AP61 ACCESS POINT DATASHEET
Outdoor Wi-Fi And Bluetooth® LE

Product Overview

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 by 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 via the Juniper 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.

Juniper Access Point Family

The Juniper enterprise-grade access point family consists of:

- AP61, AP21, and AP41 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, 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

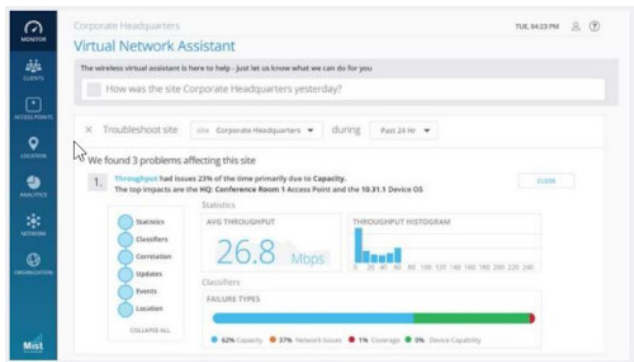## Services available on the AI-Driven WLAN

Juniper Mist Wi-Fi Assurance

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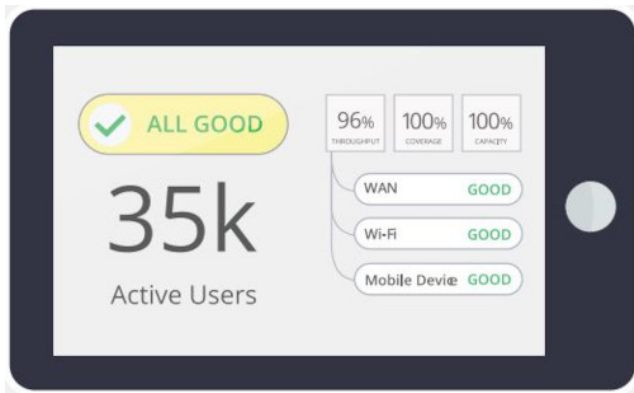
Marvis Virtual Assistant

- 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
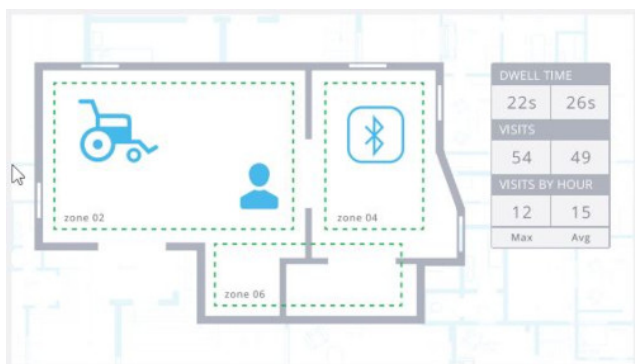

Juniper Mist Mobile Engagement

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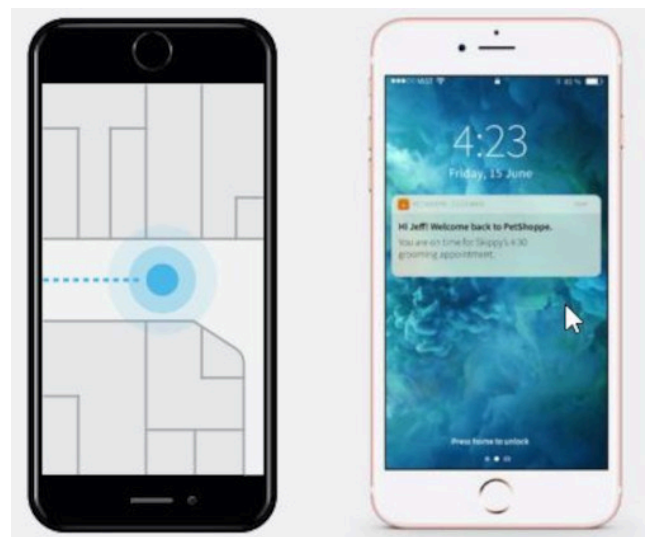
Juniper Mist Asset Visibility

Immediately locate high-value resources and analyze traffic patterns.

*Juniper Mist Premium Analytics service subscription is needed

AP61 Features

High-Performance Outdoor Wi-Fi Access

The AP61 delivers high-performance wireless access with three 802.11ac Wave 2 radios that deliver up to 1,730 Mbps in the 5GHz band and up to 800 Mbps in the 2.4GHz band.

Whether you want to extend your users' experiences outside the four walls or you want to set up pervasive outdoor wireless with mesh backhaul, the AP61 delivers the best performance with the simplest operations in an industrial-grade form factor.

High-Accuracy Indoor Location

The AP61 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.
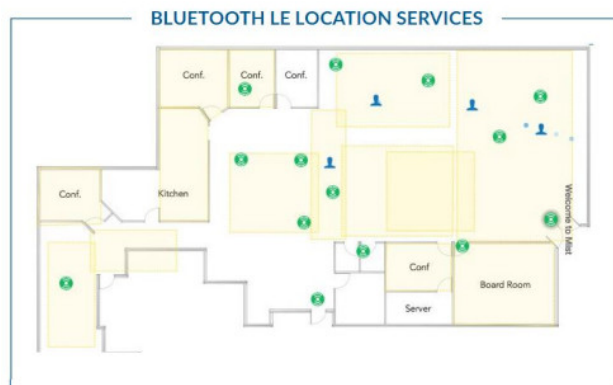
The AP61 works with the Juniper Mist cloud to provide high-accuracy, enterprise-grade Bluetooth LE location services using virtual beacons.

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).

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. To extend these capabilities for more dynamic insights like motion paths and other third-party* data, along with the option to generate customized reports, the Juniper Mist Premium Analytics service is available as an additional subscription.

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.

Dynamic Debugging

Constantly monitor services running on the AP61 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.

## Effortless, Cloud-Based Setup and Updates

The AP61 automatically connects to the Juniper 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.

Automatic RF Optimization

The AP61'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 AP61's dual-band sensor continuously scans the airspace for threats and interference.
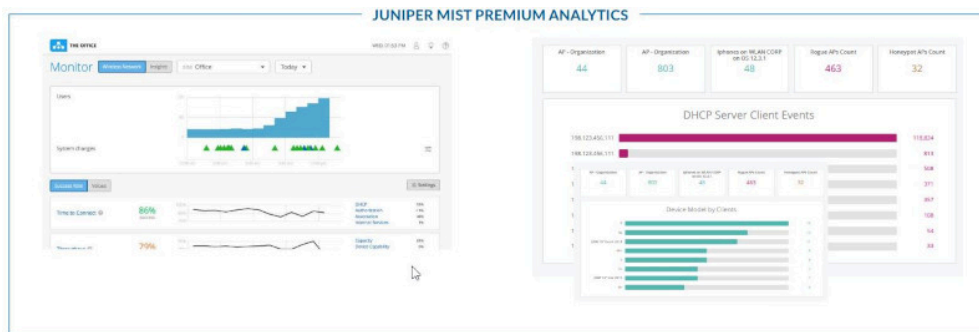
The AP61 collects data for the Juniper Mist cloud to enforce service level expectations (SLEs) and premium services.

*Juniper Mist Premium Analytics service subscription is needed

SPECIFICATIONS	AP61
Gigabit Wi-Fi	802.11ac Wave 2
Combined Highest Supported Data Rates	2.5 Gbps
2.4GHz	4x4:4 802.11b/g/n/ac up to 800 Mbps data rate. 802.11ac for VHT-capable proprietary clients
5GHz	4x4:4 802.11a/n/ac Wave 2 up to 1,733 Mbps data rate
MIMO	MU-MIMO (Multi-User) SU-MIMO (Single-User)
Dedicated Third Radio	2.4GHz and 5GHz dual-band WIDS/WIPS, spectrum analysis and location analytics radio
Antenna Options	Internal and External
Bluetooth®	16 directional antenna + 1 omni antenna
Beam Forming	Transmit beamforming and maximal ratio combining
Power Options	802.3at PoE
Dimensions	310mm x 310mm x 107mm (12.2in x 12.2in x 4.3in)
Weight	Internal Antenna - 4.309 kg (9.5 lbs) External Antenna – 4.5 35 kg (10 lbs)
Operating Temperature	-20° to 65° C; no solar loading -20° to 55° C; with solar loading
Enclosure	IP67 / NEMA 4 compliant
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	1 - 10/100/1000BASE-T auto-sensing RJ-45 with PoE1 – 10/100/1000BASE-T auto-sensing RJ-45
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)
Certification	Class 1, Division 2 for hazardous locations

MIST AP61 ACCESS POINT

JUNIPER OMNIDIRECTIONAL BLUETOOTH ANTENNA ARRAY

I/O PORTS & ACCESSORIES	
Reset	Reset to the factory default settings
Eth1	10/100/1000 BaseT RJ45 interface
Eth0+PoE	10/100/1000 BaseT RJ45 interface that supports 802.3at PoE
Brackets	Vertical, tilt and horizontal mounting kit included
Kensington Lock	No

ORDERING INFORMATION	
US/FCC Domain	AP61-US (Internal Antenna) AP61E-US (External Antenna)
Rest of the World	AP61-WW (Internal Antenna) AP61E-WW (External Antenna)

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end-users. Our solutions deliver industry-leading insight, automation, security, and assurance to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability, and equality.