# AirLink® RX55

## World's Most Power-Efficient Rugged 4G LTE-A Router*

The AirLink® RX55 is optimized for Industrial IoT with the lowest idle power consumption of its category* 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.

*Based on internal study of comparable routers November 2023*

| | |
|---|---|
| Single/Dual Serial | 4G LTE-A (Cat-7) |
| GNSS | Dual 1×1 Wi-Fi 5 |
| IP64 Rated | 1x Ethernet (1 Gbps) |
| AirLink OS with AirLink Complete | |

**NEW-GEN**

# AirLink® RX55 – Router Specifications

## KEY FEATURES

| | |
|---|---|
| **Cellular Radios** | 4G LTE-A |
| **Wi-Fi** | Dual 1×1 Wi-Fi 5 |
| **Ethernet** | 1x 1 Gigabit Ethernet Port (RJ45) |
| **Serial** | Dual RS-232 serial port (DB9) – Base Model (with optional Y-cable)<br>Single RS-232 serial port (DB9) – Wi-Fi & Wi-Fi Plus Model |
| **GNSS** | 30 Channel GNSS |
| **CAN** | Wi-Fi & Wi-Fi Plus Model (with optional Y-cable) |
| **I/O** | 1 GPIO |
| **USB** | USB 2.0 Micro-B |
| **Bluetooth** | – |
| **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** | 2×2 | 2×2 |
| **RF Connectors** | SMA | SMA |
| **SIM** | Dual SIM (Mini-2FF) | Dual SIM (Mini-2FF) |

**FREQUENCY BANDS – NAM**

|  | 1 | 2 | 3 | 4 | 5 | 7 | 8 | 12 | 13 | 14 | 20 | 25 | 26 | 28 | 32 | 38 | 40 | 41 | 42 | 43 | 48 | 66 | 71 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4G LTE** | – | B2 | – | B4 | B5 | B7 | – | B12 | B13 | B14 | – | B25 | B26 | – | – | – | – | B41 | B42 | B43 | B48 | B66 | B71 |
| **3G (HSPA+)** | – | B2 | – | B4 | B5 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

**FREQUENCY BANDS – EMEA & APAC**

|  | 1 | 2 | 3 | 4 | 5 | 7 | 8 | 12 | 13 | 14 | 20 | 25 | 26 | 28 | 32 | 38 | 40 | 41 | 42 | 43 | 48 | 66 | 71 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4G LTE** | B1 | – | B3 | – | – | B7 | B8 | – | – | – | B20 | – | – | B28 | B33 | B38 | B40 | B41 | B42 | B43 | – | – | – |
| **3G (HSPA+)** | B1 | – | – | – | B5 | – | B8 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |

**WIRELESS CERTIFICATION**

| Regulatory | FCC, IC/ISED, PTCRB | GCF, CE, RED, RCM |
|---|---|---|
| **Carrier** | Verizon, AT&T, T-Mobile, Bell, CBRS | – |
| **Public Safety** | FirstNet® | – |
| **Part Numbers** | 1104927 Base<br>1104928 Wi-Fi<br>1104934 Wi-Fi Plus | 1104929 Base<br>1104930 Wi-Fi<br>1104933 Wi-Fi Plus |

**WI-FI (OPTIONAL)**

| Wi-Fi Standard | Wi-Fi 5 |
|---|---|
| **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** | 2.4/5 GHz |
| **RF Connectors** | SMA (Reverse Polarity) |

## ENVIRONMENTAL

| | |
|---|---|
| **Operating Temperature** | -40°C to +70°C / -40°F to +158°F<br>-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 |
| **Hazardous Environments** | Class 1 Div 2 – Ambient temperatures of -30°C to +60°C<br>IECEx & ATEX |
| **Rail Usage** | North America: EN50155<br>EMEA & APAC: EN50155/EN45545 (Rolling Stock) |

## POWER

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

## SECURITY

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

**NETWORK AND ROUTING**

|  |  |
|---|---|
|  | Cognitive Wireless<br>IPv4 and IPv6 Routing<br>Network Address Translation (NAT)<br>Port Forwarding<br>DHCP Server<br>IP Passthrough<br>LAN Segmentation<br>IPv4 Passthrough and IPv6 Prefix Extension<br>WAN/LAN Connection Policy Management<br>Policy-Based Routing<br>Configurable MTU size<br>Static Routing<br>WAN Ethernet |
| **QoS** | Application/Traffic Priority Queuing |
| **WAN Monitors** | Connection Failure Recovery |

**VPN**

|  |  |
|---|---|
|  | Integrated with ACM VPN Server<br>IPsec protocol with IKEv1/IKEv2<br>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<br>Up to 10 concurrent tunnels per link<br>MOBIKE protocol<br>IP compression<br>Full/Split Tunnel<br>Dead Peer Detection (DPD) |

**ROUTER MANAGEMENT INTERFACES**

|  |  |
|---|---|
|  | ALMS<br>Local web user interface<br>REST API (Beta) |

**EDGE COMPUTING**

|  |  |
|---|---|
|  | Support for Edge Compute Containerized Applications (Beta) |
| **RAM**[1,2] | 50 MB (Base & Wi-Fi)<br>200 MB (Wi-Fi Plus) |
| **Storage (Flash)**[1] | 200 MB (Base & Wi-Fi)<br>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 (1 YEAR INCLUDED WITH ROUTER PURCHASE)

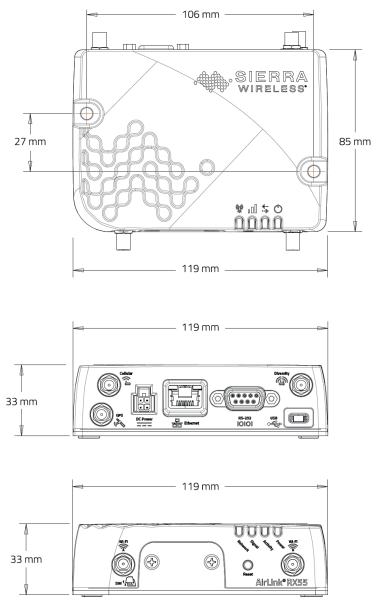| | |
|---|---|
| **Support** | 24/7 technical support* |
| **Hardware Warranty** | 1-year standard hardware warranty<br>Extended hardware warranty up to 5 years with current subscription** |
| **Device Management** | AirLink Management Service (ALMS)* |
| **Software Updates** | Unrestricted critical firmware updates through at least December 31st, 2029 |

*With current AirLink Complete subscription
**Full warranty terms are available at **www.sierrawireless.com/end-user-warranty**

## ACCESSORIES

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

## DIMENSIONS

| | |
|---|---|
| **Size** | 119 mm x 33 mm x 85 mm (102 mm including Wi-Fi connectors) |
| **Weight** | 320 g / 0.7 lb |



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

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