Dodatok č. 1 k Zmluve o dodaní tovarov na vybudovanie bezplatného WiFi pripojenia
podľa ustanovenia § 269 ods. 2 zákona č. 513/1991 Zb. Obchodný zákonník v znení
neskorších predpisov.

Zmluvné strany

Objednávateľ:	**Obec Mankovce**
zastúpený:	Milan Vrábel, starosta
Adresa:	Mankovce 101, 951 91 Hosťovce
IČO:	00308242
DIČ:	
Telefón:	037 / 634 7221
E-mail:	mankovce@centrum.sk
Bankové spojenie:	
IBAN:	

(ďalej „objednávateľ")

Dodávateľ:	**WESTCOM s.r.o.**
zastúpený:	Miloš Hudoba, poverená osoba
Adresa:	Keltská 68, 851 10 Bratislava
IČO:	44 808 704
DIČ:	2022856528
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Telefón:	
Kontaktná osoba:	Miloš Hudoba
Telefón:	+421 905 270 869

(ďalej „dodávateľ")

Poskytovateľ / Sprostredkovateľský orgán pre OP Integrovaná infraštruktúra:
Úrad podpredsedu vlády Slovenskej republiky pre investície a informatizáciu   (ďalej aj „SO OPII")
konajúci v zastúpení Riadiaceho orgánu
Ministerstva dopravy a výstavby Slovenskej republiky   (ďalej len „RO OPII")

Čl. 1. Východiskové podklady a údaje

1) Dodávateľ a objednávateľ uzatvorili dňa 10.12.2019 Zmluvu o dodaní tovarov na vybudovanie bezplatného WiFi pripojenia a to na základe výsledku verejného obstarávania, vyhláseného v zmysle § 117 zákona č. 343/2015 Z. z. o verejnom obstarávaní a o zmene a doplnení niektorých zákonov na predmet zákazky „Dodanie bezdrôtových prístupových bodov na verejných priestranstvách v rámci obce".

2) Tento Dodatok č. 1 sa uzatvára v súlade s ustanovením §18 bod c) zák. č. 343/2015 Z. z. o verejnom obstarávaní a o zmene a doplnení niektorých zákonov, potreba zmeny vyplynula s okolností, ktoré verejný obstarávateľ nemohol pri vynaložení náležitej starostlivosti predvídať, pričom jeho uzatvorením nedochádza k podstatnej zmene pôvodnej zmluvy.

Čl. 2. Zmena zmluvy

1) Článok 6 bod 2 sa mení nasledovne:
Dodávateľ preberá záruku za akosť vykonaných prác v zmysle Obchodného zákonníka. Záručná doba za jednotlivé komponenty technologických častí je určená ich výrobcom v záručných listoch.

Záručná doba za kabeláž a montážne práce je 60 mesiacov odo dňa ich prevzatia objednávateľom. Zhotoviteľ zodpovedá že celý predmet zákazky bude počas 60 mesiacov spôsobilý na zmluvný účel a zachová si počas tejto lehoty dohodnuté vlastnosti.

2) Článok 7 bod 6 sa mení nasledovne:

Táto zmluva nadobúda platnosť dňom jej podpisu zmluvnými stranami a účinnosť deň nasledujúci po dni zverejnenia. Objednávateľ si vyhradzuje právo od zmluvy odstúpiť prípadne posunúť dobu plnenia vzhľadom ku stanoviskám Poskytovateľa k procesu VO a podpisu zmluvy. Dodávateľ berie na vedomie, že zákazka financovaná z fondov EÚ, ohľadom, ktorej sa uzatvára zmluva, bude predmetom ex post kontroly procesu verejného obstarávania zo strany príslušného Riadiaceho orgánu alebo Sprostredkovateľského orgánu pod Riadiacim orgánom. Schválenie zákazky v rámci ex post kontroly príslušným orgánom je zároveň podmienkou nadobudnutia účinnosti zmluvy.

3) K prílohám zmluvy sú doplnené:

Príloha č. 3 – Podrobný popis prístupových bodov AP s väzbou na finančné limity
Príloha č. 4 – Test splnenia technických parametrov (TSTP) v rámci „Wifi pre Teba"
Príloha č. 5 – Technické listy dodávaných aktívnych prvkov
a tvoria neoddeliteľnú súčasť zmluvy.

Čl. 3. Záverečné ustanovenia

1) Zmeny uvedené v tomto Dodatku neporušujú podmienky uvedené pri verejnom obstaraní na predmet diela. Všetky podmienky verejného obstarávania sú zachované.

2) Tento Dodatok k Zmluve je vypracovaný v 4 vyhotoveniach, objednávateľ obdrží 2 vyhotovenia a dodávateľ 2 vyhotovenia.

3) Tento Dodatok nadobudne platnosť dňom jeho podpisu štatutármi všetkých zmluvných strán.

4) Tento Dodatok nadobudne účinnosť dňom nasledujúcim po dni jeho zverejnenia na webovej stránke objednávateľa.

5) Zmluvné strany vyhlasujú, že obsah tohto dodatku je zrozumiteľný a určitým prejavom ich slobodnej a vážnej vôle, ktorý nebol urobený v tiesni za nápadne nevýhodných podmienok, ktoré by mohli spôsobiť jeho neplatnosť, na znak čoho pripájajú svoje podpisy.

6) Týmto dodatkom nie sú dotknuté ostatné ustanovenia zmluvy o dielo.

...vciach dňa 20.10.2020

...Bratislave dňa

Mila...
starosta

Mi...
štatuta...

WESTCOM s.r.o.
Koltská 930/68
851 10 Bratislava
IČO: 44 808 704, DIČ: 2022856528
DIČ DPH: SK2022856528   -2-

Externé AP	Označenie bodu	Číslo parcely	GPS súradnice		Číslo listu vlastníctva
1.	Obecný úrad	C 198	AP 1: 48.427014°	18.326972°	LV č. 1
2.	Detské ihrisko	C 198/1	AP 2: 48.428157°	18.327632°	LV č. 1
3.	Areál Bôrina	E 2114/3	AP 3, : 48.431073°	18.325230°	LV č. 1
4.	Multifunkčné ihrisko	E 873	AP4 48.426013°	18.326841°	LV č.348
5.	Škôlka, školský areál	E 870	AP 5: 48.426376°	18.326768°	LV č. 348
6.	Detské ihrisko	C 198	AP 6: 48.426262°	18.326119°	LV č. 1
7.	VP pri cintoríne	E 1649/2	AP 7: 48.425738°	18.326187°	LV č. 666
8.	VP pri futbalovom ihrisku	E1649/3	AP 8: 48.421466°	18.327921°	LV č. 1
9.	Kultúrny dom	C198	AP 9, 48.427522°	18.327378°	LV č. 1
10	Autobusová zastávka	C192/1	AP10: 48.426930°	18.327794°	LV č. 348

Príloha č. 1 Príručky pre prijímateľa DOP Wifi pre Teba - príloha k ŽoP: Podrobný popis prístupového bodu (AP) s väzbou na finančné limity

Položka	Merná jednotka	Počet jednotiek	Jednotková cena (v EUR bez DPH)	Vysúťažená suma celkom (v EUR s DPH)	Limity podľa Príručky pre oprávnenosť výdavkov PO7 OPII pre dopytovo orientované projekty „Wifi pre Teba" (max. suma za 1 AP v EUR s DPH)
Externý prístupový bod (AP) č. 1:	(nevypĺňa sa)			1472,28	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,5	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	6	36	216	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Switch	ks	1	197,98	237,58	(nevypĺňa sa)
Externý prístupový bod (AP) č. 2:	(nevypĺňa sa)			1450,7	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,6	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	10	36	432	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Interný prístupový bod (AP) č. 3:	(nevypĺňa sa)			1472,28	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,5	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	6	36	216	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Switch	ks	1	197,98	237,58	(nevypĺňa sa)
Interný prístupový bod (AP) č. 4:	(nevypĺňa sa)			1450,7	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,5	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	10	36	432	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Interný prístupový bod (AP) č. 5:	(nevypĺňa sa)			1450,7	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,5	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	10	36	432	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Interný prístupový bod (AP) č. 6:	(nevypĺňa sa)			1450,7	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,5	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	10	36	432	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Interný prístupový bod (AP) č. 7	(nevypĺňa sa)			1450,7	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,5	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	10	36	432	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Externý prístupový bod (AP) č. 8:	(nevypĺňa sa)			1450,7	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Vzdušný optický internetový prepoj	ks	1	220,5	264,6	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	10	36	432	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Externý prístupový bod (AP) č. 9:	(nevypĺňa sa)			1402,1	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	15	36	648	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Externý prístupový bod (AP) č. 10:	(nevypĺňa sa)			1402,1	1 500,00
rozpísať všetky nákladové položky daného AP, ktoré sú uvedené na faktúre				(nevypĺňa sa)	
Vonkajšia jednotka na šírenie signálu	ks	1	300	360	(nevypĺňa sa)
úchyt pre vonkajšiu jednotku	ks	1	35,21	42,25	(nevypĺňa sa)
Skrinka na zariadenia	ks	1	49,9	59,88	(nevypĺňa sa)
Elektrická kabeláž	ks	0,1	570	68,4	(nevypĺňa sa)
RouterOS	ks	0,1	193,1	23,17	(nevypĺňa sa)
Dátová kabeláž	ks	0,1	800	96	(nevypĺňa sa)
Inštalačné práce	hod	15	36	648	(nevypĺňa sa)
Ochrana siete a smerovať dát	ks	0,1	270	32,4	(nevypĺňa sa)
Pomocný materiál	ks	1	60	72	(nevypĺňa sa)
Celkom				14452,96	

Search article base

UniFi - USW: Configuring Access Policies (802.1X) for Wired Clients

Overview

This article describes how to configure access policies (802.1X) on UniFi switches for wired clients. This article includes instructions on how to configure using the RADIUS server built-in to the UniFi Security Gateway and also controller configuration examples to point to your own authentication server.

NOTES & REQUIREMENTS:

Please complete the prerequisite configuration found in the UniFi - USG: Configuring RADIUS Server article before following this guide's instructions.

Every UniFi switch model is capable of authentication via 802.1X. The configuration does not change from model to model. Devices used in this article:
- UniFi Switch
- UniFi Security Gateway

Table of Contents

Introduction

The 802.1X standard has three components:

- **Authenticators:** Specifies the port or device that is sending messages to the RADIUS server before permitting system access.
- **Supplicants:** Specifies host connected to the port requesting access to the system services.
- **Authentication Server:** Specifies the external server, for example, the RADIUS server that performs the authentication on behalf of the authenticator, and indicates whether the user is authorized to access system services. The Port Access Control folder contains links to the following pages that allow you to view and configure 802.1X features on the system.

RADIUS Authentication and Authorization:

The process in which a client device is authorized with 802.1X goes as follows:

1. The client device is prompted for credentials.

2. User inputs credentials.

3. The client device sends a request on the data link layer to an authenticator to gain access to the network.

4. The authenticator device then sends a messaged called the "RADIUS Access Request" message to the configured RADIUS server.

> **NOTE:** This message includes but is not limited to username, password, or certificate provided by the user for access.

5. The RADIUS server then returns one of three responses to the authenticator:

- **Access-Reject:** The user entered is denied all access either based on inability to provide correct identification or the user has been removed from the RADIUS server.

- **Access-Challenge:** The user needs additional information to authenticate such as secondary password, token, PIN, or card. This message is also used in more complex authentication where a secure tunnel is established between the user machine and RADIUS server.
- **Access-Accept:** The user is granted access to the network.

> **NOTE:** Additionally there may be other attributes passed on to the authenticator about the client including:
> - Static IP to be used for the client.
> - A specific address pool to be used for the client.
> - Maximum time that a client can be authenticated.
> - Access list parameters
> - QoS specifics
> - VLAN id to be used for the client (Dynamic VLAN).

Network Diagram
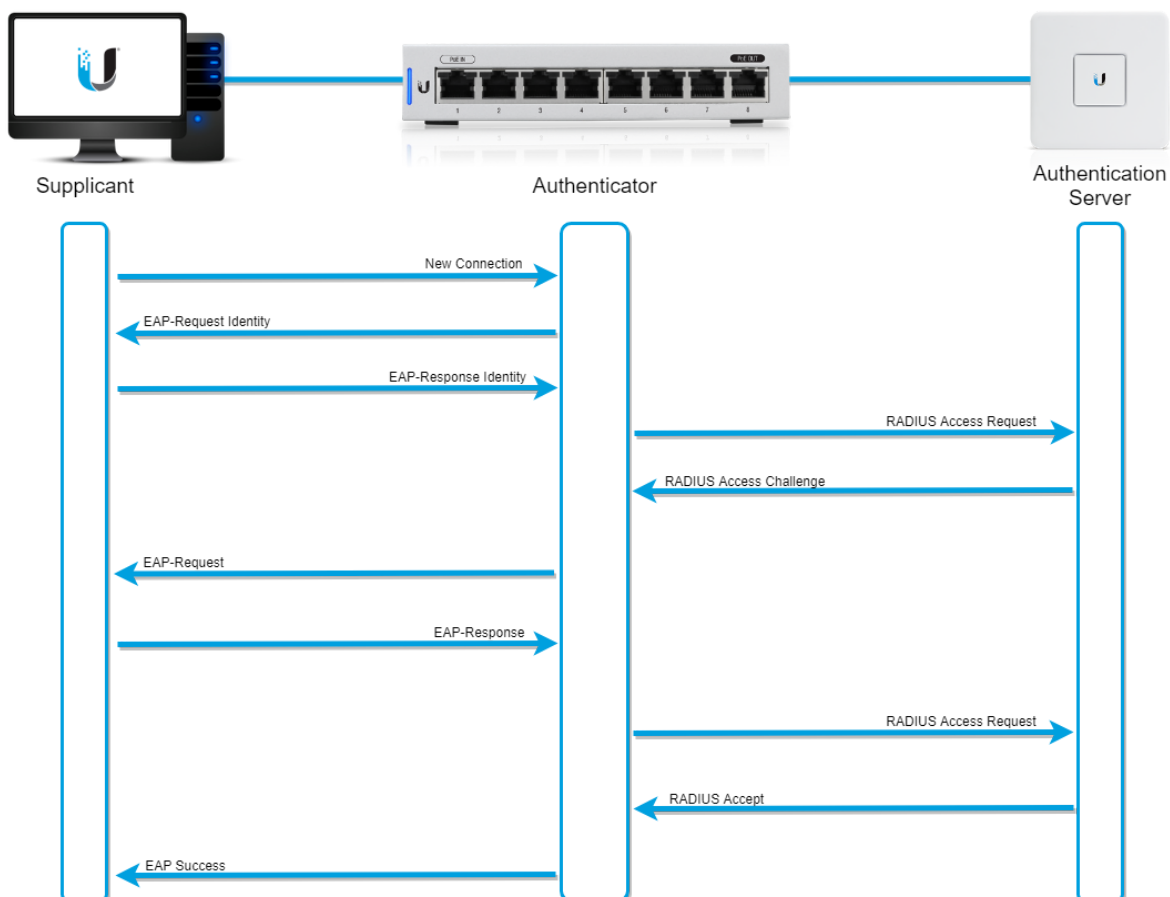
How to Enable the 802.1X Service on a Switch

This option is found on the switch properties panel under **Config > Services** in the **Security** section when selecting an individual switch from the "Devices" section of the controller.
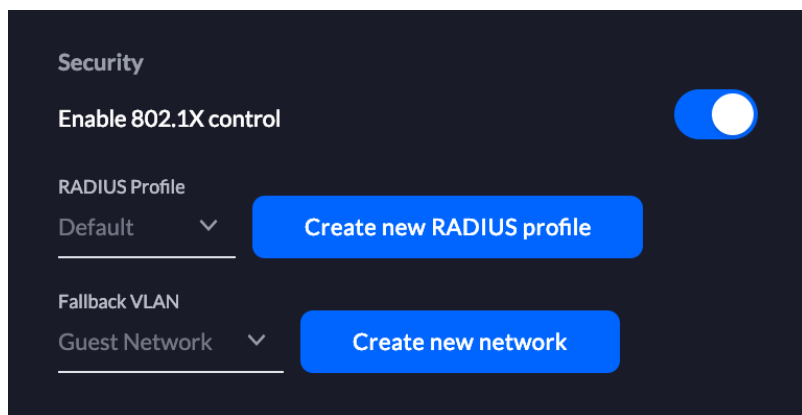
> **ATTENTION:** Enabling access control is done a per switch basis. If this is not enabled, the switch will not be able to act as an authenticator to pass RADIUS messages to the RADIUS server.

Differentiating 802.1X Port Modes

- **Auto:** The port is unauthorized until a successful authentication exchange has taken place.
- **Force Unauthorized:** The port ignores supplicant authentication attempts and does not provide authentication services to the client
- **Force Authorized:** The port sends and receives normal traffic without client port-based authentication.
- **MAC-Based:** This mode allows multiple supplicants connected to the same port to each authenticate individually. Each host connected to the port must authenticate separately in order to gain access to the network. The hosts are distinguished by their MAC addresses.

Working with Port Profiles

Using port profiles for rapid deployment is recommended instead of applying 802.1X policies manually on each port.

1. Navigate to **Settings > Profiles > Switch Ports.**
2. Create a new profile with the desired 802.1X control.

> **NOTE:** When using dynamic VLAN assignment on RADIUS the port profile must include each VLAN desired for use.

How to Configure Fallback VLAN

The fallback VLAN is used when a client fails to authenticate with username and password or MAC authentication bypass. This setting is defined per-switch.

This option is found on the switch properties panel under Config > Services in the Security section when selecting an individual switch from the "Devices" section of the controller. The Fallback option will appear once the 802.1X control option is enabled. **Controller version 5.9+ required.**

Controller Configuration for Non-USG RADIUS Server

1. Navigate to **Settings > Profiles > RADIUS.**
2. Create a new RADIUS Profile with the information for the external RADIUS server.

User Tip: Check out Microsoft's guide on how to administrate their NPS to manage RADIUS users, certificates, etc.

Related Articles

- UniFi - USG: Configuring RADIUS Server
- UniFi - Troubleshooting RADIUS Authentication

Was this article helpful?

Yes   No

39 found this article helpful

Submit an RMA Request

Visit the Ubiquiti RMA portal to submit a warranty claim for your Ubiquiti device.

Visit the RMA portal >

Plan your UniFi Deployment

Use the Design Center to design your UniFi Network using the most suitable products.

Try the UniFi Design Center >

Talk to other Ubiquiti users

Visit our worldwide community of Ubiquiti experts for more answers and solutions.

Ask the Ubiquiti Community >

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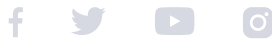
Submit a ticket
Terms of Service
Privacy Policy
Legal

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
N E T W O R K S

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.
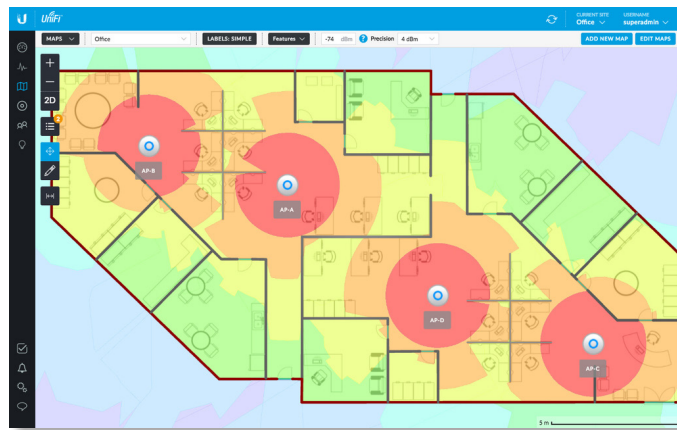
WLAN Groups

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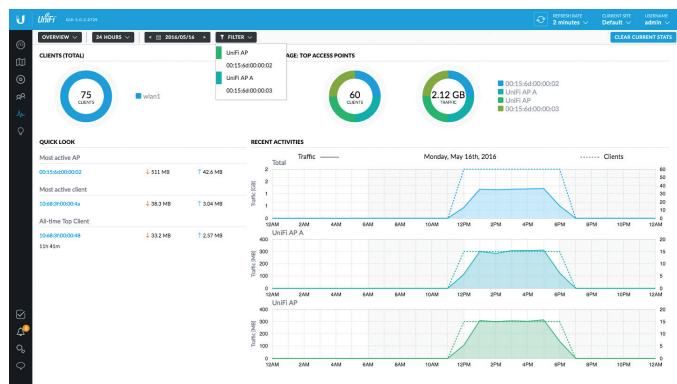
Dashboard

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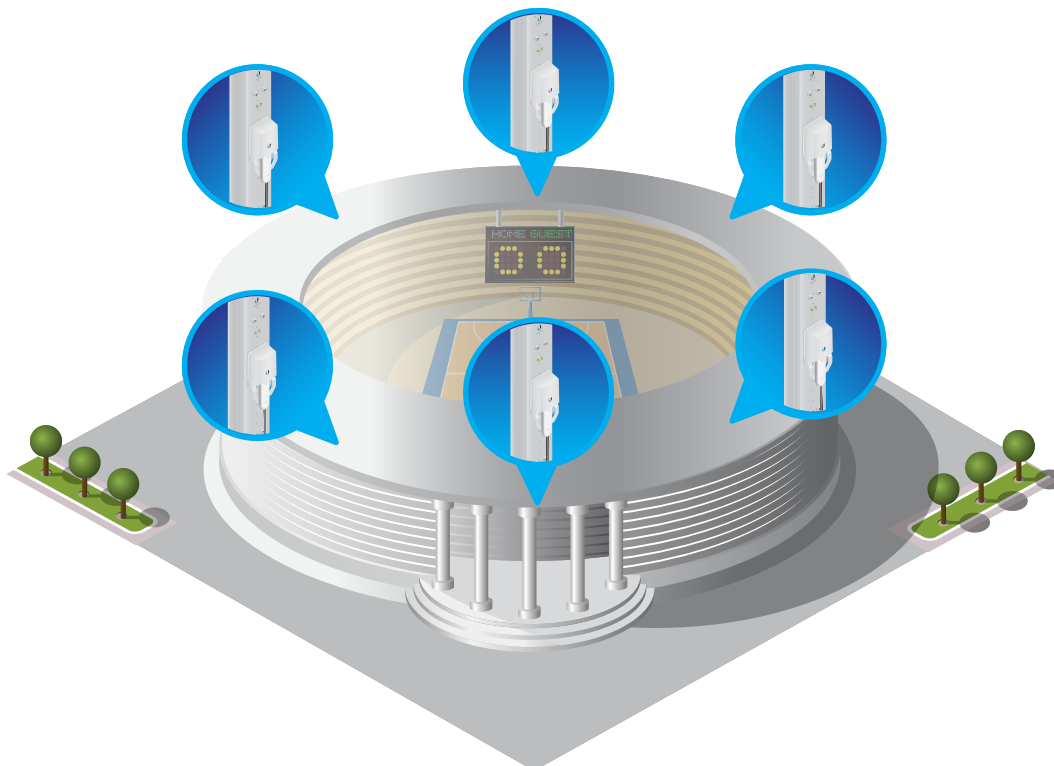
The UAP-AC-M utilizes the same antenna connector technology as airMAX® antennas.[2]

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® CLOUD KEY

UniFi® Controller Hybrid Cloud

Model: UC-CK

Secure UniFi Hybrid Cloud Technology

Fully Integrated, Stand-Alone UniFi Controller Hardware

Remote, Private Cloud Access to the UniFi Controller

UBIQUITI
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UniFi ® CLOUD KEY

UniFi Controller with Hybrid Cloud

Big things do come in small packages. We took one of our biggest ideas and engineered it to fit into a tiny form factor. Introducing the UniFi Cloud Key, a miniaturized marvel of technology.

The UniFi Cloud Key is an integrated computer and software controller minus the bulk. It features a quad-core processor with 2 GB RAM, operating the latest version of the UniFi Controller with built-in hybrid cloud technology.

Breakthrough Efficiency

The UniFi Cloud Key is fully capable of configuring and managing dozens of UniFi devices in your deployment. Replacing a dedicated server or computer, the UniFi Cloud Key is an ultra-low energy solution with virtually no footprint.
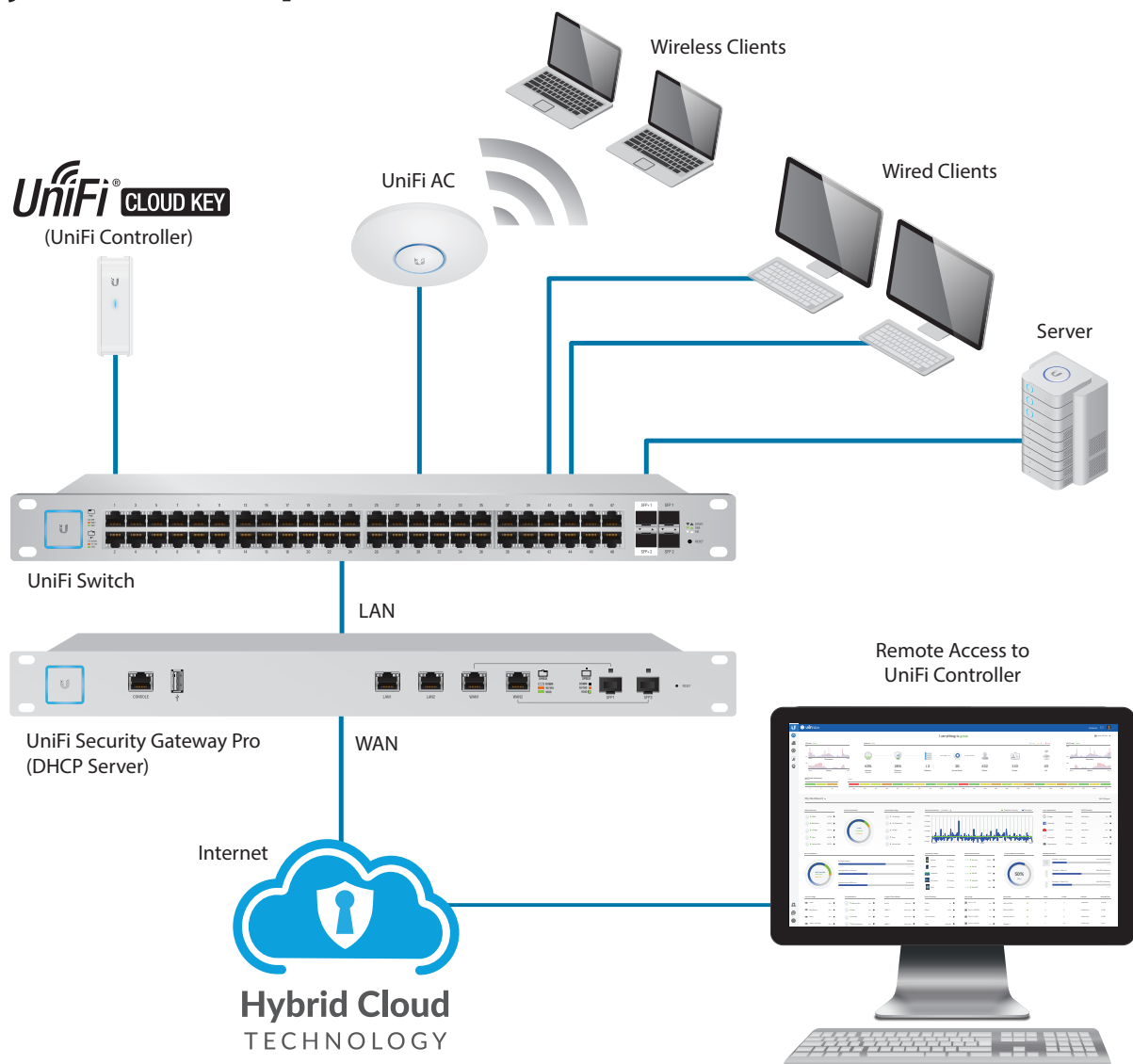
Hybrid Cloud Technology

The Ubiquiti® hybrid cloud configuration provides a secure, private SSO (Single Sign-On) to access all of your UniFi deployments from anywhere in the world. With the Ubiquiti hybrid cloud, a third-party hosted cloud service is not required, so all of your personal data and network information remains local and secure–the way it should be.

Incredible, Agile Scalability

Add, provision, configure, monitor, and manage all of your UniFi devices, whether in one or thousands of private networks–all from a central control plane.

Easily accessible through any standard web browser, the UniFi Cloud Key is a powerful solution for managing your UniFi networks across the campus or across the globe.

System Example

Wireless Clients

UniFi AC

Wired Clients

UniFi ® CLOUD KEY
(UniFi Controller)

Server

UniFi Switch

LAN

UniFi Security Gateway Pro
(DHCP Server)

WAN

Remote Access to
UniFi Controller

Internet

Hybrid Cloud
TECHNOLOGY

UniFi Controller

Designed for convenient management, the UniFi Controller software allows admins to configure and monitor UniFi devices using a graphical user interface. There is no separate software, licensing, hosting, or support fee.

Multi-Site Management

A UniFi Cloud Key installed at each deployment site provides an always-on, private UniFi cloud service. Every site is accessible through its assigned secure SSO. Each UniFi Cloud Key is independent with its own network monitoring, configuration, maps, statistics, and admin accounts.

Improved User Experience

Redesigned to be more intuitive and easier to navigate, the new UI raises the bar for enterprise network management efficiency. Important network details are logically organized for a simplified, yet powerful, interface.

Network Overview

A comprehensive overview of your network health is readily available in the new dashboard. Monitor your network's vitals and make on-the-fly adjustments as needed.

Detailed Analytics

Use the configurable reporting and analytics to monitor large user groups and expedite troubleshooting.

LAN/WLAN Groups

The UniFi Controller can manage flexible configurations of large deployments. Create multiple LAN and WLAN groups and assign them to the respective UniFi devices.

Wi-Fi Management

Use the UniFi Controller to provision UniFi APs, configure wireless networks, map out networks, and quickly manage system traffic. Powerful Wi-Fi management features include:

- RF monitoring and device mapping
- Detailed RF performance analysis
- Band steering support
- Guest portal/hotspot support

Router and Switch Management

Use the UniFi Controller to provision UniFi Security Gateways and Switches. Configure a variety of features:

- WAN/LAN/VLAN configuration
- Operation mode (switching, mirroring, or aggregate) per port
- PoE setting per port (device dependent)
- Jumbo frame and flow control services
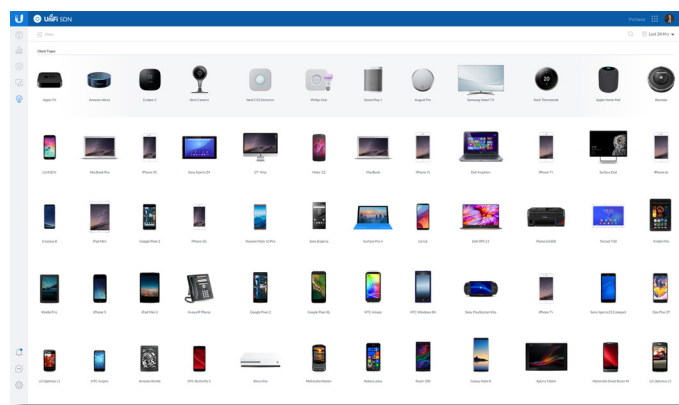- Monitor and analyze performance of each port
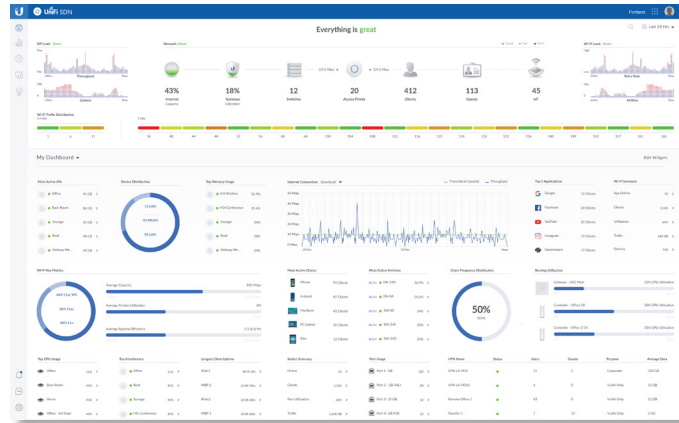
Dashboard

UniFi provides a visual representation and status information about different aspects of your network.
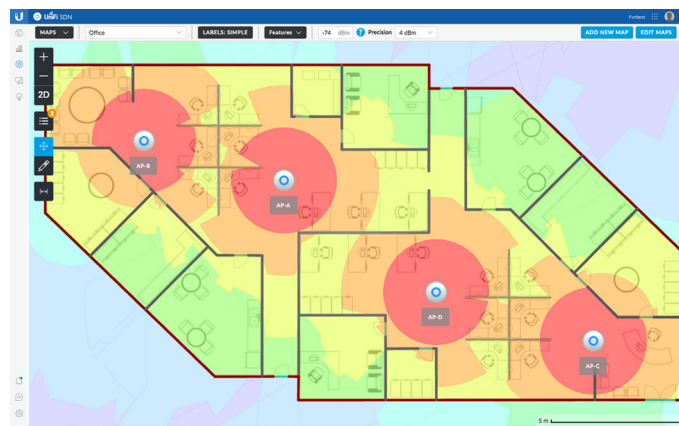
Wi-Fi RF Map

Monitor UniFi APs and analyze the surrounding RF environment.

Insights

UniFi displays the client types for a specific time period.

Specifications

UniFi Cloud Key	
Dimensions	21.7 x 43.4 x 121.9 mm (0.85 x 1.71 x 4.80")
Weight	110 g (3.88 oz)
Processor	Quad-Core SoC
Memory	2 GB DDR
Internal Storage	16 GB
Networking Interface	(1) 10/100/1000 Ethernet Port
Buttons	(1) Reset to Defaults Shutdown

Power Method
  PoE
 	
  USB Type C
	
	48V 802.3af or
	Passive PoE (Pairs 4, 5+; 7, 8 Return)
	5V

Power Supply	802.3af PoE or USB-C 5V, Minimum 1A
Max. Power Consumption	5W
Operating Temperature	0 to 40° C (32 to 104° F)
Operating Humidity	20 to 90% Noncondensing
Certifications	CE, FCC, IC

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