TECHNICAL SPECIFICATIONS

AirLink® MG90

MG90 5G

MG90 LTE-A Pro

FIRSTNET.
Built with AT&T
READY

|	Global	North America	Global
	5G	**LTE-A Pro**	
LTE CATEGORY	Cat 20	Cat 12	
Peak D/L	Up to 4.14 Gbps	Up to 600 Mbps	
Peak U/L	Up to 660 Mbps	Up to 150 Mbps	
5G Frequency Bands	Sub-6: n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n38, n40, n41*, n48, n66, n71, n77, n78, n79		
4G LTE Frequency Bands	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)
3G WCDMA/HSPA+ Frequency Bands	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)
APPROVALS			
Regulatory	FCC, IC, PTCRB, GCF, CE, RED, RCM	FCC, IC, PTCRB, GCF	CE, RED, RCM
Carrier	AT&T, T-Mobile, Verizon	AT&T FirstNet, Verizon, T-Mobile, US Cellular, Telus	
PART NUMBERS	1104708 (Single 4x4) 1104709 (Dual 2x2)	1103981 (Single) 1103982 (Dual)	1103980 (Single) 1103983 (Dual)

only supported on 4x4 configuration

	Specification
HOST INTERFACES	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)
SECURITY	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
WI-FI	Dual Radio, dual concurrent 3x3 MIMO 802.11 b/g/n/ac
	Dual Band 2.4/5 GHz (each radio)
	Support for 128 clients
	WWPA2 Enterprise
	Default mode: Wi-Fi as WAN and Wi-Fi built-in vehicle AP
	High output power 21 dBm (per channel)
	Captive Portal

	Specification
LAN (ETHERNET/USB/ WI-FI/BLUETOOTH/ SERIAL)	DHCP Server VLAN Virtual BSSIDs
	PPPoE
	AP Isolation
SATELLITE NAVIGATION (GNSS)	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)
NETWORK MANAGEMENT	Airlink Mobility Manager (AMM): available as cloud based service or as licensed enterprise application
	• Status dashboard showing at-a-glance fleet health
	• Remote management, configuration and software updates
	• Location-based analytics and diagnostics: Network Coverage Maps and Trails; Link Utilization; Bandwidth Consumption
	• Configurable geo-zone based event monitoring and alerting
	• Live vehicle location tracking
	• Optional fleet operations pack: vehicle diagnostics reporting and mobile asset tracking

	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: IECEE 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 website for more antenna options
DIMENSIONS	272mm x 220mm x 60mm (10.71in x 8.66in x 2.36in)
	Weight: 2.4kg / 5.3 lb
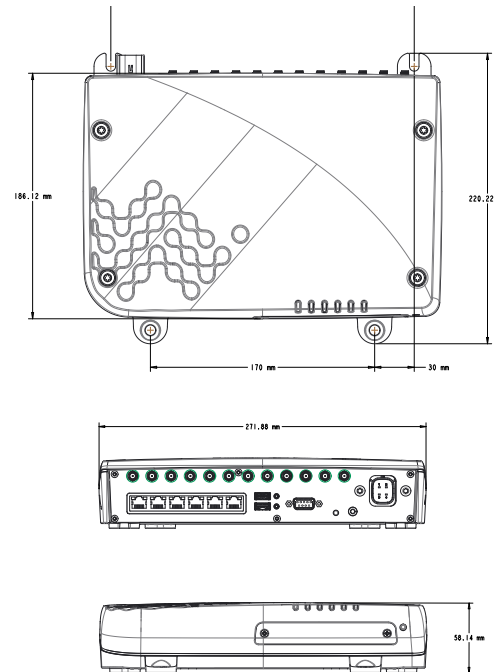
Related AirLink Products

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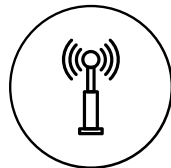
- Tested and certified to provide guaranteed performance with all AirLink routers and gateways
- Accelerate deployment with always-on, end-to-end connectivity

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.

For more information, visit www.sierrawireless.com.