



## 5G and Wi-Fi 6 Performance in an Ultra- Compact and Rugged Router for Fixed and Mobile Mission-Critical Applications

### KEY FEATURES

- 4x4 5G + LTE Cat-20
- 2x2 Wi-Fi 6 (optional)
- Dual-Band GNSS
- Single Serial / Single Ethernet (1 Gbps) or Dual Ethernet (1 Gbps + 5 Gbps)
- IP64 and MIL-STD-810H Rated
- Powered by AirLink® OS and AirLink® Complete

## XR60 Product Description

The ultra-compact and highly ruggedized AirLink® XR60 delivers high performance 5G and Wi-Fi 6 connectivity to space-limited and harsh environments – from tight industrial enclosures to fast-moving vehicles. With advanced networking capabilities, private network support and edge computing capabilities, the XR60 future proofs your connectivity and accelerates your digital transformation.

## A Fully Integrated Solution

The AirLink XR60 is fully integrated with AirLink Complete – a comprehensive service package that includes remote device and security management, expert technical support and extended hardware warranty. You can also opt for AirLink Premium – an advanced service package that includes all the benefits of AirLink Complete, enhanced with Advanced Mobility Reporting and Advance Replacement.

## Ideal Applications

High-performance and reliable connectivity in fixed and mobile mission-critical applications:

- Critical Infrastructure
- Video Surveillance
- Smart Cities
- Manufacturing
- Public Safety Vehicles
- Fixed Wireless Access
- Fleet Vehicles

## Benefits

- Designed for high performance with 5G, Wi-Fi 6, 5 Gbps Ethernet and USB-C technologies
- Ultra-compact design making it ideal for space-constrained industrial settings and vehicle applications
- Designed and thoroughly tested to thrive in the harshest conditions: shock and vibration resilience (MIL-STD-810H grade), extreme temperature and humidity operating range, intrinsic safety and power resilience
- Advanced networking capabilities with flexible software-defined routing functions
- Multi-band support for extensive public and private networking coverage
- Edge intelligence with industry-standard container support
- Redundant USB-C power supply input for increased reliability

## XR60 Services and Support



### AIRLINK COMPLETE

Maximize your AirLink XR60 hardware investment with AirLink Complete – a comprehensive service package designed to empower you with the tools and support necessary to secure, optimize and effortlessly scale your XR60 deployments.

AirLink Complete includes\*:

- AirLink Management Service (ALMS) for remote device and security management
- Extended hardware warranty up to 5 years maximum
- Expert technical support
- For more information on AirLink Complete visit our [web page](#)

*\*With active subscription. 1-year subscription included with the XR60 purchase*



### AIRLINK PREMIUM

Ideal for organizations managing mission-critical vehicle fleets, this service upgrade encompasses all the benefits of [AirLink Complete](#)\*, enhanced with:

- **Advanced Mobility Reporting\***: Offers comprehensive coverage and fleet reporting to monitor your network and vehicles.
- **Advance Replacement\***: Provides same-day shipping for in-warranty router replacements, minimizing downtime, spare inventory and keeping your operations running smoothly.

*\*With active subscription.*



### HYBRID CLOUD

This optional feature merges the benefits of cloud technology with on-premise security controls for the management of your AirLink XR and RX routers, offering ultimate security and control.

[Hybrid Cloud](#) is available to add to an active AirLink Complete or Premium subscription.



### AIRLINK CONNECTION MANAGER (ACM) – MOBILE VPN

This purpose-built VPN solution securely extends your enterprise network to your AirLink router and its connected devices and applications.

Optimized for use in a mobile, multi-network environment it seamlessly maintains VPN tunnels as users roam between multiple carrier and Wi-Fi networks to prevent downtime and loss of communications.

Available in a FIPS 140-2 compliant offering.



### ANTENNAS

- Tested and certified to provide guaranteed performance with all AirLink routers
- Accelerate deployment with always-on, end-to-end connectivity
- For more information on antennas specific to the XR60 router visit our [web page](#)

## AirLink XR60 – Router Specifications

| KEY FEATURES      |   |
|-------------------|---|
| Cellular Radios   | 5G  |
| Wi-Fi             | 2x2 MIMO Wi-Fi 6 (Optional)   |
| Ethernet          | 1x Ethernet RJ45 (1 Gbps) – Single Serial/Single Ethernet variant<br>2x Ethernet RJ45 (1 Gbps + 5 Gbps) – Dual Ethernet variant |
| Serial            | Dual RS-232/485 (Serial/Ethernet variant)   |
| GNSS              | Dual-band 48 Channel GNSS   |
| CAN               | –   |
| I/O               | 1 GPIO  |
| USB               | USB 3.2 Gen 1 Type-C® with Power Delivery and 5 Gbps LAN networking   |
| Bluetooth         | –   |
| IP Rating         | Sealed Aluminum Housing (IP64 Rated)  |
| Services          | AirLink Complete (1 year included)  |
| Operating System  | AirLink OS  |
| Management System | AirLink Management Service (ALMS)   |

| GLOBAL                      |                     |
|-----------------------------|---------------------|
| CELLULAR                    |                     |
| Variant                     | Global              |
| Technology                  | 5G                  |
| Peak Downlink (Theoretical) | 2800 Mbps           |
| Peak Uplink (Theoretical)   | 900 Mbps            |
| Category                    | 5G                  |
| Region                      | Global              |
| Radio                       | EM9291              |
| MIMO                        | 4x4                 |
| RF Connectors               | SMA                 |
| SIM                         | Dual SIM (Nano-4FF) |



| FREQUENCY BANDS |      |        |            |
|-----------------|------|--------|------------|
|                 | 5G   | 4G LTE | 3G (HSPA+) |
| 1               | n1   | B1     | B1         |
| 2               | n2   | B2     | B2         |
| 3               | n3   | B3     |            |
| 4               |      | B4     | B4         |
| 5               | n5   | B5     | B5         |
| 7               | n7   | B7     |            |
| 8               | n8   | B8     | B8         |
| 12              | n12  | B12    |            |
| 13              | n13  | B13    |            |
| 14              | n14  | B14    |            |
| 17              |      | B17    |            |
| 18              | n18  | B18    |            |
| 19              |      | B19    | B19        |
| 20              | n20  | B20    |            |
| 25              | n25  | B25    |            |
| 26              | n26  | B26    |            |
| 28              | n28  | B28    |            |
| 29              | n29* | B29**  |            |
| 30              | n30  | B30**  |            |
| 32              |      | B32**  |            |
| 34              |      | B34    |            |
| 38              | n38  | B38    |            |
| 39              |      | B39    |            |
| 40              | n40  | B40    |            |

| FREQUENCY BANDS |      |        |            |
|-----------------|------|--------|------------|
|                 | 5G   | 4G LTE | 3G (HSPA+) |
| 41              | n41  | B41    |            |
| 42              |      | B42    |            |
| 43              |      | B43    |            |
| 46              |      | B46**  |            |
| 48              | n48  | B48    |            |
| 66              | n66  | B66    |            |
| 70              | n70  |        |            |
| 71              | n71  | B71    |            |
| 75              | n75* |        |            |
| 76              | n76* |        |            |
| 77              | n77  |        |            |
| 78              | n78  |        |            |
| 79              | n79  |        |            |

\* SA downlink only

\*\* Downlink only

## WIRELESS CERTIFICATION

|               |  |
|---------------|--|
| Regulatory    | FCC, IC/ISED, PTCRB, GCF, CE <sup>2</sup> , RED <sup>2</sup> RCM   |
| Carrier       | AT&T, FirstNet® 4G Capable, T-Mobile, Verizon, Telus, Southern Linc, CBRS, C-Band<br>Planned: Rogers <sup>1</sup> , Bell <sup>1</sup> , Telstra <sup>1</sup>   |
| Public Safety | FirstNet® 4G Capable   |
| Part Numbers  | 1105099 XR60 Dual Ethernet (1 Gbps + 5 Gbps)<br>1105159 XR60 Dual Ethernet (1 Gbps + 5 Gbps) with Wi-Fi<br>1105160 XR60 Single Serial, Single Ethernet (1 Gbps)<br>1105161 XR60 Single Serial, Single Ethernet (1 Gbps) with Wi-Fi<br><br><b>TAA Part Numbers:</b><br>1105232 XR60 TAA Dual Ethernet (1 Gbps + 5 Gbps)<br>1105233 XR60 TAA Dual Ethernet (1 Gbps + 5 Gbps) with Wi-Fi<br>1105234 XR60 TAA Single Serial, Single Ethernet (1 Gbps)<br>1105235 XR60 TAA Single Serial, Single Ethernet (1 Gbps) with Wi-Fi |

## WI-FI

|                               |   |
|-------------------------------|---|
| Wi-Fi Standard                | Wi-Fi 6   |
| Access Point                  | Dual (2.4 & 5 GHz)  |
| Client (Depot/WAN)            | Yes   |
| Client & AP                   | Yes   |
| Peak Throughput (Theoretical) | 1200 Mbps   |
| MIMO                          | Single 2x2  |
| Security                      | WPA2/3 Personal<br>WPA2/3 Transitional<br>WPA2 Enterprise |
| Clients                       | Up to 32 maximum  |
| SSID                          | 3   |
| Output Power                  | 21 dBm per chain  |
| Frequency                     | 2.4/5 GHz   |
| RF Connectors                 | SMA (Reverse Polarity)                                    |

## ENVIRONMENTAL

|                        |  |
|------------------------|--|
| Operating Temperature  | -40°C to +75°C / -40°F to +167°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-810H (Shock, Vibration, Thermal Shock, Humidity)                             |
| IP Rating              | IP64   |

## INDUSTRY CERTIFICATIONS

|                          |   |
|--------------------------|---|
| Safety                   | IECEE Certification Bodies Scheme (CB Scheme)   |
| Vehicle Usage            | E-Mark <sup>3</sup> (UN ECE Regulation 10.05), ISO7637-2, SAE J1455 (Shock, Vibration, Electrical)            |
| Environmental Directives | RoHS2, REACH, WEEE, Prop 65   |
| Hazardous Environments   | Class 1 Div 2 <sup>2</sup> – Ambient temperatures of -30°C to +60°C<br>IECEX <sup>2</sup> & ATEX <sup>2</sup> |
| Rail Usage               | EN50155/EN45545 (Rolling Stock)   |

## POWER

|                   |  |
|-------------------|--|
| Input Voltage     | 7 to 36 VDC<br>Redundant power input via USB-C (45W)   |
| Power Consumption | Idle Power: 3.5W (290 mA @ 12VDC) - Serial/Ethernet variant<br>Standby Mode Power: 55 mW (4.6 mA @ 12 VDC)<br>Triggered on low voltage, I/O or periodic timer  |
| Power Modes       | 7 to 36 VDC:<br>Low voltage disconnect to prevent battery drain<br>Built-in protection against voltage transients including 5VDC engine cranking and +200 VDC load dump<br>Ignition Sense with time delay shutdown<br>Configurable features and ports to optimize power consumption<br><br>Can switch to redundant power input via USB-C (45W) |

## SECURITY

|                 |   |
|-----------------|---|
| AAA             | Wi-Fi 802.1x/Radius authentication                                      |
| Firewall        | Stateful firewall with port forwarding, DMZ                             |
| WLAN Encryption | WPA2/3 Personal<br>WPA2/3 Transitional<br>WPA2 Enterprise (Client only) |
| Firmware Update | Secure Firmware Update  |

1: Pending. See latest status [here](#).

2: TAA Part Numbers do not have the CE/RED, C1D2, and IECEX/ATEX certification

3: Pending for non-TAA Part Numbers. TAA Part Numbers do not have the E-Mark certification.



| NETWORK AND ROUTING          |   |
|------------------------------|---|
| Throughput                   | 800 Mbps Firewall TCP throughput  |
| Features                     | Semtech 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   |
| LAN (ETHERNET/USB)           |   |
|                              | USB to Ethernet   |
| VPN                          |   |
| Throughput                   | 175 Mbps IPSec VPN TCP throughput   |
| Features                     | 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) licensed via ALMS   |
| EDGE COMPUTING               |   |
|                              | Support for Edge Compute Docker Containerized Applications (Beta) licensed via ALMS   |
| RAM <sup>1,2</sup>           | 1.2 GB  |
| Storage (Flash) <sup>1</sup> | 1.7 GB  |
| CPU                          | Quad Core Arm A53 64 bit  |

1. Approximation available to containers (not device total)  
2. Depends on other enabled features

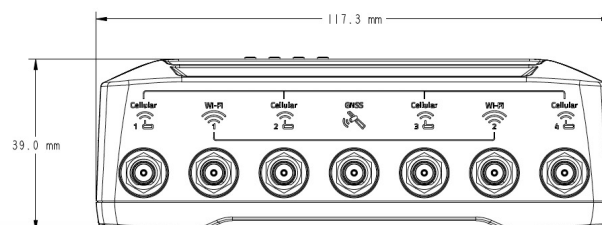
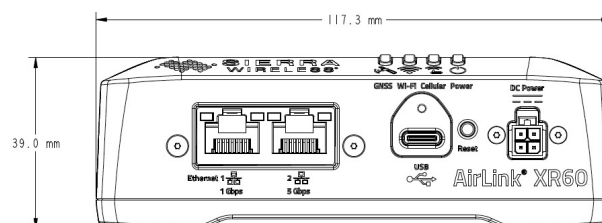
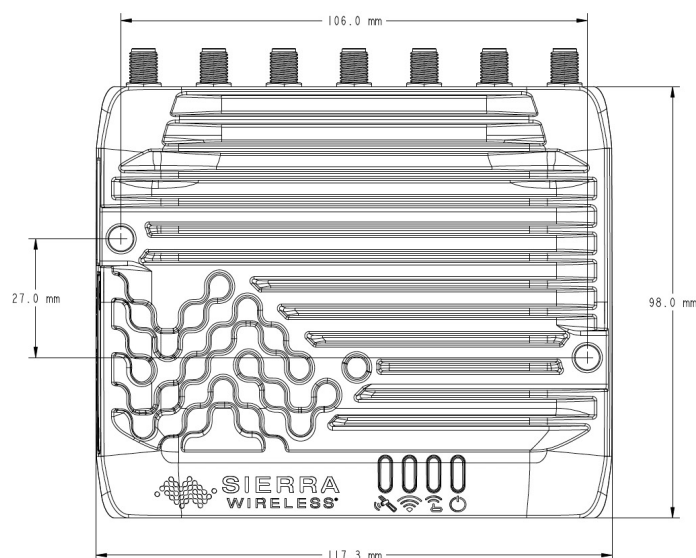
| AIRLINK COMPLETE (1 Year Included With Router Purchase)                                 |  |
|---|--|
| Support   | 24/7 technical support*  |
| Hardware Warranty   | 1-year standard hardware warranty<br>Extended hardware warranty up to 5 years with current subscription**  |
| Device Management   | AirLink Management Service (ALMS)*   |
| Software Updates  | Unrestricted critical firmware updates through at least December 31st, 2029  |
| AIRLINK PREMIUM (Optional Upgrade)<br>Includes All Airlink Complete Features* and Adds: |  |
| Advanced Mobility Reporting   | Coverage and fleet reporting***  |
| Advance Replacement   | Same-day shipping for in-warranty router replacements***   |
| RELIABILITY   |  |
| MTBF  | 1105099 XR60 Dual Ethernet: 264010 hours (30.13 years)<br>1105159 XR60 Dual Ethernet, Wi-Fi: 245227 hours (27.99 years)<br>1105160 XR60 Serial, Ethernet: 283666 hours (32.38 years)<br>1105161 XR60 Serial, Ethernet, Wi-Fi: 262094 hours (29.91 years)<br><br><ul style="list-style-type: none"> <li>Ground Benign, 25°C</li> <li>MTBF calculations performed per Telcordia "Reliability Prediction Procedure for Electronic Equipment" document number SR-332, Method I, Issue 3</li> </ul> |
| ACCESSORIES   |  |
| In The Box  | XR60, DC Power Cable, Quick Start Guide, AirLink Complete Leaflet  |
| Other Accessories (sold separately)   | 6001503 AC Adapter<br>6001502 Spare DC Power Cable<br>6001529 DIN Rail Bracket<br>6001410 RJ45 to Single DB9<br>6001409 RJ45 to Dual DB9<br>For Antenna options visit: <a href="#">web page</a>  |
| DIMENSIONS  |  |
| AirLink XR60  | <b>Size:</b> 118mm x 39mm x 98mm (108 including SMA connectors)<br>4.6 x 1.5 x 3.9 in (4.2 in including SMA connectors)<br>Same bolt pattern as RV<br><b>Weight:</b> 522 g / 1.15 lb with Wi-Fi  |

\*With current AirLink Complete subscription

\*\*Full warranty terms are available at [www.sierrawireless.com/end-user-warranty](http://www.sierrawireless.com/end-user-warranty)

\*\*\*With current AirLink Premium subscription

## AirLink XR60 – Router Dimensions Diagram



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### About Semtech

Semtech Corporation (Nasdaq: SMTC) is a high-performance semiconductor, IoT systems and cloud connectivity service provider dedicated to delivering high-quality technology solutions that enable a smarter, more connected and sustainable planet. Our global teams are committed to empowering solution architects and application developers to develop breakthrough products for the infrastructure, industrial and consumer markets.

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