airGrid 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



DATASHEET

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 to create a reliable connection.

airGrid M as a powerful wireless client.

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

- 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

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-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
	1 - 24 Mbps	28 dBm	± 2 dB		1 - 24 Mbps	-97 dBm min.	± 2 dB
119	36 Mbps	26 dBm	± 2 dB	<u>6</u>	36 Mbps	-80 dBm	$\pm 2 \text{ dB}$
-	48 Mbps	25 dBm	± 2 dB	11	48 Mbps	-77 dbm	± 2 dB
	54 Mbps	24 dBm	± 2 dB		54 Mbps	-75 dBm	$\pm 2 \text{ dB}$
	MCS0	28 dBm	± 2 dB	11n / airMAX	MCS0	-96 dBm	± 2 dB
	MCS1	28 dBm	± 2 dB		MCS1	-95 dBm	± 2 dB
AX	MCS2	28 dBm	± 2 dB		MCS2	-92 dBm	± 2 dB
11n / airMAX	MCS3	28 dBm	± 2 dB		MCS3	-90 dBm	± 2 dB
a/r	MCS4	27 dBm	± 2 dB		MCS4	-86 dBm	± 2 dB
111	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



	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
	1 - 24 Mbps	28 dBm	± 2 dB		1 - 24 Mbps	-97 dBm min.	$\pm 2 dB$
119	36 Mbps	26 dBm	± 2 dB	119	36 Mbps	-80 dBm	$\pm 2 \text{ dB}$
~	48 Mbps	25 dBm	± 2 dB	-	48 Mbps	-77 dbm	± 2 dB
	54 Mbps	24 dBm	± 2 dB		54 Mbps	-75 dBm	$\pm 2 \text{ dB}$
	MCS0	28 dBm	± 2 dB	AX	MCS0	-96 dBm	± 2 dB
	MCS1	28 dBm	± 2 dB		MCS1	-95 dBm	± 2 dB
AX	MCS2	28 dBm	± 2 dB		MCS2	-92 dBm	± 2 dB
irM	MCS3	28 dBm	± 2 dB	irM	MCS3	-90 dBm	± 2 dB
11n / airMAX	MCS4	27 dBm	± 2 dB	11n/airMAX	MCS4	-86 dBm	± 2 dB
111	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



	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
	1 - 24 Mbps	25 dBm	± 2 dB		1 - 24 Mbps	-97 dBm min.	± 2 dB
11 a	36 Mbps	24 dBm	± 2 dB	a	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
	MCS0	25 dBm	± 2 dB	11n/airMAX	MCS0	-97 dBm	± 2 dB
	MCS1	25 dBm	± 2 dB		MCS1	-96 dBm	± 2 dB
AX	MCS2	25 dBm	± 2 dB		MCS2	-93 dBm	± 2 dB
irM	MCS3	24 dBm	± 2 dB		MCS3	-91 dBm	± 2 dB
11n/airMAX	MCS4	23 dBm	± 2 dB	a/r	MCS4	-87 dBm	± 2 dB
111	MCS5	22 dBm	± 2 dB	111	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



Datasheet

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
	1 - 24 Mbps	25 dBm	± 2 dB		1 - 24 Mbps	-97 dBm min.	± 2 dB
11a	36 Mbps	24 dBm	± 2 dB	a	36 Mbps	-90 dBm	± 2 dB
-	48 Mbps	22 dBm	± 2 dB	1	48 Mbps	-86 dBm	± 2 dB
	54 Mbps	21 dBm	± 2 dB		54 Mbps	-84 dBm	± 2 dB
	MCS0	25 dBm	± 2 dB		MCS0	-97 dBm	± 2 dB
	MCS1	25 dBm	± 2 dB		MCS1	-96 dBm	± 2 dB
AX	MCS2	25 dBm	± 2 dB	AX	MCS2	-93 dBm	± 2 dB
irM	MCS3	24 dBm	± 2 dB	irM	MCS3	-91 dBm	± 2 dB
11n/airMAX	MCS4	23 dBm	± 2 dB	11n/airMAX	MCS4	-87 dBm	± 2 dB
111	MCS5	22 dBm	± 2 dB	11r	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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