

# AIRMESH MST200 OUTDOOR WIRELESS MESH ACCESS ROUTER

Delivers High-Performance Outdoor Wireless Mesh Connectivity



The Aruba AirMesh MST200 outdoor wireless mesh access router delivers high-performance outdoor wireless mesh connectivity for remote locations and devices such as IP video surveillance cameras and digital signage.

Ruggedized and hardened to withstand extreme environmental conditions, the MST200 is ideal for providing 802.11n connectivity in metropolitan and industrial areas, oilfields, mines, shipping ports, traffic corridors and large public areas. Supporting data rates up to 300 Mbps, the MST200 a reliable and cost-effective alternative to cabling or fiber.

Running the Aruba MeshOS operating system, the MST200 features a single 5-GHz 2x2 MIMO radio with dual spatial streams and patented Adaptive Wireless Routing™ (AWR™) technology. Together, these features offer unparalleled speed, reliability, and low latency for voice, video and other real-time multimedia-grade applications.

## OPTIMIZED FOR LONG-DISTANCE TRANSMISSION

With an integrated directional antenna, the MST200 provides a long-range backhaul link that connects to the AirMesh network or another MST200 up to 7.5 km away. Radio optimization enables the MST200 to preserve the integrity of applications over long distances.

## TRAFFIC PRIORITIZATION AND QUALITY OF SERVICE

As part of the AirMesh wireless network, the MST200 enforces prioritization and quality of service (QoS) for latency-sensitive video and voice traffic. When multiple data streams enter the AirMesh network, the MST200 can automatically identify and tag specific latency-sensitive traffic to guarantee priority treatment across the mesh.

## VIDEO OPTIMIZATION TECHNOLOGY

The MST200 also ensures the delivery HD-quality video from surveillance cameras, monitors and recording systems using Active Video Transport™ (AVT™) technology. Inherent in the Aruba MeshOS, AVT uses deep packet-inspection, MAC protocol optimization, in-network retransmission protocol and adaptive video jitter removal to provide enhanced video at up to 30 frames per second across the distributed wireless mesh.

## APPLICATION

- Single radio outdoor wireless mesh access router

## OPERATING MODE

- 802.11a/n mesh router for backhaul

## RADIOS

- Single 5-GHz radio
- Radio implements 2x2 MIMO with two spatial streams, providing up to 300 Mbps data rate
- Maximum aggregate transmit power per radio: up to 25 dBm
- Dual receiver chain maximal ratio combining (MRC) for improved receiver performance

## RF MANAGEMENT

- RF interference detection and avoidance

## WIRELESS RADIO SPECIFICATIONS

- AP type: outdoor, single radio, 802.11a/n 5 GHz
- Supported frequency bands (country-specific restrictions apply)
  - 5.470 to 5.725 GHz
  - 5.725 to 5.850 GHz
- Available channels: Dependent on configured regulatory domain
- Maximum transmit power: 25 dBm (325 mW) limited by local regulatory requirements
- Supported radio technologies:
  - 802.11a/n: Orthogonal frequency division multiplexing (OFDM)
  - 802.11n: 2x2 MIMO with two spatial streams
- Supported modulation types:
  - 802.11a/ n: BPSK, QPSK, 16-QAM, 64-QAM
- Association Rates
  - 802.11a: 6, 9, 12, 18, 24, 36, 48, 54
  - 802.11n: MCS0 - MCS15 (6.5 Mbps to 300 Mbps)
  - 802.11n high-throughput (HT) support: HT 20/40
  - 802.11n packet aggregation: A-MPDU, A-MSDU

## ANTENNA

- Built in antenna
- Frequency range and max gain:
  - 5.470 to 5.700 GHz: >12.5dBi
  - 5.700 to 5.900 GHz: 14dBi
- Beamwidth:
  - E-plane: 13 degrees
  - H-plane: 55 degrees

## ARUBA MESHOS

Aruba MeshOS is a feature-rich operating system that is used across all MSR wireless mesh routers

### Routing Features

- Adaptive Wireless Routing (AWR)
  - Layer 3 optimal route selection
  - Fast convergence and failover
  - Multiple concurrent gateways
- OSPF enables integration with existing routing topologies

### Networking

- NAT/PAT
- DHCP server, relay, client
- 4,000 VLANs
- Support for HTTP, HTTPS, SSH, Telnet, SNMP, NTP and ICMP

### Security

- End-to-end WPA/WPA2, TKIP (128 bit), PSK, AES (128 bit)
- Authentication: 802.1X (RADIUS), EAP methods
- MAC and IP address filtering
- Access Control List (ACL)
- Digital certificates

### Traffic Management

- Wi-Fi Multimedia (WMM), 802.11e
- IEEE 802.1p prioritization
- DSCP/DiffServ
- Bandwidth control

### RF Management

- Automatic channel selection
- RF interference detection and avoidance
- 16 BSSIDs
- Adaptive baud rate control

## ADVANCED FEATURES

- Virtual Private LAN over Mesh (VPLN) provides native Layer 2 over Layer 3 interface to external networks
- Active Video Transport (AVT) technology performs deep packet inspection, adaptive jitter removal and corrects transmission packet loss
- MobileMatrix technology allows users to roam between mesh routers while maintaining their application sessions

## POWER

- Power
  - 802.3af PoE input (MST2H13N0)
  - 100-240 VAC 50/60 Hz (MST2H13N1)
- Power consumption: 12.5 watts max (excludes power consumed by any PoE device connected to and powered by the MST200 AC versions)

## INTERFACES

- Network:
  - 1 x 10/100/1000BASE-T Ethernet (RJ45), auto-sensing link speed and MDI/MDX
- Power:
  - 1 x AC power connector (MST2H13N1 model only)
- Other:
  - 1 x USB console interface

## MOUNTING

- Mounting kit:
  - Pole/mast mounting
  - Wall mounting

## MECHANICAL

- Dimensions/weight (unit)
  - 255 mm x 180 mm x 82 mm (10" x 7" x 3.3")
  - 1.8 kg (4.0 lb)
- Dimensions/weight (shipping)
  - 425 mm x 335 mm x 225 mm (16.7" x 13.2" x 8.8")
  - 4.5 kg (9.9 lb)

## ENVIRONMENTAL

- Operating:
  - Temperature: -30° C to 60° C (-22° F to 140° F) for PoE powered models; -40° C to 55° C (-40° F to 131° F) for AC powered models
  - Humidity: 5% to 95% non-condensing
- Storage and transportation temperature range:
  - -30° C to 70° C (-22° F to 158° F)
- Weather rating: IP66
- Wind survivability: Up to 165 mph
- Shock and vibration: ETSI 300-19-2-4 spec T41.E class 4M3
- Transportation: ISTA 2A

## REGULATORY

- Safety
  - EN 60950-1
  - IEC60950-1
  - UL 60950-1
  - CAN/CSA-C22.2 No.60950-1
  - ANSI/IEEE C62.41
  - UL1449-2
- EMC
  - EN301 48
  - EN55022
  - EN61000
  - FCC Part 15
  - RSS-Gen
- RF
  - CFR47 FCC Part 15
  - RSS-21
  - EN 300 328
  - EN 301 893

REGULATORY (CONTINUED)

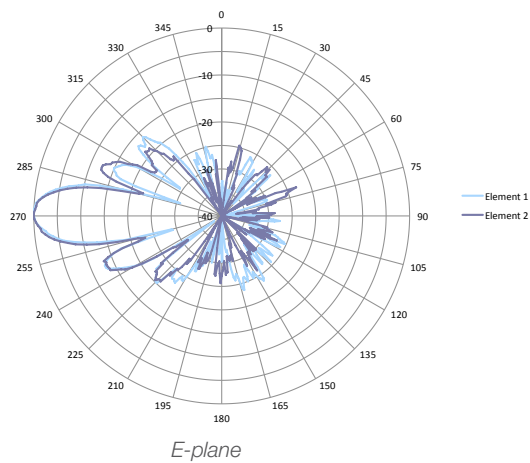
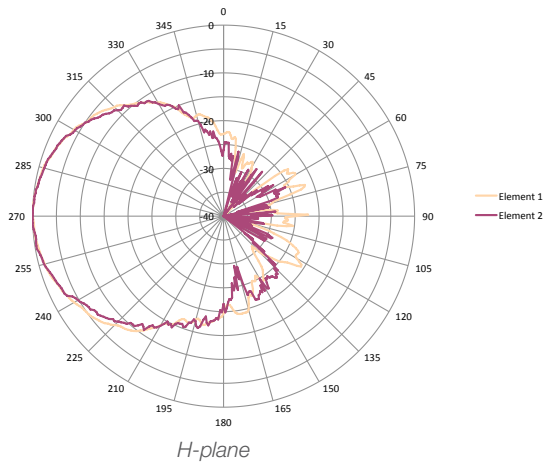
- Certification
  - FCC
  - IC
  - CE
  - CB
  - cTUVus
  - RoHS
  - SRRC (China)

WARRANTY

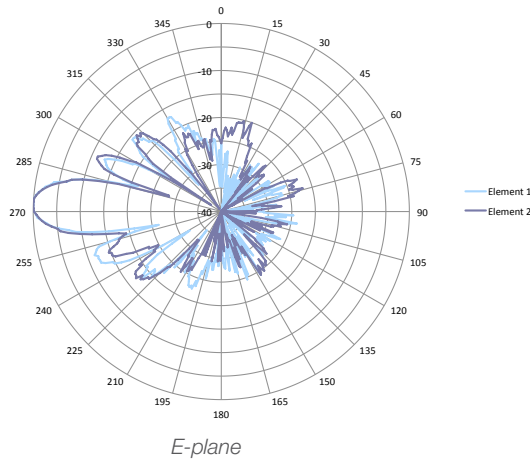
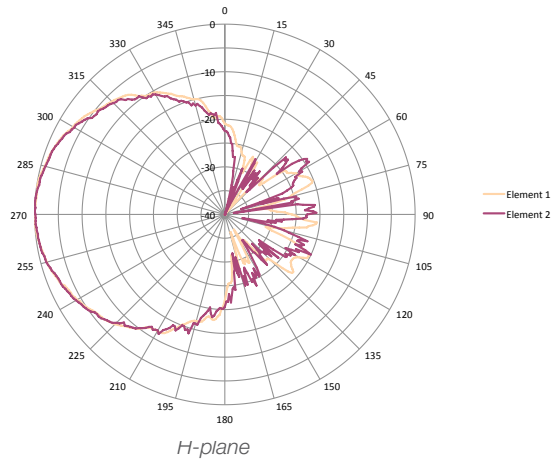
- 1 year parts/labor

ANTENNA PATTERN PLOTS (NORMALISED)

5.500 GHz



5.875 GHz



**Ordering Information**

Part Number	Description
MST2H13N0-US (U.S. only) MST2H13N0-JP (Japan only) MST2H13N0-IL (Israel only) MST2H13N0 (rest of world)	<ul style="list-style-type: none"> <li>• MST200 Wireless Mesh Access Router</li> <li>• Single 802.11a/n 320 mW radio (5 GHz)</li> <li>• 10/100/1000BASE-T Ethernet interface (RJ45)</li> <li>• Power input via (802.3af PoE) Ethernet interface</li> </ul>
MST2H13N1-US (U.S. only) MST2H13N1-JP (Japan only) MST2H13N1-IL (Israel only) MST2H13N1 (rest of world)	<ul style="list-style-type: none"> <li>• MST200 Wireless Mesh Access Router</li> <li>• Single 802.11a/n 320 mW radio (5 GHz)</li> <li>• 10/100/1000BASE-T Ethernet interface (RJ45) with 802.3af PoE power sourcing equipment (PSE) capability</li> <li>• 100-240Vac power input</li> </ul>

**Accessories**

PD-3501G-AC	PoE Power Injector (802.3af, 15W); power cable not included
PD-9001GO-NA	1 Port 802.3at PoE Midspan 10/100/1000 30W Outdoor; NA power cord
PD-9001GO-INTL	1 Port 802.3at PoE Midspan 10/100/1000 30W Outdoor; EU/International power cord
PD-MOUNT-OD	Pole/Mast mount kit for outdoor POE midspan injectors
ACONGESTD-00	USB console cable, 1.5 m
CKIT-RJ45-P	Spare weatherproof connector kit, for plastic RJ45 connector
CBL-USB-P	Weatherproof USB console cable (5m), for plastic USB connector
CBL-AC-NA	Weatherproof AC power cable (5m), North America version
CBL-AC-INTL	Weatherproof AC power cable (5m), International (EU) version
CKIT-AC-M	Weatherproof connector kit for AC power interface


[www.arubanetworks.com](http://www.arubanetworks.com)

1344 Crossman Avenue, Sunnyvale, CA 94089

1-866-55-ARUBA | Tel. +1 408.227.4500 | Fax. +1 408.227.4550 | [info@arubanetworks.com](mailto:info@arubanetworks.com)