



# *air*Grid<sup>®</sup> **M**

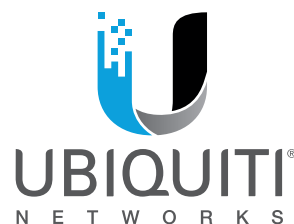
airMAX<sup>®</sup> Wireless Broadband CPE

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

High Performance, Long Range

Integrated InnerFeed<sup>®</sup> CPE

Easy Assembly and Installation

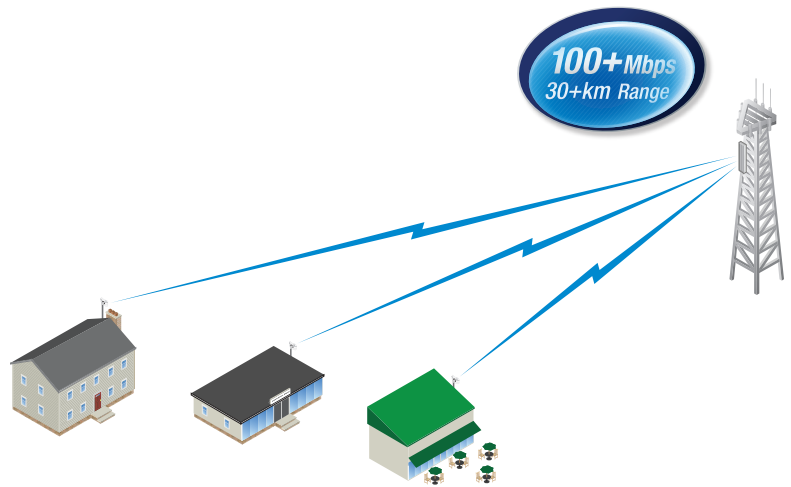


# airGrid M

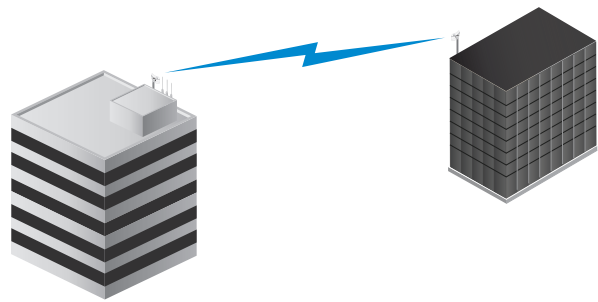
Utilizing InnerFeed technology, the new airGrid M HP Series from Ubiquiti Networks represents the latest evolution of outdoor wireless broadband devices. The revolutionary InnerFeed technology integrates the entire radio system into the feedhorn of the antenna. airGrid M combines Ubiquiti's InnerFeed 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.



*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

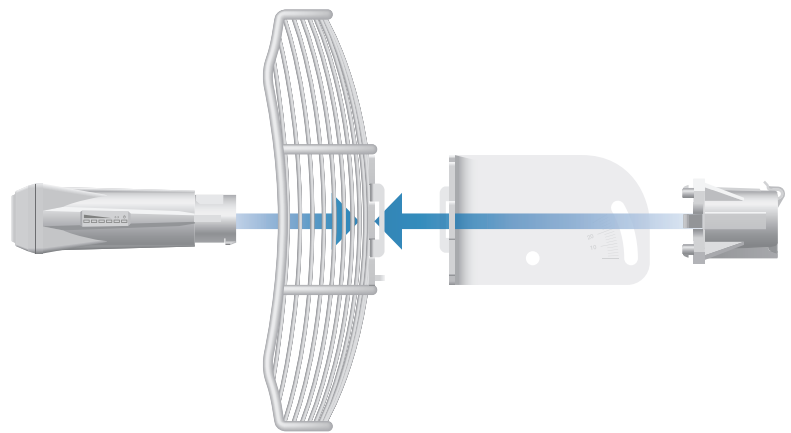
Unlike standard Wi-Fi protocol, the exclusive Ubiquiti Networks® airMAX Time Division Multiple Access (TDMA) protocol allows each client to send and receive data using pre-designated time slots managed by an intelligent AP controller. This "time slot" method eliminates hidden node collisions and maximizes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



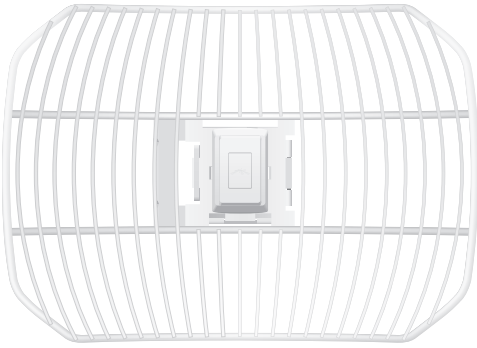
You simply snap the feed, antenna, mounting bracket and rear housing together for a secure, solid assembly.

# Models

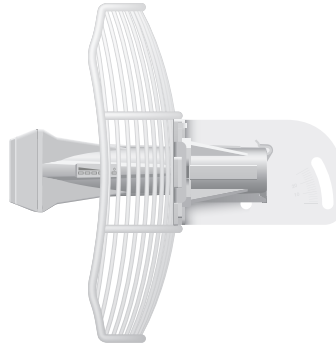
## airGrid M2 HP

Model: AG-HP-2G16

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



*Front View*

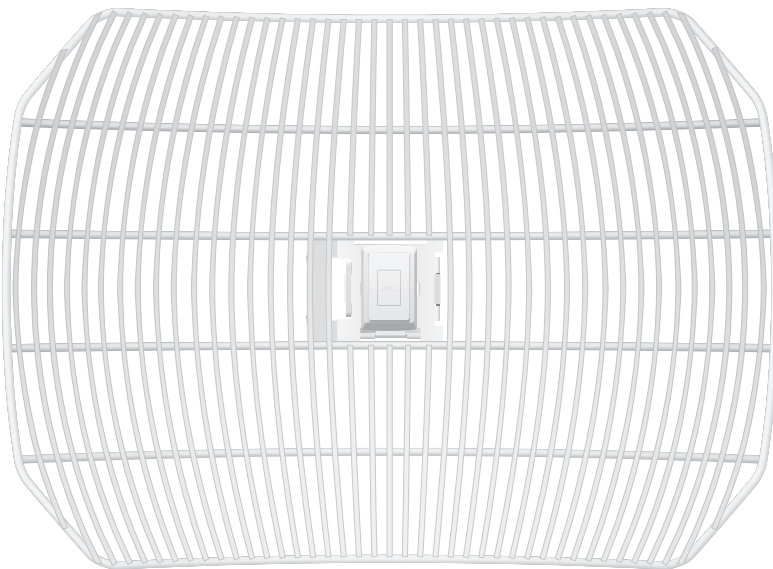


*Side View*

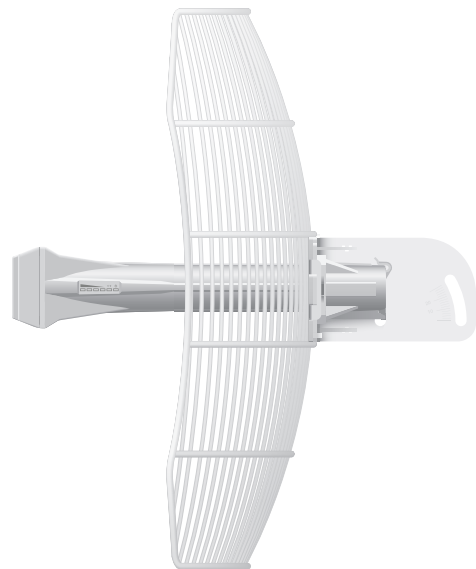
## airGrid M2 HP

Model: AG-HP-2G20

- 2412 - 2462 MHz
- 20 dBi
- Antenna Size: 620 x 460 mm



*Front View*



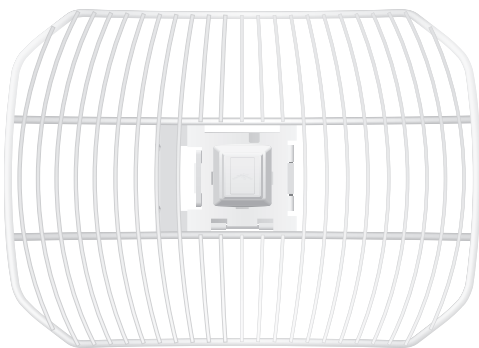
*Side View*

## Models

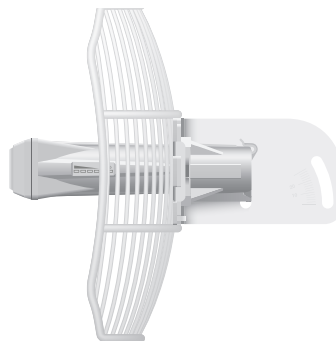
### airGrid M5 HP

Model: AG-HP-5G23

- 5725 – 5850 MHz
- 23 dBi
- Antenna Size: 370 x 270 mm



Front View

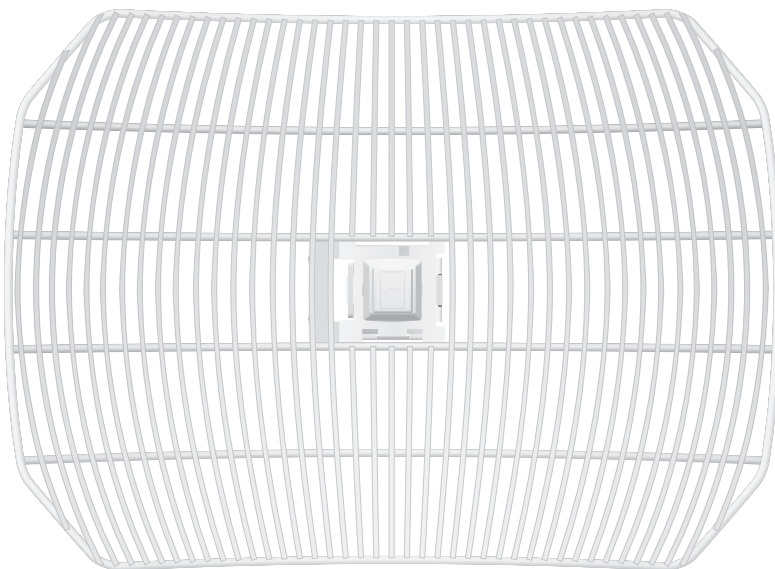


Side View

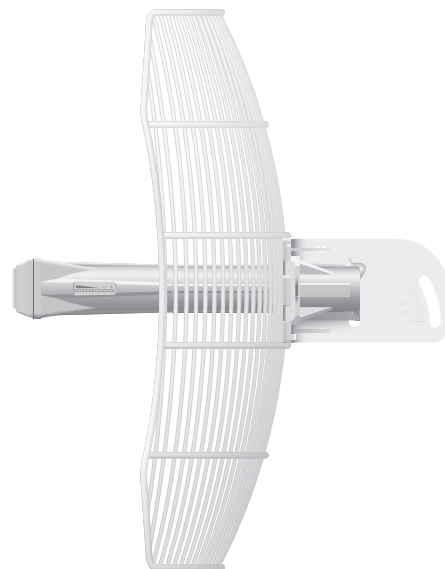
### airGrid M5 HP

Model: AG-HP-5G27

- 5725 – 5850 MHz
- 27 dBi
- Antenna Size: 620 x 460 mm



Front View



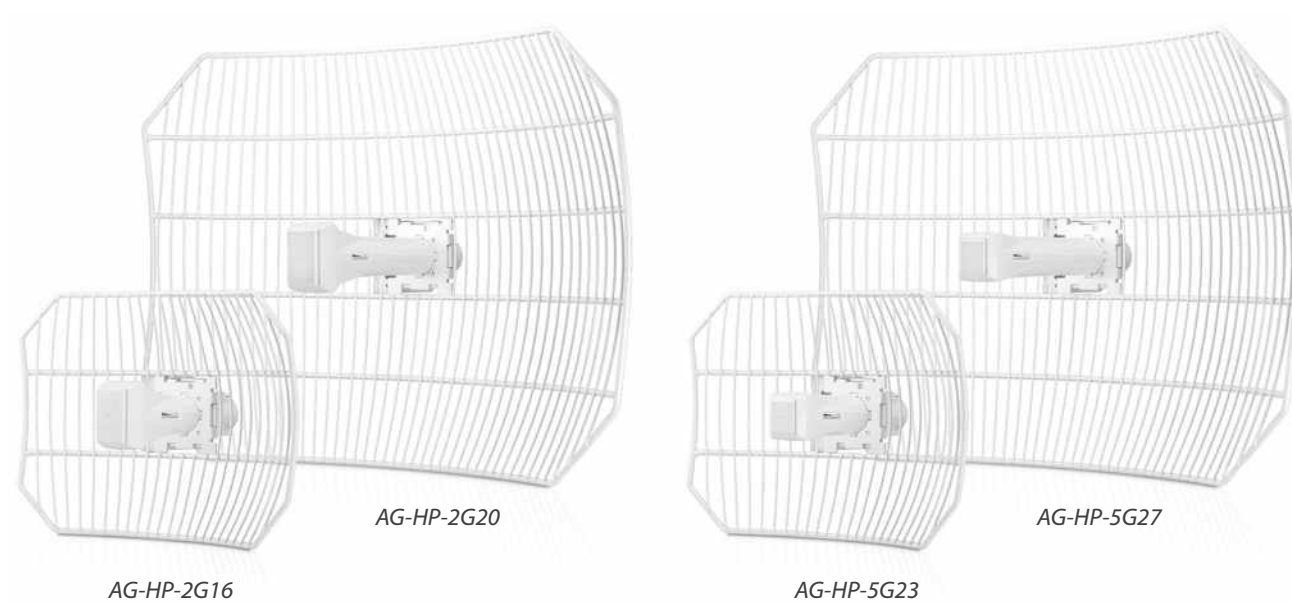
Side View

# 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                           |

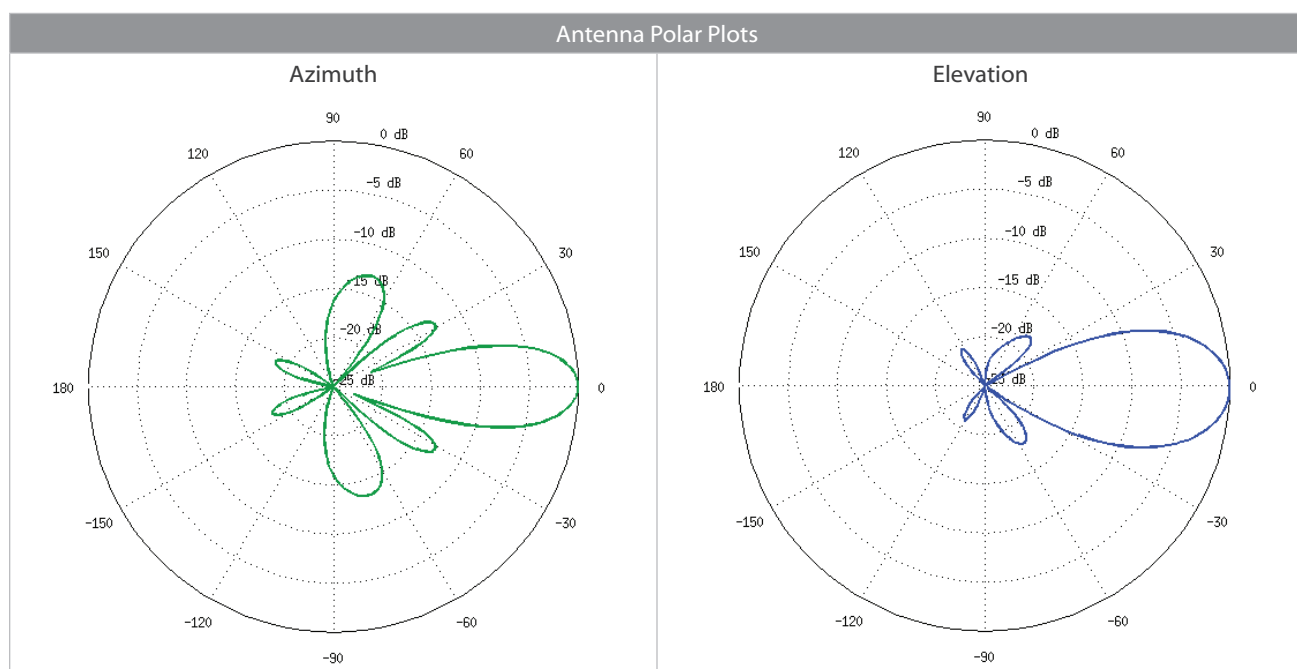
| Physical / Electrical / Environmental |                                                        |
|---------------------------------------|--------------------------------------------------------|
| Enclosure Characteristics             | Outdoor UV Stabilized Plastic                          |
| Mounting 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                                         |



# Specifications

| AG-HP-2G16                  |                                                |
|-----------------------------|------------------------------------------------|
| Dimensions (Mount Included) | 370 x 270 x 270 mm<br>(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                                         |

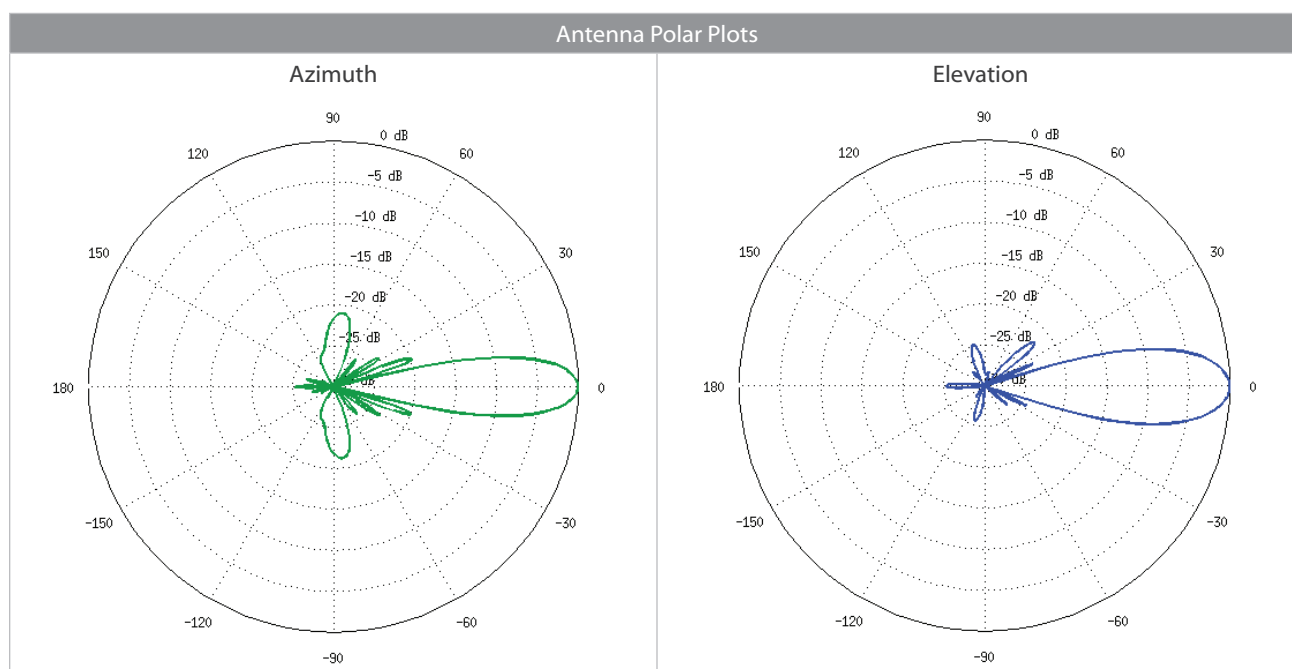
| AG-HP-2G16 Output Power: 28 dBm |             |         |           |                         |             |              |           |
|---------------------------------|-------------|---------|-----------|-------------------------|-------------|--------------|-----------|
| TX Power Specifications         |             |         |           | 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    |



# Specifications

| AG-HP-2G20                  |                                                |
|-----------------------------|------------------------------------------------|
| Dimensions (Mount Included) | 620 x 460 x 390 mm<br>(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                                         |

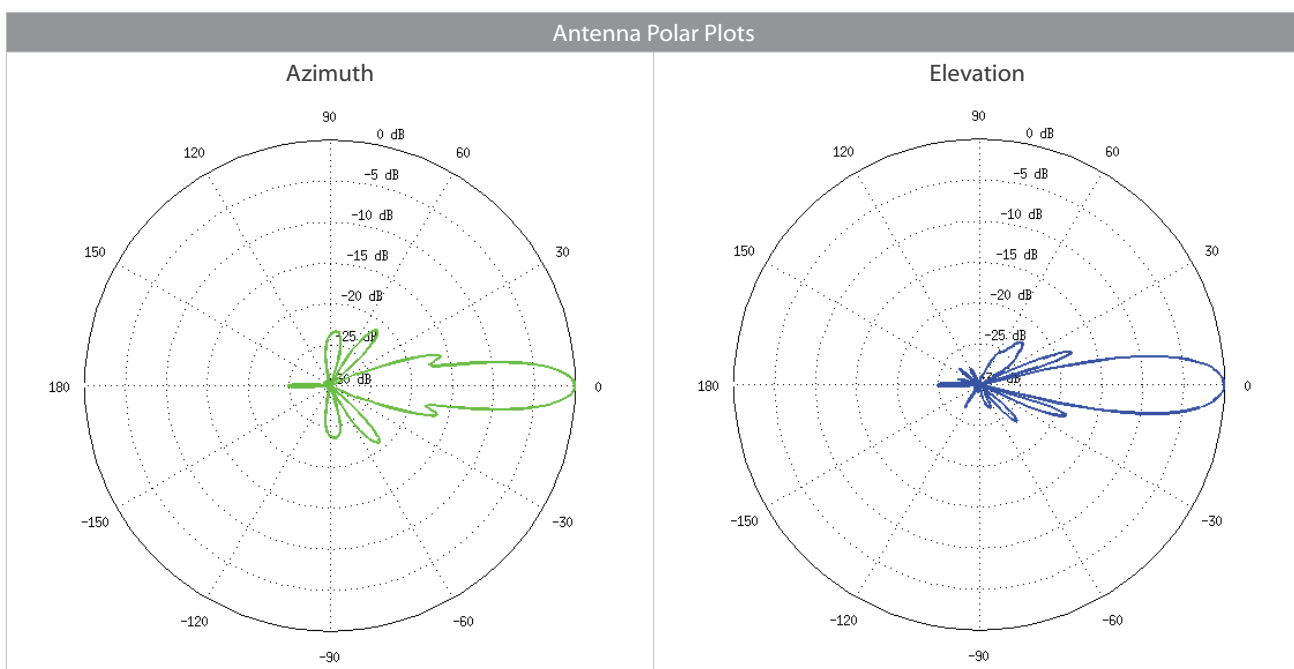
| AG-HP-2G20 Output Power: 28 dBm |             |         |           |                         |             |              |           |
|---------------------------------|-------------|---------|-----------|-------------------------|-------------|--------------|-----------|
| TX Power Specifications         |             |         |           | 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    |



# Specifications

| AG-HP-5G23                  |                                                |
|-----------------------------|------------------------------------------------|
| Dimensions (Mount Included) | 370 x 270 x 260 mm<br>(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         | 5725 - 5850 MHz                                |
| Max. VSWR                   | 1.5:1                                          |
| Gain                        | 23 dBi                                         |

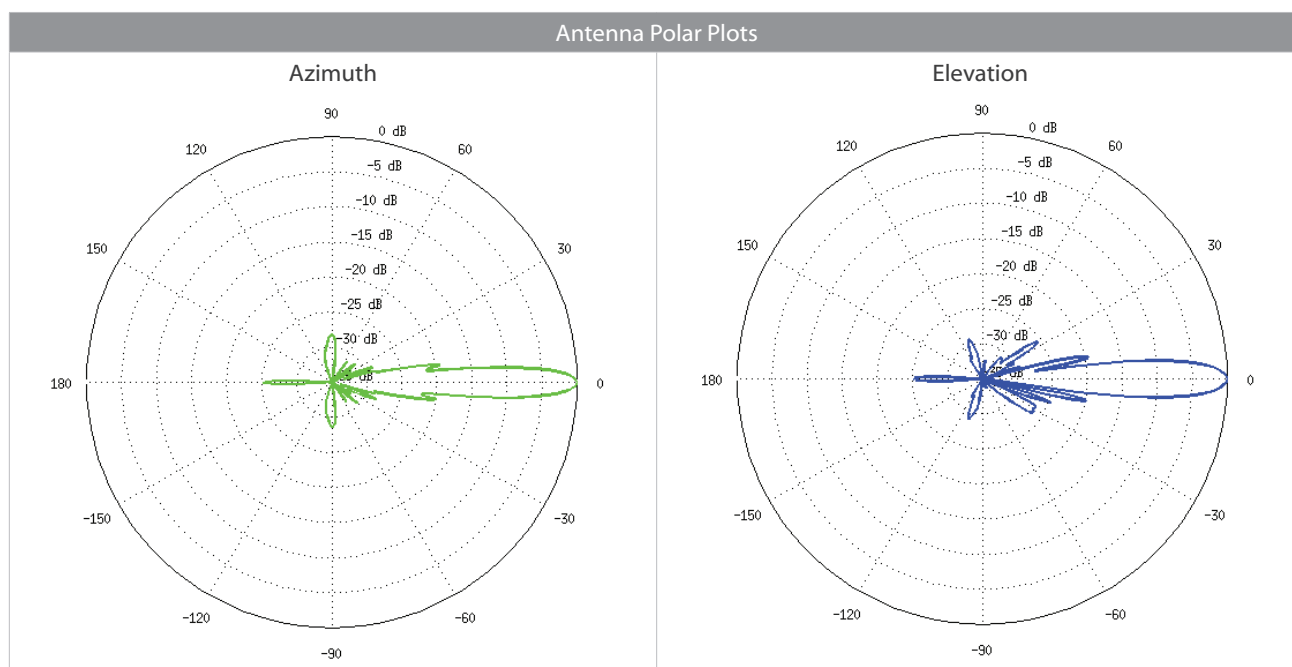
| AG-HP-5G23 Output Power: 25 dBm |             |         |           |                         |             |              |           |
|---------------------------------|-------------|---------|-----------|-------------------------|-------------|--------------|-----------|
| TX Power Specifications         |             |         |           | RX Power Specifications |             |              |           |
| Modulation                      | Data Rate   | Avg. TX | Tolerance | Modulation              | Data Rate   | Sensitivity  | Tolerance |
| <b>11a</b>                      | 1 - 24 Mbps | 25 dBm  | ± 2 dB    | <b>11a</b>              | 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    |
| <b>11n / airMAX</b>             | MCS0        | 25 dBm  | ± 2 dB    | <b>11n / airMAX</b>     | 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    |



# Specifications

| AG-HP-5G27                  |                                                |
|-----------------------------|------------------------------------------------|
| Dimensions (Mount Included) | 620 x 460 x 360 mm<br>(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         | 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    |



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