

# Mist AP21 Access Point



## High Performance Wi-Fi and Bluetooth® LE

*Mist built the first AI-driven wireless platform, designed specifically for the Smart Device Era. Mist's Learning Wireless LAN makes Wi-Fi predictable, reliable and measurable by providing unprecedented visibility into the user experience and by replacing time consuming manual IT tasks with proactive automation. In addition, Mist is the first vendor to bring Enterprise-grade Wi-Fi, Bluetooth® LE and IoT together to deliver personalized, location-based wireless services without requiring battery-powered beacons.*

The Mist Learning WLAN consists of the following products:

**Mist Cloud** – All wireless deployment, setup, operations, and insight are handled via the Mist cloud, which was designed to provide unprecedented visibility and control at web scale. A microservices architecture provides maximum agility when rolling out new features/services.

**Mist Access Points** – The AP21, AP41, and AP61 are high performance, enterprise-grade Access Points for 802.11ac Wave 2 Gigabit Wi-Fi and Bluetooth® Low Energy. The Mist BT11 is an enterprise-grade Access Point exclusively for Bluetooth® Low Energy.



The Mist cloud



Micro-services architecture



	AP61	AP41	AP21	BT11
<b>Deployment</b>	Outdoor	Indoor	Indoor	Indoor
<b>Wi-Fi</b>	802.11ac Wave2 4x4:4	802.11ac Wave2 4x4:4	802.11ac Wave2 2x2:2	-
<b>Wi-Fi Tri-Radio</b>	✓	✓	✓	-
<b>IoT Interface</b>	-	✓	-	-
<b>Antenna Options</b>	Internal/External	Internal/External	Internal	Internal
<b>Virtual Bluetooth® LE</b>	✓	✓	✓	✓
<b>Warranty</b>	1 Year	Limited Lifetime	Limited Lifetime	Limited Lifetime

### Mist Wi-Fi Assurance Service



**Predictable & Reliable Wi-Fi**  
Set, monitor and enforce service levels for every user.

**Proactive Operations**  
Automatically identify and fix wired, wireless & device problems using machine learning.

**Minimize Wi-Fi Costs**  
Eliminate onsite visits with dynamic packet capture.

### Mist Engagement Service



Wayfinding

Proximity messaging

### Mist Asset Visibility Service



# Mist AP21 Features

## High performance outdoor Wi-Fi access

The AP21 delivers high performance 802.11ac Wave 2 wireless, with maximum throughput of up to 867 Mbps in the 5GHz band and up to 400 Mbps in the 2.4Ghz band.



The AP21 works with the Mist cloud to provide high accuracy enterprise-grade Bluetooth® LE location services using virtual beacons

## High accuracy indoor location

The AP21 has a 16-element Virtual Bluetooth® LE (vBLE) antenna array controlled from the Mist Cloud. Passive antennas enhance the power of a single transmitter and produce directional beams to accurately detect distance and location with 1 to 3 meter accuracy. With Mist's patented vBLE technology, you can deploy an unlimited amount of virtual beacons in your physical environment without requiring battery powered BLE beacons.

## Unprecedented insight and action

A dedicated dual band radio collects data for Mist's patent-pending Proactive Analytics and Correlation Engine (PACE), which leverages machine learning to analyze user experience, correlate problems and automatically detect the root cause of problems. These metrics are used to monitor service level expectations and provide proactive recommendations to ensure problems don't occur (or are fixed as quickly as possible when they do).



The AP21 collects data for the Mist cloud to use for Proactive Analytics and Event Correlation, as well as enforcing Service Level Expectations

## Dynamic packet capture

The Mist platform automatically captures packets and streams them to the cloud when major issues are detected. This saves IT time and effort and eliminates the need for truck rolls with sniffers.

Client Events				47 Total 31 Good 7 Neutral 9 Bad			
Association	Scanner2	12:25:50.827 AM, Jun 30	AP	Main	Server IP Address	10.1.1.1	
Fast BSS Assoc Failure	Scanner2	12:25:48.458 AM, Jun 30	Reason	Failing DHCP DISCOVER from 5d:5d:25:10:10:d2 on vlan 1 with Xid 1234567728- No DHCP Request seen from client in response to the Offer from the Server	BSSID	5d:5d:25:10:10:d2	
IP Assigned	Scanner2	12:25:47.835 AM, Jun 30			SSID	Network 1	
DNS OK	Scanner2	12:25:45.033 AM, Jun 30			Subnet	10.1.1.1/16	
Default Gateway ARP Success	Scanner2	12:25:43.837 AM, Jun 30			Transaction ID	922349945	
DHCP Stuck - Bind Failure	Scanner2	12:25:39.947 AM, Jun 30	RSSI	-53			
Authorization	Scanner2	12:25:29.207 AM, Jun 30	VLAN	1			
DNS OK	Scanner2	12:25:38.104 AM, Jun 30	Failure Count	1			
Fast Roaming 802.11R	Scanner2	12:25:37.099 AM, Jun 30					
Reassociation	Scanner2	12:25:36.098 AM, Jun 30					

Download Packet Capture

## Effortless, cloud-based setup and updates

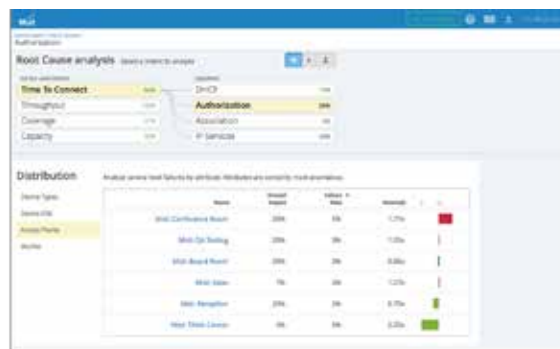
The AP21 automatically connects to the Mist cloud, downloads its configuration, and joins the appropriate network. Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes, and security updates.

## Dynamic debugging

Constantly monitor services running on the AP21 and send alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on becoming unavailable

## Automatic RF optimization

The AP21's dual-band scanning mode continuously scans the airspace for threats and interference. This ensures optimal performance under what could otherwise be challenging RF conditions. The AP41's dual-band sensor continuously scans the airspace for threats and interference.



# Mist AP21 Specifications

FEATURES	AP21
<b>Gigabit Wi-Fi</b>	Wave 2
<b>Combined Highest Supported Data Rates</b>	1.3Gbps
<b>2.4Ghz</b>	2x2:2 802.11b/g/n/ac up to 400 Mbps data rate. 802.11ac for VHT capable Proprietary clients.
<b>5Ghz</b>	2x2:2 802.11a/n/ac Wave 2 up to 867 Mbps data rate.
<b>Dedicated Third Radio</b>	2.4 GHz & 5 GHz dual-band WIDS/WIPS, spectrum analysis & location analytics radio.
<b>Bluetooth®</b>	16 Directional Antenna + 1 Omni Antenna Bluetooth® Array
<b>Beam Forming</b>	Transmit Beamforming and Maximal Ratio Combining
<b>Power Options</b>	802.3af PoE 12V/3A DC power supply
<b>Powering adaptor</b>	100-240VAC, 50-60 Hz, input All regions (output): 12V/3A DC output
<b>Dimensions</b>	203mm x 203mm x 40mm (7.99in x 7.99in x 1.57in)
<b>Weight</b>	0.636 kg (1.4 lbs)
<b>Operating Temperature</b>	0° to 40° C
<b>Operating Humidity</b>	10% to 90% maximum relative humidity, non-condensing
<b>Operating Altitude</b>	3,048m (10,000 ft)
<b>Electromagnetic Emissions</b>	FCC Part 15 Class B
<b>I/O</b>	1-10/100/1000BASE-T auto-sensing RJ-45 with PoE-in 1-10/100/1000BASE-T auto-sensing RJ-45 with 48Vdc PoE-out
<b>Indicators</b>	Multi-color status LED
<b>Compliance Standards</b>	UL 60950-1 CAN/CSAC22.2 No. 60950-1 FCC Part 15.247, 15.407, 15.107, and 15.109 RSS247 ICES003 (Canada)

I/O PORTS & ACCESSORIES	
<b>Reset</b>	Reset to the factory default settings
<b>12VDC</b>	Support for the 12VDC power supply recommended by Mist
<b>Eth1</b>	10/100/1000 BaseT RJ45 interface
<b>Eth0+PoE</b>	10/100/1000 BaseT RJ45 interface that supports 802.3af/802.3at PoE PD
<b>Brackets</b>	AP41BR1 (T-Bar) BT11BR1 (Dry-wall)
<b>Kensington Lock</b>	Supported

ORDERING INFORMATION	
<b>US/FCC Domain</b>	AP21-US (Internal Antenna)
<b>Rest of the World</b>	AP21-WW (Internal Antenna)



Mist Access Point AP21