2x2 MIMO BaseStation Sector Antenna

High Performance, Long Range
Seamlessly Integrates with RocketM
Excellent Cross-Polarization Isolation
Overview

Sector Coverage

The airMAX Sector Antenna is a Carrier Class 2x2 Dual Polarity MIMO Sector Antenna that was designed to seamlessly integrate with RocketM radios (RocketM sold separately).

Pair the RocketM's radio with the airMAX Sector Antenna's reach to create a powerful basestation. This versatile combination gives network architects unparalleled flexibility and convenience.

On the right is one example of how the airMAX Sector Antenna can be deployed:

Utilize airMAX Technology*

Unlike standard Wi-Fi protocol, Ubiquiti's Time Division Multiple Access (TDMA) airMAX protocol allows each client to send and receive data using pre-designated time slots scheduled by an intelligent AP controller.

This "time slot" method eliminates hidden node collisions and maximizes airtime efficiency. It provides many magnitudes of performance improvements in latency, throughput, and scalability compared to all other outdoor systems in its class.

Intelligent QoS  Priority is given to voice/video for seamless streaming.

Scalability  High capacity and scalability.

Long Distance  Capable of high-speed, carrier-class links.

* When airMAX Sector is paired with RocketM

Up to 100 airMAX clients can be connected to an airMAX Sector; four airMAX clients are shown to illustrate the general concept.
Models

AM-9M13 (900 MHz, 13 dBi)

AM-2G15-120 (2.4 GHz, 15 dBi)

AM-2G16-90 (2.4 GHz, 16 dBi)

AM-3G18-120 (3 GHz, 18 dBi)

AM-5G16-120 (5 GHz, 16 dBi)

AM-5G17-90 (5 GHz, 17 dBi)

AM-5G19-120 (5 GHz, 19 dBi)

AM-5G20-90 (5 GHz, 20 dBi)
Software

**airOS**

airOS is an intuitive, versatile, highly developed Ubiquiti firmware technology. It is exceptionally intuitive and was designed to require no training to operate. Behind the user interface is a powerful firmware architecture, which enables high-performance, outdoor multipoint networking.

- Protocol Support
- Ubiquiti Channelization
- Spectral Width Adjustment
- ACK Auto-Timing
- AAP Technology
- Multi-Language Support

**airView**

Integrated on all Ubiquiti M products, airView provides Advanced Spectrum Analyzer Functionality: Waterfall, waveform, and real-time spectral views allow operators to identify noise signatures and plan their networks to minimize noise interference.

- **Waterfall** Aggregate energy over time for each frequency.
- **Waveform** Aggregate energy collected.
- **Real-time** Energy is shown in real time as a function of frequency.
- **Recording** Automate airView to record and report results.

**airControl**

airControl is a powerful and intuitive, web-based server network management application, which allows operators to centrally manage entire networks of Ubiquiti devices.

- Network Map
- Monitor Device Status
- Mass Firmware Upgrade
- Web UI Access
- Manage Groups of Devices
- Task Scheduling
## Specifications

<table>
<thead>
<tr>
<th></th>
<th>AM-9M13</th>
<th>AM-2G15-120</th>
<th>AM-2G16-90</th>
<th>AM-3G18-120</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>AM-9M13</td>
<td>AM-2G15-120</td>
<td>AM-2G16-90</td>
<td>AM-3G18-120</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>1290 x 290 x 134</td>
<td>700 x 145 x 93</td>
<td>700 x 145 x 79</td>
<td>735 x 144 x 78</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>12.5 kg</td>
<td>4.0 kg</td>
<td>3.9 kg</td>
<td>5.9 kg</td>
</tr>
<tr>
<td><strong>Frequency Range</strong></td>
<td>902 - 928 MHz</td>
<td>2.3 - 2.7 GHz</td>
<td>2.3 - 2.7 GHz</td>
<td>3.3 - 3.8 GHz</td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>13.2 - 13.8 dBi</td>
<td>15.0 - 16.0 dBi</td>
<td>16.0 - 17.0 dBi</td>
<td>17.3 - 18.2 dBi</td>
</tr>
<tr>
<td><strong>HPOL Beamwidth</strong></td>
<td>109° (6 dB)</td>
<td>123° (6 dB)</td>
<td>91° (6 dB)</td>
<td>118° (6 dB)</td>
</tr>
<tr>
<td><strong>VPOL Beamwidth</strong></td>
<td>120° (6 dB)</td>
<td>118° (6 dB)</td>
<td>90° (6 dB)</td>
<td>121° (6 dB)</td>
</tr>
<tr>
<td><strong>Electrical Beamwidth</strong></td>
<td>15°</td>
<td>9°</td>
<td>9°</td>
<td>6°</td>
</tr>
<tr>
<td><strong>Electrical Downtilt</strong></td>
<td>N/A</td>
<td>4°</td>
<td>4°</td>
<td>3°</td>
</tr>
<tr>
<td><strong>Max. VSWR</strong></td>
<td>1.5:1</td>
<td>1.5:1</td>
<td>1.5:1</td>
<td>1.5:1</td>
</tr>
<tr>
<td><strong>Wind Survivability</strong></td>
<td>125 mph</td>
<td>125 mph</td>
<td>125 mph</td>
<td>125 mph</td>
</tr>
<tr>
<td><strong>Wind Loading</strong></td>
<td>95 lbf @ 100 mph</td>
<td>24 lbf @ 100 mph</td>
<td>19 lbf @ 100 mph</td>
<td>21 lbf @ 100 mph</td>
</tr>
<tr>
<td><strong>Polarization</strong></td>
<td>Dual-Linear</td>
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</tr>
<tr>
<td><strong>ETSI Specification</strong></td>
<td>N/A</td>
<td>EN 302 326 DN2</td>
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<tr>
<td><strong>Mounting</strong></td>
<td>Universal Pole Mount, RocketM Bracket, and Weatherproof RF Jumpers Included</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
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* Dimensions exclude pole mount and RocketM (RocketM sold separately)
** Weight includes pole mount and excludes RocketM (RocketM sold separately)

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<tr>
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<tr>
<td><strong>Dimensions</strong></td>
<td>367 x 63 x 41</td>
<td>367 x 63 x 41</td>
<td>700 x 135 x 73</td>
<td>700 x 135 x 70</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.1 kg</td>
<td>1.1 kg</td>
<td>5.9 kg</td>
<td>5.9 kg</td>
</tr>
<tr>
<td><strong>Frequency Range</strong></td>
<td>5.10 - 5.85 GHz</td>
<td>4.90 - 5.85 GHz</td>
<td>5.15 - 5.85 GHz</td>
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<tr>
<td><strong>Gain</strong></td>
<td>15.0 - 16.0 dBi</td>
<td>16.1 - 17.1 dBi</td>
<td>18.6 - 19.1 dBi</td>
<td>19.4 - 20.3 dBi</td>
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<td><strong>HPOL Beamwidth</strong></td>
<td>137° (6 dB)</td>
<td>72° (6 dB)</td>
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<tr>
<td><strong>VPOL Beamwidth</strong></td>
<td>118° (6 dB)</td>
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<td>123° (6 dB)</td>
<td>85° (6 dB)</td>
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<tr>
<td><strong>Electrical Beamwidth</strong></td>
<td>8°</td>
<td>8°</td>
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<td>6 lbf @ 100 mph</td>
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<td>20 lbf @ 100 mph</td>
<td>26 lbf @ 100 mph</td>
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AM-9M13 Antenna Information

Return Loss

Vertical Azimuth

Vertical Elevation

Horizontal Azimuth

Horizontal Elevation

AM-2G15-120 Antenna Information

Return Loss

Vertical Azimuth

Vertical Elevation

Horizontal Azimuth

Horizontal Elevation
AM-5G16-120 Antenna Information

Return Loss

Vertical Azimuth

Vertical Elevation

Horizontal Azimuth

Horizontal Elevation

AM-5G17-90 Antenna Information

Return Loss

Vertical Azimuth

Vertical Elevation

Horizontal Azimuth

Horizontal Elevation
AM-5G19-120 Antenna Information

Return Loss

Vertical Azimuth

Vertical Elevation

Horizontal Azimuth

Horizontal Elevation

AM-5G20-90 Antenna Information

Return Loss

Vertical Azimuth

Vertical Elevation

Horizontal Azimuth

Horizontal Elevation
Protect your networks from the most brutal environments with Ubiquiti Networks’ industrial-grade, shielded Ethernet cable, TOUGHCable.

**Increase Performance**
Dramatically improve your Ethernet link states, speeds, and overall performance with Ubiquiti TOUGHCables.

**Extreme Weatherproof**
Designed for outdoor use, TOUGHCables have been built to perform even in the harshest weather and environments.

**ESD Damage Protection**
Protect your networks from devastating electrostatic discharge (ESD) attacks.

**Extended Cable Support**
TOUGHCables have been developed to increase power handling performance for extended cable run lengths.

**Bulletproof your networks**
TOUGHCable is currently available in two versions: PRO Shielding Protection and CARRIER Shielding Protection.

**TOUGHCable PRO** is a Category 5e, outdoor, carrier-class shielded cable with an integrated ESD drain wire.

**TOUGHCable CARRIER** is a Category 5e, outdoor, carrier-class shielded cable that features an integrated ESD drain wire, anti-crosstalk divider, and secondary shielding. It is rated to provide optimal performance on Gigabit Ethernet networks.

**Additional Information:**
- 24 AWG copper conductor pairs
- 26 AWG integrated ESD drain wire to prevent ESD attacks and damage
- PE outdoor-rated, weatherproof jacket
- Multi-layered shielding
- Available in lengths of 1000 ft (304.8 m)

ESD attacks are the leading cause for device failures. The diagram below illustrates the areas vulnerable to ESD attacks in a network.

By using a grounded Ubiquiti Power over Ethernet (PoE) Adapter along with Ubiquiti TOUGHCable and TOUGHCable Connectors, you can effectively protect against ESD attacks.