

DATA SHEET

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 (MST2HP)
 - 100-240 VAC 50/60 Hz (MST2HAC)
 - AC unit support 802.3at power out on ethernet port
- 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 (MST2HAC 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: -40° C to 60° C (-40° F to 140° F) for PoE powered models; -40° C to 60° C (-40° F to 140° F) for AC powered models
 - Humidity: 5% to 95% non-condensing
- Storage and transportation temperature range:
 - -40° C to 70° C (-40° 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

- Regulatory Model Numbers
 - MST200 AC Powered: MST2H13N1
 - MST200 PoE Powered: MST2H13N
- 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

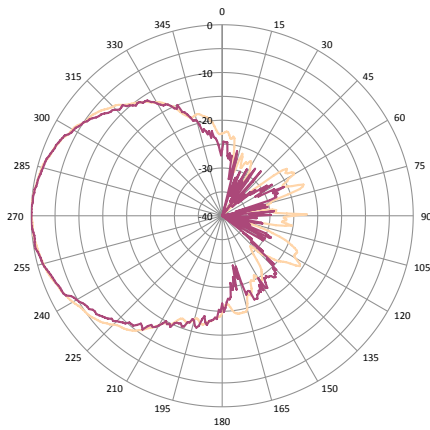
- RF
 - CFR47 FCC Part 15
 - RSS-210
 - EN 300 328
 - EN 301 893
- Certification
 - FCC
 - IC
 - CE
 - CB
 - cTUVus
 - RoHS
 - SRRC (China)

WARRANTY

- 1 year parts/labor

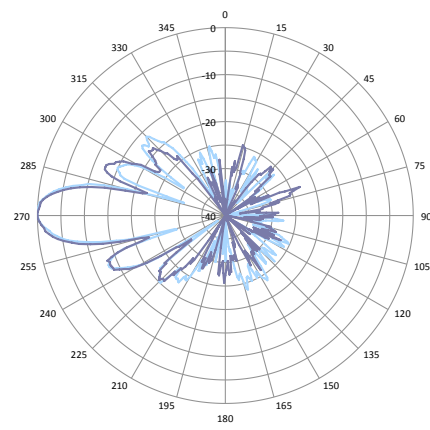
ANTENNA PATTERN PLOTS (NORMALISED)

5.500 GHz



H-plane

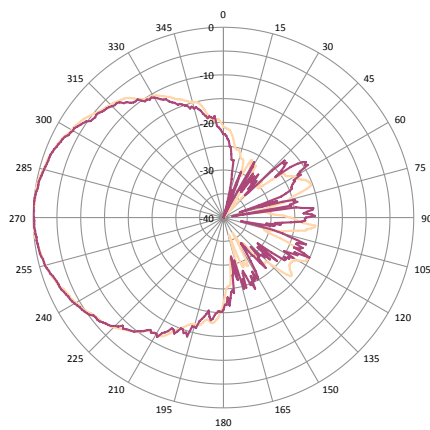
Element 1
Element 2



E-plane

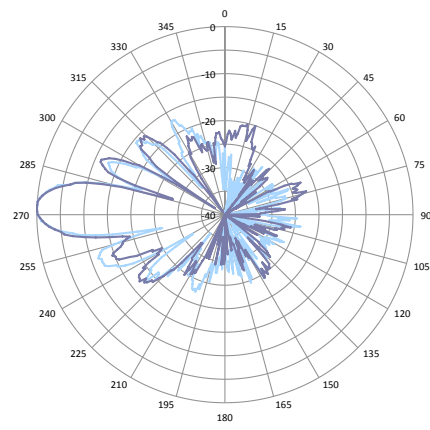
Element 1
Element 2

5.875 GHz



H-plane

Element 1
Element 2



E-plane

Element 1
Element 2

ORDERING INFORMATION

Part Number	Description
MST2HP-US (U.S. only) MST2HP-JP (Japan only) MST2HP (rest of world)	<ul style="list-style-type: none"> • MST200 Wireless Mesh Access Router • Single 802.11a/n 320 mW radio (5 GHz) • 10/100/1000BASE-T Ethernet interface (RJ45) • Power input via (802.3af PoE) Ethernet interface
MST2HAC-US (U.S. only) MST2HAC-JP (Japan only) MST2HAC (rest of world)	<ul style="list-style-type: none"> • MST200 Wireless Mesh Access Router • Single 802.11a/n 320 mW radio (5 GHz) • 10/100/1000BASE-T Ethernet interface (RJ45) with 802.3at capability • 100-240Vac power input



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