AP21 ACCESS POINT
High-Performance Wi-Fi and Bluetooth® LE

Juniper built the first AI-driven wireless platform, designed specifically for the Smart Device Era. The Juniper AI-Driven Network makes Wi-Fi predictable, reliable, and measurable by providing unprecedented visibility into the user experience and replacing time-consuming manual IT tasks with proactive automation. In addition, Juniper 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.

JUNIPER AI-DRIVEN NETWORK COMPONENTS

Marvis Virtual Assistant
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.

### The Juniper Mist™ Cloud Architecture
All wireless deployment, setup, operations, and insight are handled by Juniper Mist cloud services, which were designed to provide unprecedented visibility and control at Web scale. A microservices architecture provides maximum agility when rolling out new features and services.

Juniper Access Point Family
The Juniper enterprise-grade access point family consists of:

- AP21, AP41, and AP61 Series, which support 802.11ac Wave 2, Bluetooth LE, and IoT
- AP12, AP32, AP33, AP43, and AP63 Series, which support 802.11ax (Wi-Fi 6), Bluetooth LE, and IoT
- BT11, which supports Bluetooth LE

These access points are all built on a real-time microservices platform and are managed by the Juniper Mist cloud.

THE JUNIPER MIST CLOUD

The Juniper Mist cloud, featuring a microservices architecture and powered by Mist AI™.
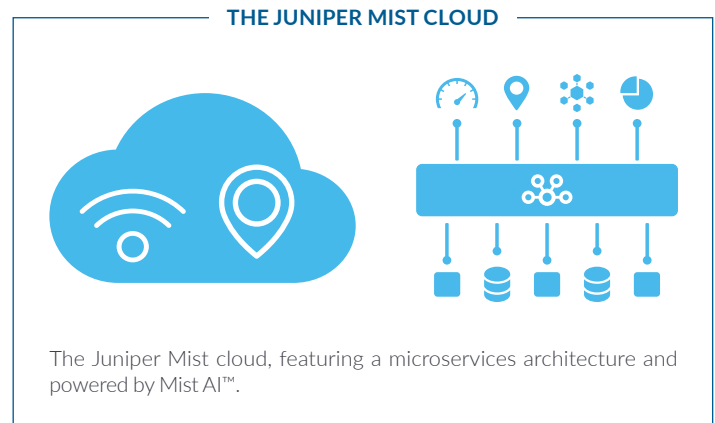
	AP61	AP43	AP41	AP21	BT11
Deployment	Outdoor	Indoor	Indoor	Indoor	Indoor
Wi-Fi Standard	802.11ac Wave2 4x4 : 4	802.11ax (Wi-Fi 6) 4x4 : 4	802.11ac Wave2 4x4 : 4	802.11ac Wave2 2x2 : 2	—
Wi-Fi Tri-Radio	✓	✓	✓	—	—
Antenna Options	Internal/External	Internal/External	Internal/External	Internal	Internal
Virtual Bluetooth LE	✓	✓	✓	✓	✓
IoT Interface	—	✓	✓	—	—
IoT Sensors	—	Humidity, Pressure, Temperature	—	—	—
Warranty	1 Year	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime

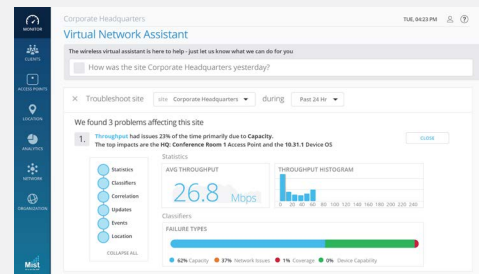## SERVICES AVAILABLE ON THE AI-DRIVEN WLAN

Juniper Mist Wi-Fi Assurance

- Predictable and reliable Wi-Fi
- Proactive operations
- Lower Wi-Fi costs
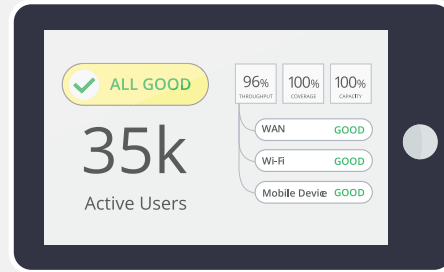
Marvis Virtual Assistant

- Natural language queries, data mining, and feature ranking
- Simplified troubleshooting
- Proactive notifications

Juniper Mist Premium Analytics

- End-to-end network visibility
- Orchestrated networking and application performance queries
- Customer segmentation and reporting based on visitor telemetry
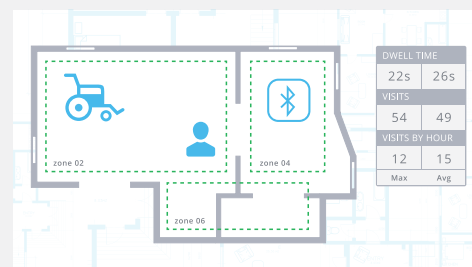- Customized* dwell and third-party reporting for traffic and trend analysis
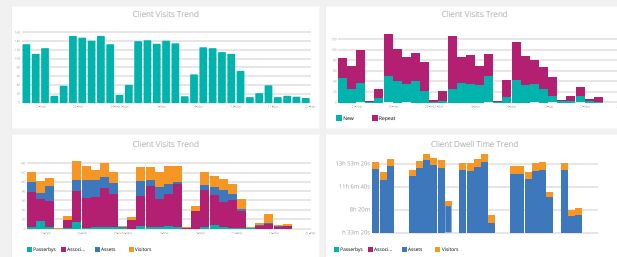
Juniper Mist Mobile Engagement

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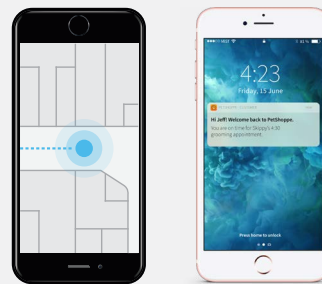
Juniper Mist Asset Visibility

Immediately locate high-value resources and analyze traffic patterns.

*Juniper Mist Premium Analytics service subscription is needed

AP21 FEATURES

High-Performance Wi-Fi

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 Juniper 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 Juniper's patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment without requiring battery-powered BLE beacons.

BLUETOOTH LE LOCATION SERVICES
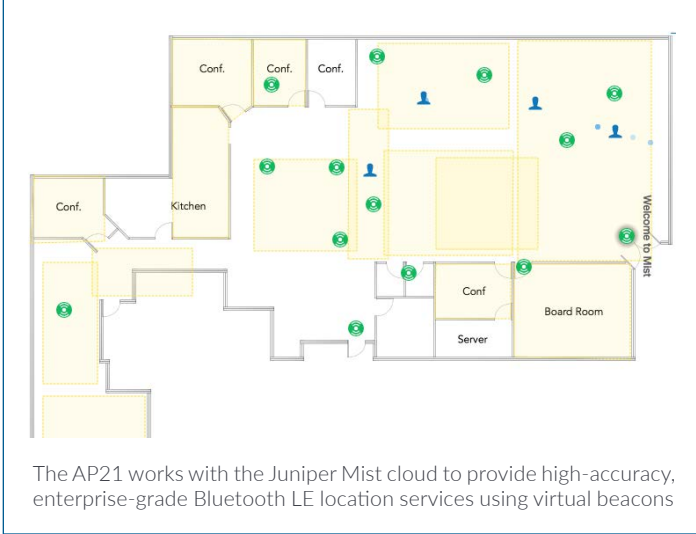
The AP21 works with the Juniper Mist cloud to provide high-accuracy, enterprise-grade Bluetooth LE location services using virtual beacons

Unprecedented Insight and Action

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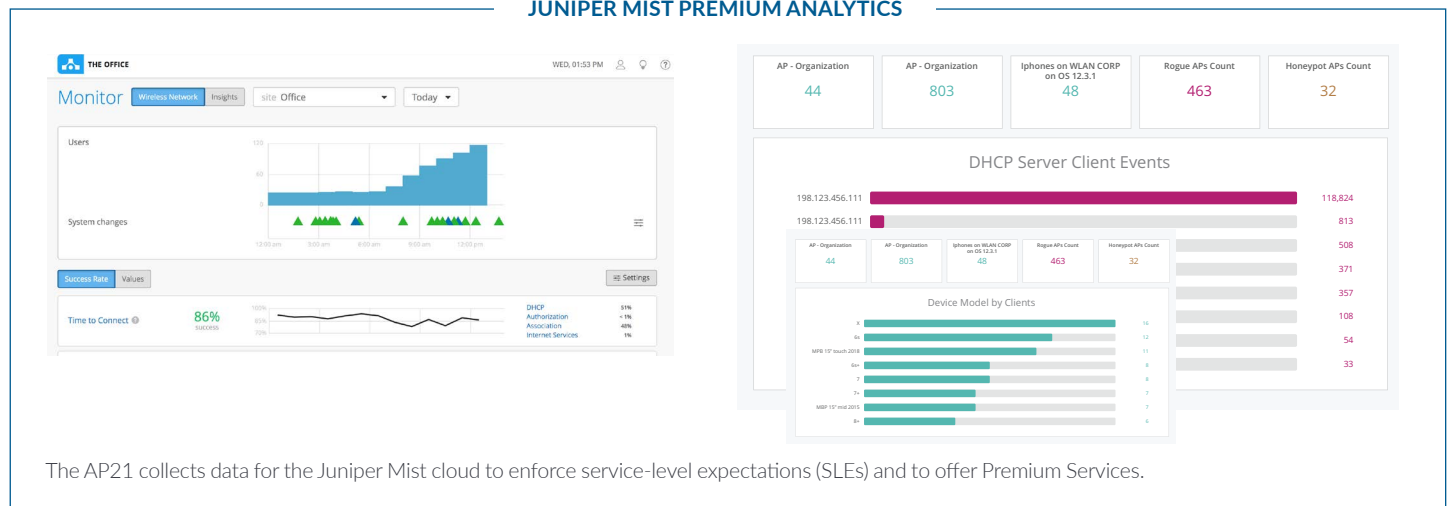
Dynamic Packet Capture

The Juniper 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.

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

Juniper Mist's Wireless Assurance, User Engagement, and Asset Visibility service includes a base analytics capability for analyzing up to 30 days of data, from which you can extract network insights across your enterprise. For enterprises that need to extend the data timeline past 30 days or access third-party* solutions for customized reporting, the Juniper Mist Premium Analytics service is available as an additional subscription.

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 it 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.

JUNIPER MIST PREMIUM ANALYTICS

The AP21 collects data for the Juniper Mist cloud to enforce service-level expectations (SLEs) and to offer Premium Services.

* Juniper Mist Premium Analytics service subscription is needed

SPECIFICATIONS	AP21
Gigabit Wi-Fi	802.11ac 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
Power Adapter	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)

AP21 ACCESS POINT

Mist

JUNIPER OMNIDIRECTIONAL BLUETOOTH ANTENNA ARRAY

JUNIPER
driven by Mist AI