UniFi® AC MESH

802.11AC AP with Plug & Play Mesh

Models: UAP-AC-M, UAP-AC-M-PRO

High-Performance Wide-Area Wi-Fi with UniFi® Mesh Technology

Breakthrough Speeds up to 1300 Mbps in the 5 GHz Band

802.3af PoE Compatibility

UBIQUITI
NETWORKS

UniFi ®

Scalable Enterprise Wi-Fi Management

UniFi® is the revolutionary Wi-Fi system that combines enterprise performance, unlimited scalability, and a central management controller. The UniFi AC Mesh APs have a refined industrial design and can be easily installed using the included mounting hardware.

Easily accessible through any standard web browser and the UniFi mobile app (iOS or Android), the UniFi Controller software is a powerful software engine ideal for high-density client deployments requiring low latency and high uptime performance.

Use the UniFi Controller software to quickly configure and administer an enterprise Wi-Fi network – no special training required. RF map and performance features, real-time status, automatic UAP device detection, and advanced security options are all seamlessly integrated.

Features

Save Money and Save Time UniFi comes bundled with a non-dedicated software controller that can be deployed on an on-site PC, Mac, or Linux machine; in a private cloud; or using a public cloud service. You also have the option of using the UniFi Cloud Key with built-in software.

Powerful Hardware The UniFi AC Mesh APs feature Wi-Fi 802.11AC with Plug & Play Mesh technology.

Intuitive UniFi Controller Software Configure and manage your APs with the easy-to-learn user interface.

Expandable Unlimited scalability: build wireless networks as big or small as needed. Start with one and expand to thousands while maintaining a single unified management system.

Extend Your Coverage

With the UniFi Controller software running in a NOC or in the cloud, administrators can manage multiple sites: multiple distributed deployments and multi-tenancy for managed service providers. Below are some deployment examples.

Corporate Buildings

University/Industrial Campus

Internet Cafe

Dorm or Residence

Hotel
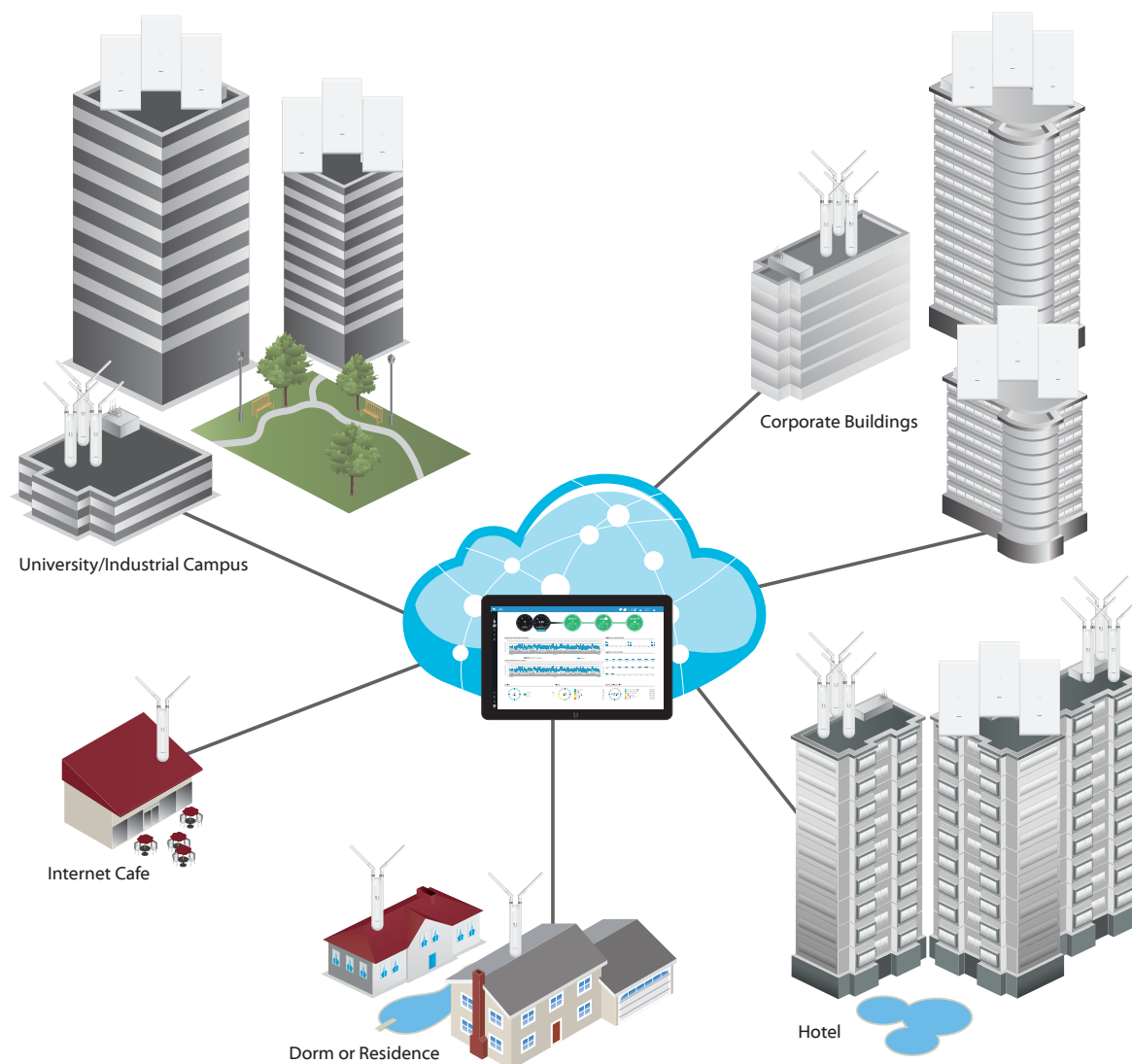
UniFi Controller

Packed with Features

Use the UniFi Controller to provision thousands of UniFi APs, map out networks, quickly manage system traffic, and provision additional UniFi APs.

Breakthrough RF Map

Use the RF map to monitor and analyze radio frequencies for optimal AP placement, configuration, and troubleshooting.

Powerful RF Performance Features

Advanced RF performance and configuration features include spectral analysis, airtime fairness, and band steering.

Detailed Analytics

Use the configurable reporting and analytics to manage large user populations and expedite troubleshooting.

Wireless Uplink

Wireless Uplink functionality enables wireless connectivity between APs for extended range. One wired UniFi AP uplink supports up to four wireless downlinks on a single operating band, allowing wireless adoption of devices in their default state and real-time changes to network topology.

For devices that support Plug & Play Mesh, this functionality is extended to allow multi-hop wireless uplink – so wirelessly uplinked APs can support uplink to other wirelessly uplinked APs.

Guest Portal/Hotspot Support

Easy customization options for Guest Portals include authentication, Hotspot setup, and the ability to use your own external portal server. Use UniFi's rate limiting for your Guest Portal/Hotspot package offerings. Apply different bandwidth rates (download/upload), limit total data usage, and limit duration of use.

All UniFi APs include Hotspot functionality:

- Built-in support for billing integration using major credit cards.
- Built-in support for voucher-based authentication.
- Built-in Hotspot Manager for voucher creation, guest management, and payment refunds.
- Full customization and branding of Hotspot portal pages.

Multi-Site Management

A single cloud-based UniFi Controller can manage multiple sites: multiple, distributed deployments and multi-tenancy for managed service providers. Each site is logically separated and has its own configuration, maps, statistics, guest portal, and admin read/write and read-only accounts.
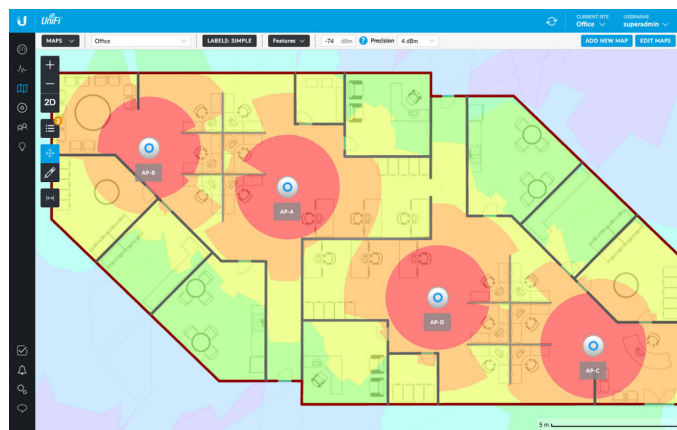
WLAN Groups

Manage flexible configurations of large deployments. Create multiple WLAN groups and assign them to an AP's radio.
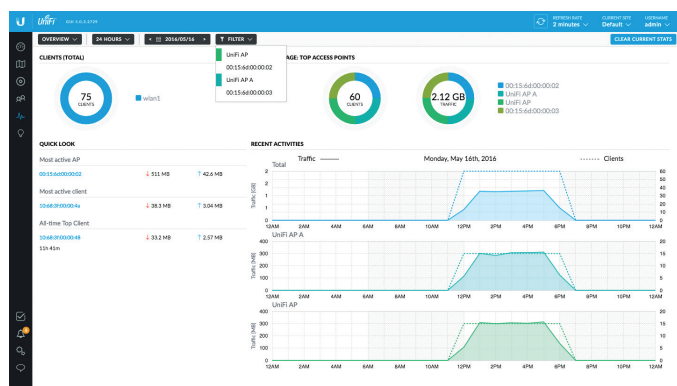

Dashboard

UniFi provides a visual representation of your network's status and delivers basic information about each network segment.

RF Map

Monitor UniFi APs and analyze the surrounding RF environment.

Statistics

UniFi visualizes network traffic in clear and easy-to-read graphs.

UniFi Mobile App

Manage your UniFi devices from your smartphone or tablet.

Model Comparison

	UAP-AC-M	UAP-AC-M-PRO
Environment	Indoor/Outdoor	Outdoor
Simultaneous Dual-Band	✓	✓
2.4 GHz Radio Rate	300 Mbps	450 Mbps
2.4 GHz MIMO	2x2	3 x 3
5 GHz Radio Rate	867 Mbps	1300 Mbps
5 GHz MIMO	2x2	3 x 3
Secondary Ethernet Port		✓
PoE Mode	24V Passive PoE 802.3af PoE: Alternative A	802.3af PoE
Wall Mount	✓	✓
Pole Mount	✓	✓
Fast Mount	✓	

Use Cases

Mesh Multi-Hop A large outdoor area, such as a park with minimal infrastructure, can take advantage of a mesh network comprised of the UniFi AC Mesh models.

Omnidirectional Coverage, Indoors or Outdoors The UAP-AC-M includes adjustable dual-band omni antennas.

You have the option to use a 5 GHz omni antenna[1] for spot-beam coverage in high-density locations with numerous APs and clients, like a conference hall or event center.

Directional Coverage, Outdoors The UAP-AC-M is versatile.

You have the option to use a 5 GHz sector antenna[2] (wide beam in the azimuth plane and narrow in the elevation plane) for broad outdoor coverage.

Maximum Coverage, Outdoors The UAP-AC-M-PRO is ideal for applications requiring 3x3 MIMO data rates for close-in omni coverage.

Temporary Installations Deploy the UniFi AC Mesh models for outdoor installations requiring quick setup and takedown, such as a street fair, music festival, or concert venue.

[1] Different antenna gains are allowed for each regulatory domain or country. It is the installer's responsibility to check local regulations.

Application Example

Both UniFi AC Mesh models provide wireless coverage for a street fair in a city plaza.

Hardware Overview

Model: UAP-AC-M

The UAP-AC-M provides simultaneous, dual-band, 2x2 MIMO technology and is available in single- and five-packs[1].

Compact Form Factor The UAP-AC-M discreetly integrates into any environment.

Weather-Resistant Enclosure The UAP-AC-M can be used indoors or outdoors.

Versatile Mounting The UAP-AC-M can be mounted on a wall, pole, or fast-mount of an optional Ubiquiti® high-gain antenna[2]. (All accessories are included.)

Multiple Power Options The UAP-AC-M is compatible with 802.3af PoE Alternative A and 24V passive PoE. You can power it with the included Gigabit PoE adapter[1] or an 802.3af Alternative A compatible switch, such as the UniFi PoE Switch or EdgePoint™ EP-R6.

Antenna Options Use the included omni antennas, or use the included fast-mount adapter to install the AP on an optional connectorized antenna[2] for expanded range coverage and customized pattern shaping.

[1] Five-packs do not ship with PoE adapters; we recommend powering the UniFi APs with the UniFi PoE Switch instead.

[2] Different antenna gains are allowed for each regulatory domain or country. It is the installer's responsibility to check local regulations.

Application Example
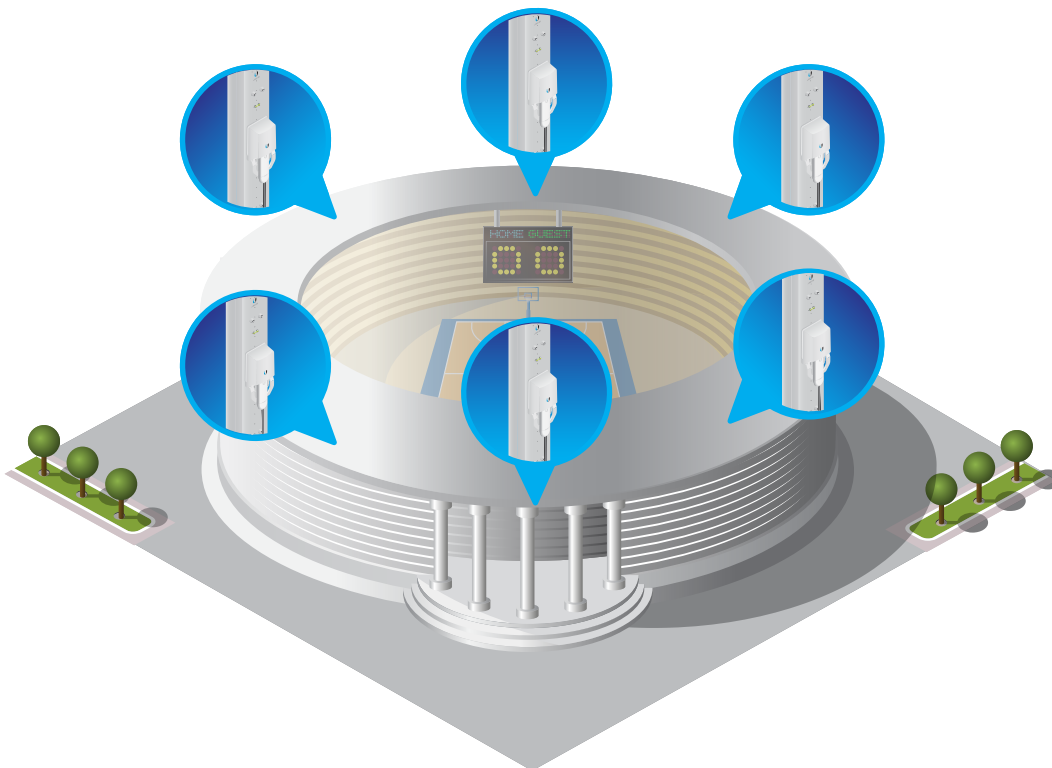
The UAP-AC-M utilizes the same antenna connector technology as airMAX® antennas.[2]

Hardware Overview

Model: UAP-AC-M-PRO

The UAP-AC-M-PRO provides simultaneous, dual-band, 3x3 MIMO technology and is available in single- and five-packs*.

Weather-Resistant Form Factor The enclosure of the UAP-AC-M-PRO is designed to withstand the elements, making it ideal for outdoor deployment.

Powerful Coverage Built-in dual-band omnidirectional antennas deliver expanded range coverage outdoors.

Mounting Flexibility The UAP-AC-M-PRO can be mounted on a wall or pole. (All accessories are included.)

Dual Gigabit Ethernet Ports The primary port is for data and PoE; the secondary port is for bridging.

Multiple Power Options You can power the UAP-AC-M-PRO with an 802.3af compatible switch, UniFi PoE Switch, or the included Gigabit PoE adapter*.

* Five-packs do not ship with PoE adapters; we recommend powering the UniFi APs with the UniFi PoE Switch instead.

Application Example

The UniFi AC M Pro APs cover the quad and park on a university campus.

UAP-AC-M Specifications

UAP-AC-M	
Dimensions	353 x 46 x 34.4 mm (13.9 x 1.81 x 1.35")
Weight	152 g (5.36 oz) with Antennas
Networking Interface	(1) 10/100/1000 Ethernet Port
Buttons	Reset
Power Method	24V Passive PoE (Pairs 4, 5+; 7, 8 Return); 802.3af Alternative A (Pairs 1, 2+; 3, 6 Return) (Supported Voltage Range: 44 to 57VDC)
Power Supply	24V, 0.5A Gigabit PoE Adapter*
Power Save	Supported
Maximum Power Consumption	8.5W

Maximum TX Power
  2.4 GHz
  5 GHz
	
	20 dBm
	20 dBm

Antennas
  2.4 GHz
  5 GHz
	(2) External Dual-Band Omni Antennas
	3 dBi
	4 dBi

Wi-Fi Standards	802.11 a/b/g/n/r/k/v/ac
Wireless Security	WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES)
BSSID	Up to 8 per Radio
Mounting	Wall/Pole/Fast-Mount (Kits Included)
Operating Temperature	-30 to 70° C (-22 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC

* Only the single-pack of the UAP-AC-M includes a PoE adapter.

Advanced Traffic Management	
VLAN	802.1Q
Advanced QoS	Per-User Rate Limiting
Guest Traffic Isolation	Supported
WMM	Voice, Video, Best Effort, and Background
Concurrent Clients	250+

Supported Data Rates (Mbps)	
Standard	Data Rates
802.11ac	6.5 Mbps to 867 Mbps (MCS0 - MCS9 NSS1/2, VHT 20/40/80)
802.11n	6.5 Mbps to 300 Mbps (MCS0 - MCS15, HT 20/40)
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11b	1, 2, 5.5, 11 Mbps

UAP-AC-M-PRO Specifications

UAP-AC-M-PRO	
Dimensions	343.2 x 181.2 x 60.2 mm (13.51 x 7.13 x 2.37")
Weight	633 g (1.40 lb)
Networking Interface	(2) 10/100/1000 Ethernet Ports
Buttons	Reset
Power Method	802.3af PoE (Supported Voltage Range: 44 to 57VDC)
Power Supply	48V, 0.5A PoE Gigabit Adapter*
Power Save	Supported
Maximum Power Consumption	9W

Maximum TX Power
  2.4 GHz
  5 GHz
	
	22 dBm
	22 dBm

Antennas	(3) Internal Dual-Band Antennas 8 dBi
Wi-Fi Standards	802.11 a/b/g/n/r/k/v/ac
Wireless Security	WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES)
BSSID	Up to 8 per Radio
Mounting	Wall/Pole (Pole Kit Included)
Operating Temperature	-40 to 70° C (-40 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC

*   Only the single-pack of the UAP-AC-M-PRO includes a PoE adapter.

Advanced Traffic Management	
VLAN	802.1Q
Advanced QoS	Per-User Rate Limiting
Guest Traffic Isolation	Supported
WMM	Voice, Video, Best Effort, and Background
Concurrent Clients	250+

Supported Data Rates (Mbps)	
Standard	Data Rates
802.11ac	6.5 Mbps to 1300 Mbps (MCS0 - MCS9 NSS1/2/3, VHT 20/40/80)
802.11n	6.5 Mbps to 450 Mbps (MCS0 - MCS23, HT 20/40)
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11b	1, 2, 5.5, 11 Mbps

UniFi Switch Compatibility

The UniFi switches are compatible with UniFi Access Points and UniFi G3 Video Cameras, as detailed below.

AP/Camera Model	US-8	US-8-60W	US-8-150W	US-16-150W	US-24-250W	US-24-500W	US-48-500W	US-48-750W
UVC-G3			✓	✓	✓	✓	✓	✓
UVC-G3-AF	✓	✓	✓	✓	✓	✓	✓	✓
UVC-G3-DOME	✓	✓	✓	✓	✓	✓	✓	✓
UAP			✓	✓	✓	✓	✓	✓
UAP-LR			✓	✓	✓	✓	✓	✓
UAP-PRO	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-LITE	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-LR	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-PRO	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-M	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-M-PRO	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-IW*	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-IW-PRO*	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-HD	–	–	✓	✓	✓	✓	✓	✓

✓   Compatible with the UniFi switch

     Requires an Instant 802.3af Gigabit PoE Converter: INS-3AF-I-G or INS-3AF-O-G

Note:

* For the UAP-AC-IW and UAP-AC-IW-PRO, PoE passthrough is supported by all of the switches listed above except for models US-8 and US-8-60W.

Related Product Datasheets

UniFi Switch 8, UniFi Switch 8-60W:

dl.ubnt.com/datasheets/unifi/UniFi_Switch_8_DS.pdf

UniFi PoE Switches:

dl.ubnt.com/datasheets/unifi/UniFi_PoE_Switch.pdf

www.ubnt.com

UniFi AC MESH

AJL011719

Date: May 16, 2019

1. MTBF Reliability Prediction

MTBF (mean time between failures) is calculated for the following Ubiquiti products based on Telcordia Issue 3 model using Windchill Quality Solution 10.2 software. MTBF predictions are estimates of the service life of the products and are subject to the limitations of the testing methodology.

1.1 Products

This information applies to the following Ubiquiti products:

Model Name	Description
UAP-AC-PRO	UniFi Access Point AC Pro
UAP-AC-LR	UniFi Access Point AC LR
UAP-AC-M	UniFi Access Point AC Mesh
UAP-AC-M-PRO	UniFi Access Point AC Mesh Pro

1.2 Calculations

Model Name	Temperature (°C)	MTBF (Hours)
UAP-AC-PRO	25°C	5,747,106
	60°C	1,806,394

Model Name	Temperature (°C)	MTBF (Hours)
UAP-AC-LR	25°C	7,298,732
	60°C	2,057,372

Model Name	Temperature (°C)	MTBF (Hours)
UAP-AC-M	25°C	7,344,545
	60°C	2,018,888

Model Name	Temperature (°C)	MTBF (Hours)
UAP-AC-M-PRO	25°C	6,406,924
	60°C	2,000,379

2. Support

The products listed above will receive Ubiquiti standard support for five years from the date of this letter and all sales of the products are subject to a limited warranty available at https://www.ui.com/support/warranty/ and strict adherence to the Compliance Policy attached hereto as Exhibit A.

Exhibit A

Compliance Policy

<u>Export Compliance</u>

The U.S. Government administers and enforces certain laws and regulations that cover the sale and shipment of our products to foreign countries. The key laws and regulations are:

- The Export Administration Regulations (the "**EAR**"), administered by the Bureau of Industry and Security ("**BIS**"), apply to the sale, shipment and transfer of our goods and technology to foreign companies and foreign persons located both in the United States and abroad.

- The trade and economic sanctions regulations, administered by the Office of Foreign Assets Control, restrict trade, investment, and financial transactions with certain countries, organizations, and individuals.

Restrictions on Certain Countries and Certain Users

- Under these regulations, Ubiquiti products **cannot be sold, shipped, or otherwise transferred into** any destination that is subject to a U.S. government embargo and/or anti-terrorism controls, currently **Cuba, Iran, North Korea, Sudan, and Syria, and the Crimea region of Ukraine**.

- Ubiquiti products cannot be sold, shipped or otherwise transferred, directly by Ubiquiti or by any of its distributors or their customers or resellers to one of these restricted destinations.

- No Ubiquiti products can be exported to any prohibited individuals or entities listed on the relevant U.S. lists of prohibited parties.

- Ubiquiti products that are classified as 5A002 "ENC Restricted" by the BIS **cannot be exported without a license** from the BIS **to government end-users**[1] outside of the United States, Canada, Europe, Japan, and Australia. Export control classification numbers for Ubiquiti products can be found here: https://www.ubnt.com/compliance/eccn/.

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[1] Under the EAR, **a government end-user is defined as** "any foreign central, regional or local government department, agency, or other entity performing governmental functions; including governmental research institutions, governmental corporations or business units, and international governmental organizations." However, the term does not include: utilities (including telecommunications companies and Internet service providers); banks and financial institutions; transportation; broadcast or entertainment; educational organizations; civil health and medical organizations; retail or wholesale firms; and manufacturing or industrial entities.

- Any failure to abide by these regulations may result in termination of the business relationship with Ubiquiti and may subject you to criminal sanctions, civil fines and imprisonment by applicable U.S. federal agencies.

<u>FCPA Compliance</u>

- The U.S. Foreign Corrupt Practices Act (the "**FCPA**") prohibits giving anything of value, directly or indirectly, to officials of foreign governments or foreign political candidates in order to obtain or retain business. Illegal payments to government officials of any country are strictly prohibited.

- Compliance with the FCPA, as well as the U.K. Bribery Act 2010, and any other applicable antibribery or anti-corruption law are critical to Ubiquiti's reputation and success.

- Any failure to abide by these regulations will result in termination of the business relationship with Ubiquiti and may subject you to criminal sanctions, civil fines and imprisonment by the relevant agencies.

Príloha č.4 - Hotspot 2 certifikácia

Wi-Fi CERTIFIED™ Interoperability Certificate

This certificate lists the features that have successfully
completed Wi-Fi Alliance interoperability testing.
Learn more: www.wi-fi.org/certification/programs

Date of Last Certification	March 17, 2020
Company	Ubiquiti Inc.
Product	UniFi Access Point AC Mesh
Model Number	UAP-AC-M
Product Identifier(s)	
Category	Routers
Subcategory	Enterprise/Service Provider Access Point, Switch/Controller or Router
Hardware Version	Product: MP, Wi-Fi Component: U-AME-G1
Firmware Version	Product: ca-gen2-wfa.11264, Wi-Fi Component: ca-gen2-wfa.11264
Operating System	Linux
Frequency Band(s)	2.4 GHz, 5 GHz - Concurrent

Summary of Certifications

CLASSIFICATION	PROGRAM
Connectivity	Wi-Fi CERTIFIED™ a, b, g, n, ac
	WPA2™ – Enterprise, Personal
Optimization	WMM®
Access	Passpoint®

Security

WPA2™ – Enterprise, Personal
    EAP Type(s)
        Any EAP Type
Protected Management Frames

Wi-Fi CERTIFIED™ a

Wi-Fi CERTIFIED™ b

Wi-Fi CERTIFIED™ g

Wi-Fi CERTIFIED™ n

2.4 GHz, 5 GHz - Concurrent
2 Spatial Streams 2.4 GHz
2 Spatial Streams 5 GHz
Short Guard Interval
TX A-MPDU
STBC Transmit
40 MHz operation in 2.4 GHz, with coexistence mechanisms
40 MHz operation in 5 GHz

Wi-Fi CERTIFIED™ ac

2 Spatial Streams 5 GHz
Rx MCS 8-9 (256-QAM)
Tx STBC 2x1
Rx A-MPDU of A-MSDU
Low Density Parity Check coding
RTS with BW Signaling
Extended 5 GHz Channel Support

WMM®

Passpoint®

Release 2

Passpoint® (Release 2)

Online Signup (OSU) and Policy Provisioning

Spectrum and Regulatory Features

802.11d
802.11h