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5 GHz airMAX[®] AC AP

Models: LAP-120, LAP-GPS

High-Performance Sector AP

Up To 450+ Mbps Real TCP/IP Throughput

Lightweight, Low-Cost Solution



Application Examples



Introducing the airMAX[®] LiteAP[™] AC, the latest high-performance access point with disruptive pricing from Ubiquiti Networks. Featuring an ultra-lightweight form factor, the LiteAP AC was designed to be an affordable cost/performance solution for long-distance, wireless broadband bridging. Each of these models operates in the worldwide, license-free 5 GHz frequency range with high-performance speeds.

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



In a cost-effective WISP deployment, the LAP-GPS is used as an Access Point in an airMAX ac Point-to-MultiPoint network.

Software airOS[°]8

airOS[®] v8 is the revolutionary operating system for Ubiquiti[®] airMAX ac products.

Powerful Wireless Features

- Access Point PtMP airMAX Mixed Mode
- airMAX ac Protocol Support
- Long-Range Point-to-Point (PtP) Link Mode
- Selectable Channel Width
 - PtP: 10/20/30/40/50/60/80 MHz
 - PtMP: 10/20/30/40 MHz
- Automatic Channel Selection
- Transmit Power Control: Automatic/Manual
- Automatic Distance Selection (ACK Timing)
- Strongest WPA2 Security

Usability Enhancements

- airMagic[®] Channel Selection Tool
- Redesigned User Interface
- Dynamic Configuration Changes
- Instant Input Validation
- HTML5 Technology
- Optimization for Mobile Devices
- Detailed Device Statistics
- Comprehensive Array of Diagnostic Tools, including RF Diagnostics and airView[®] Spectrum Analyzer



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Hardware Overview

The LiteAP AC delivers up to 450+ Mbps real TCP/IP throughput and features an efficient form factor.

Quick Installation Minimal fasteners simplify installation. No tools are needed; only a single wrench is required for pole-mounting.

Versatile Mounting The ball-joint mount of the LiteAP AC provides adjustment flexibility for versatile mounting options.

Efficient Design The LiteAP AC features a lightweight antenna with an integrated radio in a sleek design.

Gigabit Ethernet The LiteAP AC delivers high throughput over its wired connection.





LAP-120 mounted on a pole

GPS Sync Support

Precise GPS frame synchronization enables co-located LAP-GPS devices to transmit and receive data without interfering with each other, allowing for better frequency reuse and increased network stability.

Two LAP-GPS devices transmitting simultaneously

Mobile App Support

The LAP-GPS integrates a separate Wi-Fi radio for fast and easy setup using your mobile device.

Accessing airOS via Wi-Fi

The Ubiquiti Network Management System (UNMS[™]) app* provides instant accessibility to the airOS configuration interface and can be downloaded from the App Store[®] (iOS) or Google Play[™] (Android[™]). UNMS allows you to set up, configure, and manage your device, and offers various configuration options once you're connected or logged in.

* UNMS app support for the LAP-120 requires the U-Installer, sold separately.



LiteAP^{ac}

	LAP-120
Dimensions (Mount Not Included)	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)
Networking Interface	(1) 10/100/1000 Ethernet Port
Memory	64 MB
Max. Power Consumption	7W
Max. TX Power	25 dBm
Antenna Gain	16 dBi
Power Supply	24V, 0.5A Gigabit PoE Adapter (Included)
Power Method	Passive PoE (Pairs 4, 5+; 7, 8 Return)
Processor Specs	Atheros MIPS 74Kc, 533 MHz
Shock and Vibration	ETSI300-019-1.4
ETSI Specification	EN 302 326 DN2
ESD/EMP Protection	± 24 kV Contact / Air
RoHS Compliance	Yes
Operating Temperature	-40 to 70° C (-40 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	FCC, IC, CE

Output Power: 25 dBm							
	TX Power Speci	fications		RX Power Specifications			
Modulation	Data Rate	Avg. TX	Tolerance	Modulation	Data Rate	Sensitivity	Tolerance
	1x BPSK (1/2)	25 dBm	±2 dB	airMAX ac	1x BPSK (1/2)	-96 dBm	±2 dB
	2x QPSK (1/2)	25 dBm	±2dB		2x QPSK (1/2)	-95 dBm	±2dB
	2x QPSK (¾)	25 dBm	±2dB		2x QPSK (¾)	-92 dBm	±2dB
ac	4x 16QAM (1/2)	25 dBm	±2 dB		4x 16QAM (1/2)	-90 dBm	±2 dB
	4x 16QAM (¾)	25 dBm	±2 dB		4x 16QAM (¾)	-86 dBm	±2 dB
airMAX	6x 64QAM (⅔)	25 dBm	±2dB		6x 64QAM (⅔)	-83 dBm	±2 dB
	6x 64QAM (¾)	24 dBm	±2dB		6x 64QAM (¾)	-77 dBm	±2dB
	6x 64QAM (5%)	23 dBm	±2 dB		6x 64QAM (5%)	-74 dBm	±2 dB
	8x 256QAM (¾)	21 dBm	±2 dB		8x 256QAM (¾)	-69 dBm	± 2 dB
	8x 256QAM (%)	21 dBm	±2dB		8x 256QAM (%)	-65 dBm	±2 dB

Operating Frequency (MHz)				
Worldwide	5150 - 5875			
USA	5150 - 5850			









-90

Vertical Elevation

90

120

0 dB

-5 dB

-10 dB

-15 dB -20 dB

15 00

60

30

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LiteAP[®]GPS

	LAP-GPS
Dimensions (Mount Not Included)	360.98 x 124.57 x 71.28 mm (14.21 x 4.90 x 2.81")
Weight (No Mount)	752 g (1.66 lb)
Mounting Kit	Pole Mounting Kit (Included)
Networking Interface	(1) 10/100/1000 Ethernet Port
Memory	DDR2 64 MB
Max. Power Consumption	7.1W
Max. TX Power	25 dBm
Antenna Gain	17 dBi
Power Supply	24V, 0.3A PoE Adapter (Included)
Power Method	Passive PoE (Pairs 4, 5+; 7, 8 Return)
Processor Specs	Atheros MIPS 74Kc, 533 MHz
Shock and Vibration	ETSI300-019-1.4
ETSI Specification	EN 302 326 DN2
ESD/EMP Protection	± 24 kV Contact / Air
RoHS Compliance	Yes
Operating Temperature	-40 to 70° C (-40 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	FCC, IC, CE

Output Power: 25 dBm							
	TX Power Specifications			RX Power Specifications			
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	1x BPSK (1/2)	25 dBm	± 2 dB	airMAX ac	1x BPSK (1/2)	-96 dBm	± 2 dB
ac	2x QPSK (1/2)	25 dBm	± 2 dB		2x QPSK (1/2)	-95 dBm	± 2 dB
	2x QPSK (¾)	25 dBm	± 2 dB		2x QPSK (¾)	-92 dBm	± 2 dB
	4x 16QAM (½)	25 dBm	± 2 dB		4x 16QAM (1/2)	-90 dBm	± 2 dB
	4x 16QAM (¾)	25 dBm	$\pm 2 dB$		4x 16QAM (¾)	-86 dBm	$\pm 2 \text{ dB}$
airMAX	6x 64QAM (⅔)	25 dBm	± 2 dB		6x 64QAM (⅔)	-83 dBm	± 2 dB
a:	6x 64QAM (¾)	24 dBm	± 2 dB		6x 64QAM (¾)	-77 dBm	± 2 dB
	6x 64QAM (5%)	23 dBm	± 2 dB		6x 64QAM (%)	-74 dBm	± 2 dB
	8x 256QAM (¾)	21 dBm	± 2 dB		8x 256QAM (¾)	-69 dBm	± 2 dB
	8x 256QAM (%)	21 dBm	± 2 dB		8x 256QAM (%)	-65 dBm	± 2 dB

Operating Frequency (MHz)				
Worldwide		5150 - 5875		
USA	U-NII-1 5150 - 5250	U-NII-3 5725 - 5850		

	Management Radio (MHz)
Worldwide	2412 - 2472
USA	2412 - 2462

Datasheet

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Vertical Azimuth Vertical Elevation 90° 0dB 120° 60° 120° -5dB -10dB 150° 30° 150° -15dB 20dB -25dB 30dB 180° 0° 180° -30° -150 -150 -120 -60° -120° -90° Horizontal Azimuth Horizontal Elevation 90° 0dB 120° 60° 120° -5dB -10dB 150° 30° 150° -15dB -20dB -25dB 30dB 180° 0° 180° -30° -150

-60°

-120

-90°

90° 0dB 60° -5dB -10dB 30° -15dB -20dB -250B 30dB 0° -30° -150 -60° -120 -90°

-90°

90°

0dB

-5dB

-10dB

-15dB

-20dB

-25dB

30dB

60°

-60°

30°

-30°

0°

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