



TECHNICAL SPECIFICATIONS

AirLink® MG90

Performance Series Routers



	Global	North America	Global
	5G	LTE-A Pro	
<b>LTE CATEGORY</b>	Cat 20	Cat 12	
<b>Peak D/L</b>	Up to 2 Gbps	Up to 600 Mbps	
<b>Peak U/L</b>	Up to 1 Gbps	Up to 150 Mbps	
<b>5G</b>			
<b>Frequency Bands</b>	Sub-6: n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41*, n48, n66, n71, n77, n78, n79		
<b>4G LTE</b>			
<b>Frequency Bands</b>	2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 2600(B7), 900(B8), 700(B12), 700(B13), 700(B14), 700(B17), 850(B18), 850(B19), 800(B20), 1900(B25), 850(B26), 700(B28), 700(B29), 2300(B30), 1500(B32), TDD B38, TDD B39, TDD B40, TDD B41, TDD B42, TDD B46, CBRS B48, 1700(B66), 600(B71)	2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 2600(B7), 900(B8), 1800(B9), 700(B12), 700(B13), 700(B14), 850(B18), 850(B19), 800(B20), 850(B26), 700(B29), 2300(B30), 1500(B32), TDD B41, TDD B42, TDD B43, TDD B46, CBRS B48, 1700(B66)	2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 2600(B7), 900(B8), 1800(B9), 700(B12), 700(B13), 850(B18), 850(B19), 800(B20), 850(B26), 700(B28), 700(B29), 2300(B30), 1500(B32), TDD B41, TDD B42, TDD B43, TDD B46, CBRS B48, 1700(B66)
<b>3G WCDMA/HSPA+</b>			
<b>Frequency Bands</b>	2100(B1), 1900(B2), 1800(B3), AWS(B4), 850(B5), 800(B6), 900(B8), 1700(B9), 850(B19)	2100(B1), 1900(B2), AWS(B4), 850(B5), 800(B6), 900(B8), 1700(B9), 850(B19)	2100(B1), 1900(B2), AWS(B4), 850(B5), 800(B6), 900(B8), 1700(B9), 850(B19)
<b>APPROVALS</b>			
<b>Regulatory</b>	FCC, IC, PTCRB, GCF, CE, RED, RCM	FCC, IC, PTCRB, GCF	CE, RED, RCM
<b>Carrier</b>	Pending: Verizon, AT&T, T-Mobile	AT&T FirstNet, Verizon, US Cellular, Sprint, Telus	
<b>PART NUMBERS</b>	1104708 (Single 4x4) 1104709 (Dual 2x2)	1103981 (Single) 1103982 (Dual)	1103980 (Single) 1103983 (Dual)

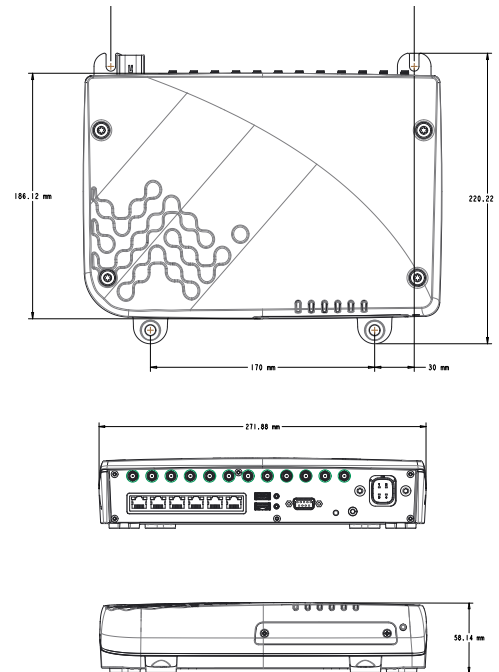
\*only supported on 4x4 configuration

	Specification
<b>HOST INTERFACES</b>	5 Gigabit RJ-45 Ethernet ports 2 USB 3.0 type-A ports 1 RS-232 serial port (DB-9 connector) 1 Auxiliary RJ-45 Input/Output port 4 SIM Slots (Dual SIM per radio) 5 SMA antenna connectors (2 cellular, 2 diversity, 1 GNSS) 7 RP-SMA antenna connectors (3x3 Wi-Fi WAN, 3x3 Wi-Fi AP, 1 Bluetooth)
<b>SECURITY</b>	AAA: 802.1x/Radius authentication with Wi-Fi and Ethernet Firewall: Port forwarding and filtering WLAN Encryption: WPA2 Personal/Enterprise WLAN MAC Address filtering FIPS 140-2
<b>WI-FI</b>	Dual Radio, dual concurrent 3x3 MIMO 802.11 b/g/n/ac Dual Band 2.4/5 GHz (each radio) Support for 128 clients WPA2 Enterprise Default mode: Wi-Fi as WAN and Wi-Fi built-in vehicle AP High output power 21 dBm (per channel) Captive Portal

	Specification
<b>LAN (ETHERNET/USB/ WI-FI/BLUETOOTH/SERIAL)</b>	DHCP Server VLAN Virtual BSSIDs PPPoE AP Isolation
<b>SATELLITE NAVIGATION (GNSS)</b>	Dedicated 48 channel GNSS Receiver supporting GPS, GLONASS, BeiDou, Galileo Tracking Sensitivity: -162 dBm Reports (Update Rate 1Hz): NMEA, TAIP Reliable Store and Forward via serial, TCP or UDP Inertial Navigation Sensors (Accelerometer and Gyro)
<b>NETWORK MANAGEMENT</b>	Airlink Mobility Manager (AMM): available as cloud based service or as licensed enterprise application <ul style="list-style-type: none"> <li>Status dashboard showing at-a-glance fleet health</li> <li>Remote management, configuration and software updates</li> <li>Location-based analytics and diagnostics: Network Coverage Maps and Trails; Link Utilization; Bandwidth Consumption</li> <li>Configurable geo-zone based event monitoring and alerting</li> <li>Live vehicle location tracking</li> <li>Optional fleet operations pack: vehicle diagnostics reporting and mobile asset tracking</li> </ul>

	Specification
INPUT/OUTPUT	Configurable I/O GPIOs (5 pins total – 4 DB9 & 1 Power connector) Digital input: 0-36 VDC with optional pullup (Dry contact sense input) Digital Open Collector Output > sinking 500 mA
ENVIRONMENTAL	Operating Temperature: -30°C to +70°C / -22°F to +158°F Storage Temperature: -40°C to +85°C / -40°F to +185°F Humidity: 95% RH @ 60C IP64 rated ingress protection MIL-STD-810G conformance to shock, vibration, thermal shock, and humidity
POWER	Input/Operating Voltage: 7 to 36 VDC Power modes: ON 30W (2.5A @12V); Standby 135mW (11mA@12V) Built-in protection against voltage transients including 5 VDC engine cranking Ignition Sense with time delay shutdown
NETWORK AND ROUTING	Network Address Translation (NAT) LAN Segmentation WAN/LAN Connection Policy Management QoS: Application/ Traffic Priority Queuing Load Balancing Over Multiple WAN Links WAN Monitors: Connection Failure Recovery Configurable MTU size Multiple LAN Support Customize transmission buffer size Static Routing WAN Ethernet
VPN	Integrated with ACM VPN Server IPsec protocol with IKEv1/IKEv2 Encryption: 3DES/AES128/AES256 Hashing: MD5/SHA1/SHA256/SHA512 Key Exchange: DHGroup2/5/14/15/16/17 Support 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)

	Specification
VEHICLE TELEMETRY	OBD II/ J1939/ J1708 interface over serial (optional) Diagnostic real time alerts/reports (via AMM)
INDUSTRY CERTIFICATIONS	Safety: IECCE Certification Bodies Scheme (CB Scheme), UL 60950 Vehicle Usage: E-Mark (72/245/EEC, 2009/19/EC), ISO7637-2, SAE J1455 (Shock & Vibration) Environmental: RoHS2, REACH, WEEE Rail Usage: EN50155 (Rolling Stock)
RELIABILITY	MTBF: 23.22 years (Telcordia SR-332 Issue3 Method1)
SUPPORT AND WARRANTY	3-year standard warranty; Optional 2-year warranty Extension Includes unrestricted device software upgrades
ACCESSORIES	In the box: DC Power cable, Quick Start Guide and SMA wrench Mounting bracket (6001024) AC Adapter (6001023) I/O Cable (6001095) 8-in-1 Dome Antenna (6001344 Black/6001345 White) 6-in-1 Dome Antenna (6001364 Black/ 6001363 White) 3-in-1 Wi-Fi Antenna (6001283 Black/6001284 White) See <a href="#">website</a> for more antenna options
DIMENSIONS	272mm x 220mm x 60mm (10.71in x 8.66in x 2.36in) Weight: 2.4kg / 5.3 lb



## Related AirLink Products

### AIRLINK DEVICE MANAGEMENT SOLUTIONS

#### AirLink Management Service (ALMS)



- Secure, Cloud-based network and asset management
- Remotely deploy, configure, monitor and manage AirLink devices
- Carrier-grade, high availability, secure, global infrastructure

#### AirLink Manager / Mobility Manager (AM/AMM)



- Deployable in the enterprise data center (on-premises) or in the cloud
- Advanced, end-to-end network and asset management for both fixed and mobile networks.
- Remote, real-time configuration, control and troubleshooting of AirLink devices

### AIRLINK VPN APPLIANCE

#### AirLink Connection Manager



- VPN appliance built from the ground up for AirLink routers & gateways
- Simplify deployment and management of your VPN solution, extending the enterprise to the network edge for fixed and mobile endpoints
- Carrier agnostic – ACM doesn't require fixed and/or public IP
- Compatible with FIPS 140-2, and always-on VPN capability

### AIRLINK ANTENNA SOLUTIONS

#### AirLink Antennas



- Tested and certified to provide guaranteed performance with all AirLink routers and gateways
- Accelerate deployment with always-on, end-to-end connectivity

#### About Sierra Wireless

Sierra Wireless (NASDAQ: SWIR) (TSX: SW) is the leading IoT solutions provider that combines devices, network and software to unlock value in the connected economy. Companies globally are adopting IoT to improve operational efficiency, create better customer experiences, improve their business models and create new revenue streams. Whether it's a solution to help a business securely connect edge devices to the cloud, or a software/API solution to help manage processes associated with billions of connected assets, or a platform to extract real-time data to make the best business decisions, Sierra Wireless will work with you to create the right industry-specific solution for your next IoT endeavor. Sierra Wireless has more than 1,300 employees globally and operates R&D centers in North America, Europe and Asia.

For more information, visit [www.sierrawireless.com](http://www.sierrawireless.com).