients

10 per radio

SSID

1 per radio

Output Power

16 dBm

Frequency

2.4/5GHz

RF Connectors

SMA (Reverse Polarity)

ENVIRONMENTAL**Operating Temperature**-40°C to +70°C / -40°F to +158°F
-30°C to +70°C / -22°F to +158°F (Wi-Fi variant)**Storage Temperature**

-40°C to +85°C / -40°F to +185°F

Humidity

95% RH @ 60°C

Military Specification

MIL-STD-810G (shock, vibration, thermal shock, humidity)

IP Rating

IP64

INDUSTRY CERTIFICATIONS**Safety**

IECEE Certification Bodies Scheme (CB Scheme)

Vehicle Usage

E-Mark (UN ECE Regulation 10.04), ISO7637-2, SAE J1455 (Shock, Vibration, Electrical)

Environmental Directives

RoHS2, REACH, WEEE, Prop 65

INDUSTRY CERTIFICATIONS

Hazardous Environments	Class 1 Div 2 – Ambient temperatures of -30°C to +60°C IECEX & ATEX
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Rail Usage	EN50155 (Pending)
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POWER

Input Voltage	7 to 36 VDC
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Power Consumption	LTE Idle Power: 900mW (75 mA @ 12VDC) Standby Mode Power: 53 mW (4.4 mA @ 12 VDC) triggered on low voltage, I/O or periodic timer
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Power Modes	Low voltage disconnect to prevent battery drain; Built-in protection against voltage transients including 5 VDC engine cranking and +200 VDC load dump; Ignition Sense with time delay shutdown; Configurable features and ports to optimize power consumption
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SECURITY

AAA	802.1x /Radius authentication with Wi-Fi and Ethernet
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Firewall	Stateful firewall with port forwarding, DMZ
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WLAN Encryption	WPA2/WPA3 Personal/Enterprise
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Firmware Update	Secure Firmware Update
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NETWORK AND ROUTING

Sierra Cognitive Wireless
IPv4 and IPv6 Routing
Network Address Translation (NAT)
Port Forwarding
DHCP Server
IP Passthrough
LAN Segmentation
IPv4 Passthrough and IPv6 Prefix Extension
WAN/LAN Connection Policy Management
Policy-Based Routing
Configurable MTU size
Static Routing
WAN Ethernet

QoS	Application/Traffic Priority Queuing
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WAN Monitors	Connection Failure Recovery
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VPN

VPN

Integrated with ACM VPN Server
IPsec protocol with IKEv1/IKEv2
FIPS 140-2 Level 1 compliant

Encryption AES128/AES192/AES256

Hashing SHA256/SHA384/SHA512

Key Exchange DHGroup14/15/16/17/18/19/20/21

LAN to LAN and Host to LAN
Up to 10 concurrent tunnels per link
MOBIKE protocol
IP compression
Full/Split Tunnel
Dead Peer Detection (DPD)

ROUTER MANAGEMENT INTERFACES

ALMS
Local web user interface
REST API (Beta)

EDGE COMPUTING

Support for Edge Compute Containerized Applications (Beta)

RAM^{1,2} 50 MB (Base & Wi-Fi)
200 MB (Wi-Fi Plus)

Storage (Flash)¹ 200 MB (Base & Wi-Fi)
2.8 GB (Wi-Fi Plus)

CPU Dual Core ARMv7 32-bit

¹ Approximation available to containers (not device total)

² Depends on other enabled features

AIRLINK COMPLETE

Services AirLink Complete

Support 24/7 with current AirLink Complete subscription

Warranty 1 year standard warranty with up to 5 years extended warranty with current AirLink Complete subscription

Device Management ALMS with current AirLink Complete subscription

Software Updates Unrestricted critical firmware updates

ACCESSORIES ACCESSORIES

In The Box	RX55, DC Power Cable and Quick Start Guide
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Other Accessories (sold separately)	2000579 AC Adapter, 12VDC 6000659 DIN Rail Bracket 6001238 Dual Serial Y-cable 6001479 Serial CAN Y-cable For Antenna options visit: here
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DIMENSIONS

Size	119 mm x 33 mm x 85 mm (102 mm including wi-fi connectors) 4.69 in x 1.34 in x 3.35 in (3.70 in including connectors)
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Weight	320 g
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**For carrier specific band support please refer to the hardware user guide.*