*air*Grid® *M*

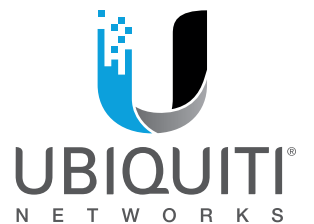## airMAX® Wireless Broadband CPE

Models: AG-HP-2G16, AG-HP-2G20, AG-HP-5G23, AG-HP-5G27

High Performance, Long Range

Integrated InnerFeed® CPE

Easy Assembly and Installation

UBIQUITI
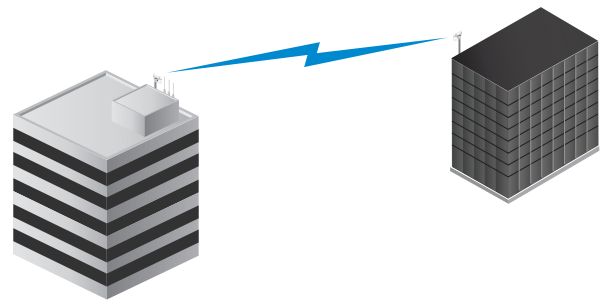N E T W O R K S

airGrid® M

Utilizing InnerFeed technology, the new airGrid® M HP Series from Ubiquiti Networks represents the latest evolution of outdoor wireless broadband devices. The revolutionary InnerFeed technology integrates the entire radio system into the feedhorn of the antenna. airGrid M combines Ubiquiti's InnerFeed and airMAX® (TDMA protocol) technologies to create a simple, yet extremely powerful and robust wireless CPE (Customer Premises Equipment).

Complete antenna and radio system integration provides affordable cost/performance solutions to the wireless broadband industry. airGrid M operates in the worldwide, license-free frequency range of either 2 GHz or 5 GHz, and features breakthrough performance of up to 100+ Mbps in real outdoor throughput and incredible range of up to 30+ km.

The low-cost, high-performance, robust "all-in-one" design and light weight of airGrid M make it versatile and ideal in several different applications.

100+Mbps
30+km Range
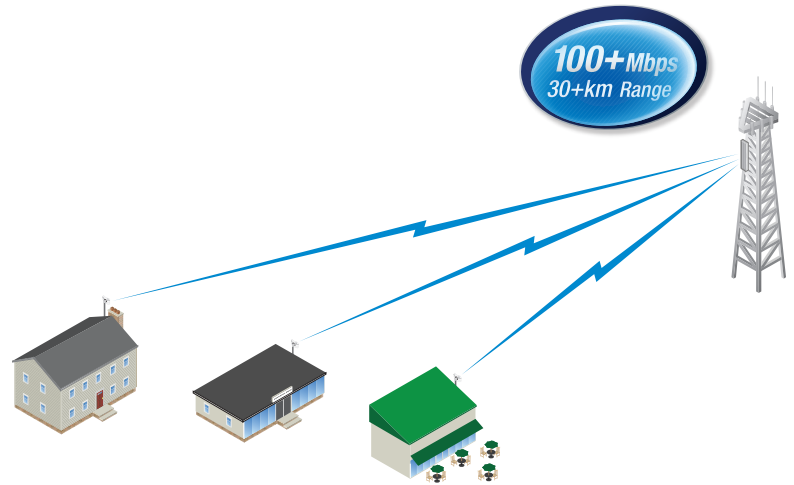
airGrid M as a cost-effective CPE in an airMAX Point-to-Multi-Point network.

Use an airGrid M on each side of a Point-to-Point link.

## 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 airGrid M delivers 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.

Easy, No-Tool Assembly

With its updated mechanical design, assembling and disassembling the airGrid M is literally a snap. No tools are required.
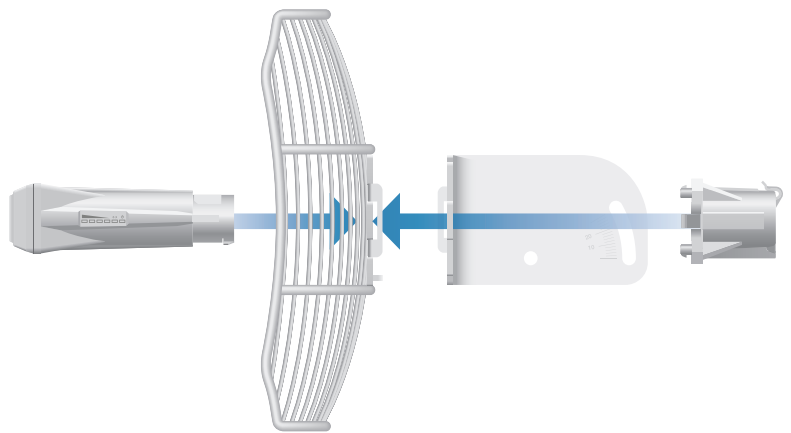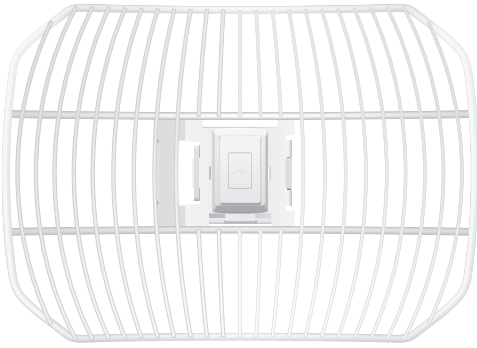
You simply snap the feed, antenna, mounting bracket and rear housing together for a secure, solid assembly.

Models

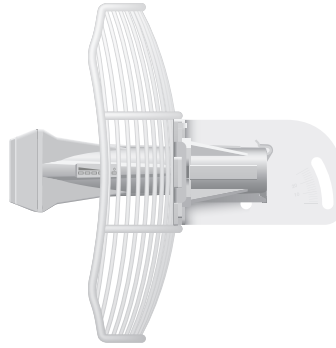## airGrid M2 HP

Model: AG-HP-2G16

- 2412 - 2462 MHz
- 16 dBi
- Antenna Size: 370 x 270 mm

Front View   *Side View*

airGrid M2 HP

Model: AG-HP-2G20

- 2412 - 2462 MHz
- 20 dBi
- Antenna Size: 620 x 460 mm
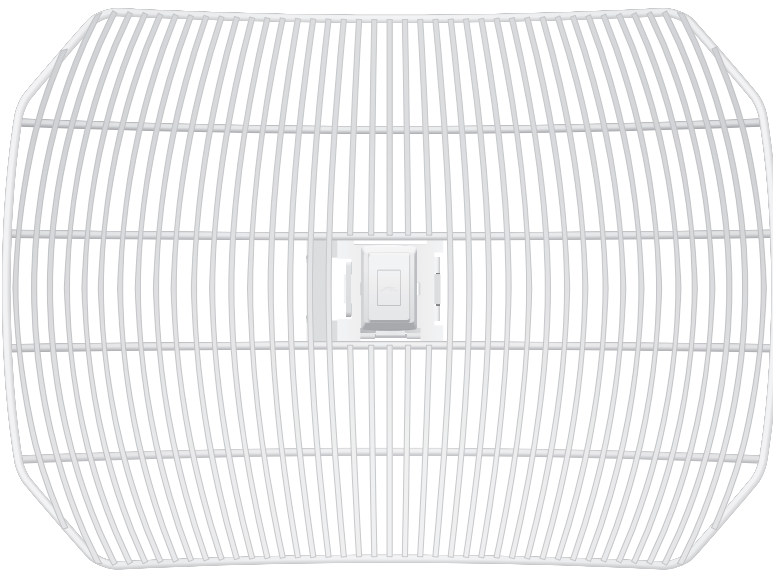
Front View   *Side View*
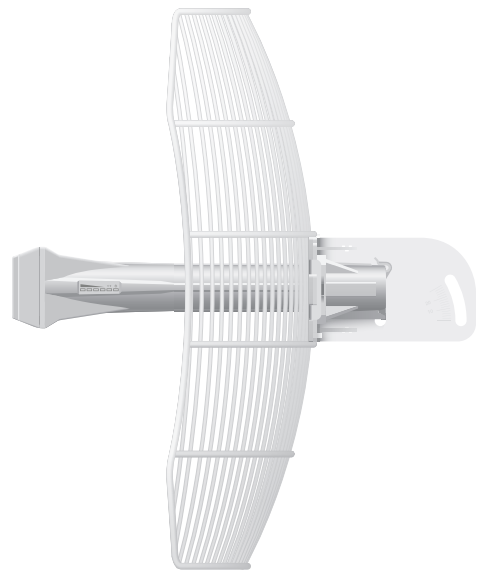
airGrid M

Models

airGrid M5 HP

Model: AG-HP-5G23

- Worldwide: 5170 – 5875 MHz
- India: 5825 – 5875 MHz
- USA: 5725 – 5850 MHz
- 23 dBi
- Antenna Size: 370 x 270 mm

Front View   *Side View*

airGrid M5 HP

Model: AG-HP-5G27

- Worldwide: 5170 – 5875 MHz
- India: 5825 – 5875 MHz
- USA: 5725 – 5850 MHz
- 27 dBi
- Antenna Size: 620 x 460 mm
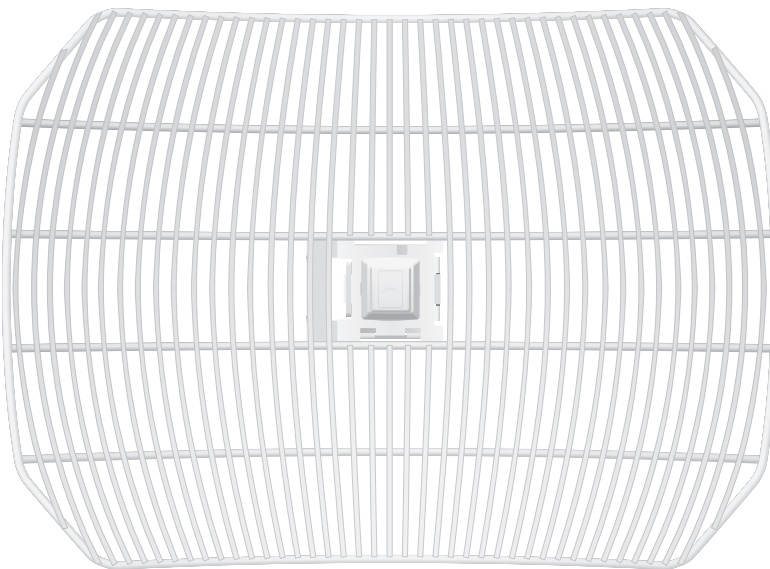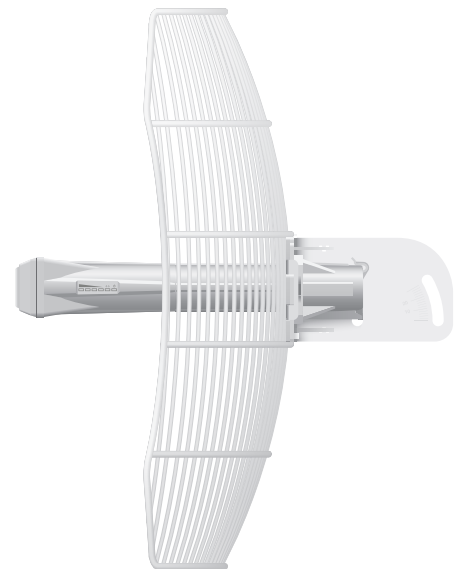
Front View   *Side View*

Specifications

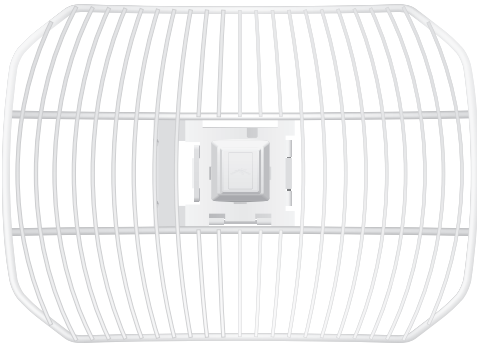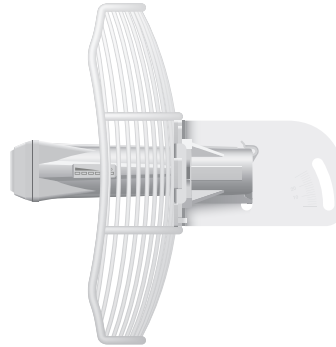| System Information	
Processor Specs	Atheros MIPS 74Kc, 560 MHz
Memory Information	64 MB DDR2, 8 MB Flash
Networking Interface	(1) 10/100 Ethernet Port

Regulatory / Compliance Information	
Wireless Approvals	FCC Part 15.247, IC RS210, CE
RoHS Compliance	Yes

Physical / Electrical / Environmental	
Enclosure Characteristics	Outdoor UV Stabilized Plastic
Mounting Kit	Pole Mounting Kit (Included)
Max. Power Consumption	3W
Power Supply	24V, 0.5A PoE Adapter (Included)
Power Method	Passive Power over Ethernet (Pairs 4, 5+; 7, 8 Return)
Operating Temperature	-30 to 75° C (-22 to 167° F)
Operating Humidity	5 to 95% Condensing
Shock and Vibration	ETSI300-019-1.4
ETSI Specification	EN 302 326 DN2

AG-HP-2G20

AG-HP-2G16

AG-HP-5G27

AG-HP-5G23

Specifications

airGrid M

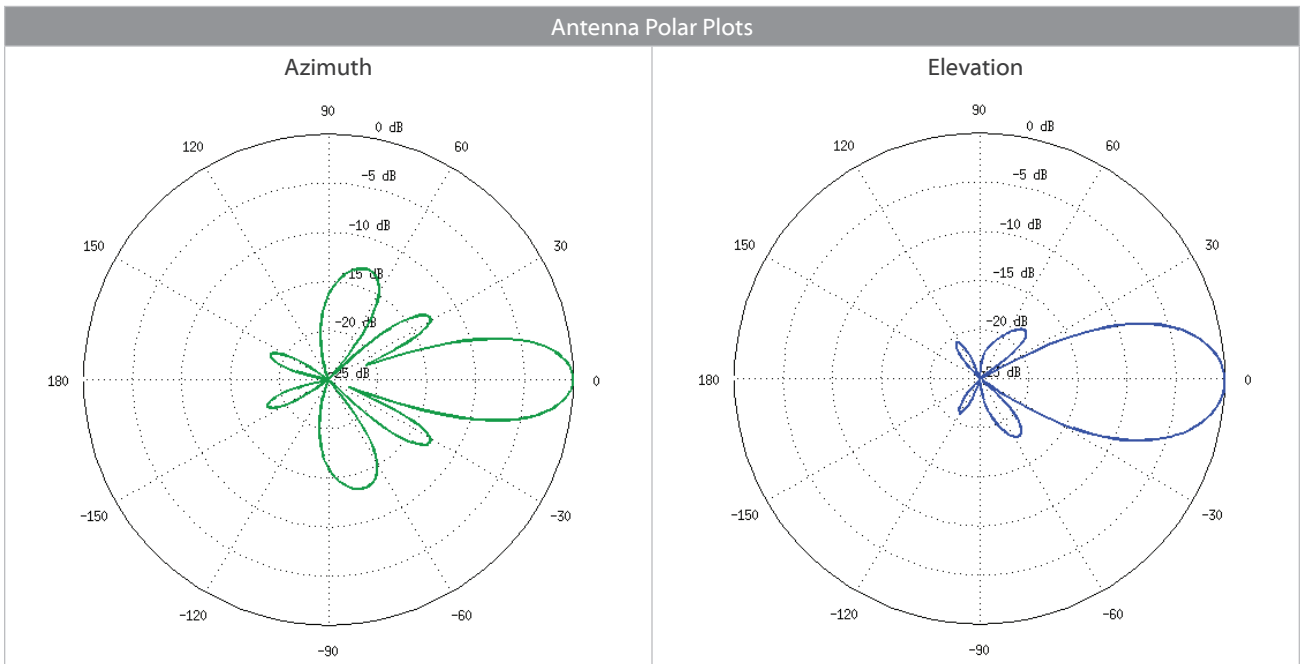| AG-HP-2G16	
Dimensions (Mount Included)	370 x 270 x 270 mm (14.57 x 10.63 x 10.63")
Weight (Mount Included)	1478 g (3.258 lb)
Wind Survivability	200 km/h (125 mph)
Wind Loading	58 N @ 200 km/h (13 lbf @ 125 mph)
Operating Frequency	2412 - 2462 MHz
Max. VSWR	1.5:1
Gain	16 dBi

AG-HP-2G16 Output Power: 28 dBm							
TX Power Specifications				**RX Power Specifications**			
Modulation	Data Rate	Avg. TX	Tolerance	Modulation	Data Rate	Sensitivity	Tolerance
11g	1 - 24 Mbps	28 dBm	± 2 dB	**11g**	1 - 24 Mbps	-97 dBm min.	± 2 dB
	36 Mbps	26 dBm	± 2 dB		36 Mbps	-80 dBm	± 2 dB
	48 Mbps	25 dBm	± 2 dB		48 Mbps	-77 dbm	± 2 dB
	54 Mbps	24 dBm	± 2 dB		54 Mbps	-75 dBm	± 2 dB
11n / airMAX	MCS0	28 dBm	± 2 dB	**11n / airMAX**	MCS0	-96 dBm	± 2 dB
	MCS1	28 dBm	± 2 dB		MCS1	-95 dBm	± 2 dB
	MCS2	28 dBm	± 2 dB		MCS2	-92 dBm	± 2 dB
	MCS3	28 dBm	± 2 dB		MCS3	-90 dBm	± 2 dB
	MCS4	27 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
	MCS5	25 dBm	± 2 dB		MCS5	-83 dBm	± 2 dB
	MCS6	23 dBm	± 2 dB		MCS6	-77 dBm	± 2 dB
	MCS7	22 dBm	± 2 dB		MCS7	-74 dBm	± 2 dB

Antenna Polar Plots

Azimuth

Elevation

Specifications

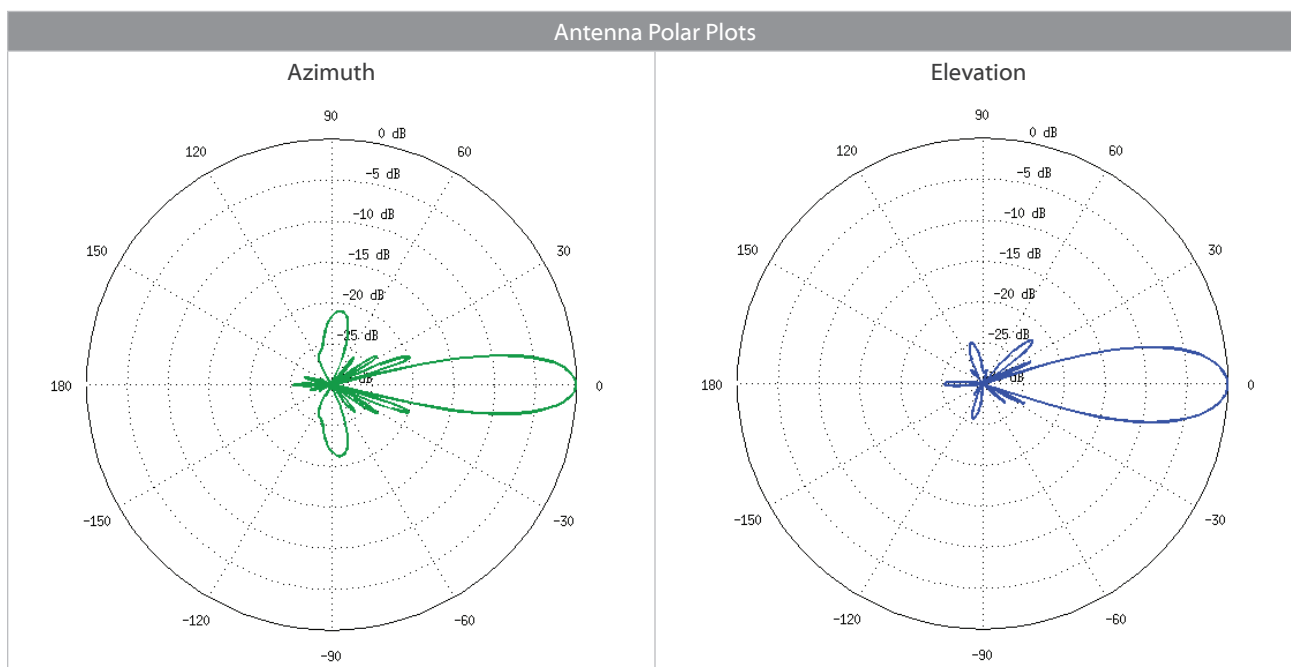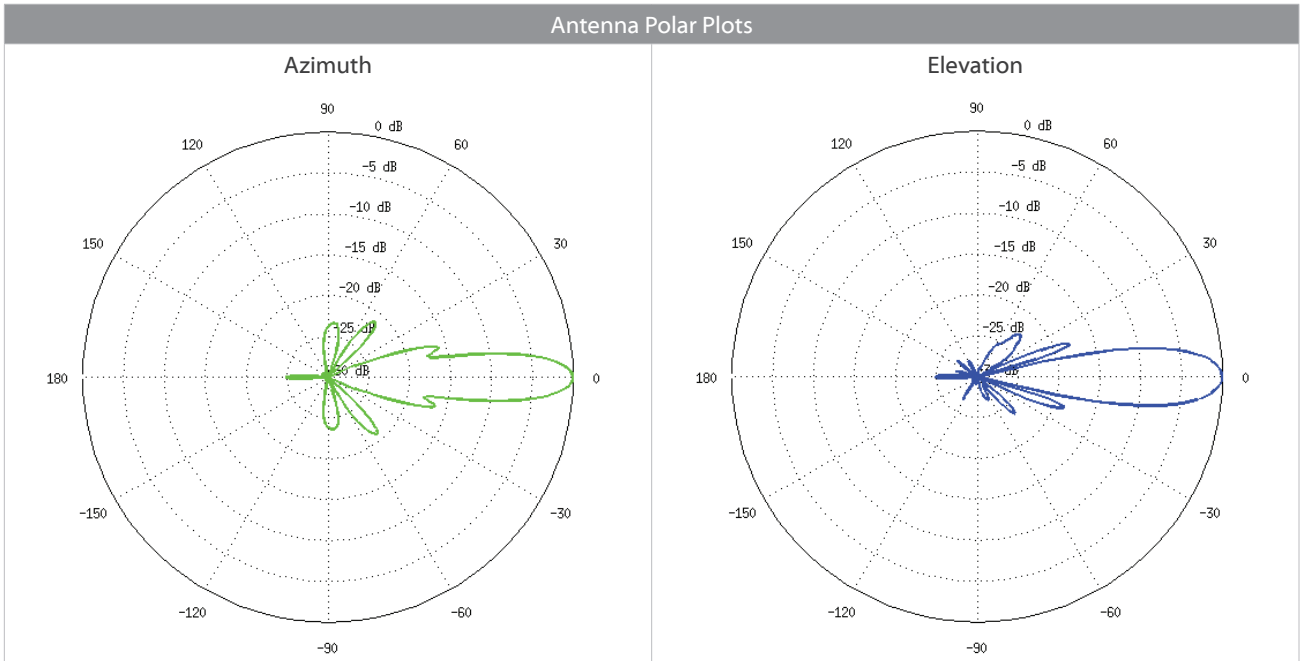| AG-HP-2G20	
Dimensions (Mount Included)	620 x 460 x 390 mm (24.41 x 18.11 x 15.35")
Weight (Mount Included)	2603 g (5.739 lb)
Wind Survivability	200 km/h (125 mph)
Wind Loading	102 N @ 200 km/h (23 lbf @ 125 mph)
Operating Frequency	2412 - 2462 MHz
Max. VSWR	1.5:1
Gain	20 dBi

AG-HP-2G20 Output Power: 28 dBm							
TX Power Specifications				RX Power Specifications			
Modulation	Data Rate	Avg. TX	Tolerance	Modulation	Data Rate	Sensitivity	Tolerance
11g	1 - 24 Mbps	28 dBm	± 2 dB	**11g**	1 - 24 Mbps	-97 dBm min.	± 2 dB
	36 Mbps	26 dBm	± 2 dB		36 Mbps	-80 dBm	± 2 dB
	48 Mbps	25 dBm	± 2 dB		48 Mbps	-77 dbm	± 2 dB
	54 Mbps	24 dBm	± 2 dB		54 Mbps	-75 dBm	± 2 dB
11n / airMAX	MCS0	28 dBm	± 2 dB	**11n / airMAX**	MCS0	-96 dBm	± 2 dB
	MCS1	28 dBm	± 2 dB		MCS1	-95 dBm	± 2 dB
	MCS2	28 dBm	± 2 dB		MCS2	-92 dBm	± 2 dB
	MCS3	28 dBm	± 2 dB		MCS3	-90 dBm	± 2 dB
	MCS4	27 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
	MCS5	25 dBm	± 2 dB		MCS5	-83 dBm	± 2 dB
	MCS6	23 dBm	± 2 dB		MCS6	-77 dBm	± 2 dB
	MCS7	22 dBm	± 2 dB		MCS7	-74 dBm	± 2 dB

Antenna Polar Plots

Azimuth

Elevation

airGrid M

Specifications

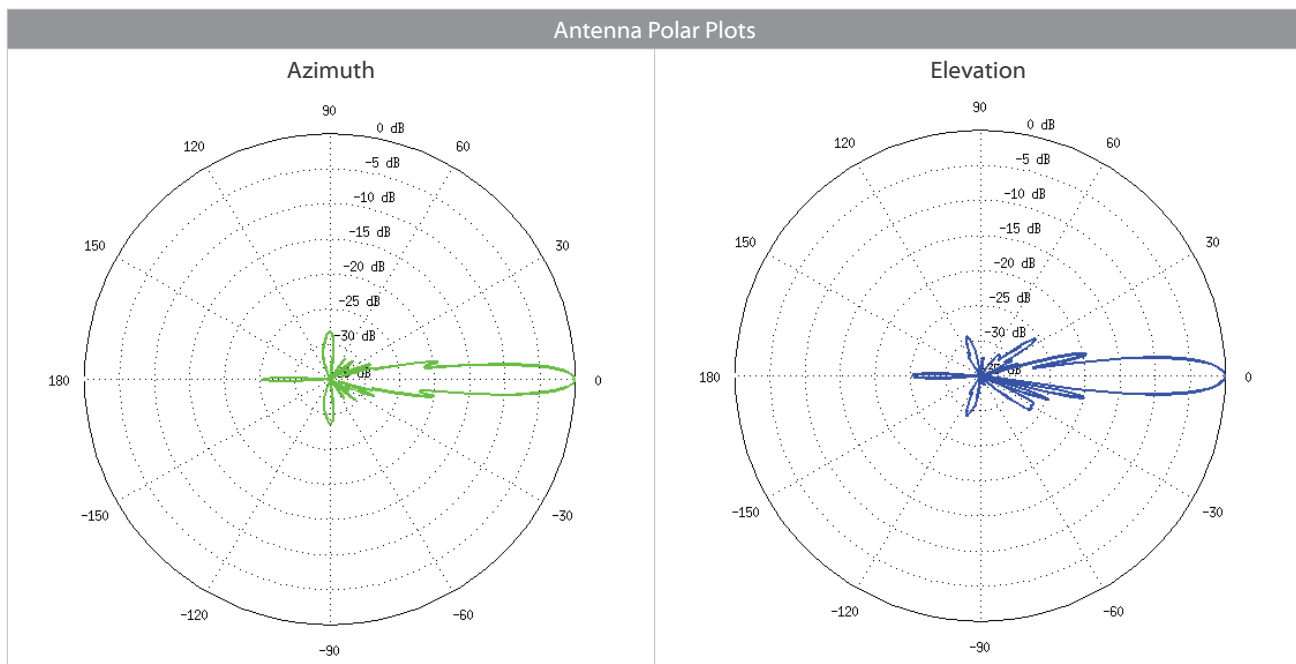| AG-HP-5G23	
Dimensions (Mount Included)	370 x 270 x 260 mm (14.57 x 10.63 x 10.24")
Weight (Mount Included)	1452 g (3.201 lb)
Wind Survivability	200 km/h (125 mph)
Wind Loading	58 N @ 200 km/h (13 lbf @ 125 mph)
Operating Frequency	Worldwide: 5170 – 5875 MHz USA: 5725 – 5850 MHz
Max. VSWR	1.5:1
Gain	23 dBi

AG-HP-5G23 Output Power: 25 dBm							
TX Power Specifications				RX Power Specifications			
Modulation	Data Rate	Avg. TX	Tolerance	Modulation	Data Rate	Sensitivity	Tolerance
11a	1 - 24 Mbps	25 dBm	± 2 dB	11a	1 - 24 Mbps	-97 dBm min.	± 2 dB
11a	36 Mbps	24 dBm	± 2 dB	11a	36 Mbps	-90 dBm	± 2 dB
11a	48 Mbps	22 dBm	± 2 dB	11a	48 Mbps	-86 dBm	± 2 dB
11a	54 Mbps	21 dBm	± 2 dB	11a	54 Mbps	-84 dBm	± 2 dB
11n / airMAX	MCS0	25 dBm	± 2 dB	11n / airMAX	MCS0	-97 dBm	± 2 dB
11n / airMAX	MCS1	25 dBm	± 2 dB	11n / airMAX	MCS1	-96 dBm	± 2 dB
11n / airMAX	MCS2	25 dBm	± 2 dB	11n / airMAX	MCS2	-93 dBm	± 2 dB
11n / airMAX	MCS3	24 dBm	± 2 dB	11n / airMAX	MCS3	-91 dBm	± 2 dB
11n / airMAX	MCS4	23 dBm	± 2 dB	11n / airMAX	MCS4	-87 dBm	± 2 dB
11n / airMAX	MCS5	22 dBm	± 2 dB	11n / airMAX	MCS5	-84 dBm	± 2 dB
11n / airMAX	MCS6	21 dBm	± 2 dB	11n / airMAX	MCS6	-78 dBm	± 2 dB
11n / airMAX	MCS7	19 dBm	± 2 dB	11n / airMAX	MCS7	-75 dBm	± 2 dB

Antenna Polar Plots	
Azimuth	Elevation

Specifications

AG-HP-5G27	
Dimensions (Mount Included)	620 x 460 x 360 mm (24.41 x 18.11 x 14.17")
Weight (Mount Included)	2585 g (5.699 lb)
Wind Survivability	200 km/h (125 mph)
Wind Loading	102 N @ 200 km/h (23 lbf @ 125 mph)
Operating Frequency	Worldwide: 5170 – 5875 MHz USA: 5725 – 5850 MHz
Max. VSWR	1.5:1
Gain	27 dBi

AG-HP-5G27 Output Power: 25 dBm							
TX Power Specifications				**RX Power Specifications**			
Modulation	Data Rate	Avg. TX	Tolerance	Modulation	Data Rate	Sensitivity	Tolerance
11a	1 - 24 Mbps	25 dBm	± 2 dB	11a	1 - 24 Mbps	-97 dBm min.	± 2 dB
	36 Mbps	24 dBm	± 2 dB		36 Mbps	-90 dBm	± 2 dB
	48 Mbps	22 dBm	± 2 dB		48 Mbps	-86 dBm	± 2 dB
	54 Mbps	21 dBm	± 2 dB		54 Mbps	-84 dBm	± 2 dB
11n / airMAX	MCS0	25 dBm	± 2 dB	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 Polar Plots

Azimuth

Elevation

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