



LiteBeam™

5 GHz, airMAX® Technology Solutions

Models: LBE-M5-23, LBE-5AC-23, LBE-5AC-16-120

Lightweight, Low-Cost Solution

Full Adjustment Flexibility

Quick Assembly and Installation



LiteBeam™

The LiteBeam™ is the latest evolution of a lightweight and compact, outdoor wireless broadband product from Ubiquiti Networks. Each of these models was designed to be an affordable cost/performance solution for long-distance, wireless broadband bridging. It operates in the worldwide, license-free 5 GHz frequency range with high-performance speeds.

The LiteBeam combines proprietary hardware and software technologies to deliver its breakthrough combination of throughput and range with cost-effective value.

The InnerFeed® technology (models LBE-M5-23 and LBE-5AC-23) integrates the entire radio system into the antenna feed, and our revolutionary airMAX TDMA protocol enhances network performance and scalability.

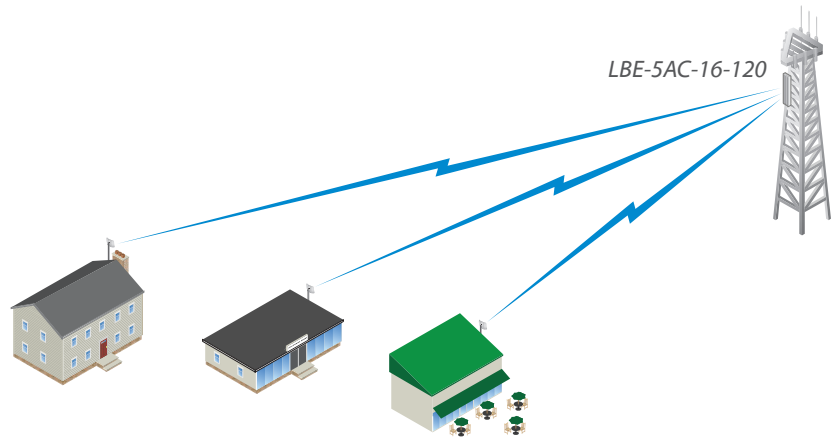
Integrated airMAX Technology

Unlike standard Wi-Fi protocol, the exclusive Ubiquiti Networks® airMAX Time Division Multiple Access (TDMA) protocol allows each client to send and receive data using pre-designated time slots managed by an intelligent AP controller. This "time slot" method eliminates hidden node collisions and maximizes airtime efficiency.

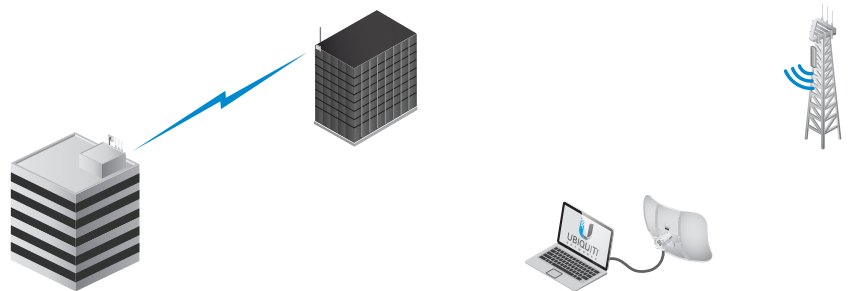
Compared to other systems in its class, the LiteBeam products deliver superior performance in reduced latency, throughput, and scalability.

- **Intelligent QoS** Priority is given to voice/video for seamless access.
- **Scalability** High capacity and scalability.
- **Long Distance** Capable of high-speed, 30+ km links.

Application Examples

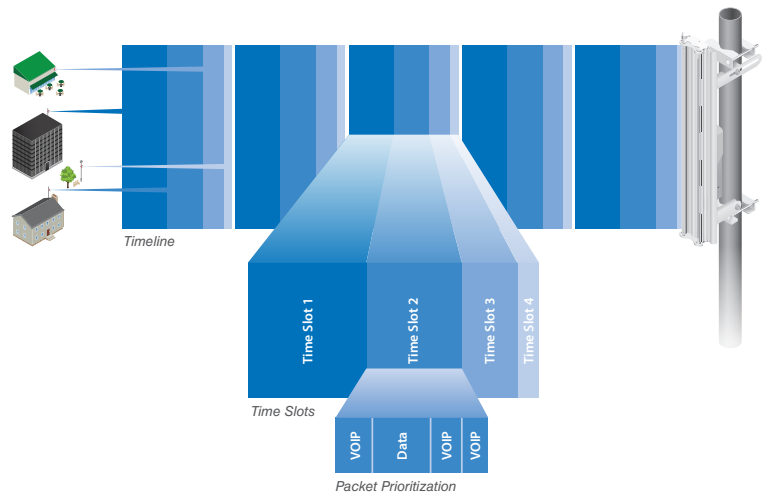


LiteBeam as a cost-effective WISP deployment in an airMAX ac Point-to-MultiPoint network.



A LiteBeam on each side of a Point-to-Point link to create a reliable wireless bridge.

LiteBeam as a powerful wireless client.

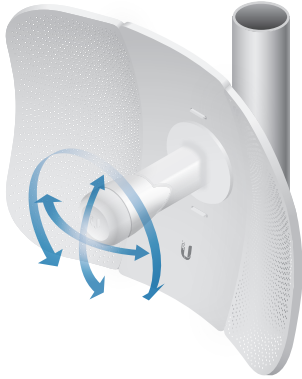


Up to 100 airMAX stations can be connected to an airMAX Sector; four airMAX stations are shown to illustrate the general concept.

Hardware Overview

Full Adjustment Flexibility

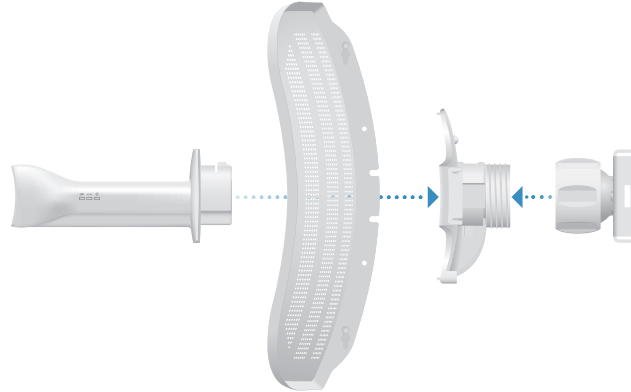
The LiteBeam features a unique ball joint mount that provides adjustment flexibility along three axes for versatile mounting options. The mounting system, coupled with the built-in bubble level, enables quick and easy alignment.



LBE-5AC-23

Quick, Snap-and-Lock Assembly

The all-new mechanical design makes assembling the LBE-M5-23 and LBE-5AC-23 – literally – a snap. No tools are required. Simply snap the feed, antenna panels, rear housing, and ball joint mount together for a secure, solid assembly.



LBE-M5-23

Model Comparison

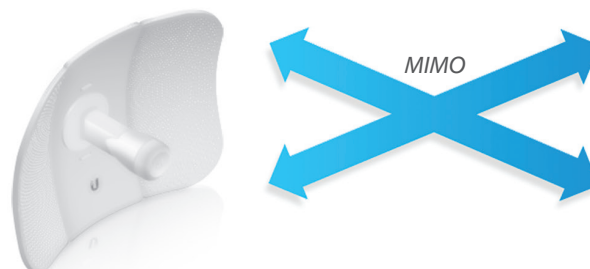
| | LBE-M5-23 | LBE-5AC-23 | LBE-5AC-16-120 |
|-----------------------------------|-----------|-----------------------|-----------------------|
| Frequency Band | 5 GHz | 5 GHz | 5 GHz |
| Antenna Gain | 23 dBi | 23 dBi | 16 dBi |
| Antenna Type | 1x1 SISO | 2x2 MIMO | 2x2 MIMO |
| Polarization | Vertical | Vertical + Horizontal | Vertical + Horizontal |
| airMAX ac | | ✓ | ✓ |
| Gigabit Ethernet | | ✓ | ✓ |
| Point-to-Point Functionality | ✓ | ✓ | ✓ |
| Point-to-MultiPoint Functionality | | | ✓ |

SISO Versus MIMO Functionality

LiteBeam™ M5



LiteBeam™ ac



LBE-M5-23 Specifications

| Physical / Electrical / Environmental | |
|---------------------------------------|---|
| Dimensions (No Mount) | 362 x 267 x 184 mm (14.25 x 10.51 x 7.24") |
| Weight (No Mount) | 750 g (24.11 oz) |
| Mounting Kit | Pole Mounting Kit (Included) |
| Max. Power Consumption | 4W |
| Power Supply | 24V, 0.2A PoE Adapter (Included) |
| Power Method | Passive PoE (Pairs 4, 5+; 7, 8 Return) |
| Operating Temperature | -40 to 70° C (-40 to 158° F) |
| Operating Humidity | 5 to 95% Noncondensing |
| Shock and Vibration | ETSI300-019-1.4 |
| ETSI Specification | EN 302 326 DN2 |
| ESD/EMP Protection | ± 24 KV Contact / Air |

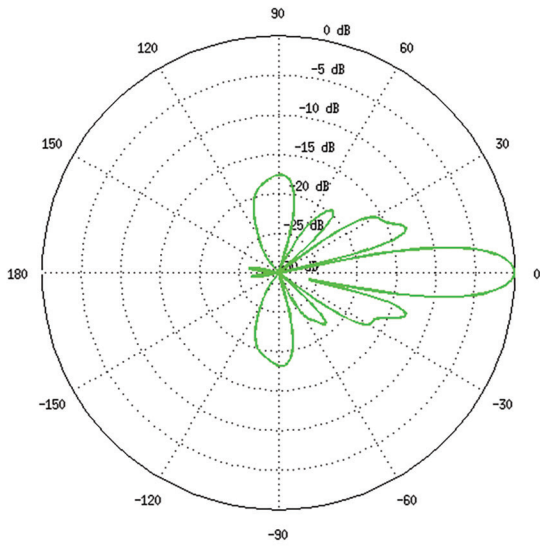
| System Information | |
|----------------------|--------------------------|
| Processor Specs | MIPS 74K |
| Memory | 64 MB |
| Networking Interface | (1) 10/100 Ethernet Port |

| Regulatory / Compliance Information | |
|-------------------------------------|-------------|
| Wireless Approvals | FCC, IC, CE |
| RoHS Compliance | Yes |

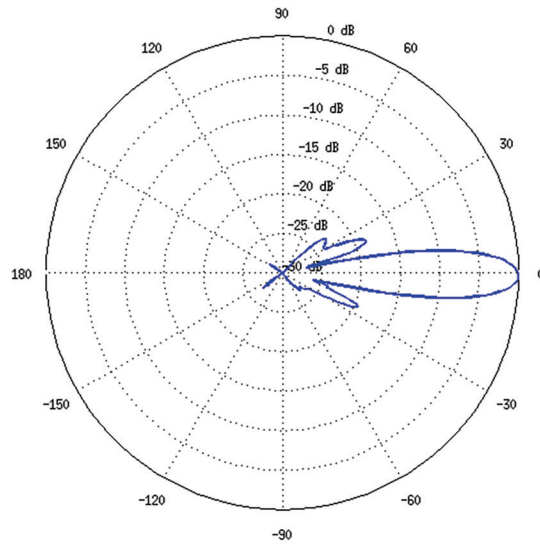
| Output Power: 25 dBm | | | | | | | |
|-------------------------|-----------|---------|-----------|-------------------------|-----------|-------------|-----------|
| TX Power Specifications | | | | RX Power Specifications | | | |
| Modulation | Data Rate | Avg. TX | Tolerance | Modulation | Data Rate | Sensitivity | Tolerance |
| 802.11n/airMAX | MCS0 | 25 dBm | ± 2 dB | 802.11n/airMAX | MCS0 | -97 dBm | ± 2 dB |
| | MCS1 | 25 dBm | ± 2 dB | | MCS1 | -96 dBm | ± 2 dB |
| | MCS2 | 25 dBm | ± 2 dB | | MCS2 | -93 dBm | ± 2 dB |
| | MCS3 | 24 dBm | ± 2 dB | | MCS3 | -91 dBm | ± 2 dB |
| | MCS4 | 23 dBm | ± 2 dB | | MCS4 | -87 dBm | ± 2 dB |
| | MCS5 | 22 dBm | ± 2 dB | | MCS5 | -84 dBm | ± 2 dB |
| | MCS6 | 21 dBm | ± 2 dB | | MCS6 | -78 dBm | ± 2 dB |
| | MCS7 | 19 dBm | ± 2 dB | | MCS7 | -75 dBm | ± 2 dB |

| Antenna Information | |
|---------------------|--|
| Operating Frequency | Worldwide: 5150 - 5875 MHz USA: 5725 - 5850 MHz |
| Output Power | 25 dBm |
| Gain | 23 dBi |
| Max. VSWR | 1.5:1 |

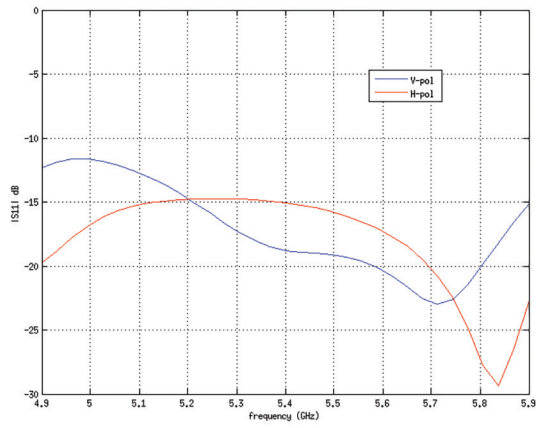
Vertical Azimuth



Vertical Elevation



Return Loss



LBE-5AC-23 Specifications

| Physical / Electrical / Environmental | |
|---------------------------------------|---|
| Dimensions (No Mount) | 362 x 273 x 203 mm (14.25 x 10.75 x 7.99") |
| Weight (No Mount) | 907 g (2.00 lbs) |
| Mounting Kit | Pole Mounting Kit (Included) |
| Max. Power Consumption | 7W |
| Power Supply | 24V, 0.3A Gigabit PoE Adapter (Included) |
| Power Method | Passive PoE (Pairs 4, 5+; 7, 8 Return) |
| Operating Temperature | -40 to 70° C (-40 to 158° F) |
| Operating Humidity | 5 to 95% Noncondensing |
| Shock and Vibration | ETSI300-019-1.4 |
| ETSI Specification | EN 302 326 DN2 |
| ESD/EMP Protection | ± 24 KV Contact / Air |

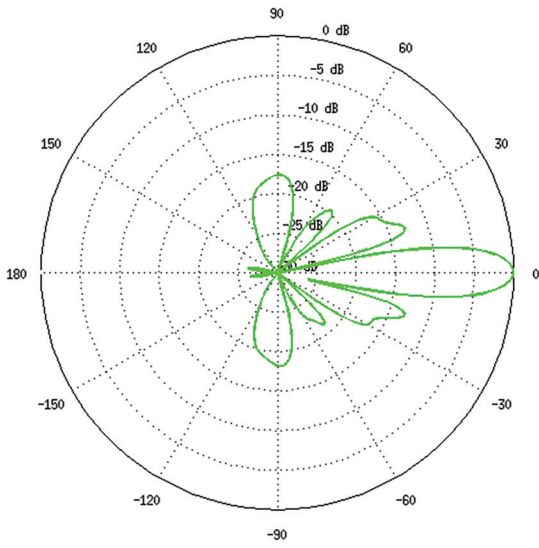
| System Information | |
|----------------------|-------------------------------|
| Processor Specs | MIPS 74K |
| Memory | 64 MB |
| Networking Interface | (1) 10/100/1000 Ethernet Port |

| Regulatory / Compliance Information | |
|-------------------------------------|-------------|
| Wireless Approvals | FCC, IC, CE |
| RoHS Compliance | Yes |

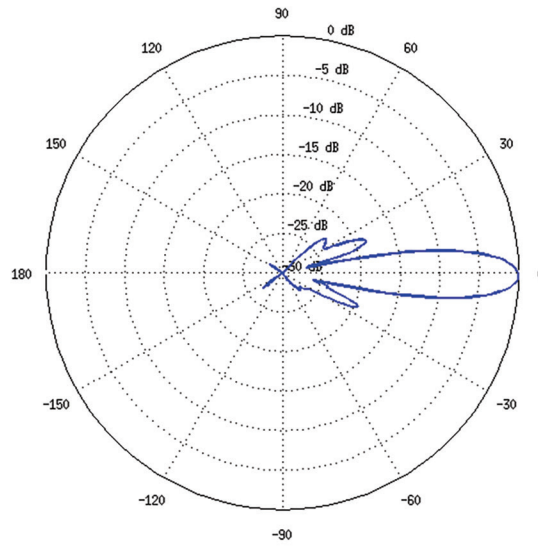
| Output Power: 24 dBm | | | | | | | |
|-------------------------|-----------------|---------|-----------|-------------------------|-----------------|-------------|-----------|
| TX Power Specifications | | | | RX Power Specifications | | | |
| Modulation | Data Rate | Avg. TX | Tolerance | Modulation | Data Rate | Sensitivity | Tolerance |
| airMAX ac | 1x BPSK (1/2) | 24 dBm | ± 2 dB | airMAX ac | 1x BPSK (1/2) | -96 dBm | ± 2 dB |
| | 2x QPSK (1/2) | 24 dBm | ± 2 dB | | 2x QPSK (1/2) | -95 dBm | ± 2 dB |
| | 2x QPSK (3/4) | 24 dBm | ± 2 dB | | 2x QPSK (3/4) | -92 dBm | ± 2 dB |
| | 4x 16QAM (1/2) | 24 dBm | ± 2 dB | | 4x 16QAM (1/2) | -90 dBm | ± 2 dB |
| | 4x 16QAM (3/4) | 24 dBm | ± 2 dB | | 4x 16QAM (3/4) | -86 dBm | ± 2 dB |
| | 6x 64QAM (2/5) | 23 dBm | ± 2 dB | | 6x 64QAM (2/5) | -83 dBm | ± 2 dB |
| | 6x 64QAM (3/4) | 22 dBm | ± 2 dB | | 6x 64QAM (3/4) | -77 dBm | ± 2 dB |
| | 6x 64QAM (5/6) | 21 dBm | ± 2 dB | | 6x 64QAM (5/6) | -74 dBm | ± 2 dB |
| | 8x 256QAM (3/4) | 20 dBm | ± 2 dB | | 8x 256QAM (3/4) | -69 dBm | ± 2 dB |
| | 8x 256QAM (5/6) | 19 dBm | ± 2 dB | | 8x 256QAM (5/6) | -65 dBm | ± 2 dB |

| Antenna Information | |
|---------------------|--|
| Operating Frequency | Worldwide: 5150 - 5875 MHz USA: 5725 - 5850 MHz |
| Output Power | 25 dBm |
| Gain | 23 dBi |
| Max. VSWR | 1.5:1 |

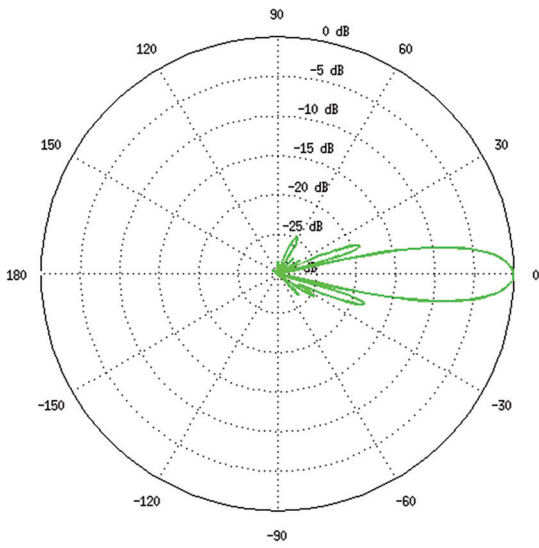
Vertical Azimuth



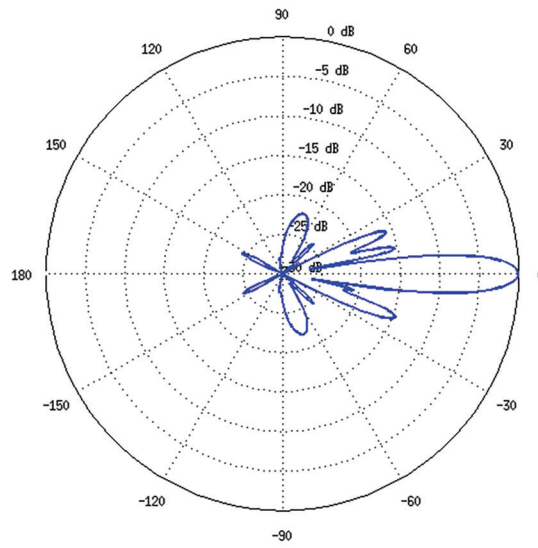
Vertical Elevation



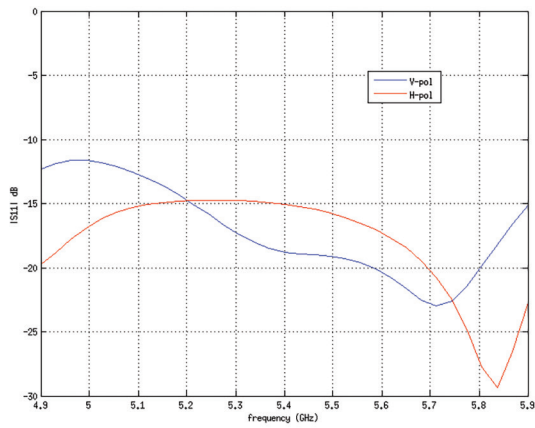
Horizontal Azimuth



Horizontal Elevation



Return Loss



LBE-5AC-16-120 Specifications

| Physical / Electrical / Environmental | |
|---------------------------------------|--|
| Dimensions (No Mount) | 452.3 x 78.7 x 54.4 mm (17.81 x 3.10 x 2.14") |
| Weight (No Mount) | 420 g (14.82 oz) |
| Mounting Kit | Pole Mounting Kit (Included) |
| Max. Power Consumption | 7W |
| Power Supply | 24V, 0.5A Gigabit PoE Adapter (Included) |
| Power Method | Passive PoE (Pairs 4, 5+; 7, 8 Return) |
| Operating Temperature | -40 to 70° C (-40 to 158° F) |
| Operating Humidity | 5 to 95% Noncondensing |
| Shock and Vibration | ETSI300-019-1.4 |
| ETSI Specification | EN 302 326 DN2 |
| ESD/EMP Protection | ± 24 KV Contact / Air |

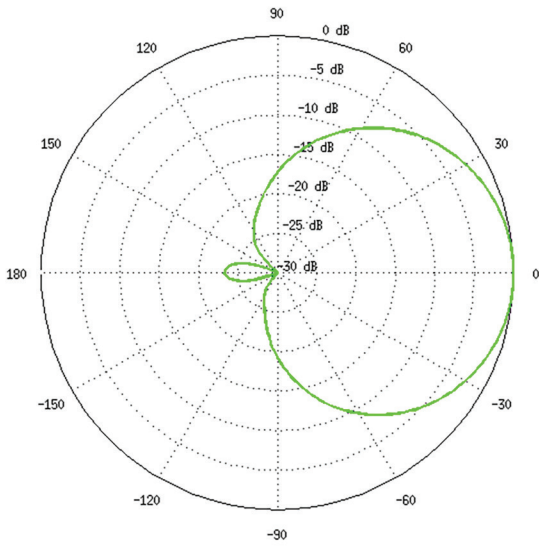
| System Information | |
|----------------------|-------------------------------|
| Processor Specs | MIPS 74K |
| Memory | 64 MB |
| Networking Interface | (1) 10/100/1000 Ethernet Port |

| Regulatory / Compliance Information | |
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| Wireless Approvals | FCC, IC, CE |
| RoHS Compliance | Yes |

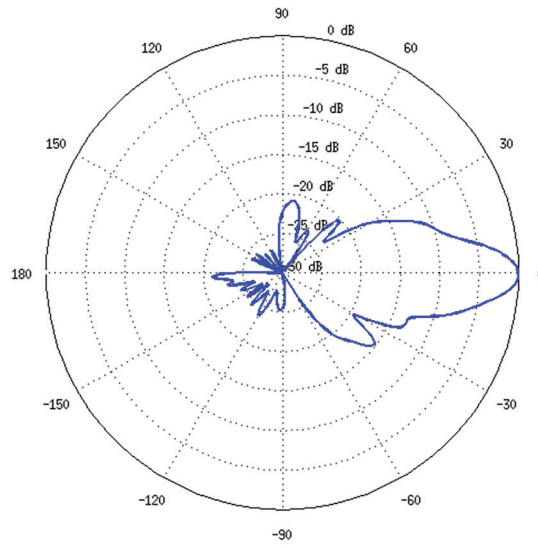
| Output Power: 25 dBm | | | | | | | |
|-------------------------|-----------------|---------|-----------|-------------------------|-----------------|-------------|-----------|
| TX Power Specifications | | | | RX Power Specifications | | | |
| Modulation | Data Rate | Avg. TX | Tolerance | Modulation | Data Rate | Sensitivity | Tolerance |
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| | 2x QPSK (1/2) | 25 dBm | ± 2 dB | | 2x QPSK (1/2) | -95 dBm | ± 2 dB |
| | 2x QPSK (3/4) | 25 dBm | ± 2 dB | | 2x QPSK (3/4) | -92 dBm | ± 2 dB |
| | 4x 16QAM (1/2) | 25 dBm | ± 2 dB | | 4x 16QAM (1/2) | -90 dBm | ± 2 dB |
| | 4x 16QAM (3/4) | 25 dBm | ± 2 dB | | 4x 16QAM (3/4) | -86 dBm | ± 2 dB |
| | 6x 64QAM (2/5) | 25 dBm | ± 2 dB | | 6x 64QAM (2/5) | -83 dBm | ± 2 dB |
| | 6x 64QAM (3/4) | 24 dBm | ± 2 dB | | 6x 64QAM (3/4) | -77 dBm | ± 2 dB |
| | 6x 64QAM (5/6) | 23 dBm | ± 2 dB | | 6x 64QAM (5/6) | -74 dBm | ± 2 dB |
| | 8x 256QAM (3/4) | 21 dBm | ± 2 dB | | 8x 256QAM (3/4) | -69 dBm | ± 2 dB |
| | 8x 256QAM (5/6) | 21 dBm | ± 2 dB | | 8x 256QAM (5/6) | -65 dBm | ± 2 dB |

| Antenna Information | |
|---------------------|--|
| Operating Frequency | Worldwide: 5150 - 5875 MHz USA: 5725 - 5850 MHz |
| Output Power | 25 dBm |
| Gain | 16 dBi |
| Max. VSWR | 1.5:1 |

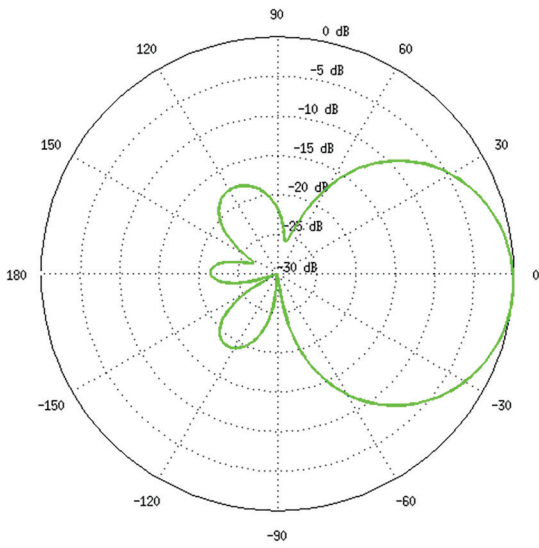
Vertical Azimuth



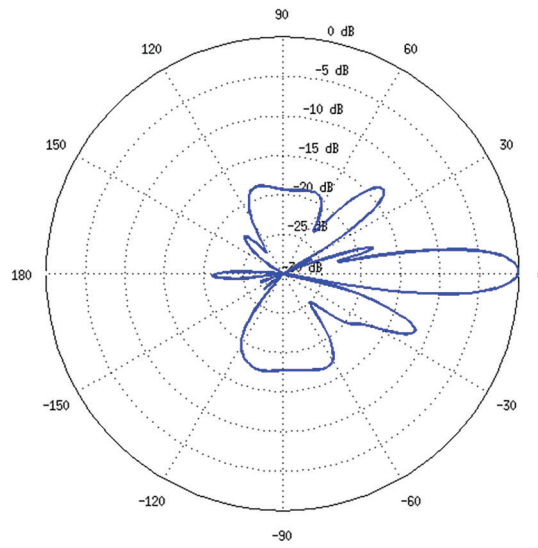
Vertical Elevation



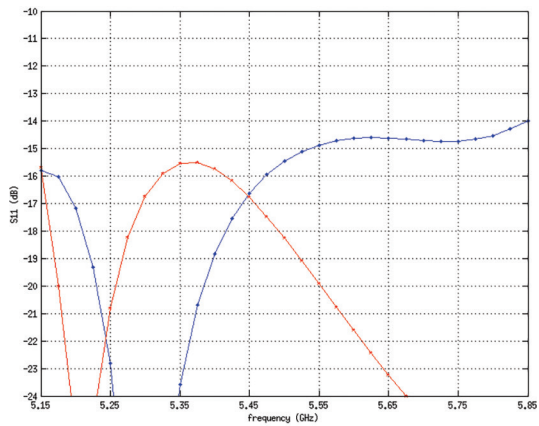
Horizontal Azimuth



Horizontal Elevation



Return Loss



Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: www.ubnt.com/support/warranty
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