

StartMesh Sector M90



StartMesh Sector M90 is a powerful outdoor industrial WiMesh router, enabling high-performance communication with up to 500 Mbps throughput to enable data, voice, and video applications. StartMesh Sector M90 comes with an integrated sectorial antenna with a gain of 17dBi and a horizontal beamwidth of 90° to maximize throughput and increase the coverage area. It provides a cost-effective solution for point-to-point and point-to-multipoint applications. Its integrated antenna, radio transceiver, and Power over Ethernet (POE) interface make it ideal for CCTV applications and building-to-building connections.

OUTDOOR

WIMESH

ROUTER

KEY FEATURES

2x2 MIMO 5GHz 802.11a/b/g/n/ac radio transceiver

Built-in 17dBi 2x2 dual-slant polarization directional antenna

Useful Throughput up to 500Mbps

1 x 10/100/1000Mbps Ethernet (Passive POE)

MeshTool Suite software and web interface operate in tandem to configure, troubleshoot, and monitor the network architecture

Plug-and-Play installation

Outdoor rated: IP67, -40°C to +70°C temperature range

3D VIEWS



HARDWARE SPECIFICATIONS

| | | | |
|-------------|--|--|------------------|
| CPU | Quad-core CPU ARM Cortex A7 up to 717MHz, 128 MB Nand Flash, 32MB Nor Flash and DDR3L 256 MB | | |
| WLAN | Physical Layer | Complies with IEEE 802.11a/b/g/n/ac, supports 2x2 MIMO and provides a maximum rate of 866Mbps | |
| | Frequency¹ | U-NII-1: 5180 – 5250 MHz U-NII-2A: 5250 – 5330 MHz U-NII-2C: 5470 – 5725 MHz U-NII-3: 5725 – 5825 MHz | |
| | Modulation | OFDM : BPSK, QPSK, DBPSK, DQPSK, CCK, 16-QAM, 64-QAM, 256-QAM | |
| | Max. EIRP^{2,3} | 41 dBm | |
| | RX Sensitivity⁴ | nHT20 | -96 dBm @ 6 Mb/s |
| | HT20 | -93 dBm @ MCS8 | -76 dBm @ MCS15 |

| | | | | |
|--------------------------------------|---|--------------|----------------|-----------------|
| | | HT40 | -90 dBm @ MCS8 | -73 dBm @ MCS15 |
| | | VHT20 | -93 dBm @ MCS0 | -71 dBm @ MCS8 |
| | | VHT40 | -90 dBm @ MCS0 | -68 dBm @ MCS9 |
| | | VHT80 | -88 dBm @ MCS0 | -61 dBm @ MCS9 |
| Integrated Antenna | Gain | 17 dBi | | |
| | Polarization | Slant X | | |
| | Beamwidth | 8°/90° +/-5° | | |
| | VSWR | <2.00 | | |
| | Front to back | >24 dB | | |
| Ethernet Interfaces | 1x RJ45 input port , 10/100/1000BaseT, full duplex, IEEE 802.3, auto MDI/MDIX, passive POE | | | |
| LED Indicators | 1 x RGB LED for RSSI and Alarm status | | | |
| Button | 1x push button to restore factory settings and restart the device | | | |
| Power Supply | 24 VDC Passive POE | | | |
| Power Consumption⁵ | Max. 9 W | | | |
| Temperature | Operating temperature: -40°C to 70°C -40°F to 176° F Storage temperature: -45°C to 105°C -49°F to 221° F | | | |
| Humidity | Operating Humidity : 5 to +95% (non-condensing) Storage Humidity : 0 to +90% (non-condensing) | | | |
| Wind Resistance | 250Km/h | | | |
| Dimensions | 486 x 290 x 105.6 mm 19.13 x 11.42 x 4.16 in. | | | |
| Weight | 2 Kg 4.40 lb. | | | |
| IP code | IP67 | | | |
| Materials | ABS, PTFE | | | |

¹Channel, Frequency Channel, frequency and bandwidth options will vary based upon regional and local regulations

²Transmission power is governed by local regulations and varies by frequency

³EIRP power Tolerance is ±2 dB

⁴RX sensitivity Tolerance is ±2 dB

⁵Power consumption depends on transceiver configuration

SOFTWARE SPECIFICATIONS

| | |
|-------------------|---|
| Networking | Compliance with 802.11s Mesh networking |
| | Compliance with IEEE 802.1q |
| | Proactive link-state routing protocol for Mesh networking |
| | SSID-based VLAN assignment |
| | Service set identifier (SSID) hiding |
| | Automatic and manual rate adjustment |
| | Automatic channel scanning and interference avoidance |

| | |
|---------------------|---|
| | <p>Frame aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx)</p> <p>Tunnel data forwarding and direct data forwarding</p> <p>STA isolation in the same VLAN</p> <p>Access control lists (ACLs)</p> <p>Link Layer Discovery Protocol (LLDP)</p> <p>Network Address Translation (NAT)</p> <p>Virtual Router Redundancy Protocol (VRRP)</p> <p>Supports IPv6/ IPv4, UDP, TCP, ICMP, Telnet, SNMP, HTTP and FTP protocols</p> <p>Static IP, dynamic IP or zero-configuration deployment</p> |
| Management | <p>Web local management through HTTP or HTTPS</p> <p>Real-time configuration monitoring and fast fault location using the NMS</p> <p>SNMPv2c and v3</p> <p>System status alarm</p> <p>Network Time Protocol (NTP)</p> <p>Control and Provisioning of Wireless devices</p> <p>Remote software update</p> |
| Security | <p>Open system authentication</p> <p>WPA/WPA2/WPA-WPA2-PSK/WPA3 authentication and encryption</p> <p>Wireless intrusion detection system (WIDS) and wireless intrusion prevention system (WIPS)</p> <p>WPA/WPA2/WPA-WPA2-802.1x authentication and encryption</p> <p>IP Source Guard</p> <p>VPN with public key security (SSL/TLS mode) using client & server certificates.</p> <p>WPA, WPA2, and WPA-WPA2 support TKIP and CCMP encryption algorithms, where CCMP uses 256-bit advanced encryption standard (AES) encryption algorithm and has high security</p> |
| QoS Features | <p>Priority mapping and packet scheduling based on a Wi-Fi Multimedia (WMM) profile to implement priority-based data processing and forwarding</p> <p>WMM parameter management for each radio</p> <p>WMM power saving</p> <p>Priority mapping for upstream packets and flow-based mapping for downstream packets</p> |

Queue mapping and scheduling

User-based bandwidth limiting

Adaptive bandwidth management (automatic bandwidth adjustment based on the user quantity and radio environment)

STANDARDS AND CERTIFICATIONS

FCC

Part 15.C
Part 15.E
Part 15.247
Part 15.407
Part 1.1310 & 2.1091
Part 15.203
Part15.207
Part 15.205
Part 15.209

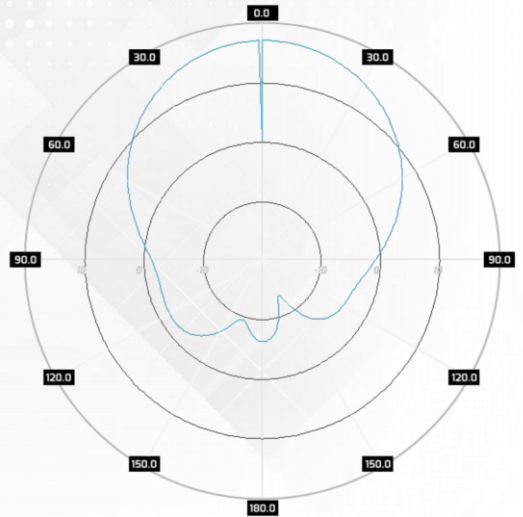
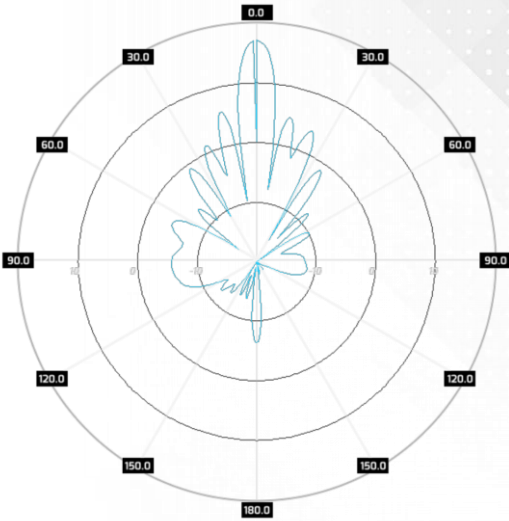
Environmental

IEC 60529 (IP67)
RoHs compliance

ANTENNA PATTERNS

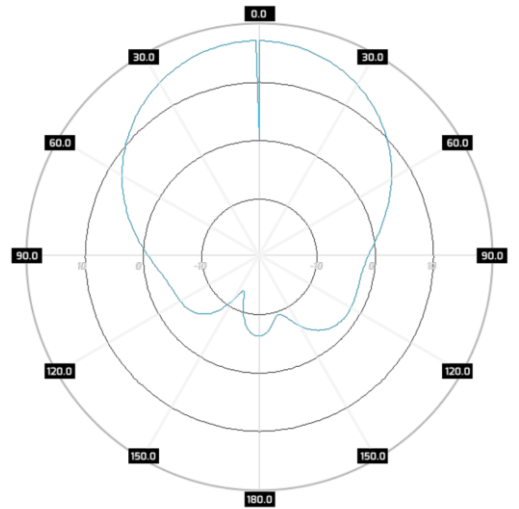
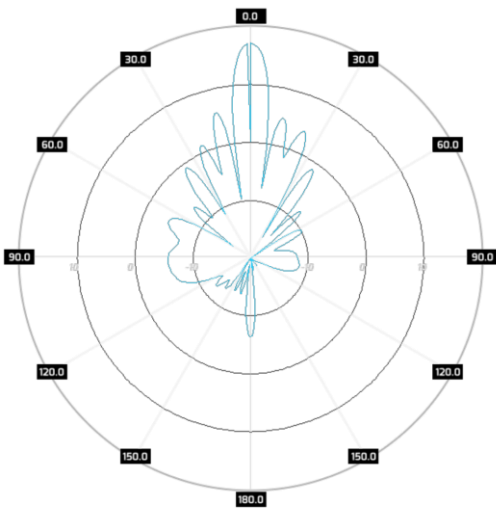
Port 1 Elevation

Port 1 Azimuth

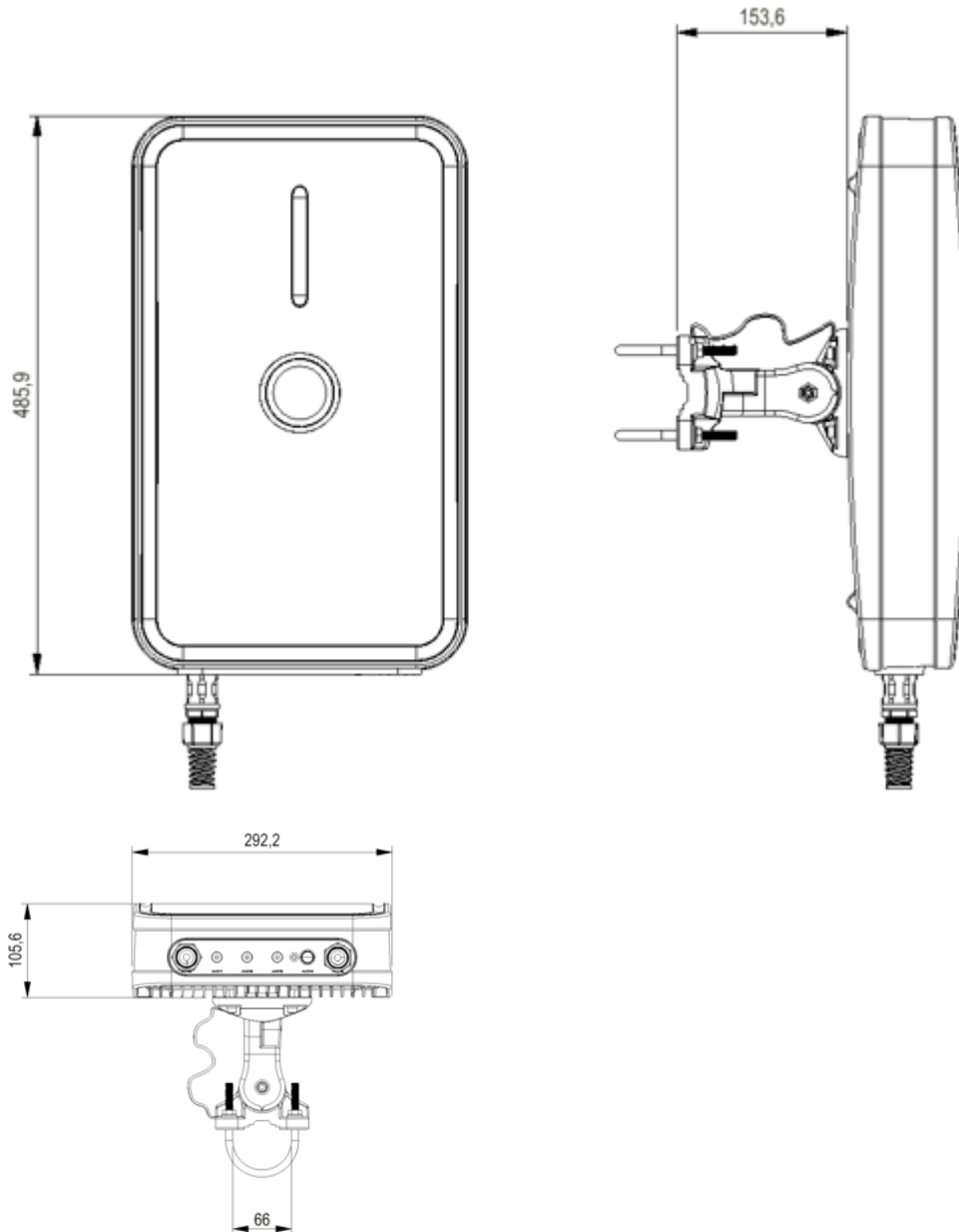


Port 2 Elevation

Port 2 Azimuth



DIMENSIONS



ORDERING INFORMATION

OWR-1000AC-C-SM90

StartMesh Sector M90 with one radio transceiver 802.11a/b/g/n/ac, 2x2 MIMO, 5GHz, and one integrated antenna 90°, 17dBi.

AL-0010: 100-240VAC/24V DC 1A passive PoE power supply