

To: Obion County Board Of Education
ATTN: Brad Barbour
1700 N. Fifth St.
Union City, TN 38261

VENDOR: Area Wide Communicatons, LLC / Ken-Tenn Wireless
P.O. Box 716
417 W. Reelfoot Ave
Union City TN. 38261

E-Rate SPIN: 143046551

TN State Contractors License: Area Wide Communications, LLC, ID# 00066684, exp 03/31/2017 ; CE-F, E; S-AREA
WIDE WARNING SYSTEMS; S-EQUIPMENT INSTALLATION;

Pricing Format

Site	Cost	E-RATE Eligible (Y or N)
Black Oak Elementary	\$47,436.00	Yes
Hillcrest Elementary	\$100,944.00	Yes
Obion County Central High	\$87,256.00	Yes
Lake Road Elementary	\$68,237.00	Yes
Ridgemont Elementary	\$54,670.00	Yes
South Fulton Elementary	\$42,283.00	Yes
South Fulton Middle/High	\$63,835.00	Yes
Obion County Central Office	\$12,783.00	Yes

Having carefully examined the invitation to RFP documents prepared by Obion County Board of Education entitled Network Hardware Upgrade, RFP Number TECH-1215-1, and together with such addenda, if any, as listed hereafter, the undersigned hereby proposes and agrees to provide all components as specified in the attached Proposal Schedule, these sheets being a part of the Proposal. It is agreed that the undersigned has complied with all requirements concerning Vendor Qualifications, licensing, and with all other local, state, federal laws, and that no legal requirement has been violated in making or accepting this proposal in awarding a contract to him or in the delivery of products. In submitting this proposal, it is understood that the right is reserved by the Customer to reject any or all proposals and waive all technicalities/informalities in connection therewith. It is also agreed that this proposal may not be withdrawn for a period of Ninety (90) days from the opening thereof. The undersigned declares that the person or persons signing the Proposal is/are fully authorized to sign on behalf of the firm listed and to fully bind the firm listed to all of the conditions and provisions thereof. In view of the terms of this Invitation to RFP, the undersigned proposes to furnish all items for a total sum of: **\$477,444.00**

Signature: _____

Title: IT DIRECTOR, MEMBER

Date: 12 MAR 15

RFP Response Letter

BACKGROUND:

Vendors for this project will be Area Wide Communications LLC and Ken-Tenn Wireless LLC.

Area Wide Communications, LLC is based out of Medina, TN and has been servicing Public Safety and 911 Dispatch Centers for phone, radio, and networking for over 20 years. Area Wide Communications, LLC is a Tennessee licensed contractor and is a certified Drug Free Workplace. Management and employees have numerous FCC and CompTIA certifications. All administrative and IT staff keep Criminal Justice Information System Security and Awareness Training and background checks current.

We also have multiple government customers using Ubiquiti equipment. Including Gibson county Emergency Communications District and Fayette County Sheriff's Office.

Ken-Tenn Wireless has been in the networking business for 13 years. They currently manage 67 broadcast sites across Northwest Tennessee and West Kentucky allowing over 1500 households access to high speed internet services. They have also configured, installed new networks for businesses and hotels across the state of Tennessee and Kentucky.

SCOPE OF PROJECT:

This is a response to RFP Tech-1215-1 from the Obion County Board of Education for the installation of networking switches, wireless access points and installing cabling to network devices together. Vendor has read and has an full understanding of RFP Tech-1215-1, Addendum 1 and Addendum 2.

EQUIPMENT USED

Vendor will be using Ubiquiti Wireless Access Points and Network Switches. Ubiquiti Networks is an American technology company started in 2005. Ken-Tenn Wireless has been using Ubiquiti Access Points and switches for 5 years to serve its 1500 Wireless Internet Customers and support its backbone network of 67 broadcast sites. Ken-Tenn Wireless has also installed several hotels with the Ubiquiti Unifi Access points. Some of these hotels include Hampton Inn of Union City (80 Rooms Hotel), Quality Inn of Paris (100 Room Hotel) and helped out with the initial configuration and installation at Discovery Park using the Ubiquiti Unifi Equipment. Ken-Tenn Wireless feels that the performance and management of the Ubiquiti Access Points is 2nd to none. We have listed supporting letters from several businesses that use Ubiquiti Access Points for Wireless Internet. Vendor will also be installing Eaton 5PX1000RT UPS Battery backups. The Eaton battery backup with an optional network card can be remotely monitored online and will email alerts.

SUPPORTING INFORMATION

We have listed supporting letters from several businesses that use Ubiquiti Access Points for Wireless Internet. We have also included data sheets for the hardware that will be used for this project.

SCHEDULE OF WORK

Project manager will be Eric Frilling and will be the single point of contact. Vendors expects the project to take 2 months to finish. They will have 2 teams working. The 1st phase will be running all cat 6 cable for access points and the new cabling for classrooms at the Hillcrest school. This phase will take approximately 1 month to finish and include the bulk of the labor for running 640 cable drops. The 2nd phase will be installing, configuring the switches, access points with the controller. The last

phase will be testing the system and training support staff

Vendor has also included additional bids to run 78 cable drops for 3 computer labs located at Black Oak Elementary, Hillcrest Elementary, Ridgemont Elementary. These bids are to run new cat 6 lines from computers in computer lab to the closest IDF.

OPTIONAL BIDS.

Hillcrest Elementary – Optional bid to run cat6 cables to 26 computers from Computer Lab to IDF1, terminate cat6 cables in patch panel.

Total Optional Bid: \$5,224.00

Black Oak – Optional bid to run cat6 cables to 26 computers from Computer Lab to IDF1, terminate cat6 cables in patch panel.

Total Optional Bid: \$5,224.00

Ridgemont – Optional bid to run cat6 cables to 26 computers from Computer Lab to IDF1, terminate cat6 cables in patch panel.

Total Optional Bid: \$5,224.00

Area Wide Communications, LLC, ID# 00066684, exp 03/31/2017
CE-F, E; S-AREA WIDE WARNING SYSTEMS; S-EQUIPMENT INSTALLATION;



**Liberty
Mutual**

The Ohio Casualty Insurance Company

BID OR PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, That we,

Area Wide Communications LLC
(hereinafter called the Principal) as Principal, and The Ohio Casualty Insurance Company, with its
principal office in the City of Hamilton, Ohio (hereinafter called the Surety), as Surety, are held and firmly bound unto
Ohio County Board of Education

(hereinafter called the Obligee) in the penal sum of

5% Amount bid Dollars \$
lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our
heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas, the Principal has submitted the
accompanying bid dated 3/13/2015 for

Internet Upgrade Ohio County Schools

NOW, THEREFORE, if the Obligee shall make any award according to the terms of said bid and the Principal shall enter
into a contract with said Obligee in accordance with the terms of said bid and give bond for the faithful performance
thereof within the time specified; or if no time is specified within thirty days after the date of said award; or if the Principal
shall, in the case of failure so to do, indemnify the Obligee against any loss the Obligee may suffer directly arising by
reason of such failure, not exceeding the penalty of this bond, then this obligation shall be null and void; otherwise to
remain in full force and virtue.

Signed, sealed and dated:

3/13/2015

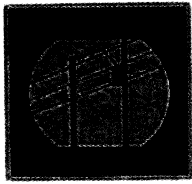
Area Wide Communications LLC
(Principal)

By: [Signature]


The Ohio Casualty Insurance Company

By: [Signature]

(Attorney-in-Fact)



Southwest Tennessee Electric Membership Corporation

A Touchstone Energy Cooperative 

March 11, 2015

Eric Frilling
Ken-Tenn Wireless
P.O. Box 716
Union City, TN. 38261

To whom it concerns,

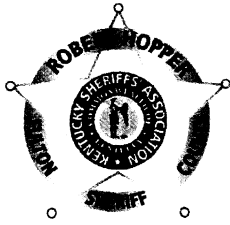
Southwest Electric has been using Ubiquiti UniFi Access points throughout at 5 different location for the last year. It has helped our productivity and ease of access to vital information no matter our location throughout our entire facility. The Ubiquiti UniFi access points were easy to install and control with one computer. With the included controller software, it is also ease to manage the network and expand it in the future as our business grows and our needs increase.

I would not hesitate to recommend this equipment to anyone looking for an easy to use, easy to manage access point for a professional network. The UniFi Access Points and accompanying controller are fast capable and easy to maintain.

Thanks,
Jason Kendall



IT and Network Manager
Phone: 1-731-585-0575
Email: jkendall@steme.com
Southwest Tennessee Electric Membership
1009 East Main Street
Brownsville, TN 38012



FULTON COUNTY SHERIFF'S OFFICE
ROBERT HOPPER SHERIFF

P.O. BOX 7
HICKMAN, KY. 42041
PHONE: 270-236-2545
FAX: 270-236-3373
E MAIL: office@fultoncountysheriff.net

March 11, 2015

Eric Frilling
Ken-Tenn Wireless
P.O. Box 716
Union City, TN. 38261

To whom it concerns,

Fulton County has been uses Ubiquiti UniFi Access points throughout its office for wireless connectivity for the last 2 years. We get great coverage and fast access to our network with the wireless devices.

I would not hesitate to recommend this equipment to anyone looking for an access point for a professional network.

Thanks,

Bobby Hopper



Fulton County Sheriff

Phone: 270-236-2545

Email: sheriff@fultoncountysheriff.net

2216 Myron Cory Drive,
Hickman, KY 42050

March 11, 2015

Eric Frilling
Ken-Tenn Wireless
P.O. Box 716
Union City, TN. 38261

To whom it concerns,

Discovery Park of America, located in Union City, TN, offers visitors a world-class entertainment and educational experience with more than 70,000 square footage of exhibits focused on nature, grounds, science, technology, history, and art; and 50 acres of gardens, grounds and exhibits focused on history.

In the first year of operation we had over 295,000 guests pass through our doors. We chose Ubiquiti Unifi Access Points to provide stable and secure internet access to our guests, employees and exhibits. The Uni-Fi access points have provided us with the ability to expand our systems as Discovery Park grows in the future. It also provides the reliability to offer our guests a high speed interactive environment. I would recommend this product to most any business that is looking for a great WI-FI experience.

Thanks,
Robert Pardue



Assistant Director of Information Technology
Email: rpardue@discoveryparkofamerica.com
Phone: 731-885-5455
830 Everett Blvd
Union City, TN 38261

March 11, 2015

Eric Frilling
Ken-Tenn Wireless
P.O. Box 716
Union City, TN. 38261

To whom it concerns,

Quality Inn Paris, TN performed a wireless upgraded of internal wireless network to Ubiquiti Unifi Access Points 8 months ago. We have enjoyed the expanded coverage and speed to our 100 room hotel. The ease of use and reliability in this state of the art wireless equipment has improved our efficiency and customer satisfaction.

We would strongly recommend the use of this Ubiquiti equipment to any business needing an affordable, reliable solution for wireless connectivity. We are booked at an estimated 80% capacity year round and with the Unifi Access Points we do not have to worry about our guests being dissatisfied with the quality of service or poor coverage in our facility.

Thanks,

Robin Whitt



Hotel Manager

731-642-2838

Quality Inn

1510 East Wood Street

Paris, TN 38242

March 11, 2015

Eric Frilling
Ken-Tenn Wireless
P.O. Box 716
Union City, TN. 38261

To whom it concerns,

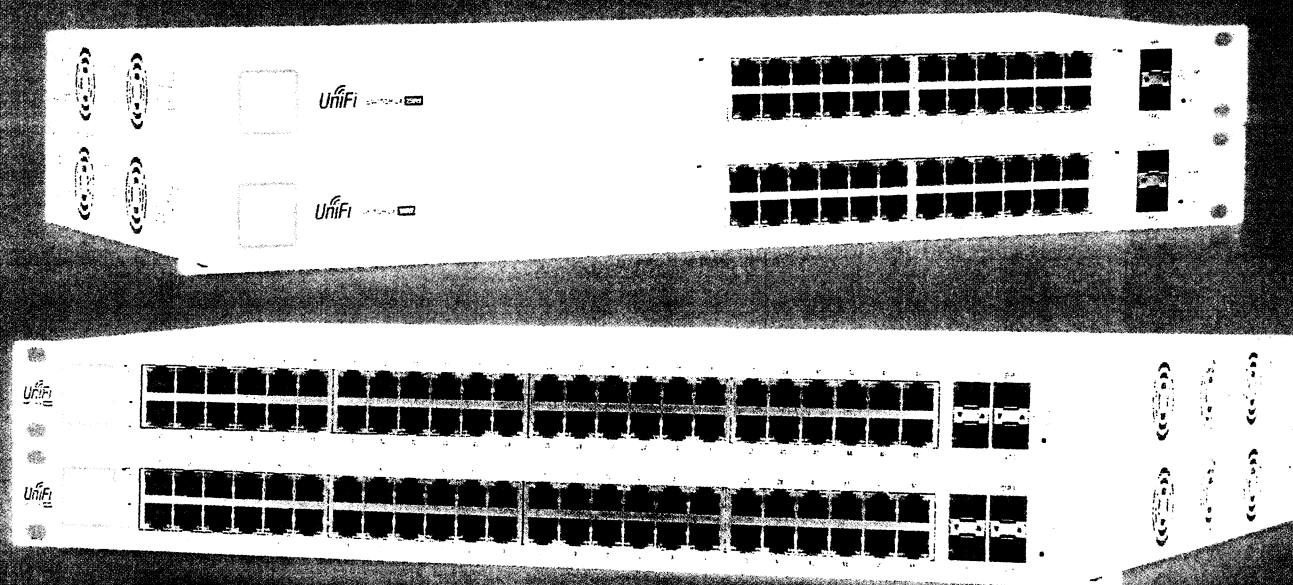
Wisper Internet Services out of Alamo TN has been using Ubiquiti equipment for the last 5 years to service it 3000 customers in North West TN. Wisper has evaluated several other wireless product brands and none of them give us the performance and reliability that we have with Ubiquiti.

I would not hesitate to recommend Ubiquiti equipment to anyone looking for an easy to use, easy to manage for an enterprise solution.

Thanks,
Charlie Karnes

A handwritten signature in black ink, appearing to read "Charlie Karnes", written in a cursive style.

Systems Administrator
Phone: 731-668-3042
Email: ckarnes53@gmail.com



UniFi® | SWITCH

Managed PoE+ Gigabit Switches with SFP

Models: US-24-250W, US-24-500W, US-48-500W, US-48-750W

Non-Blocking Throughput Switching Performance

Gigabit Ethernet RJ45 and SFP+/SFP Ports

Auto-Sensing IEEE 802.3af/at PoE



UniFi® SWITCH

Build and expand your network with Ubiquiti Networks® UniFi® Switch, part of the UniFi line of products. The UniFi Switch is a fully managed, PoE+ Gigabit switch, delivering robust performance and intelligent switching for growing networks.

Switching Performance

The UniFi Switch offers the forwarding capacity to simultaneously process traffic on all ports at line rate without any packet loss.

PoE+ Flexibility

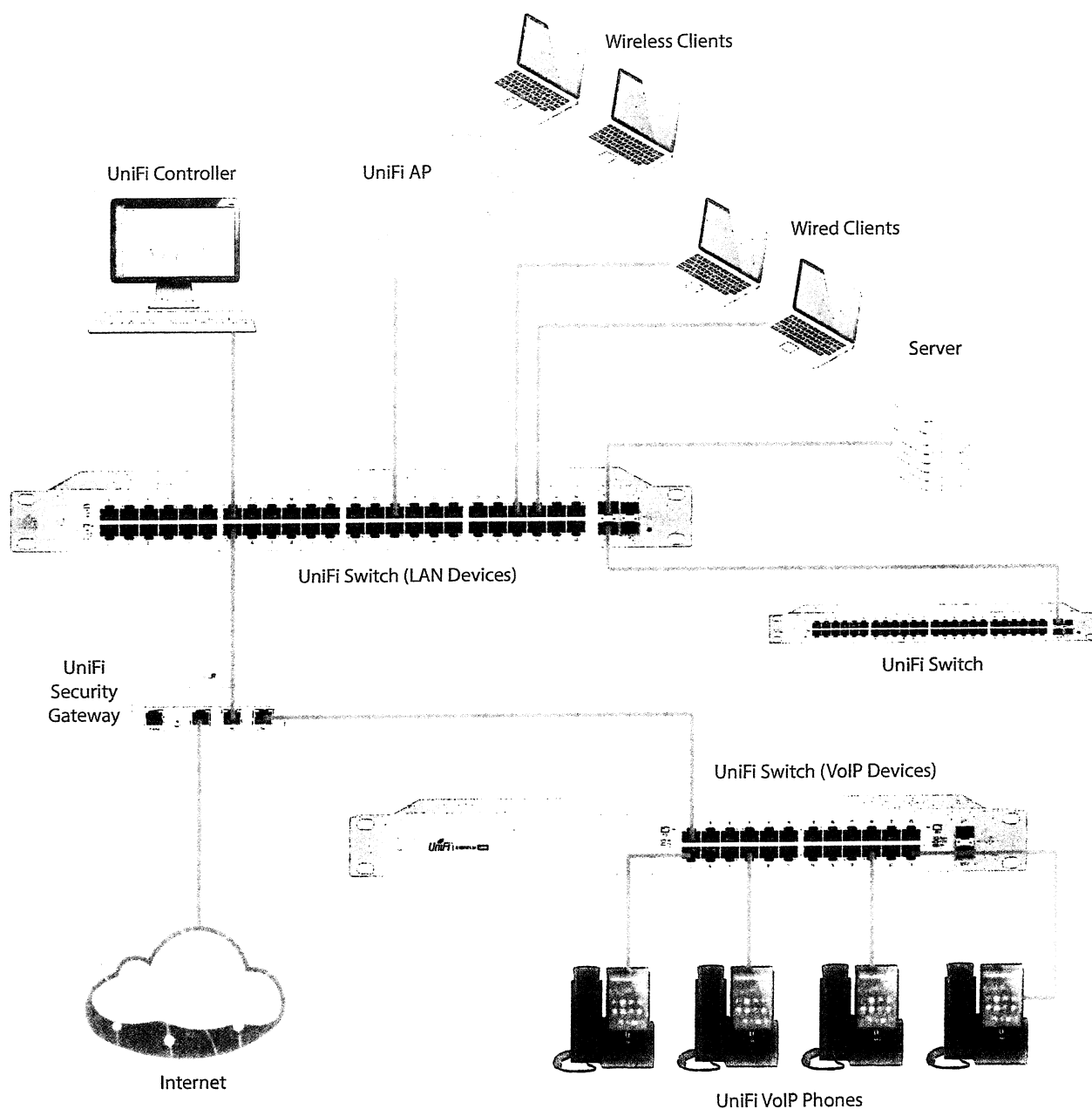
The UniFi Switch models are available with 24 or 48 PoE Gigabit Ethernet ports of auto-sensing IEEE 802.3af/at or configurable 24V passive PoE to simplify your infrastructure.

By default, the UniFi Switch automatically detects 802.3af/at devices so they automatically receive PoE. For 24V passive PoE devices, manually enable 24V passive PoE using the UniFi Controller software.

Fiber Connectivity

The UniFi Switch provides fiber connectivity options for easy expansion of your networks. Each UniFi Switch model includes two SFP ports for uplinks of up to 1 Gbps.

Each 48-port model adds two SFP+ ports for high-capacity uplinks of up to 10 Gbps, so you can directly connect to a high-performance storage server or deploy a long-distance uplink to another switch.



UniFi Controller

Designed for convenient management, the UniFi Controller software allows admins to configure and monitor the UniFi Switch and other UniFi devices using a graphical user interface. You can download it from www.ubnt.com at no extra charge – there is no separate software, licensing, or support fee.

Multi-Site Management

A single instance of the UniFi Controller running in the cloud can manage multiple UniFi sites within a centralized interface. Each site is logically separated and has its own network monitoring, configuration, maps, statistics, and admin accounts.

Switch Configuration

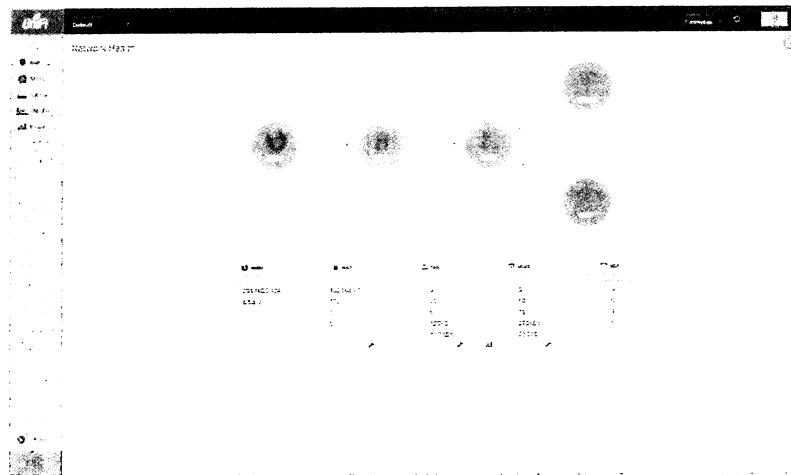
You can access any managed UniFi Switch through the UniFi Controller to configure a variety of features:

- PoE setting per port
- Operation mode (switching, mirroring, or aggregate) per port
- Network/VLAN configuration
- Jumbo frame and flow control services
- Network settings

Switch Port Status

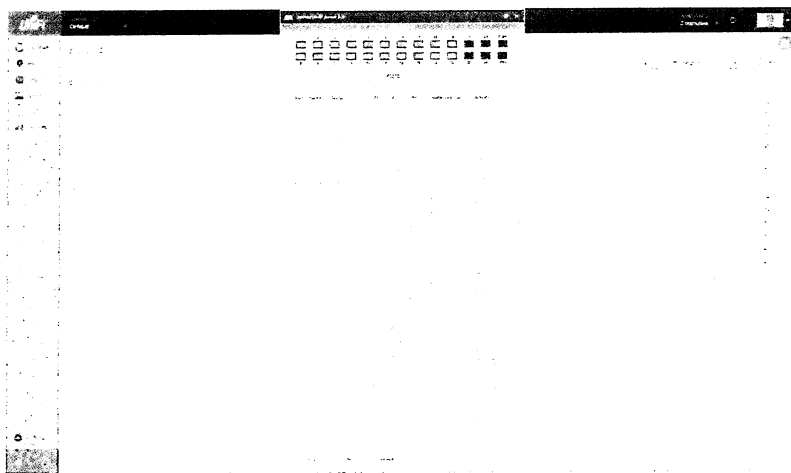
You can also view status information for each port:

- Connection speed and duplex mode
- TX/RX data rates
- PoE status
- Network/VLAN setting



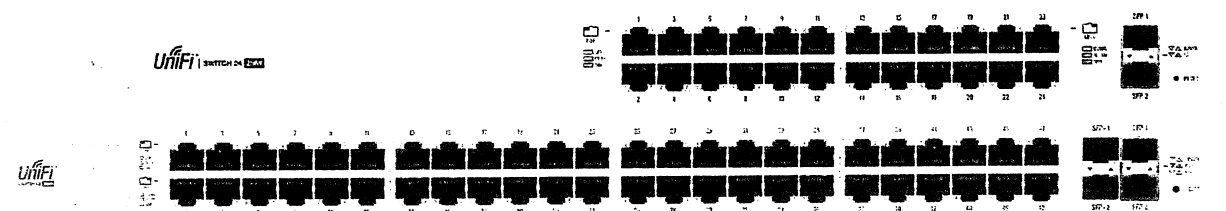
Dashboard

The *Dashboard* tab provides a visual representation of your network's status. Basic information is provided for each network segment.



Statistics

The *Statistics* tab provides a visual representation of the network clients and network traffic carried by your managed UniFi Switches and APs.

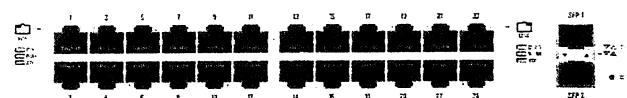
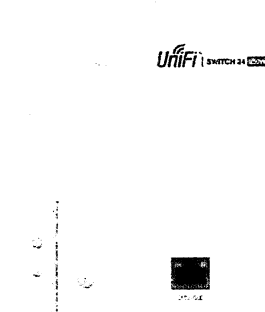


Models

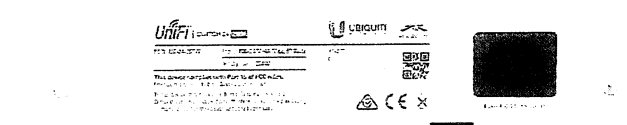
UniFi Switch 24 (250W Model)

Model: US-24-250W

- (24) Gigabit RJ45 ports
- (2) SFP ports
- (1) Serial console port (reserved for future use)
- Non-blocking throughput: 26 Gbps
- Switching capacity: 52 Gbps
- Forwarding rate: 38.69 Mpps
- Maximum power consumption: 250W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



Front Panel

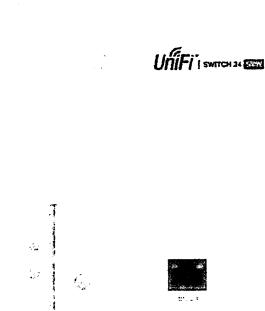


Back Panel

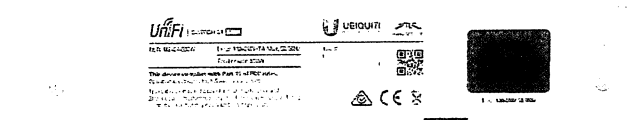
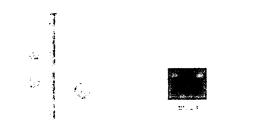
UniFi Switch 24 (500W Model)

Model: US-24-500W

- (24) Gigabit RJ45 ports
- (2) SFP ports
- (1) Serial console port (reserved for future use)
- Non-blocking throughput: 26 Gbps
- Switching capacity: 52 Gbps
- Forwarding rate: 38.69 Mpps
- Maximum power consumption: 500W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



Front Panel



Back Panel

UniFi Switch 48 (500W Model)

Model: US-48-500W

- (48) Gigabit RJ45 ports
- (2) SFP+ ports
- (2) SFP ports
- (1) Serial console port (reserved for future use)
- Non-blocking throughput: 70 Gbps
- Switching capacity: 140 Gbps
- Forwarding rate: 104.16 Mpps
- Maximum power consumption: 500W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



Front Panel



Back Panel

UniFi Switch 48 (750W Model)

Model: US-48-750W

- (48) Gigabit RJ45 ports
- (2) SFP+ ports
- (2) SFP ports
- (1) Serial console port (reserved for future use)
- Non-blocking throughput: 70 Gbps
- Switching capacity: 140 Gbps
- Forwarding rate: 104.16 Mpps
- Maximum power consumption: 750W
- Supports POE+ IEEE 802.3at/af and 24V Passive PoE
- Rackmountable



Front Panel



Back Panel

Hardware Specifications

Dimensions	485.04 x 44.45 x 285.6 mm (19.1 x 1.75 x 11.24")
Weight	3.7 kg (8.16 lb)
Total Non-Blocking Throughput	26 Gbps
Switching Capacity	52 Gbps
Forwarding Rate	38.69 Mpps
Max. Power Consumption	
US-24-250W	250W
US-24-500W	500W
Power Method	100-240VAC/50-60 Hz, Universal Input
Power Supply	
US-24-250W	AC/DC, Internal, 250W DC
US-24-500W	AC/DC, Internal, 500W DC
LEDs Per Port	
Serial Console Port	N/A
RJ45 Data Ports	PoE, Speed/Link/Activity
SFP Data Ports	Speed/Link/Activity
Networking Interfaces	(24) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1 Gbps SFP Ethernet Ports
Management Interface	(1) RJ45 Serial Port (Reserved for Future Use), Ethernet In/Out Band
Certifications	CE, FCC, IC
Rackmount	Yes, 1U High
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV
Operating Temperature	-5 to 40° C (23 to 104° F)
Operating Humidity	5 to 95% Noncondensing
Shock and Vibration	ETSI300-019-1.4 Standard
PoE Interfaces	POE+ IEEE 802.3af/at (Pins 1, 2+; 3, 6-) 24VDC Passive PoE (Pins 4, 5+; 7, 8-)
Max. PoE+ Wattage per Port by PSE	34.2W
Voltage Range 802.3at Mode	50-57V
Max. Passive PoE Wattage per Port	17W
24V Passive PoE Voltage Range	20-27V

Hardware Specifications

Dimensions	485.04 x 44.45 x 347.6 mm (19.1 x 1.75 x 13.69")
Weight	5.3 kg (11.68 lb)
Total Non-Blocking Throughput	70 Gbps
Switching Capacity	140 Gbps
Forwarding Rate	104.16 Mpps
Max. Power Consumption	
US-48-500W	500W
US-48-750W	750W
Power Method	100-240VAC/50-60 Hz, Universal input
Power Supply	
US-48-500W	AC/DC, Internal, 500W DC
US-48-750W	AC/DC, Internal, 750W DC
LEDs Per Port	
Serial Console Port	N/A
RJ45 Data Ports	PoE, Speed/Link/Activity
SFP+/SFP Data Ports	Speed/Link/Activity
Networking Interfaces	(48) 10/100/1000 Mbps RJ45 Ethernet Ports (2) 1/10 Gbps SFP+ Ethernet Ports (2) 1 Gbps SFP Ethernet Ports
Management interface	(1) RJ45 Serial Port (Reserved for Future Use), Ethernet in/Out Band
Certifications	CE, FCC, IC
Rackmount	Yes, 1U High
ESD/EMP Protection	Air: ±24 kV, Contact: ±24 kV
Operating Temperature	-5 to 40° C (23 to 104° F)
Operating Humidity	5 to 95% Noncondensing
Shock and Vibration	ETSI300-019-1.4 Standard
PoE Interfaces	POE+ IEEE 802.3af/at (Pins 1, 2+; 3, 6-) 24VDC Passive PoE (Pins 4, 5+; 7, 8-)
Max. PoE+ Wattage per Port by PSE	34.2W
Voltage Range 802.3at Mode	50-57V
Max. Passive PoE Wattage per Port	17W
24V Passive PoE Voltage Range	20-27V



UniFi

Datasheet



UniFi®

Enterprise WiFi System

Models: UAP, UAP-LR, UAP-PRO, UAP-AC,
UAP-Outdoor+, UAP-Outdoor5, UAP-AC Outdoor

**Unlimited Indoor/Outdoor AP Scalability in a
Unified Management System**

Breakthrough Speeds up to 1300 Mbps (802.11ac)

Intuitive UniFi Controller Software

**Hotspot Management – Customization and Built-In
Billing Options**

UBIQUITI
NETWORKS



Scalable and Unified Enterprise WiFi Management

The UniFi® Enterprise WiFi System is a scalable enterprise access point solution designed to be easily deployed and managed. UniFi Access Point (AP) indoor models have a sleek design and can be easily mounted to a ceiling tile or wall using the included mounting hardware. UniFi AP (UAP) outdoor models have a form factor built to last outdoors.

The UniFi Enterprise WiFi System includes the UniFi Controller software. The software installs on any PC, Mac, or Linux machine within the network and is easily accessible through any standard web browser. Using the UniFi Controller software, an Enterprise WiFi network can be quickly configured and administered without any special training. Real-time status, automatic UAP device detection, map loading, and advanced security options are all seamlessly integrated.

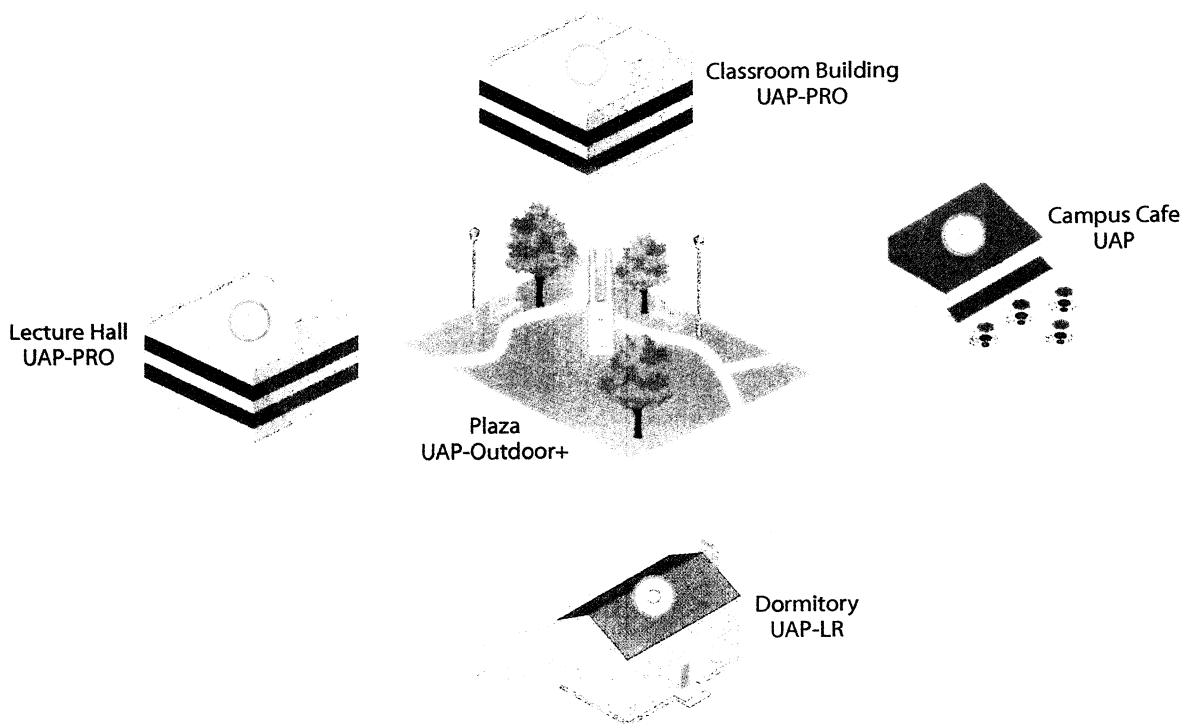
Features

Save money and save time Unlike traditional enterprise WiFi systems that utilize a hardware controller, UniFi comes bundled with a non-dedicated software controller that can be deployed on an on-premise PC, Mac, or Linux machine; in a private cloud; or using a public cloud service.

Powerful Hardware The fastest UniFi Access Points feature the latest in WiFi 802.11ac MIMO technology, capable of gigabit speeds and ranges up to 400 ft. Other models feature WiFi 802.11n MIMO technology for superior performance in the 2.4 and/or 5 GHz bands.

Intuitive UniFi Controller Software Install, configure, and manage all of your UniFi APs with the intuitive and easy-to-learn UniFi Controller user interface.

Expandable Unlimited scalability. Build wireless networks as big or small as needed. Start with one (or upgrade to a three-pack) and expand to thousands while maintaining a single unified management system.



Example of Zero Handoff Roaming on a University Campus

With Zero Handoff Roaming* by Ubiquiti Networks™, students keep their devices seamlessly connected as they move from the classroom through the plaza, to a cafe and then home to the dormitory.

* Currently available in the beta version of the UniFi Controller v3.

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.

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.

Guest Portal/Hotspot Support

Easy customization and 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 refund.
- Full customization and branding of Hotspot portal pages.

Multi-Site Management*

A single UniFi Controller running in the cloud 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 administrator read/write and read-only accounts.

WLAN Groups*

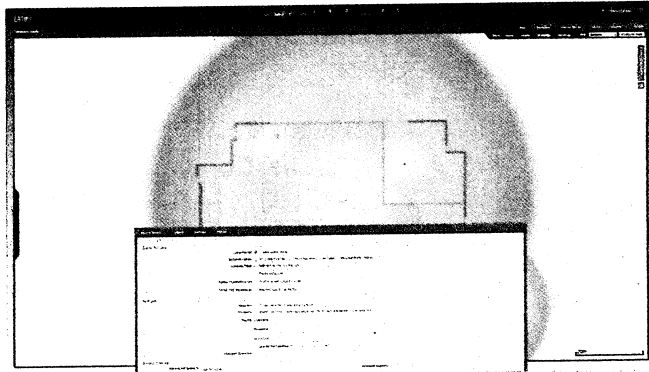
The UniFi Controller can manage flexible configurations of large deployments. Create multiple WLAN groups and assign them to an AP's radio.

Zero Handoff Roaming**

With Ubiquiti's Zero Handoff Roaming, mobile users can roam anywhere and seamlessly maintain their connections as they switch to the nearest AP. Zero Handoff Roaming makes multiple APs appear as a single AP, so it can work with any client and requires no interaction from the client device.

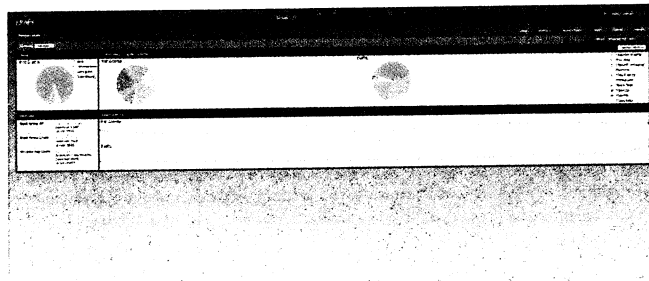
* Currently available in the beta version of the UniFi Controller v3.

† Not currently supported by the UAP-AC or UAP-AC Outdoor.



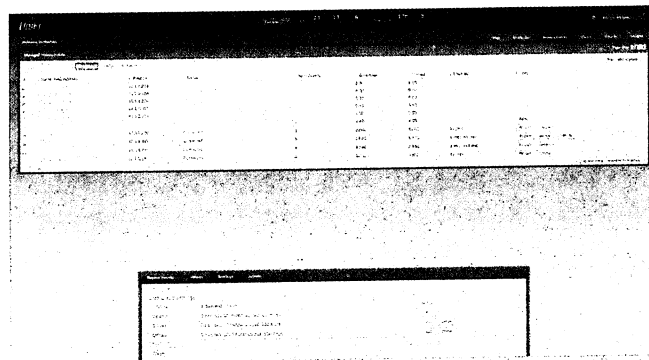
Maps

Upload map images of your location(s) for a visual representation of each wireless network.



Statistics

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



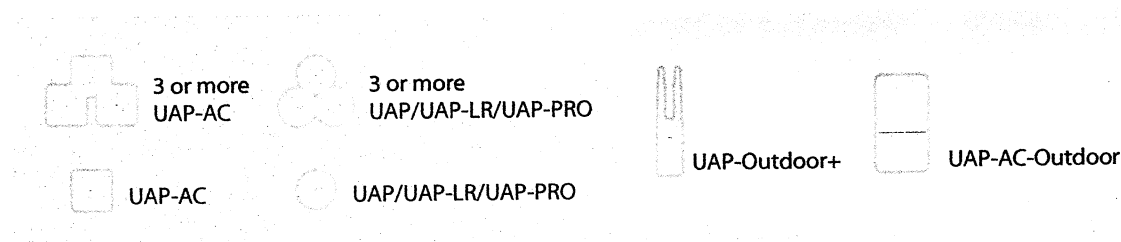
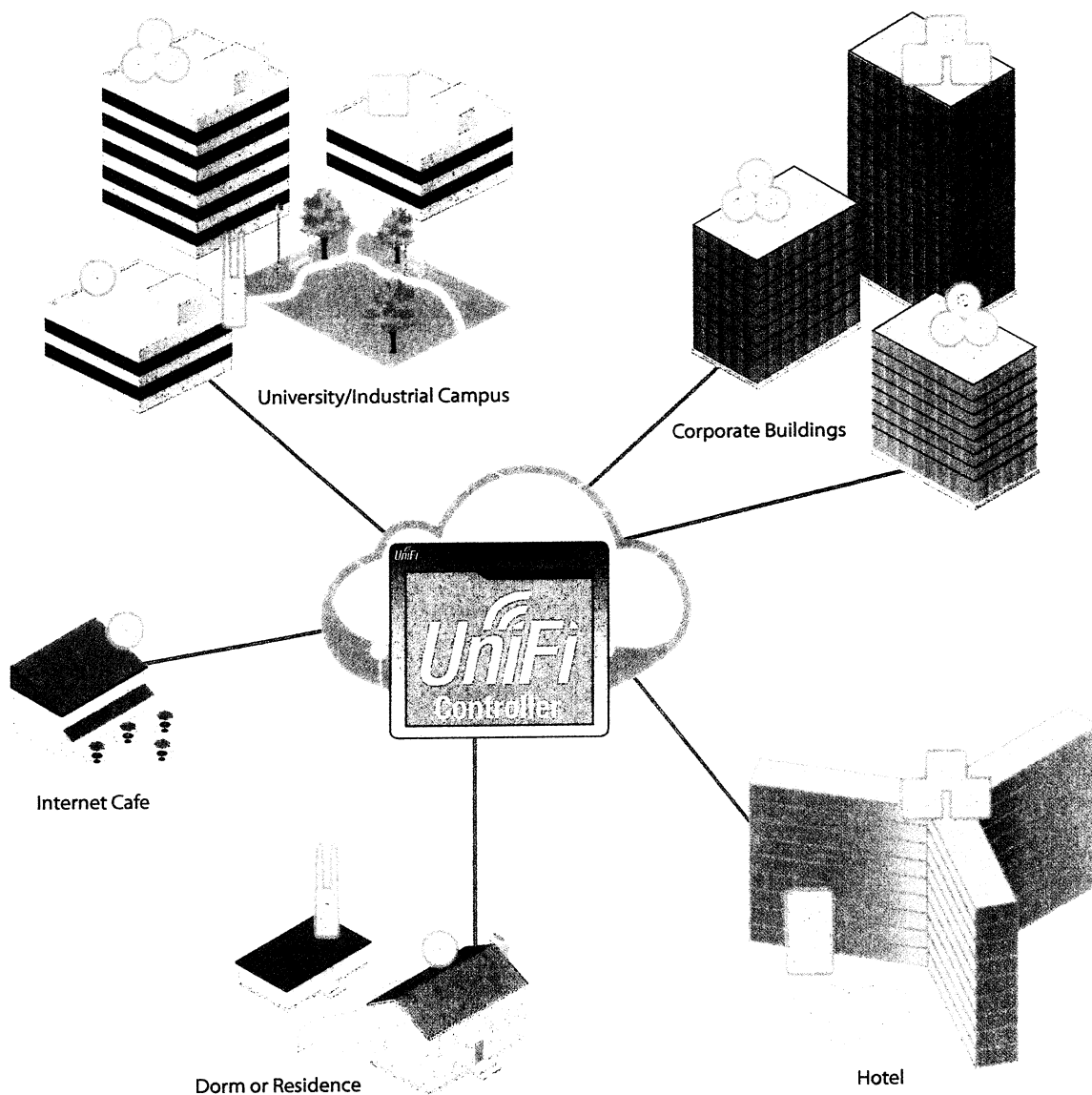
Access Points (APs)

Install, configure, and manage all APs from a single location.

Extend Your Coverage

With the UniFi Controller software running in a NOC or in the cloud, administrators can extend and centrally manage wide areas of indoor and outdoor coverage using any combination of UniFi APs.

Below are some examples of how UniFi APs can be deployed.



Increase Capacity and Throughput

Innovative Multi-Lane RF Technology

Wireless client devices in high-density areas experience significant interference and noise stemming from multiple APs using the same operating band.

With the launch of the UniFi AP-Outdoor+, Ubiquiti Networks introduces our patented Multi-Lane™ RF technology, which optimizes the operating channel and rejects interference using specialized circuitry, the High-Selectivity Receiver (HSR).

Our innovative Multi-Lane RF technology isolates signals on the operating channel and removes adjacent channel interference. Wireless capacity and throughput are increased in high-density areas, and multiple APs can operate in close proximity.

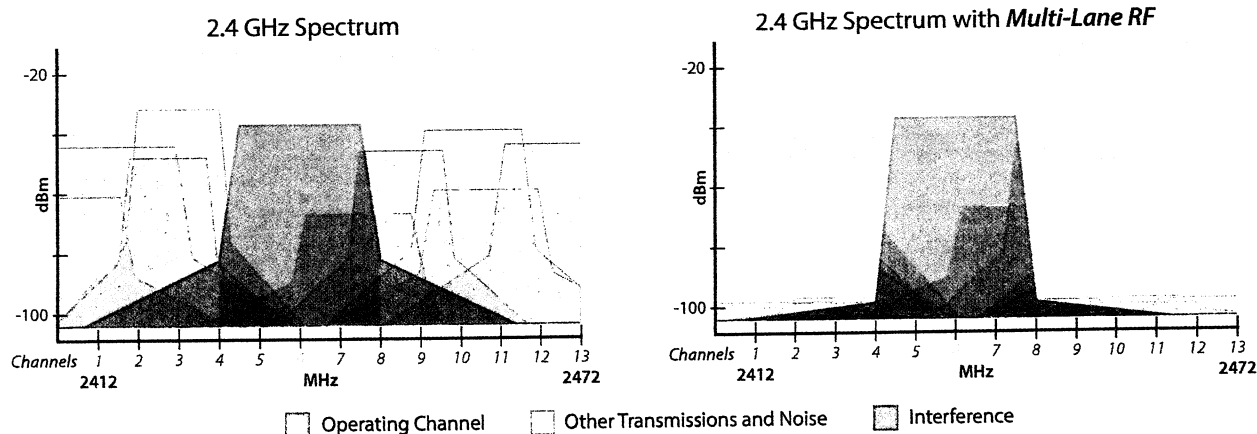
Typical AP Performance

Although theoretically channels 1, 6, and 11 of the 2.4 GHz operating band shouldn't overlap, in practice there is cross-channel interference that affects performance, especially in noisy, high-density environments. For example, with a typical AP operating on channel 6, it also hears RF from channels 1 and 11, because the typical AP has a generic filter that only filters out any non-2.4 GHz interference – all 2.4 GHz frequencies are still allowed in.

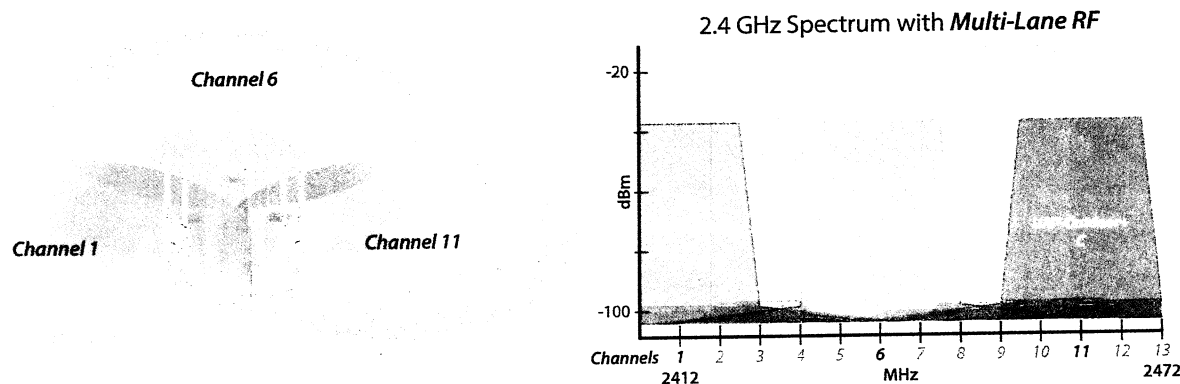
Superior UniFi AP-Outdoor+ Performance

When the UniFi AP-Outdoor+ operates on channel 6, its HSR filter specifically eliminates all non-channel 6 frequencies, creating a clean spectrum with minimal noise. So with Multi-Lane RF technology, you truly have three high-speed, multi-lane channels (1, 6, and 11) available for superior capacity and throughput.

Generic Filter versus Proprietary Filter of UniFi AP-Outdoor+



Co-Located UniFi AP-Outdoor+ Access Points



Indoor Models

Features

Easy Mounting Sleek wall or ceiling mount design (all accessories included).

Design Aesthetic industrial design with a unique LED provisioning ring or square, which provides administrator location tracking and alerts for each device.

Power over Ethernet (PoE) Includes Power over Ethernet (PoE) functionality, which allows both power and data to be carried over a single Ethernet cable to the device.

Each UniFi model includes a Power over Ethernet adapter, and it can also be powered by the Ubiquiti TOUGHSwitch PoE PRO (sold separately).

The UniFi AP-PRO is compatible with an 802.3af compliant switch, while the UniFi AP-AC is compatible with an 802.3at compliant switch.

UniFi indoor models are available in single-packs and three-packs.

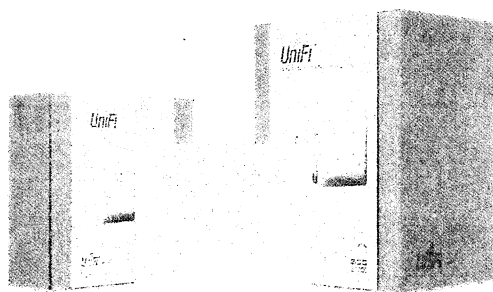
Included:

- Wall and Ceiling Mount Adapter Kit
- Power over Ethernet Adapter

Indoor Model Comparison Chart

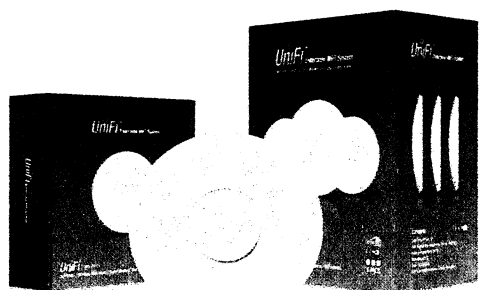
	UniFi AP-AC (UAP-AC)	UniFi AP-PRO (UAP-PRO)	UniFi AP-LR (UAP-LR)	UniFi AP (UAP)
2.4 GHz Speed*	450 Mbps	450 Mbps	300 Mbps	300 Mbps
5 GHz Speed*	1300 Mbps	300 Mbps		
Range*	122 m (400 ft)	122 m (400 ft)	183 m (600 ft)	122 m (400 ft)
Secondary Ethernet Port	✓	✓		
Gigabit Ethernet	✓	✓		
Wi-Fi Standards	802.11 a/b/g/n/ac	802.11 a/b/g/n	802.11 b/g/n	802.11 b/g/n
2.4 GHz	✓	✓	✓	✓
5 GHz	✓	✓		
Simultaneous Dual-Band	✓	✓		
Ubiquiti PoE	✓	✓	✓	✓
802.3af or 802.3at Compliant	802.3at (PoE+)	802.3af (PoE)		
Security Lock	✓	✓	✓	✓

* Speed and Range values may vary and are based on optimal environments.



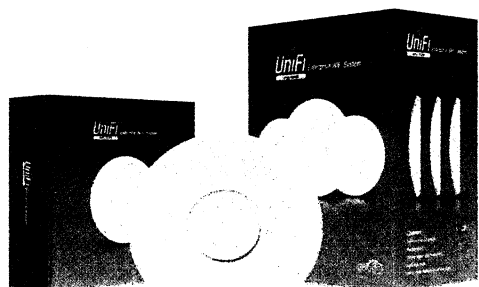
UniFi AP-AC (UAP-AC)

The fastest, indoor model supports 802.11ac and speeds of up to 1300 Mbps in the 5 GHz radio band and up to 450 Mbps in the 2.4 GHz radio band. The UAP-AC offers simultaneous dual-band operation with 3x3 MIMO technology for each band. It has a range of up to 122 m (400 ft) and two Gigabit Ethernet ports.



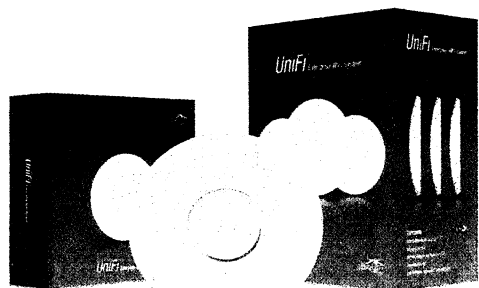
UniFi AP-PRO (UAP-PRO)

The UAP-PRO supports speeds of up to 300 Mbps in the 5 GHz radio band and up to 450 Mbps in the 2.4 GHz radio band. The UAP-PRO offers simultaneous dual-band operation with 2x2 and 3x3 MIMO technology. It has a range of up to 122 m (400 ft) and two Gigabit Ethernet ports.



UniFi AP-Long Range (UAP-LR)

The UAP-LR has a longer range than the base model UAP with a range of up to 183 m (600 ft). It also offers 802.11n MIMO, with speeds of up to 300 Mbps.



UniFi AP (UAP)

This is our standard model 802.11n MIMO UniFi AP. It is capable of speeds up to 300 Mbps with a range of up to 122 m (400 ft).

Outdoor Models

All the same features packed in the indoor UniFi models, but in a form factor built to last outdoors.

Features

Easy Mounting Sleek wall or pole mount design (all accessories included).

Designed for the Great Outdoors The weather-resistant case is designed specifically for outdoor installations. Dual, omni-directional antennas on the UAP-Outdoor+ and UAP-Outdoor5 provide 360° wireless coverage.

2G or 5G Models Choose the frequency best suited to your environment – 2.4 GHz (UAP-Outdoor+) or 5 GHz (UAP-Outdoor5). The UAP-AC Outdoor is a simultaneous dual-band device, so it supports both 2.4 and 5 GHz.

Power over Ethernet (PoE) Includes Power over Ethernet (PoE) functionality. Each UniFi model includes a Power over Ethernet adapter, and it can also be powered by the Ubiquiti TOUGHSwitch PoE (sold separately).

The UniFi AP-Outdoor+ is compatible with an 802.3af compliant switch, while the UniFi AP-AC Outdoor is compatible with an 802.3at compliant switch.

Installation Options External antennas are included. You can also connect the UAP-Outdoor+ or UAP-Outdoor5 to a dual-polarity antenna – an airMAX™ Sector or Omni Antenna – to increase gain.

Outdoor Model Comparison Chart

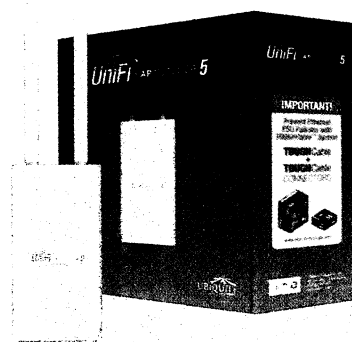
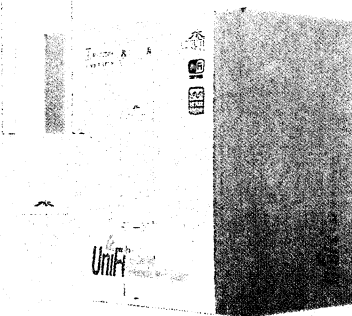
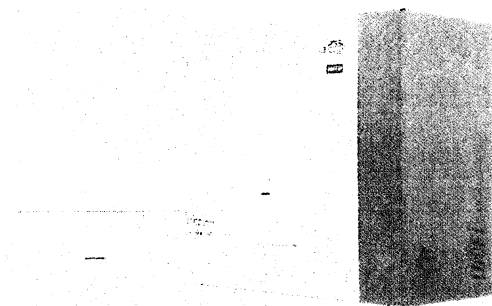
	UniFi AP-AC Outdoor (UAP-AC Outdoor)	UniFi AP-Outdoor+ (UAP-Outdoor+)	UniFi AP-Outdoor 5G (UAP-Outdoor5)
2.4 GHz Speed*			
5 GHz Speed*			
Range*			
Multi-Lane RF			
Secondary Ethernet Port			
Gigabit Ethernet			
Wi-Fi Standards			
2.4 GHz			
5 GHz			
Simultaneous Dual-Band			
Ubiquiti PoE			
802.3af or 802.3at Compliant			
External Antennas			

* Speed and Range values may vary and are based on optimal environments.

UniFi outdoor models are available in single-packs.

Included with the UAP-AC Outdoor:

- Wall and Pole Mount Kit
- Power over Ethernet Adapter



Included with the UAP-Outdoor+ or UAP-Outdoor5:

- External Antennas
- Wall and Pole Mount Kit
- Power over Ethernet Adapter

UniFi AP AC Outdoor (UAP-AC Outdoor)

The fastest outdoor model supports 802.11ac and speeds of up to 1300 Mbps in the 5 GHz radio band and up to 450 Mbps in the 2.4 GHz radio band. The UAP-AC Outdoor offers simultaneous dual-band operation with 3x3 MIMO technology for each band. It has a range of up to 183 m (600 ft) and two Gigabit Ethernet ports.

UniFi AP-Outdoor+ (UAP-Outdoor+)

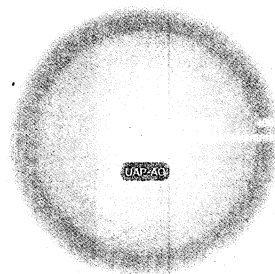
Designed for noisy, high-density environments, the UAP-Outdoor+ utilizes our innovative Multi-Lane RF technology to provide superior capacity and throughput. The UAP-Outdoor+ includes two external antennas and a secondary Ethernet port for bridging. It supports 802.11n MIMO, with speeds of up to 300 Mbps and a range of up to 183 m (600 ft).

UniFi AP-Outdoor 5G (UAP-Outdoor5)

This outdoor model operates in the 5 GHz frequency spectrum. The UAP-Outdoor5 includes two external omni antennas and a secondary Ethernet port for bridging. It supports 802.11n MIMO, with speeds of up to 300 Mbps and a range of up to 183 m (600 ft).

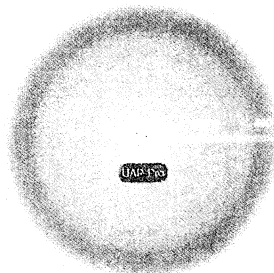
Specifications (UAP-AC)

UAP-AC (UAP-AC)	
Dimensions	200 x 204 x 27 mm (7.87 x 8.03 x 1.06 in)
Weight	508 g (1.12 lb) without Mounting Kits 566 g (1.25 lb) with Mounting Kits
Networking Interface	(2) 10/100/1000 Ethernet Ports
Buttons	Reset
Antennas	
2.4 GHz	Integrated 5 dBi Omni (Supports 3x3 MIMO with Spatial Diversity)
5 GHz	Integrated 5 dBi Omni (Supports 3x3 MIMO with Spatial Diversity)
Wi-Fi Standards	802.11 a/b/g/n/ac
Power Method	Passive Power over Ethernet (48V), 802.3at Supported (Supported Voltage Range: 39 to 57VDC)
Power Supply	48V, 0.5A PoE Gigabit Adapter Included
Maximum Power Consumption	22 W
Maximum TX Power	
2.4 GHz	28 dBm
5 GHz	28 dBm
BSSID	Up to Four per Radio
Power Save	Supported
Wireless Security	WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
Certifications	CE, FCC, IC
Mounting	Wall/Ceiling (Kits Included)
Operating Temperature	-10 to 55° C (14 to 131° F)
Operating Humidity	5 - 80% Non-Condensing
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	200+
Supported Data Rates (Mbps)	
Standard	Data Rates
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11n	6.5 Mbps to 450 Mbps (MCS0 - MCS23, HT 20/40)
802.11ac	6.5 Mbps to 1300 Mbps (MCS0 - MCS9 NSS1/2/3, VHT 20/40/80)
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps



Specifications (UAP-PRO)

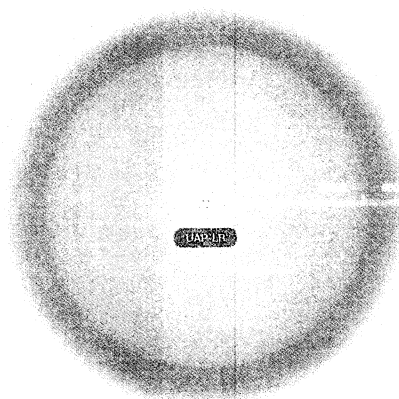
UAP-PRO	
Dimensions	200 x 200 x 36.5 mm (7.87 x 7.87 x 1.44 in)
Weight	298 g (10.51 oz) without Mounting Kits 358 g (12.63 oz) with Mounting Kits
Networking Interface	(2) 10/100/1000 Ethernet Ports
Buttons	Reset
Antennas	Integrated 5 dBi Omni (Supports 3x3 MIMO with Spatial Diversity)
2.4 GHz	Integrated 4 dBi Omni (Supports 2x2 MIMO with Spatial Diversity)
5 GHz	
Wi-Fi Standards	802.11 a/b/g/n
Power Method	Passive Power over Ethernet (48V), 802.3af Supported
Power Supply	48V, 0.5A PoE Gigabit Adapter (Included)
Maximum Power Consumption	12 W
Maximum TX Power	
2.4 GHz	30 dBm
5 GHz	22 dBm
BSSID	Up to Four Per Radio
Power Save	Supported
Wireless Security	WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
Certifications	CE, FCC, IC
Mounting	Wall/Ceiling (Kits Included)
Operating Temperature	-10 to 70° C (14 to 158° F)
Operating Humidity	5 - 80% Non-Condensing
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	200+
Supported Data Rates (Mbps)	
Standard	Data Rates
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11n	6.5 Mbps to 450 Mbps (MCS0 - MCS23, HT 20/40)*
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps



Specifications (UAP-LR)

General Specifications	
Dimensions	200 x 200 x 36.5 mm (7.87 x 7.87 x 1.44 in)
Weight	290 g (10.23 oz) without Mounting Kits 430 g (15.17 oz) with Mounting Kits
Networking Interface	(1) 10/100 Ethernet Port
Buttons	Reset
Antennas	Integrated 3 dBi Omni (Supports 2x2 MIMO with Spatial Diversity)
Wi-Fi Standards	802.11 b/g/n*
Power Method	Passive Power over Ethernet (12-24V)
Power Supply	24V, 0.5A PoE Adapter Included
Maximum Power Consumption	6 W
Maximum TX Power	27 dBm
BSSID	Up to Four Per Radio
Power Save	Supported
Wireless Security	WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
Certifications	CE, FCC, IC
Mounting	Wall/Ceiling (Kits Included)
Operating Temperature	-10 to 70° C (14 to 158° F)
Operating Humidity	5 - 80% Non-Condensing
Advanced Features	
VLAN	802.1Q
Advanced QoS	Per-User Rate Limiting
Guest Traffic Isolation	Supported
WMM	Voice, Video, Best Effort, and Background
Concurrent Clients	100+
Supported Data Rates (Mbps)	
Standard	Data Rates
802.11n	6.5 Mbps to 300 Mbps (MCS0 - MCS15, HT 20/40)
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps

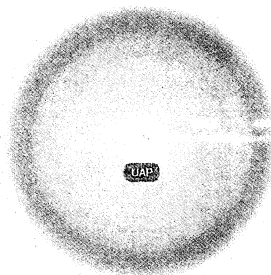
* 2.4 GHz



Specifications (UAP)

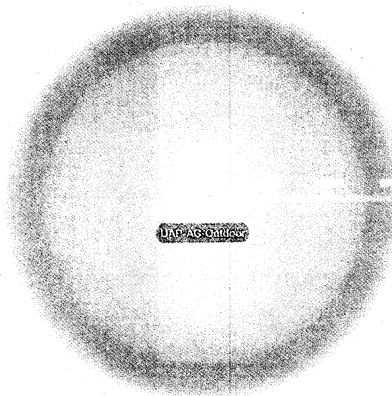
General Specifications	
Dimensions	200 x 200 x 36.5 mm (7.87 x 7.87 x 1.44 in)
Weight	290 g (10.23 oz) without Mounting Kits 430 g (15.17 oz) with Mounting Kits
Networking Interface	(1) 10/100 Ethernet Port
Buttons	Reset
Antennas	Integrated 3 dBi Omni (Supports 2x2 MIMO with Spatial Diversity)
Wi-Fi Standards	802.11 b/g/n*
Power Method	Passive Power over Ethernet (12-24V)
Power Supply	24V, 0.5A PoE Adapter Included
Maximum Power Consumption	4 W
Maximum TX Power	20 dBm
BSSID	Up to Four Per Radio
Power Save	Supported
Wireless Security	WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
Certifications	CE, FCC, IC
Mounting	Wall/Ceiling (Kits Included)
Operating Temperature	-10 to 70° C (14 to 158° F)
Operating Humidity	5 - 80% Non-Condensing
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	100+
Supported Data Rates (Mbps)	
Standard	Data Rates
802.11n	6.5 Mbps to 300 Mbps (MCS0 - MCS15, HT 20/40)
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps

* 2.4 GHz



Specifications (UAP-AC Outdoor)

General Specifications	
Dimensions	340 x 180 x 65 mm (13.39 x 7.09 x 2.56 in)
Weight	1.55 kg (3.42 lb) with Wall Mount 2 kg (4.41 lb) with Pole Mount
Networking Interface	(2) 10/100/1000 Ethernet Ports
Buttons	Reset
Antennas	Integrated 5 dBi Omni (Supports 3x3 MIMO with Spatial Diversity)
2.4 GHz	Integrated 5 dBi Omni (Supports 3x3 MIMO with Spatial Diversity)
5 GHz	Integrated 5 dBi Omni (Supports 3x3 MIMO with Spatial Diversity)
Wi-Fi Standards	802.11 a/b/g/n/ac
Power Method	Passive Power over Ethernet (48V), 802.3at Supported (Supported Voltage Range: 39 to 57VDC)
Power Supply	48V, 0.5A PoE Gigabit Adapter (Included)
Maximum Power Consumption	22 W
Maximum TX Power	
2.4 GHz	28 dBm
5 GHz	28 dBm
BSSID	Up to Four Per Radio
Power Save	Supported
Wireless Security	WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
Certifications	CE, FCC, IC
Mounting	Wall and Pole (Kits Included)
Operating Temperature	-30 to 60 °C (-22 to 140 °F)
Operating Humidity	5 - 80% Non-Condensing
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	200+
Supported Data Rates (Mbps)	
Standard	Data Rates
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11n	6.5 Mbps to 450 Mbps (MCS0 - MCS23, HT 20/40)
802.11ac	6.5 Mbps to 1300 Mbps (MCS0 - MCS9 NSS1/2/3, VHT 20/40/80)
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps



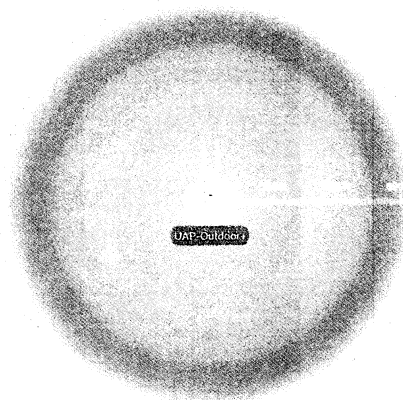
Specifications (UAP-Outdoor+)

UAP-Outdoor+	
Dimensions	205 x 83 x 37 mm (8.07 x 3.27 x 1.46 in)
Weight	250 g (8.82 oz) without Antennas 294 g (10.37 oz) with Antennas
Networking Interface	(2) 10/100 Ethernet Ports
Buttons	Reset
Antennas	(2) External 5 dBi Omni Antennas Included 191 mm (Length), 13 mm (Diameter)
Wi-Fi Standards	802.11 b/g/n*
Power Method	Passive Power over Ethernet (48V), 802.3af Supported
Power Supply	48V, 0.5A PoE Adapter (Included)
Maximum Power Consumption	8 W
Maximum TX Power	28 dBm
BSSID	Up to Four Per Radio
Power Save	Supported
Wireless Security	WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
Certifications	CE, FCC, IC
Mounting	Wall/Ceiling (Kits Included)
Operating Temperature	-30 to 65° C (-22 to 149° F)
Operating Humidity	5 - 95% Non-Condensing

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	100+

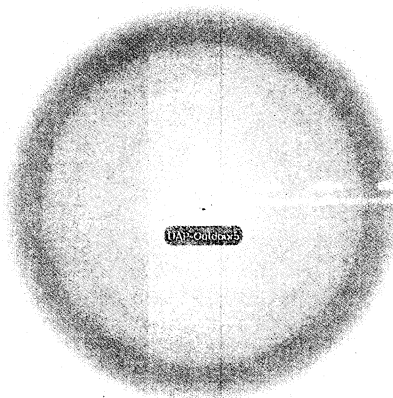
Supported Data Rates (Mbps)	
Standard	Data Rates
802.11n	6.5 Mbps to 300 Mbps (MCS0 - MCS15, HT 20/40)
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps

* 2.4 GHz



Specifications (UAP-Outdoor5)

UAP-Outdoor5	
Dimensions	170 x 80 x 30 mm (6.69 x 3.15 x 1.18 in)
Weight	230 g (8.11 oz) without Antennas 274 g (9.67 oz) with Antennas
Networking Interface	(2) 10/100 Ethernet Ports
Buttons	Reset
Antennas	(2) External 6 dBi Omni Antennas Included 191 mm (Length), 13 mm (Diameter)
Wi-Fi Standards	802.11a/n*
Power Method	Passive Power over Ethernet (12-24V)
Power Supply	24V, 1A PoE Adapter Included
Maximum Power Consumption	6.5 W
Maximum TX Power	27 dBm
BSSID	Up to Four Per Radio
Power Save	Supported
Wireless Security	WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i
Certifications	CE, FCC, IC
Mounting	Wall and Pole (Kits Included)
Operating Temperature	-30 to 75° C (-22 to 167° F)
Operating Humidity	5 to 95% Non-Condensing
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	100+
Supported Data Rates (Wi-Fi)	
Standard	Data Rates
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11n	6.5 Mbps to 300 Mbps (MCS0 - MCS15, HT 20/40)
* 5 GHz	



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