



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 (WLAN) 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 COMPONENTS:

Mist Marvis AI

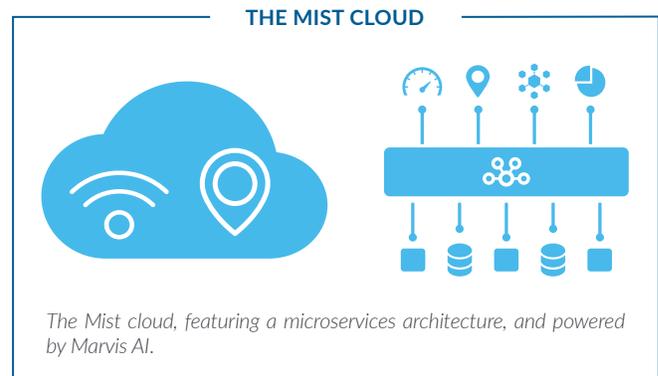
Patent-pending machine learning algorithms adapt in real-time to optimize the wireless user experience. In addition, Marvis uses AI to proactively automate IT operations, provide real-time alerts, and predict problems before they arise.

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 (detailed here), 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. To view other datasheets, go to www.mist.com/resources/datasheets/.



	AP61	AP43	AP41	AP21	BT11
Deployment	Outdoor	Indoor	Indoor	Indoor	Indoor
Wi-Fi Standard	802.11ac Wave2 4x4 : 4	802.11ax (Wi-Fi 6) 4x4 : 4	802.11ac Wave2 4x4 : 4	802.11ac Wave2 2x2 : 2	—
Wi-Fi Tri-Radio	✓	✓	✓	—	—
Antenna Options	Internal/External	Internal/External	Internal/External	Internal/External	Internal
Virtual Bluetooth® LE	✓	✓	✓	✓	✓
IoT Interface	—	✓	✓	—	—
IoT Sensors	—	Humidity, Pressure, Temperature	—	—	—
Warranty	1 Year	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime

SERVICES AVAILABLE ON THE MIST LEARNING WLAN:

Wi-Fi-Assurance Service

- Predictable & Reliable Wi-Fi
- Proactive Operations
- Minimize Wi-Fi Costs



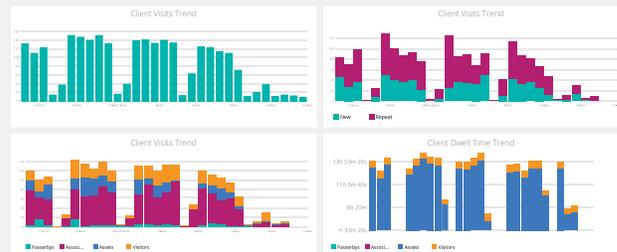
Virtual Network Assistant

- Natural language queries, data mining, and feature ranking
- Simplified Troubleshooting
- Proactive Notifications



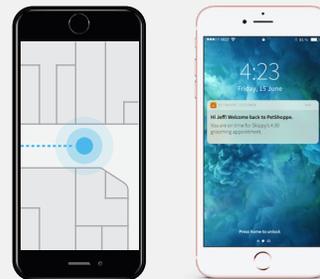
Premium Analytics

- End-to-end Network Visibility
- Orchestrated Networking and Application Performance Queries
- Customer segmentation and reporting based on visitor telemetry
- Customized* dwell and 3rd party reporting for traffic and trend analysis



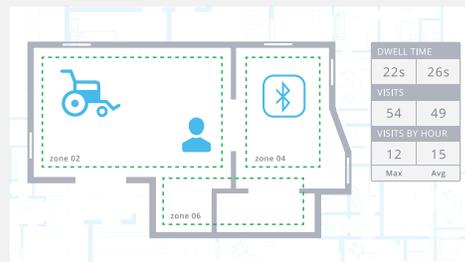
BLE Engagement Service

Push location-based information to mobile users, such as turn-by-turn directions and messages.



BLE Asset Visibility Service

Immediately locate high value resources and analyze traffic patterns.



*Mist Premium Analytics service subscription is needed

AP21 FEATURES

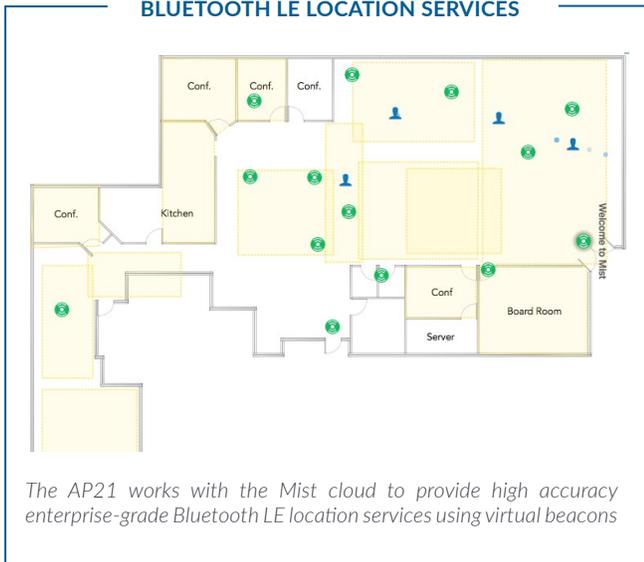
High performance Wi-Fi access

The AP21 delivers high performance wireless access with two 802.11ac Wave 2 radios that deliver up to 867 Mbps in the 5GHz band and up to 400 Mbps in the 2.4Ghz band.

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.

BLUETOOTH LE LOCATION SERVICES



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).

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	Scanner 2	12:25:50.827 AM, Jun 30	AP	Main	Server IP Address	10.1.1.1
Fast BSS Assoc Failure	Scanner 2	12:25:48.458 AM, Jun 30	Reason	Falling DHCP DISCOVER from 5d:5d:25:10:10:d2 on wlan1 with MAC 123456778: No DHCP	BSSID	5d:5d:25:10:10:d2
IP Assigned	Scanner 2	12:25:47.335 AM, Jun 30			SSID	Network 1
DNS OK	Scanner 2	12:25:45.023 AM, Jun 30			Subnet	10.1.1.1/16
Default Gateway ARP Success	Scanner 2	12:25:43.837 AM, Jun 30			Transaction ID	922349945
DHCP Stuck - Bind Failure	Scanner 2	12:25:38.947 AM, Jun 30	RSSI	-53		
Authorization	Scanner 2	12:25:28.207 AM, Jun 30	VLAN	1		
DNS OK	Scanner 2	12:25:28.104 AM, Jun 30	Failure Count	1		
Fast Roaming 802.11R	Scanner 2	12:25:37.098 AM, Jun 30				
Reassociation	Scanner 2	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.

Premium Analytics

Mist's Wireless Assurance, User Engagement, or Asset Management service includes a base analytics capability for analyzing up to 30 days of data which enables you to simplify the process of extracting network insights from data and analytics across your enterprise to properly align your support resources or introduce enhanced premium services. For those enterprises who need deeper flexibility to extend the timeline of data beyond* 30 days or access other 3rd Party* solutions with customizable* reporting to better understand shopper and guest behavior, Mist Premium Analytics Subscription services is available.

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 AP21's dual-band radios scan the airspace for threats and interference.

PREMIUM ANALYTICS

The screenshot shows the Mist Premium Analytics dashboard. At the top, it says 'THE OFFICE' and 'Monitor' with tabs for 'Wireless Network' and 'Insights'. The main area has a 'Users' bar chart showing an upward trend from 12:00 am to 12:00 pm. Below that is a 'System changes' section with green triangle icons. A 'Success Rate' section shows a 'Time to Connect' of 86% success. On the right, there are several summary cards: 'AP - Organization' (44), 'AP - Organization' (803), 'Iphones on WLAN CORP on OS 12.3.1' (48), 'Rogue APs Count' (463), and 'Honeygot APs Count' (32). Below these is a 'DHCP Server Client Events' section with a bar chart showing events for IP 198.123.456.111. At the bottom, there is a 'Device Model by Clients' bar chart.

The AP21 collects data for the Mist cloud to enforce Service Level Expectations (SLE) and to offer Premium Services.

* Mist Premium Analytics service subscription is needed

SPECIFICATIONS	AP21
Gigabit Wi-Fi	Wave 2
Combined Highest Supported Data Rates	1.3 Gbps
2.4Ghz	2x2:2 802.11b/g/n/ac up to 400 Mbps data rate. 802.11ac for VHT capable Proprietary clients.
5Ghz	2x2:2 802.11a/n/ac Wave 2 up to 867 Mbps data rate.
Bluetooth®	16 Directional Antenna + 1 Omni Antenna Bluetooth Array
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	802.3af PoE 12V/3A DC power supply
Powering Adaptor	100-240VAC, 50-60 Hz, input All regions (output): 12V/3A DC output
Dimensions	203mm x 203mm x 40mm (7.99in x 7.99in x 1.57in)
Weight	0.636 kg (1.4 lbs)
Operating Temperature	0° to 40° C
Operating Humidity	10% to 90% maximum relative humidity, non-condensing
Operating Altitude	3,048m (10,000 ft)
Electromagnetic Emissions	FCC Part 15 Class B
I/O	one 10/100/1000BASE-T auto-sensing with PoE-in one 10/100/1000BASE-T auto-sensing with 48Vdc PoE-out
Indicators	Multi-color status LED
Compliance Standards	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	
Reset	Reset to the factory default settings
12VDC	Support for the 12VDC power supply recommended by Mist
Eth1	10/100/1000 BaseT RJ45 interface
Eth0+PoE	10/100/1000 BaseT RJ45 interface that supports 802.3af/802.3at PoE PD
Brackets	AP41BR1 (T-Bar) BT11BR1 (Dry-wall)
Kensington Lock	Supported

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

MIST AP21 ACCESS POINT



MIST OMNI-DIRECTIONAL BLUETOOTH ANTENNA ARRAY

