

## Specificații tehnice (F4.1)

Numărul procedurii de achiziție ocds-b3wdp1-MD-1559917420611 din 07.06.2019

Denumirea procedurii de achiziție: Echipament de rețea

Cod CPV	Denumirea bunurilor/serviciilor	Modelul articolului	Tara de origine	Produsul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Standard de referință
1	Lotul 1	3	4	5	6	7	8
32420000-3	Router ethernet	CCR1036-8G-2S+ Cloud Core Router 1036-8G-2S+ with Tilera Tile-Gx36 CPU (36-cores, 1.2Ghz per core), 4GB RAM, 2xSFP+ cage, 8xGbit LAN, RouterOS L6, 1U rackmount case, PSU, LCD panel	Letonia	MikroTik	Ethernet Router; Rack mount carcasa; 8x Gigabit Ethernet ports; 2xSFP+ ports (DDMI support); CPU Minim 36 cores x 1.2GHz; Minim 4GB SODIMM DDR3 RAM; Storage size minim 1 GB; AC input range 100-240; Memory card support (microSD); 1x Serial port DB9 RS232C; 1x USB slot type microUSB type AB; CPU temperature monitor; Current Monitor; PCB temperature monitor; Voltage Monitor; Fan speed controlled; 41.5mpps; Up to 28Gbit/s throughput; Garantie minim 36 luni NBD	Ethernet Router; Rack mount carcasa; 8x Gigabit Ethernet ports; 2xSFP+ ports (DDMI support); CPU Minim 36 cores x 1.2GHz; Minim 4GB SODIMM DDR3 RAM; Storage size minim 1 GB; AC input range 100-240; Max power consumption 78W; Memory card support (microSD); 1x Serial port DB9 RS232C; 1x USB slot type microUSB type AB; CPU temperature monitor; Current Monitor; PCB temperature monitor; Voltage Monitor; Fan speed controlled; Dimensiuni 355x145mm55mm; 41.5mpps faspah; Up to 28Gbit/s throughput; Garantie 36 luni NBD	
32420000-3	Lotul 2						
32420000-3	Switch	CRS326-24G-2S+RM Cloud Router Switch 326-24G-2S+RM with 800 MHz CPU, 512MB RAM, 24xGigabit LAN, 2xSFP+ cages, RouterOS L5 or SwitchOS (dual boot), 1U rackmount case, PSU	Letonia	MikroTik	Switch cu management ; Rack mount carcasa; 24x 10/100/1000 Ethernet ports; 2x SFP+ port suport 1.25 Gb SFP si 10 Gb SFP+; 26 port non blocking wire speed Switch Chip; 1x RJ45 serial port; Minimum 800 Mhz CPU; Minimum 512 MB RAM; Storage size minim 16MB; Passive PoE in 11-30 V; OS featuring: Non-blocking Layer 2 switching capacity;	Switch cu management ; Rack mount carcasa; 24x 10/100/1000 Ethernet ports; 2x SFP+ port suport 1.25 Gb SFP si 10 Gb SFP+; 26 port non blocking wire speed Switch Chip; 1x RJ45 serial port; Minimum 800 Mhz CPU; Minimum 512 MB RAM; Storage size minim 16MB; Passive PoE in 11-30 V; OS featuring: Non-blocking Layer 2 switching capacity;	



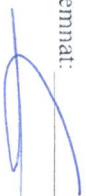
32420000-3	Switch	Cloud Router Switch 309-1G-8S+1N with Dual core 800MHz CPU, 512MB RAM, 1xGigabit LAN, 8 x SFP+ cages, RouterOS L5 or SwitchOS (dual boot), passive desktop case, rackmount ears, PSU	Letonia	Mikro Tik	16K host table, IEEE 802.1Q VLAN, suport pina la 4K simultan VLANs, Port isolation, Port security, Broadcast storm control, Port mirroring of ingress/egress traffic, Rapid Spanning Tree Protocol, Access Control List, neighbor discovery, SNMP v1, Web-based GUI, Telnet, SSH, Garantie minim 36 luni NBD	minimă 16MB; Passive PoE in 11-30 V; OS featuring: Non-blocking Layer 2 switching capacity, 16K host table, IEEE 802.1Q VLAN, suport pina la 4K simultan VLANs, Port isolation, Port security, Broadcast storm control, Port mirroring of ingress/egress traffic, Rapid Spanning Tree Protocol, Access Control List, neighbor discovery, SNMP v1, Web based GUI, Garantie 36 luni NBD	
32420000-3	Lotul 3				Switch cu management, min 8x SFP+ ports cu suport suport 1.25 Gb SFP si 10 Gb SFP+, Min 1x 10/100/1000 Ethernet ports; Minimum 800 Mhz CPU; Minimum 512 MB RAM; Storage size minim 16MB; Min 1x Serial port RS232; PoE in 802.3af/at; OS featuring: Non-blocking Layer 2 switching capacity, 16K host table, IEEE 802.1Q VLAN, suport pina la 4K simultan VLANs, Port isolation, Port security, Broadcast storm control, Port mirroring of ingress/egress traffic, Rapid Spanning Tree Protocol, Access Control List, neighbor discovery, SNMP v1, Web-based GUI, Telnet, SSH, Garantie minim 36 luni NBD	Switch cu management, 1x 10/100/1000 Ethernet ports; 8x SFP+ ports; Dual Core CPU nominal frequency 800 MHz; Size of RAM: 512 MB; Storage size: 16 MB FLASH; Serial port RS232; PoE in 802.3af/at; Non-blocking Layer 2 switching capacity, 16K host table, IEEE 802.1Q VLAN, suport pina la 4K simultan VLANs, Port isolation, Port security, Broadcast storm control, Port mirroring of ingress/egress traffic, Rapid Spanning Tree Protocol, Access Control List, neighbor discovery, SNMP v1, Web-based GUI, Telnet, SSH, Garantie 36 luni NBD	
32420000-3	SFP Transceiver	Pair of BIDI SFP1.25G 5KM SC WDM	China	Do Network Limited	SFP 1.25G Tx1310/Rx1550nm 5KM SC WDM / SFP 1.25G Tx1550/Rx1310nm 5KM SC WDM, Compatibile cu routere si switch solicitate la Lotul 1, 2 Garantie minim 36 luni NBD	SFP 1.25G Tx1310/Rx1550nm 5KM SC WDM / SFP 1.25G Tx1550/Rx1310nm 5KM SC WDM Garantie minim 36 luni NBD	





32420000-3	Lotul 4	ACCES POINT	Ubiquiti UniFi AC High Density (UAP-AC-HD)	USA	Ubiquiti Networks	Tip: 802.11ac Wave 2 Enterprise Wi-Fi Access Point; dirijarea cu ajutorul Wireless Controller; Posibilitatea de montare pe tavan si perete cu toate materialele necesare in complet; Beamforming; Radio Hardware Acceleration; Simultaneous Dual-Band 4x4 Multi-User MIMO Specificatie tehnica: 2.4 GHz MIMO (4x4 800 Mbps) + 5 Ghz MIMO (4x4 1733 Mbps); 2x Dual-Port, Dual-Polarity Antennas 2,4GHz 3 dBi each; 2x Dual-Port, Dual-Polarity Antennas 5GHz 4 dBi each; Support: Multiple SSID, VLAN, Advanced QoS, WMM, Hotspot, Guest Traffic Isolation; 802.3at PoE+ 44to57VDC; Maximum TX Power: 2.4 GHz - 25 dBm; 5 GHz - 25 dBm Porturi: 2x 10/100/1000 Ethernet Port Performanta: Sa fie asigurate minim 200 conexiuni paralele. Protocoale: 802.11 a/b/g/n/ac/ac-wave2 Wireless Security: WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES) 802.11w/PMF Garantie: minim 24 luni NBD	802.11ac Wave 2 Enterprise Wi-Fi Access Point; Mounting Wall/Ceiling (Kits Included); UniFi Controller management support; Beamforming; Radio Hardware Acceleration; Simultaneous Dual-Band 4x4 Multi-User MIMO; 2.4 GHz MIMO (4x4 800 Mbps) + 5 Ghz MIMO (4x4 1733 Mbps); 2x Dual-Port, Dual-Polarity Antennas 2,4GHz 3 dBi each; 2x Dual-Port, Dual-Polarity Antennas 5GHz 4 dBi each; Support: Multiple SSID, VLAN, Advanced QoS, WMM, Hotspot, Guest Traffic Isolation; 802.3at PoE+ 44to57VDC; Maximum TX Power: 2.4 GHz - 25 dBm; 5 GHz - 25 dBm Porturi: 2x 10/100/1000 Ethernet Port; Concurrent Clients 1000+; Wi-Fi Standards 802.11 a/b/g/n/t/k/v/ac/ac-wave2; Wireless Security WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES), 802.11w/PMF; Garantie 24 luni NBD	
TOTAL								

Semnat:




Numele, Prenumele: Cioban Alexei

În calitate de: Director

Ofertantul: IT-LAB GRUP SRL

Adresa: mun. Chisinau, str-la Studentilor 2/4 of 217

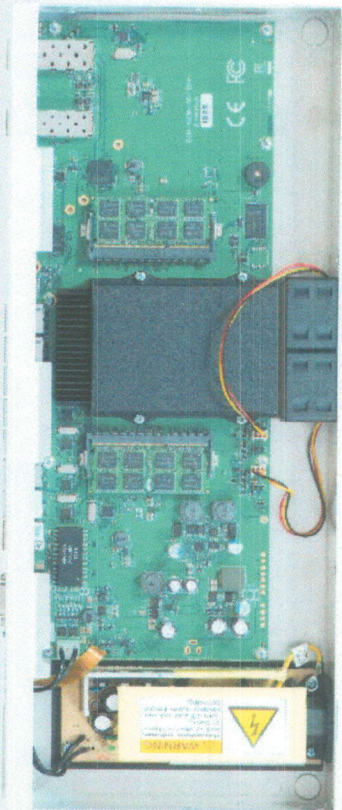
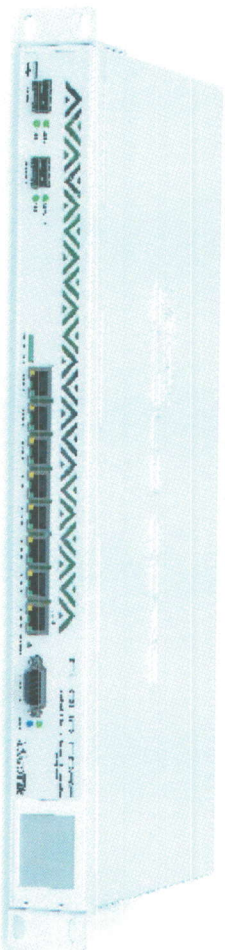
# Cloud Core Router

## CCR1036-8G-2S+

Our fastest router has now become even better - the new CCR1036-8G-2S+ now has two SFP+ ports for 10G interface support (SFP+ module available separately). It uses the same 36 core Tilera CPU as our other CCR1036 model, and delivers the same performance, but now, ten gigabit links are possible.

The device comes in a 1U rackmount case, has two SFP+ ports, eight Gigabit ethernet ports, a serial console cable and a USB port.

The CCR1036-8G-2S+ has two SODIMM slots, by default it is shipped with 4GB of RAM, but has no memory limit in RouterOS (will accept and utilize 16GB or more). Also available now, the EM model with 16GB of RAM!



New generation CPU	Highest performance	Full set of features
<ul style="list-style-type: none"> <li>• 36 core CPU</li> <li>• 1.2GHz clock per core</li> <li>• 12 Mbytes total on-chip cache</li> <li>• State of the art TILE GX architecture</li> </ul>	<ul style="list-style-type: none"> <li>• 8 mpps standard forwarding</li> <li>• 41.5 mpps fastpath forwarding (write speed for all ports)</li> <li>• Up to 28Gbit/s throughput</li> </ul>	<ul style="list-style-type: none"> <li>• 1U rackmount case</li> <li>• 8x Gigabit ports</li> <li>• 2x SFP+ ports</li> <li>• Color touchscreen LCD</li> <li>• Ports directly connected to CPU</li> </ul>

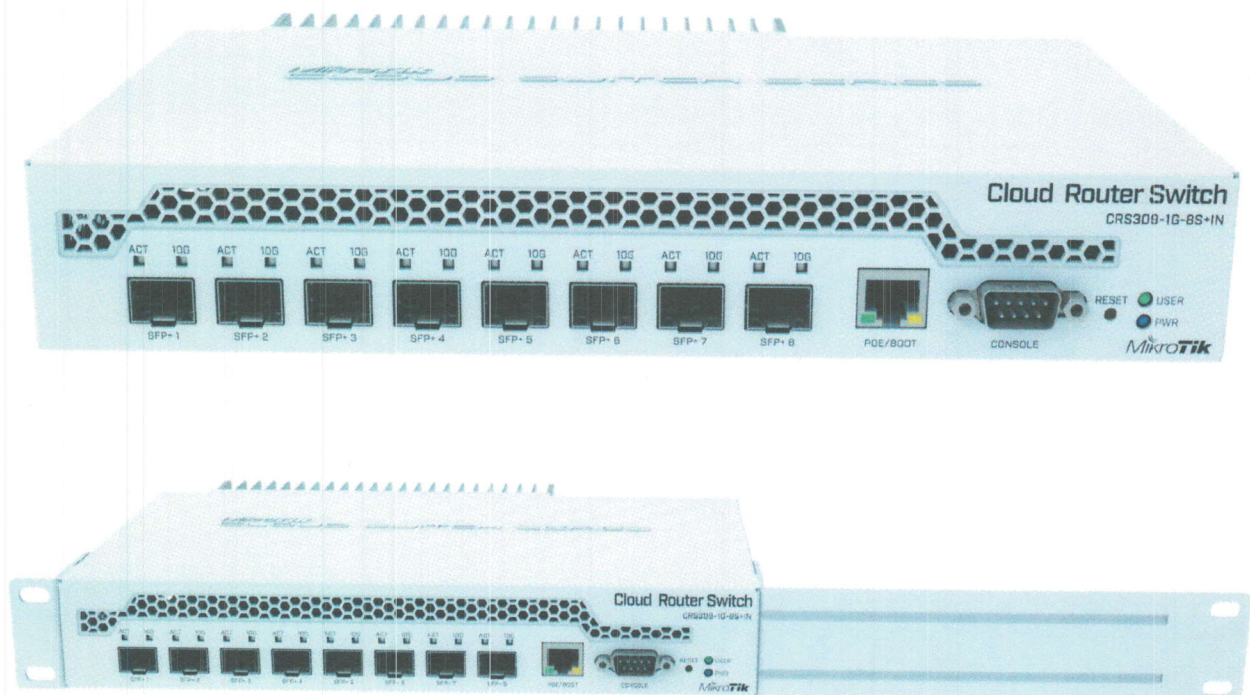
CPU	Tilera Tile-Gx36 CPU (36-cores, 1.2Ghz per core)
Memory	Two SODIMM DDR3 slots, 4GB (2x2GB) installed (no hardware or software max limit) CCR1036-8G-2S+EM: 16GB (2x8GB) RAM installed
Ethernet	Eight 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDIX
SFP	Two 10G Ethernet SFP+ cages (Mini-GBIC, SFP module not included), DDMM support
Expansion	microUSB port, host and device mode
Storage	1GB Onboard NAND
Serial port	One DB9 RS232C asynchronous serial port
Extras	Reset switch, speed controlled fan, beeper, voltage, current and temperature monitoring
Power options	IEC C14 standard connector 110/220V (PSU included), up to 60W power consumption
Board dimensions	355x145mm55mm
Temperature	Max ambient temperature 50° @ 1.2GHz; 70° @ 1GHz CPU core frequency
OS	MikroTik RouterOS v6 (64bit), Level 6 license
Included	Router in a 1U case with LCD, PSU, power cable, usb cable



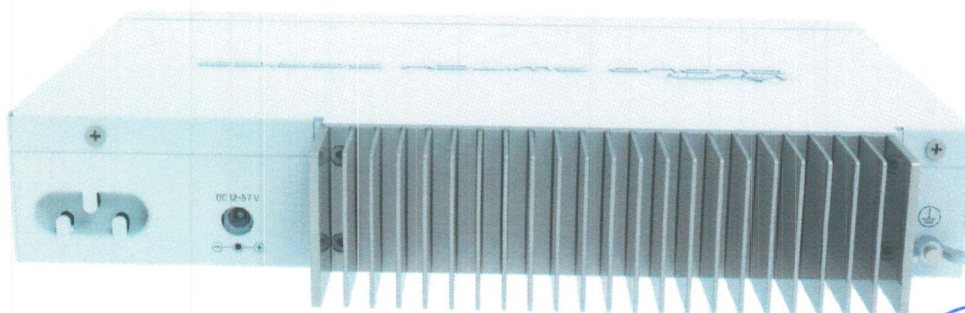
## CRS309-1G-8S+IN

The CRS309-1G-8S+ is a very compact, yet powerful networking switch. It has eight SFP+ slots, supporting up to 10 Gbit module in each, which results in a total switching capacity of 162 Gbps and total non-blocking throughput of 81 Gbps.

The device also has dual-core 800 MHz CPU, 512 MB RAM, a management Ethernet port with PoE power input, RS232 serial port, a grounding terminal and is capable of dual boot (choose which operating system you prefer, RouterOS, or SwOS).



The compact and sleek metallic enclosure also acts as a heatsink, making this device passively cooled - no fan noise and no dust accumulation inside. Special rackmount ears for installing unit into the standard rack are provided.



## Specifications

Product code	CRS309-1G-8S+IN
CPU	Dual-core 98DX8208 800 MHz
RAM	512 MB
Storage	Flash 16 MB
Switch chip model	98DX8208
Dimensions	141 x 115 x 28 mm
Operating temperature	-40°C .. +70°C tested
Operating system	SwOS / RouterOS (Dual boot)
License level	5

## Interfaces

10/100/1000 Ethernet ports	1
10G SFP+ ports	8
Serial port	RS232

## Powering

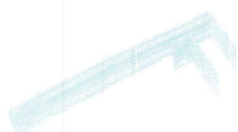
PoE in	Yes, Passive POE and 802.3af/at compliant
Supported input voltage	12 - 57 V (DC jack), 18 - 57 V (PoE in)
Number of DC jacks	1
Max power consumption	23 W / 17 W (without attachemnts)

## Included parts

Power adapter 24 V 1.2 A

Screw kit

Rack ears





## CRS326-24G-2S+RM

We are announcing a special version of the CRS326-24G-2S+RM switch, with added RouterOS as a second boot option, the new CRS326-24G-2S+RM.

This is a SwOS/RouterOS powered 24 port Gigabit Ethernet switch with two SFP+ ports, wire speed connectivity with several new switching features!

The "Dual boot" feature that allows you to choose which operating system you prefer to use, RouterOS or SwOS. If you prefer to have a simplified switch only OS with more switch specific features, use SwOS. If you are used to Winbox and would like the ability to use routing and other Layer 3 features on some ports in your CRS, boot and use RouterOS. You can select the desired operating system from RouterOS, from SwOS or from the RouterBOOT loader settings.

It gives you all the basic functionality for a managed switch, plus more: allows to manage port-to-port forwarding, apply MAC filter, configure VLANs, mirror traffic, apply bandwidth limitation and even adjust some MAC and IP header fields. SFP cage supports both 1.25 Gb SFP and 10 Gb SFP+ modules.

## Specifications

Product code	CRS326-24G-2S+RM
CPU	98DX3236A1 800 MHz
RAM	512 MB
Storage type	Flash, 16 MB
Switch chip model	98DX3236A1
10/100/1000 Ethernet ports	24
SFP+ cages	2
Operating system	SwOS /RouterOS (Dual boot)
Supported input voltage	9 - 30 V (jack or passive PoE)
Dimensions	440 x 144 x 44 mm
Operating temperature	-40°C .. +60°C tested
Max power consumption	24 W
Serial port	RJ45

## SwOS Features

- Non-blocking Layer 2 switching capacity
- 16K host table
- IEEE 802.1Q VLAN
- Supports up to 4K VLANs
- Port isolation
- Port security
- Broadcast storm control
- Port mirroring of ingress/egress traffic
- Rapid Spanning Tree Protocol
- Access Control List
- MikroTik neighbor discovery
- SNMP v1
- Web-based GUI

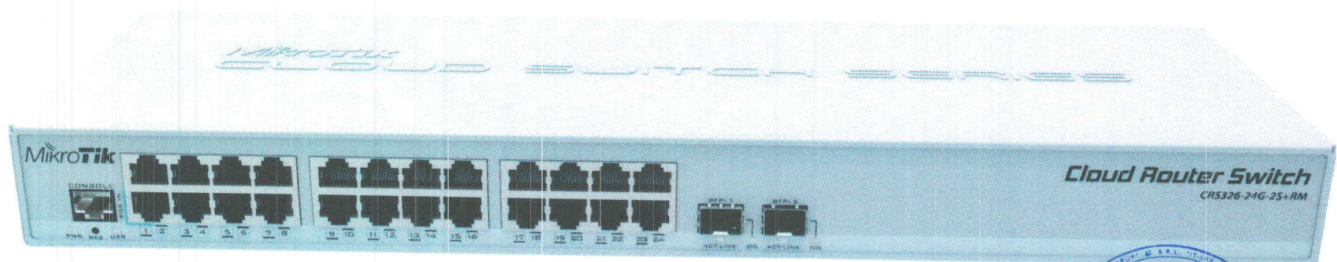
## Included



24 V 1.2 A power adapter



Rack ears





# DATASHEET



## UniFi<sup>®</sup> HD

802.11ac Wave 2 Enterprise Wi-Fi Access Point

Model: UAP-AC-HD

Simultaneous Dual-Band 4x4 Multi-User MIMO

Four-Stream 802.11ac Wave 2 Technology

802.3at PoE+ Compatibility







## 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 HD AP has a refined industrial design and can be easily installed using the included mounting hardware.

Easily accessible through any standard web browser and the UniFi 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.

## 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.



## 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 deploying the compact UniFi Cloud Key with built-in software.

**Powerful Hardware** The UniFi HD AP features the latest in Wi-Fi 802.11ac Wave 2 MU-MIMO 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 (or upgrade to a five-pack) and expand to thousands while maintaining a single unified management system.





# 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.

## View Your RF Environment

Use the RF environment functionality of the UniFi HD AP to detect and troubleshoot nearby interference, analyze radio frequencies, choose optimal AP placement, and configure settings.

## 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.

## 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 refunds.
- 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.

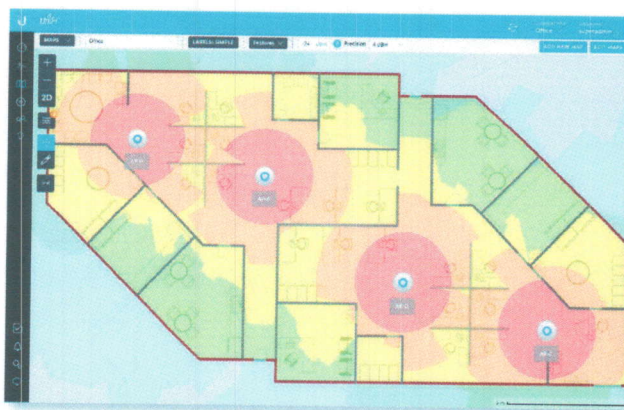
## WLAN Groups

The UniFi Controller can manage flexible configurations of large deployments. Create multiple WLAN groups and assign them to an AP's radio. Each WLAN can be VLAN tagged. Dynamic VLAN tagging per Wi-Fi station (or RADIUS VLAN) is also supported.



## Dashboard

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



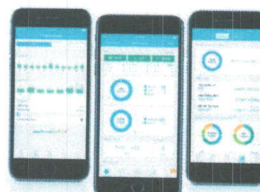
## RF Map

Monitor UniFi APs and analyze the surrounding RF environment.



## Statistics

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



## UniFi App

Manage your UniFi devices from your smartphone or tablet.



## 802.11ac Technology

Initial 802.11ac Wave 1 SU-MIMO (Single-User, Multiple Input, Multiple Output) technology allows an earlier-generation AP, such as the UniFi AC Pro AP, to communicate with only one client at a time.

802.11ac Wave 2 MU-MIMO (Multi-User, Multiple Input, Multiple Output) technology allows a Wave 2 AP, such as the UniFi HD AP, to communicate with multiple clients at the same time – significantly increasing multi-user throughput and overall user experience.

The following describes a 5-client scenario:

**MU-MIMO** Assuming the same conditions, a Wave 2 AP provides up to 75% improvement<sup>1</sup> overall over a Wave 1 AP. This improvement increases wireless performance and/or serves more clients at the same performance level.

**4x4 Spatial Streams** At any single time, a Wave 2 AP can communicate with the following MU-MIMO clients:

- four 1x1 clients
- two 2x2 clients
- one 2x2 client and two 1x1 clients
- one 3x3 client and one 1x1 client

A 4x4 Wave 2 AP delivers up to 33% greater performance<sup>1</sup> than a Wave 1 AP that is 3x3 in both radio bands.

**Real-World Performance** The UniFi HD AP is the first UniFi 802.11ac Wave 2 AP. Combining the performance increases from MU-MIMO technology and the use of 4x4 spatial streams, the UniFi HD AP delivers up to 125% greater performance<sup>1</sup> than a typical Wave 1 AP.

**Client Compatibility** For optimal performance, use MU-MIMO clients. SU-MIMO clients will also benefit and gain up to 10-20% greater performance when used with the UniFi HD AP.

<sup>1</sup> Actual performance values may vary depending on environmental and installation conditions.

## High-Density Scenarios

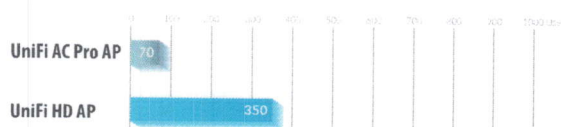
For high-density environments, such as a concert venue or outdoor fair where there are numerous clients in a relatively small space, we recommend the UniFi HD AP.

Both Wave 1 and Wave 2 APs offer 28 independent (non-overlapping) channels: three for the 2.4 GHz band and twenty-five for the 5 GHz band, including DFS channels.

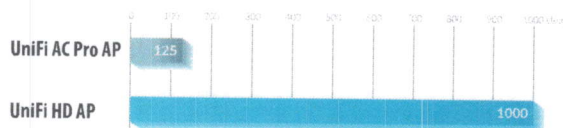
When you use the 2.4 GHz band in a high-density location, you encounter self-interference and channel saturation. When you use the 5 GHz band, you can deploy smaller cells (coverage areas), so you can support more clients in any cell that deploys more than one AP.

With the advantages of MU-MIMO technology and 4x4 spatial streams, the UniFi HD AP can support more than triple the number of users<sup>2</sup> than a typical Wave 1 AP.

### Recommended Maximum Number of Users



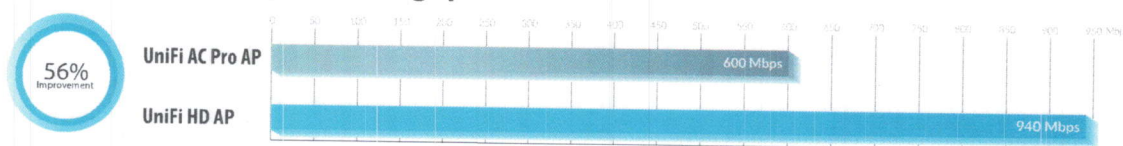
### Theoretical Maximum Number of Users



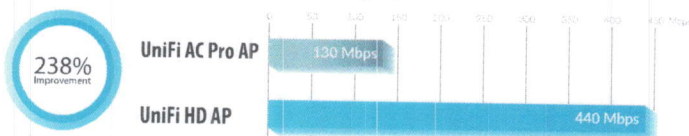
For more information, go to:  
[ubnt.link/UniFi-UAPs-High-Density](http://ubnt.link/UniFi-UAPs-High-Density)

<sup>2</sup> Actual numbers may vary depending on environmental and installation conditions.

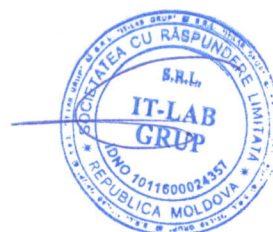
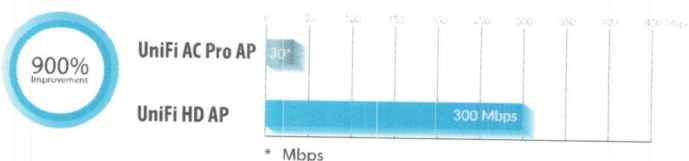
### Single-Client Aggregate Throughput



### 10-Client Aggregate Throughput



### 100-Client Aggregate Throughput



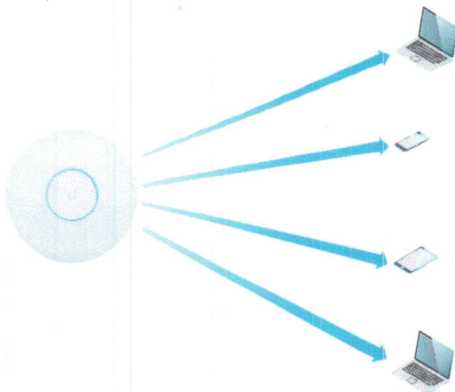
# Model Summary

## 802.11ac Wave 1 SU-MIMO

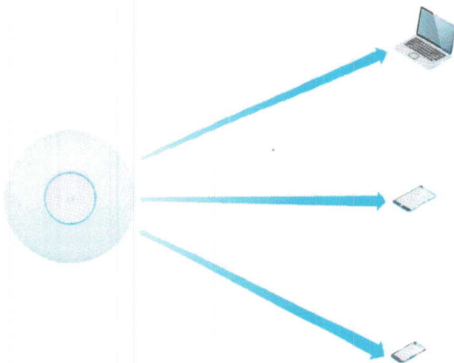


*SU-MIMO: A Wave 1 AP communicates with one client at a time.*

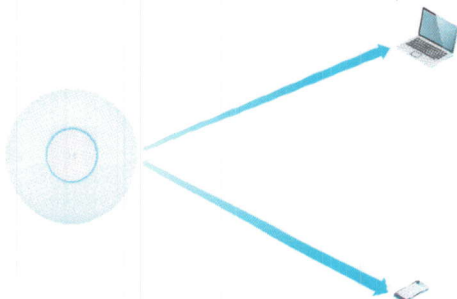
## 802.11ac Wave 2 MU-MIMO



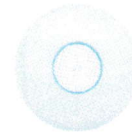
*MU-MIMO with 1x1 clients: The UniFi HD AP communicates with four 1x1 clients at a time.*



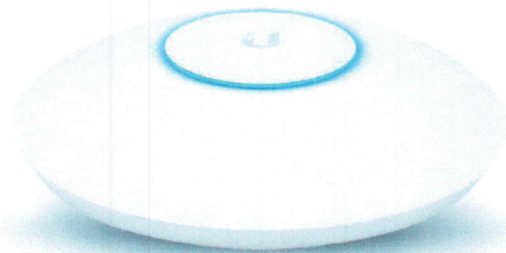
*MU-MIMO with 2x2 and 1x1 clients: The UniFi HD AP communicates with one 2x2 client and two 1x1 clients at a time.*



*MU-MIMO with 3x3 and 1x1 clients: The UniFi HD AP communicates with one 3x3 client and one 1x1 client at a time.*



	UAP-AC-HD
Environment	Indoor or Outdoor (Covered)
Simultaneous Dual-Band	✓
2.4 GHz Radio Rate	800 Mbps
2.4 GHz MIMO	4x4
5 GHz Radio Rate	1733 Mbps
5 GHz MIMO	4x4
Secondary Ethernet Port	✓
PoE Mode	802.3at PoE+
Ceiling Mount	✓
Wall Mount	✓
Wireless Uplink	✓
DFS Certification	✓





## Hardware Overview

Deploy the UniFi HD AP in high-density environments requiring maximum wireless performance. The UniFi HD AP features simultaneous, dual-band, 4x4 MU-MIMO technology and convenient 802.3at PoE+ compatibility. Available in single- and five-packs.

**Easy Mounting** Its sleek design seamlessly integrates into any environment (all accessories included) and is compatible with existing UAP-AC-PRO mounts.

**LED** The unique LED provisioning ring provides administrator location tracking and alerts for each device.

**Dual Gigabit Ethernet** The UniFi HD AP offers a secondary port available for bridging.

**Superior Processing Power** The UniFi HD AP is capable of complex operations (guest control, filtering, and other resource-intensive tasks) that may slow down a lesser-equipped AP.

**Power over Ethernet (PoE) Standard** The UniFi HD AP can be powered by an 802.3at PoE+ compliant switch. We recommend powering your UniFi devices with a UniFi PoE Switch (sold separately).

**UniFi PoE Switch** Available in 8\*, 16, 24, and 48-port versions with multiple power output options, the UniFi PoE Switch conveniently offers auto-sensing IEEE 802.3af PoE/802.3at PoE+.

\* The US-8 and US-8-60W do not support 802.3at PoE+.



# UAP-AC-HD Specifications

UAP-AC-HD	
Dimensions	220 x 220 x 48.1 mm (8.66 x 8.66 x 1.89")
Weight	700 g (1.54 lb)
With Mounting Kits	830 g (1.83 lb)
Networking Interface	(2) 10/100/1000 Ethernet Ports
Buttons	Reset
Power Method	802.3at PoE+
Supported Voltage Range	44 to 57VDC
Power Supply	UniFi Switch (PoE)
Power Save	Supported
Beamforming	Supported
Maximum Power Consumption	17W
TX Power	
2.4 GHz	6-25 dBm
5 GHz	6-25 dBm
Antennas	
2.4 GHz	(2) Dual-Port, Dual-Polarity Antennas, 3 dBi each
5 GHz	(2) Dual-Port, Dual-Polarity Antennas, 4 dBi each
Wi-Fi Standards	802.11 a/b/g/n/r/k/v/ac/ac-wave2
Wireless Security	WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES) 802.11w/PMF
BSSID	Up to 8 per Radio
Mounting	Wall/Ceiling (Kits Included)
Operating Temperature	-10 to 70° C (14 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC

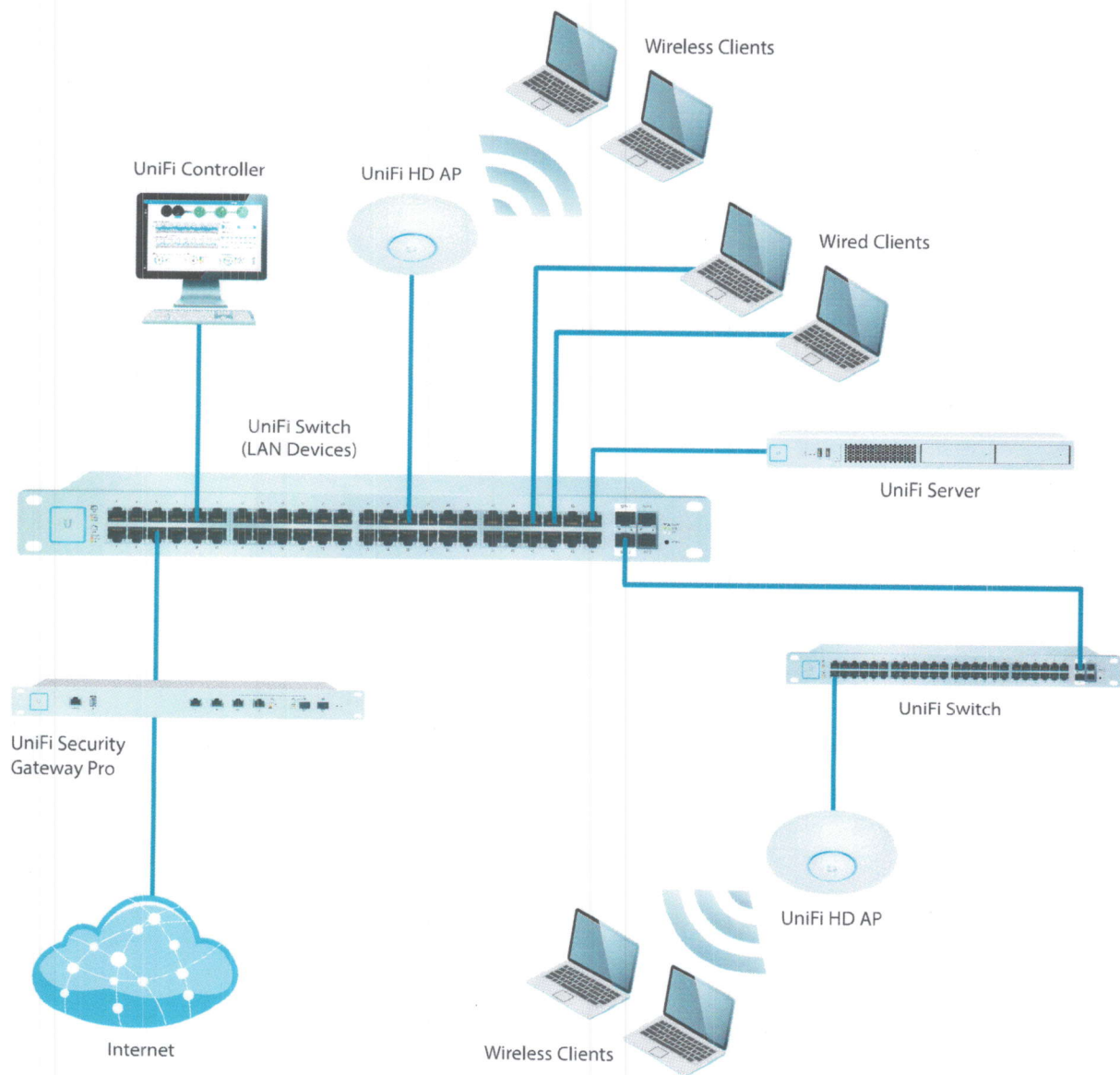
Advanced Traffic Management	
VLAN	802.1Q
Advanced QoS	Per-User Rate Limiting
Guest Traffic Isolation	Supported
WMM	Voice, Video, Best Effort, and Background
Concurrent Clients	1000+

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 1.7 Gbps (MCS0 - MCS9 NSS1/2/3/4, VHT 20/40/80) 58 Mbps to 1.7 Gbps (MCS0 - MCS9 NSS1/2, VHT 160)
802.11b	1, 2, 5.5, 11 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps











## System Example



# 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



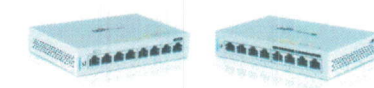
Requires an Instant 802.3af Gigabit PoE Converter: INS-3AF-I-G or INS-3AF-O-G



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](http://dl.ubnt.com/datasheets/unifi/UniFi_Switch_8_DS.pdf)



UniFi PoE Switches:

[dl.ubnt.com/datasheets/unifi/UniFi\\_PoE\\_Switch.pdf](http://dl.ubnt.com/datasheets/unifi/UniFi_PoE_Switch.pdf)

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