

# 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 Wi-Fi 5
  - Single/Dual Serial
  - IP64 Rated



## AirLink® RX55 – Router Specifications

### KEY FEATURES

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

**KEY FEATURES**

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

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

**FREQUENCY BANDS**

<b>5G Bands</b>	–	–
<b>4G LTE Bands</b>	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
<b>3G HSPA+ Bands</b>	B2, B4, B5	B1, B5, B8
<b>2G GPRS Bands</b>	–	–

**LPWA  
FREQUENCY BANDS**

-

-

**WIRELESS CERTIFICATION**

<b>Regulatory</b>	FCC, IC, PTCRB	GCF, CE, RED, RCM
<b>Carrier</b>	Verizon, AT&T, T-Mobile Planned: Bell, Telus, Rogers	Planned: Telstra
<b>Public Safety</b>	FirstNet®	-
<b>Part Numbers</b>	1104927 Base 1104928 Wi-Fi 1104934 Wi-Fi Plus	1104929 Base 1104930 Wi-Fi 1104933 Wi-Fi Plus

**WI-FI (OPTIONAL)**

<b>Wi-Fi Standard</b>	Wi-Fi 5 802.11ac
<b>Access Point</b>	Dual
<b>Client (Depot/WAN)</b>	Yes
<b>Client &amp; AP</b>	Yes
<b>Peak Throughput (Theoretical)</b>	433 Mbps
<b>MIMO</b>	Dual 1x1
<b>Security</b>	WPA2 Enterprise
<b>Clients</b>	10 per radio
<b>SSID</b>	1 per radio
<b>Output Power</b>	16 dBm
<b>Frequency</b>	2.4/5 GHz
<b>RF Connectors</b>	SMA (Reverse Polarity)

**ENVIRONMENTAL**

<b>Operating Temperature</b>	-40°C to +70°C / -40°F to +158°F -30°C to +70°C / -22°F to +158°F (Wi-Fi variant)
<b>Storage Temperature</b>	-40°C to +85°C / -40°F to +185°F
<b>Humidity</b>	95% RH @ 60°C
<b>Military Specification</b>	MIL-STD-810G (Shock, Vibration, Thermal Shock, Humidity)
<b>IP Rating</b>	IP64

**INDUSTRY CERTIFICATIONS**

**INDUSTRY CERTIFICATIONS**

<b>Safety</b>	IECEE Certification Bodies Scheme (CB Scheme)
<b>Vehicle Usage</b>	E-Mark (UN ECE Regulation 10.04), ISO7637-2, SAE J1455 (Shock, Vibration, Electrical)
<b>Environmental Directives</b>	RoHS2, REACH, WEEE, Prop 65
<b>Hazardous Environments</b>	Class 1 Div 2 – Ambient temperatures of -30°C to +60°C IECEX & ATEX
<b>Rail Usage</b>	EN50155 (Pending)

**POWER**

<b>Input Voltage</b>	7 to 36 VDC
<b>Power Consumption</b>	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
<b>Power Modes</b>	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

**SECURITY**

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

**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
<b>QoS</b>	Application/Traffic Priority Queuing
<b>WAN Monitors</b>	Connection Failure Recovery

---

## NETWORK AND ROUTING

---

### LAN (ETHERNET/USB)

---

### 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<sup>1,2</sup>

50 MB (Base & Wi-Fi)  
200 MB (Wi-Fi Plus)

---

### Storage (Flash)<sup>1</sup>

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

---

### CPU

Dual Core ARMv7 32-bit

---

<sup>1</sup> Approximation available to containers (not device total)  
<sup>2</sup> Depends on other enabled features

---

## AIRLINK SERVICES

---

### 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

<b>AIRLINK SERVICES</b>	AirLink Complete subscription
<b>Device Management</b>	ALMS with current AirLink Complete subscription
<b>Software Updates</b>	Unrestricted critical firmware updates

**RELIABILITY**

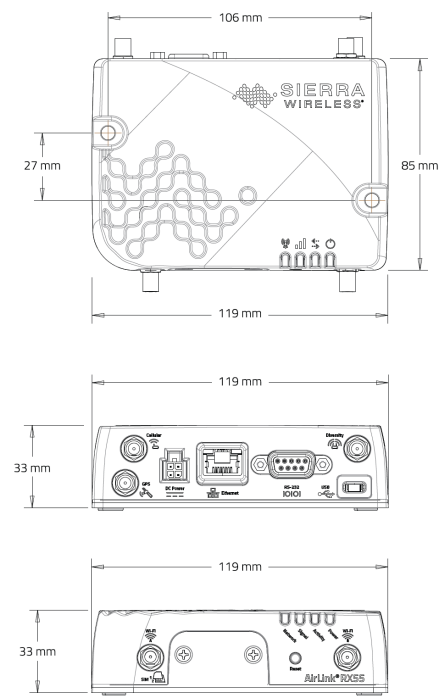
<b>MTBF</b>	—
-------------	---

**ACCESSORIES**

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

**DIMENSIONS**

<b>Size</b>	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)
<b>Weight</b>	320 g



\*For carrier specific band support please refer to the hardware user guide.

