DATASHEET

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AP7-PRO

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Next-Level ELEVATED WiFi 7

The Alta Labs AP7-Pro WiFi 7 Access Point features the same sleek, elegant design as our first-generation access points, with a slightly larger form factor to house the more complex WiFi 7 hardware. Designed to blend in with existing Alta Labs environments or just look stylish in new deployments, the AP7-Pro seamlessly integrates into corporate, commercial, and residential environments. The AP supports PoE++ to accommodate the demands of the high-performance 10 Gbps Ethernet connection.

The AP7-Pro is a Tri-Band access point, providing 2x2 MIMO radios on the 2.4 GHz and 6 GHz bands and 4x4 MIMO connectivity on the 5 GHz band for blazing-fast speeds and superior range.

Features

- WiFi 7
- 10 Gbps Ethernet
- Superior Range and Performance
- 5 & 6 GHz Mesh Functionality
- Vouchers
- One-Click Passpoint and Carrier Offload
- Scalable Cloud-Based Management
- Mobile App
- Advanced Filtering - DPI Engine
- AltaPass™ Multi-Password Technology*
- Hotspot Functionality
- On-The-Fly Changes and Scanning
- Wireless Network Color Coding
- SSID Broadcasting Flexibility
- Customizable Dashboard
- Status Snapshots
- Device Cards

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High Performance 10 GBPS Ethernet

Designed with the future in mind, the AP7-Pro includes a blazing-fast 10 Gbps Ethernet port. Take full advantage of the maximum speed that your WiFi 7 Access Point can deliver by connecting your wired connection at 10 Gbps.

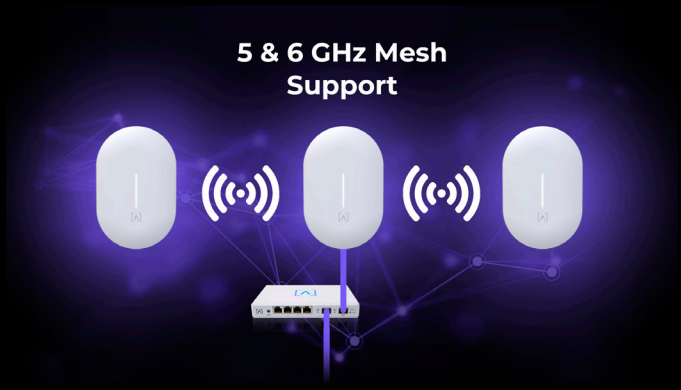


Superior Range and Performance

Our proprietary antenna design provides superior range and performance. The AP7-Pro offers Tri-Band connectivity, featuring four 5 GHz antennas, two 2.4 GHz antennas, and two 6 GHz antennas. Seamless roaming is fully automatic with support for the 802.11 k, v, and r standards. The AP7-Pro utilizes intelligent mesh formation for maximum throughput.

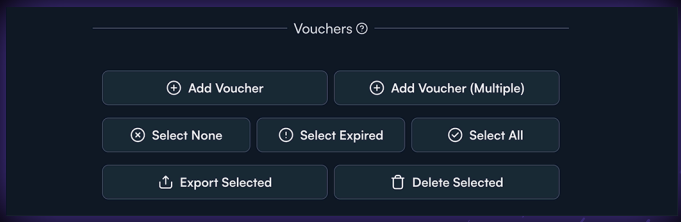


5 & 6 GHz Mesh Functionality



The AP7-Pro supports Mesh functionality, including the 5 and 6 GHz frequency spectrum, allowing you to take full advantage of your WiFi 7 access point. Mesh technology can extend your WiFi network to areas that may be difficult or unreachable with wired Ethernet.

Vouchers



Provide guests with temporary access to your WiFi network using vouchers. Perfect for hospitality, restaurant, and other venues, vouchers can be given to your guests as a simple QR code that they scan with their mobile device. This provides a limited-time, limited-bandwidth connection using several easily customizable parameters in the management portal.

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One-Click Passpoint and Carrier Offload



When Alta Labs access points have AltaBoost enabled, cellular devices can use your Alta Labs WiFi network as if it were a cell tower. In simple terms, it takes your phone's cellular data (and even voice calls) and routes them securely over your WiFi connection. AltaBoost uses a technology called Passpoint (also known as Hotspot 2.0) to broadcast a special WiFi network that participating mobile carriers automatically recognize. Connectivity is seamless and secure, using the user's existing cellular credentials automatically. Most major carriers are supported. The Alta Control cloud-based management platform provides the easiest method for enabling AltaBoost and other Passpoint providers with a single button click.

Alta Labs is the first and only networking vendor to fully support "Connect Info" Quality of Experience metrics on WiFi 7 in 6 GHz, required by major telecom carriers to achieve maximum performance with carrier offloading.

ALTA BOOST™

Scalable Cloud-Based Management

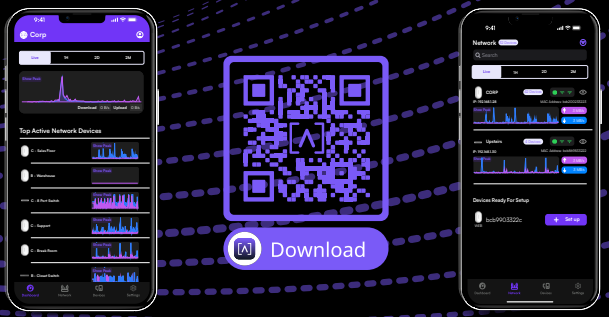
Alta Labs provides an intuitive and easy-to-use cloud-based management interface for Alta Labs products. Designed for optimum scalability using a high-availability architecture for the ultimate in convenience and worldwide accessibility. Built on a worldwide content delivery network to optimize response and latency, our global cloud infrastructure ensures geographically optimized connectivity through our redundant network.

Deploy and manage multiple sites quickly and easily. Add, delete, or rename sites instantly. Toggle between sites from a site selection drop-down. Each site contains its own data set.



Mobile App

Monitor and manage your networks from the convenience of your mobile device using the Alta Networks app. Sign up for an Alta Labs account using just your name, email, and password or sign in using your Google or Apple account.



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Advanced Filtering - DPI Engine

The Alta Labs access points have a powerful built-in Deep Packet Inspection (DPI) engine. By incorporating this feature directly in the access points, there is no need to purchase additional hardware to take advantage of this powerful tool.

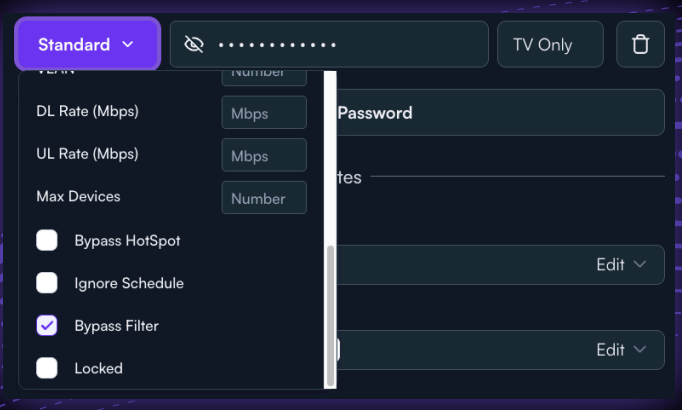
Restrict access to websites, applications, or application types. Filter settings are easily applied in the Alta Labs web management interface.

Select applications or application types in the Block Applications drop-down menu. Block websites by typing in their domain names in the Block Domains field.



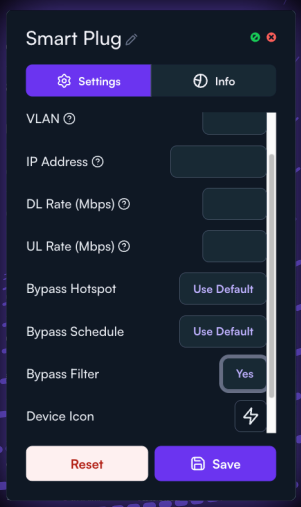
Password-Based Exceptions

There are many scenarios where users can't have or don't need their content filtered. The Alta Labs management interface allows you to bypass the site filter policy. Define a password to provide to users that bypasses the defined filter rules. If a hotspot has been created, it can also be bypassed. If a schedule has been defined, it can be ignored. Multiple password options can be defined using various combinations of the options but when using 6 GHz frequency, only the first password defined applies to the 6 GHz band. Multi-Password Technology works with 2.4 GHz and 5 GHz bands. Currently 6 GHz requires WPA3 security, which only allows one key per SSID.



Device Specific Exceptions

For instances where specific devices should not have their content filtered, adhere to a schedule, or bypass a hotspot, admins can allow individual devices to bypass the filter, schedule, and/or hotspot settings.



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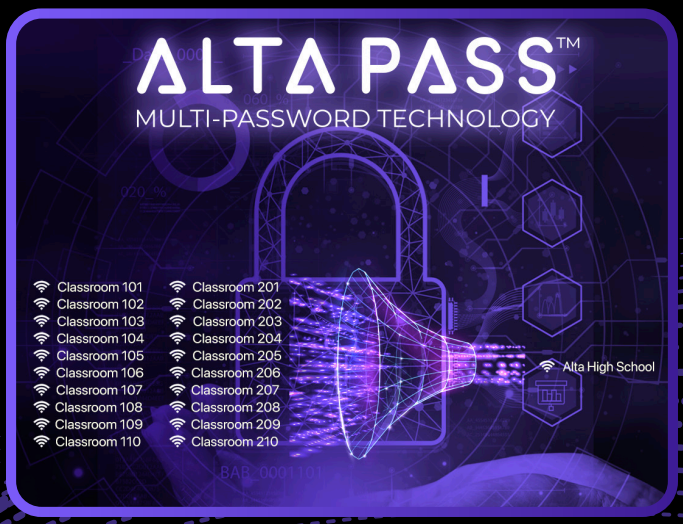
AltaPass™ Multi-Password Technology

AltaPass™ is Alta Labs' patented technology, US Patent No. 12771607, built into all Alta Labs access points. It allows clients to connect to the same wireless network SSID using different passwords. Clients are provided with different network and internet access levels based on the password they use to connect to the network.

When a password is created, select from one of the predefined standard use cases. The password can then also be associated with a specific upload or download rate, a VLAN, or set to bypass the filtering rules, the hotspot functionality, or to ignore the schedule.

- **Standard/Small** Typical network with less than 100 WiFi clients/devices
- **Large** Optimized for hundreds to thousands of WiFi clients/devices
- **IoT** Restricted to Internet and local incoming connections only
- **Internet only** Restricted to Internet only
- **Guest** Restricted to Internet and IoT devices

The preferences associated with the initial password will work on the 6 GHz operating frequency but Alta Labs is currently working with standards bodies for a solution for multi-password on the 6 GHz band. 6 GHz requires WPA3 Security, which only supports a single password SSID.



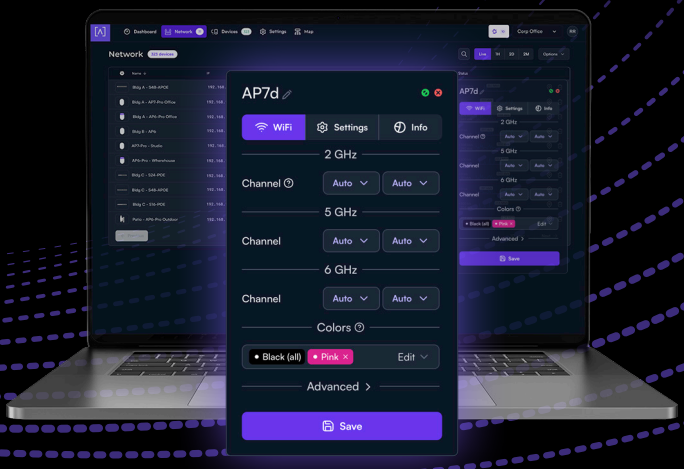
Hotspot Functionality

Built-in functionality to create your own local hotspot with a logo, title page, terms of service, and a final landing page. You also have the option to redirect to an external URL.



On-The-Fly Changes and Scanning

- Configuration changes do not require a reboot of your network. Changes can be made without taking your network down.
- Scan your AP environment without disrupting your WiFi network.

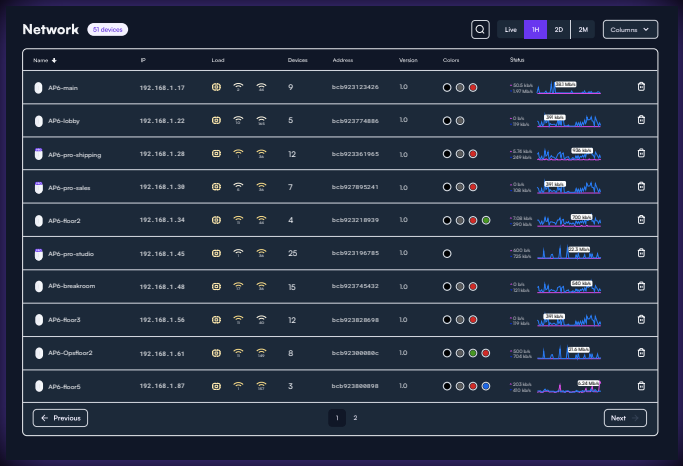


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Wireless Network Color Coding

Patent pending functionality that allows you to assign groups to wireless SSIDs and then assign membership to wireless access points.

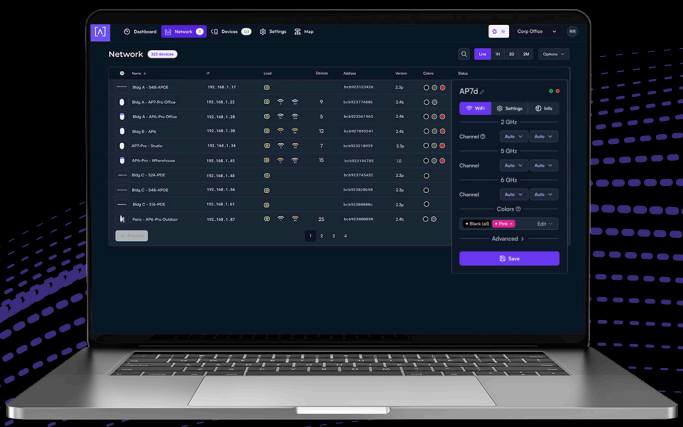


SSID Broadcasting Flexibility

In addition to standard functionality such as hiding your SSID, you can continue broadcasting your SSID during a “scheduled off” event. This provides network admins with the ability to grant users additional time on the network. A user can request access via a captive portal displayed when they try to access the network.

Customizable Dashboard

Customize your dashboard with the information you want to see: IP address, Load, number of devices, MAC address, firmware version, wireless network color assignment, and real-time status details. Details are sortable by column.

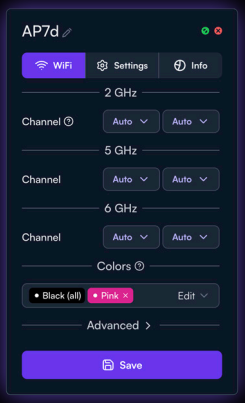


Status Snapshots

View upload and download throughput with a visual timeline on the dashboard for each AP displayed along with the number of connected devices, average processor load, channel load, and average connected devices. Select a snapshot of the last minute, last hour, last two days, or last two months.

Device Cards

Easily view connection details and configure your access points or client connections by clicking the device icon.



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SPECIFICATIONS

MECHANICAL

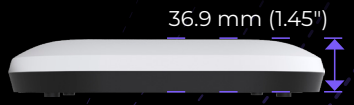
Dimensions	230 x 151.3 x 36.9 mm (9.06 x 5.96 x 1.45")
Weight	1.04 kg (2.3 lbs)
Enclosure	Top Cover: Polycarbonate, Bottom Cover: Milled Aluminum
Mount Material	Ceiling/Wall/Drop-Ceiling: Steel
Weatherproofing	None



HARDWARE

Network Interface	Ethernet, WiFi, Bluetooth
Management Interface	(1) 10 Gbps RJ45 Port
Button(s)	Reset/Factory Reset
LED	RGB
Power Method	PoE+ for up to 2.5 Gbps, PoE++ for up to 10 Gbps
Power Supply	PoE+ or PoE++ Enabled Network Switch, or 48V, 1.25A PoE Adapter (Optional)
Supported Voltage Range	42.5-57V DC
Power Consumption	Max: 30 W for POE+, 35 W for POE++, 12 W Typical
MIMO	6 GHz: 2x2, UL MU-MIMO, DL MU-OFDMA 5 GHz: 4x4, DL/UL MU-MIMO, DL/UL MU-OFDMA 2.4 GHz: 2x2, UL MU-MIMO, DL MU-OFDMA Explicit TX Beam-Forming
Throughput Rate	2.4 GHz: Up to 649 Mbps, 5 GHz: Up to 8.6 Gbps, 6 GHz: Up to 5.8 Gbps
Antenna Gain	2.4 GHz: 4 dBi, 5 GHz: 4.75 dBi, 6 GHz: 4.5 dBi
Mounting	Wall, Ceiling, Drop-Ceiling, Table Top
Operating Temperature	-30 to 50° C (-22 to 122° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, UK, FCC, IC (Visit Alta.inc for a Full List of Certifications)





MAX PHYSICAL TRANSMIT POWER

Max. Transmit Power	2.4 / 5 GHz: 30 dBm EIRP, 6 GHz: 27 dBm EIRP

The frequency and the maximum transmitted power in EU/UK are listed below:

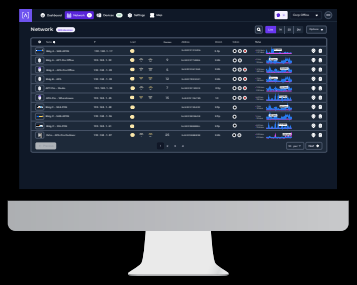
ETSI/CE TRANSMIT POWER LIMITS

Operating Frequency (MHz)	Max. RF Output Power
2412 - 2472	20 dBm (EIRP)
2402 - 2480 (Bluetooth)	7.40 dBm (EIRP)
5180 - 5240	23 dBm (EIRP)
5260 - 5320	23 dBm (EIRP)
5500 - 5700	30 dBm (EIRP)
5955 - 6415	23 dBm (EIRP)

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SOFTWARE



WiFi Standards	802.11a/b/g/n/ac/ax/be (WiFi 4/WiFi 5/WiFi 6/WiFi 7)
Roaming	802.11r/k/v
Wireless Security	2.4 GHz, 5 GHz: WPA2-Personal (PSK), WPA3-Personal (SAE), WPA-Enterprise (WPA2/WPA3) 6 GHZ: WPA3 - Personal (SAE), WPA3-Enterprise (192 bit)
Multiple SSID	48 (16 per Radio), Unlimited per Site
Ability to Limit Clients Per SSID	Yes
VLAN	802.1Q
Advanced QoS	802.11e
Guest Traffic Isolation	Supported
Concurrent Clients	500+
Zero Wait DFS	Yes
Intelligent WiFi Scheduling	Yes
Hotspot Functionality	Yes
Scalable To Stadiums	Yes
Seamless Per-Client Settings	VLAN, Device Type, Rate Limit, Hotspot/Schedule Exception
AltaPass	Yes*
DPI	Yes
Content Filtering	Yes
Customizable Dashboard	Yes
Status Snapshots	Yes

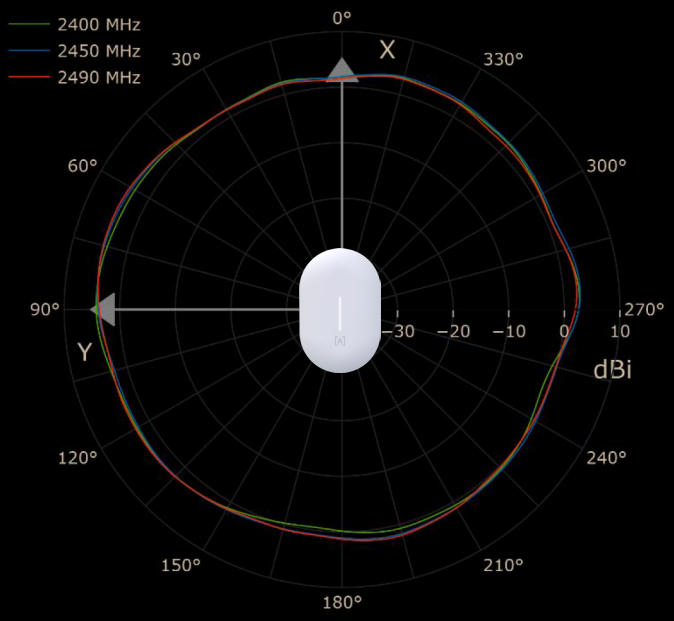
- Password-based assignment is not supported currently in 6 GHz due to industry standard limitations; however per-MAC assignment is supported in 6 GHz..

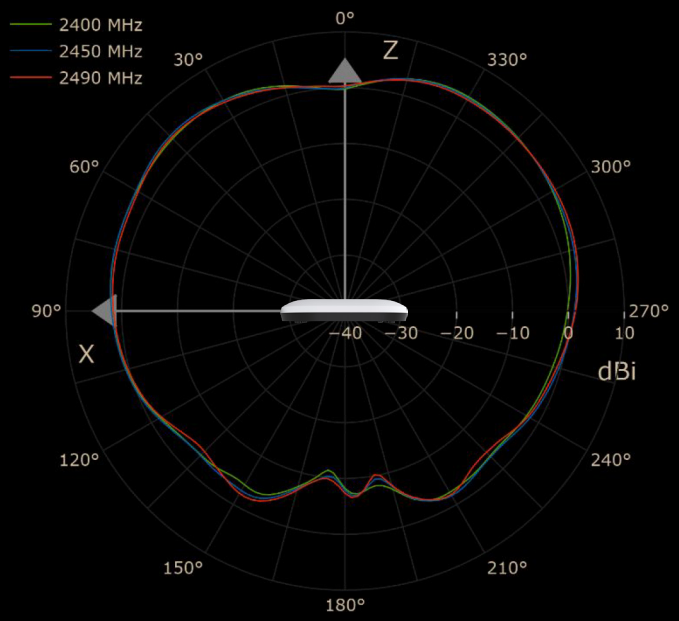
SUPPORTED DATA RATES

802.11a/g	6 Mbps to 54 Mbps
802.11b	1 Mbps to 11 Mbps
802.11n	6.5 Mbps to 600 Mbps (Up to MCS 31)
802.11ac	6.5 Mbps to 3.4 Gbps (Up to MCS 9)
802.11ax	2.4 GHz: Up to 574 Mbps, 5 GHz: Up to 4.8 Gbps, 6 GHz: Up 2.4 Gbps
802.11be	2.4 GHz: Up to 649 Mbps, 5 GHz: Up to 8.6 Gbps, 6 GHz Up to 5.8 Gbps

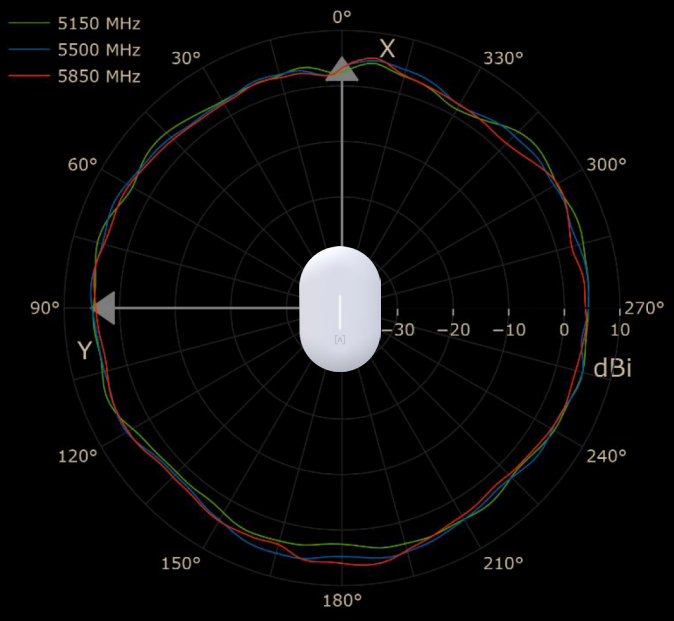
RADIATION PATTERNS

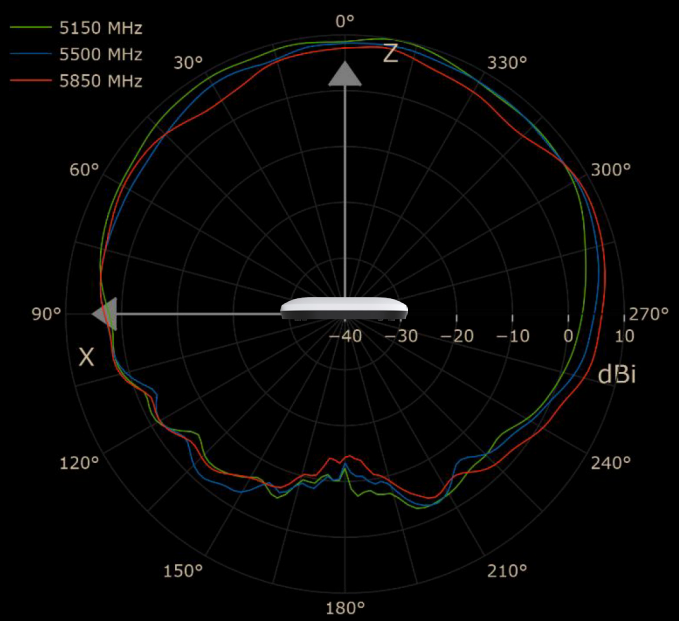
2.4 GHz





5 GHz

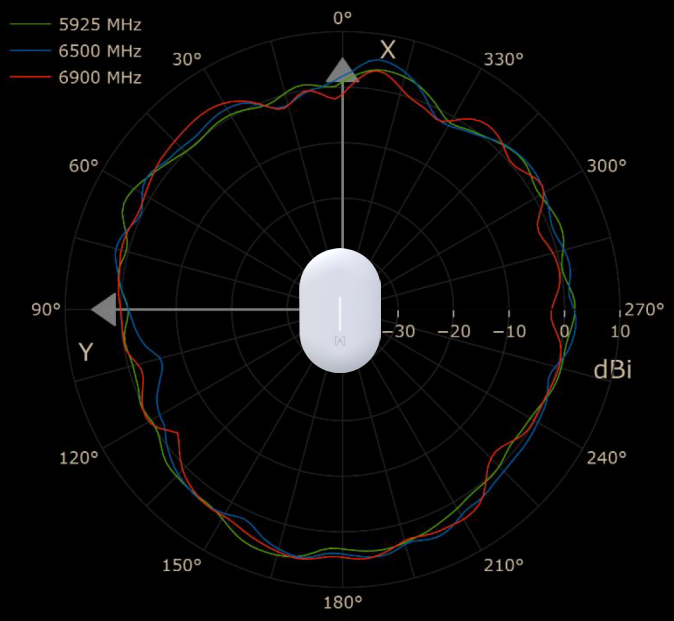


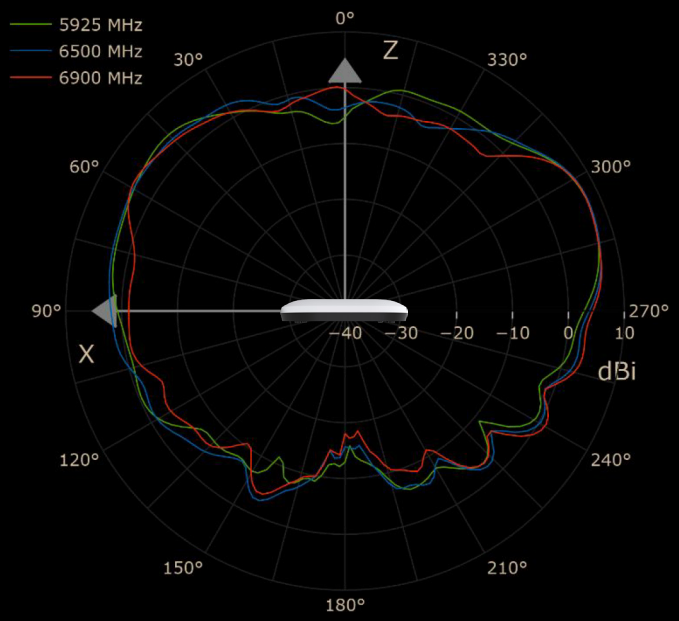


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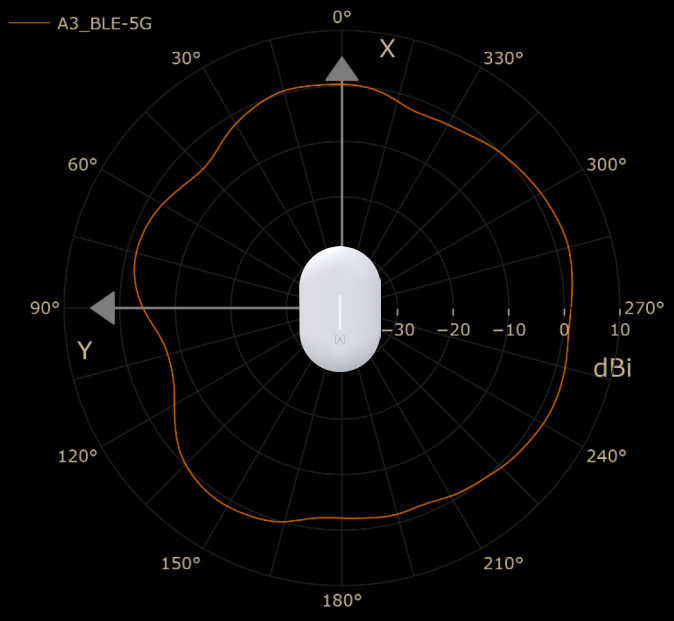
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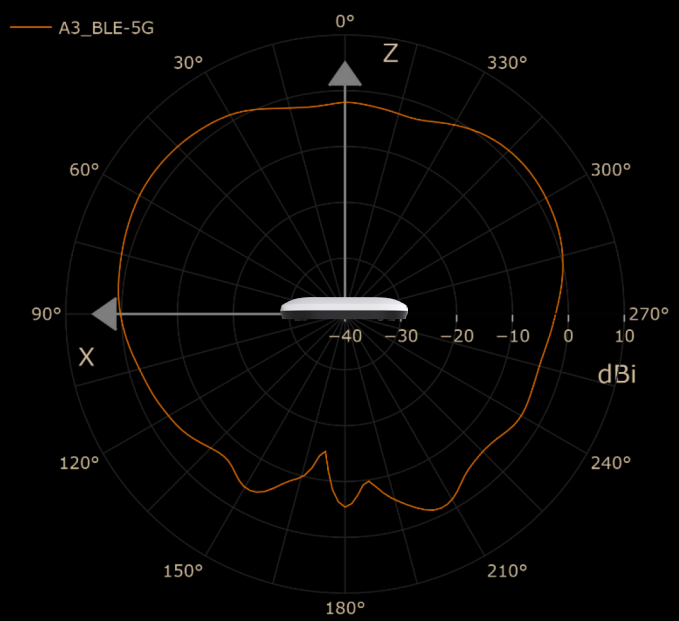
6 GHz





Bluetooth





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FEATURE COMPARISON



Features	AP7-PRO	AP6-PRO	AP6-PRO OUTDOOR	AP6	AP6W
WiFi	WiFi 7	WiFi 6	WiFi 6	WiFi 6	WiFi 6
2.4 GHz MIMO	2 x 2	2 x 2	2 x 2	2 x 2	2 x 2
5 GHz MIMO	4 x 4	4 x 4	4 x 4	2 x 2	2 x 2
6 GHz MIMO	2 x 2	-	-	-	-
IP RATING	-	IP54	IP68	-	-
4096 QAM	✔	✔	✔	-	-
Max WiFi Rate	15 Gbps	6.3 Gbps	6.3 Gbps	3.0 Gbps	3.0 Gbps
Ethernet Speed	10 Gbps	1 Gbps	1 Gbps	1 Gbps	1 Gbps
PoE+	✔	✔	✔	✔	✔
PoE++	✔	-	-	-	-
PoE Passthrough	-	-	-	-	✔
Content Filtering	✔	✔	✔	✔	✔
Bluetooth Setup	✔	✔	✔	✔	✔

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