



Product Overview

The [AP34](#) is a tri-band device with 2 spatial streams for transmitting and receiving data over three client-serving radios, with a fourth sensor radio dedicated to monitoring.

AP34 ACCESS POINT DATASHEET

Juniper AI-Driven Network

The Juniper AP34 integrates Mist AI for AX capabilities and omnidirectional Bluetooth antenna to automate network operation and boost Wi-Fi performance for devices on your network in the 6 GHz ([Wi-Fi 6E](#)) band. Juniper's AI solutions for 6E helps support optimized operator and user experiences with secure client-to-cloud automation, insight, and AI-driven actions.

The Juniper AI-Driven Enterprise makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through the use of unique service-level expectation (SLE) metrics. Proactive, AI-driven automation and self-healing replace time-consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money. The AP34 is ideal for areas where you need a high-performance, tri-band access point but don't require advanced location-based services. All operations are managed using the open and programmable microservices-based [Juniper Mist™](#) cloud architecture. The system delivers maximum network scalability and performance while also bringing DevOps agility to WLANs and location services.

The Juniper Mist Cloud Architecture

Our cloud-native, AI-driven microservices architecture delivers unparalleled agility, scale, and resiliency to your network. It lowers OpEx and delivers unprecedented insights into network performance, behaviors, traffic patterns, and potential trouble spots by using data science to analyze large amounts of rich metadata collected by [Juniper Access Points](#).

Juniper Access Point Family

The Juniper enterprise-grade access point family consists of:

- [AP45](#) Series, [AP34](#) and [AP24](#), which support [Wi-Fi 6E](#), 802.11ax (Wi-Fi 6), and Bluetooth LE
- [AP43](#), [AP12](#), [AP32](#), [AP33](#), and [AP63](#) Series, which support 802.11ax (Wi-Fi 6) and Bluetooth LE

These access points are all managed by the real-time microservices based in Juniper Mist cloud.

The table below compares the supported major functions of the Juniper Wi-Fi 6E and Wi-Fi 6 access points to help in selecting the most appropriate model(s).

| | AP45 | AP34 | AP24 | AP43 | AP33 | AP12 | AP63 |
|------------------------------|--|--|---|---------------------------------------|---|---------------------------------------|---------------------------------------|
| Deployment | Indoor | Indoor | Indoor | Indoor | Indoor | Indoor Wall Plate/ Desk Mount | Outdoor |
| Wi-Fi Standard | Wi-Fi 6E 802.11ax (Wi-Fi 6) 4x4 : 4SS | Wi-Fi 6E 802.11ax (Wi-Fi 6) 2x2 : 2SS | Wi-Fi 6E 802.11ax (Wi-Fi 6) 2x2 : 2SS 2.4/6 + 5 GHz | 802.11ax (Wi-Fi 6) 4x4 : 4SS | 802.11ax (Wi-Fi 6) 5GHz: 4x4 : 4SS 2.4GHz: 2x2 : 2SS | 802.11ax (Wi-Fi 6) 2x2 : 2SS | 802.11ax (Wi-Fi 6) 4x4 : 4SS |
| Wi-Fi Radios | Dedicated fourth radio for scanning | Dedicated fourth radio for scanning | Dedicated third radio for scanning | Dedicated third radio for scanning | Dedicated third radio for scanning | Dedicated third radio for scanning | Dedicated third radio for scanning |
| Antenna Options | Internal/External | Internal | Internal | Internal/External | Internal | Internal | Internal/External |
| Virtual BLE | ✓ | – | – | ✓ | ✓ | – | ✓ |
| USB | ✓ | ✓ | ✓ | ✓ | ✓ | – | – |
| IoT Sensors | Temperature, Accelerometer | Temperature, Accelerometer | Temperature, Accelerometer | Humidity, Pressure, Temperature | Temperature, Accelerometer | – | Humidity, Pressure, Temperature |
| Warranty | Limited Lifetime | Limited Lifetime | Limited Lifetime | Limited Lifetime | Limited Lifetime | Limited Lifetime | One Year |
| Frequencies Supported | 2.4 GHz, 5 GHz, 6 GHz | 2.4 GHz, 5 GHz, 6 GHz | 2.4 GHz, 5 GHz, 6 GHz | 2.4 GHz, 5 GHz | 2.4 GHz, 5 GHz | 2.4 GHz, 5 GHz | 2.4 GHz, 5 GHz |

Available for the Juniper AP34

Wi-Fi Cloud Services

Juniper Mist Wi-Fi Assurance

For IT and NOC Teams

- Predictable and Measurable Wi-Fi
- Service-Level Expectations (SLEs) Support
- WxLAN Policy Fabric for Role-Based Access
- Customizable Guest Wi-Fi Portal
- Radio Resource Management (RRM) Driven by AI

Marvis Virtual Assistant

For IT Helpdesk Teams

- AI-Powered Virtual Network Assistant
- Natural Language Processing Interface
- Anomaly Detection
- Client SLE Visibility and Enforcement
- Data Science-Driven Root-Cause Analysis

Juniper Mist Asset Visibility

For Process and Resource Improvement Teams

- Identification of Assets by Name and View Location
- Zonal/Room Accuracy for Third-Party Tags
- Historical Analytics for Asset Tags
- Telemetry for Asset Tags (temperature, motion, and other data)
- APIs for Viewing Assets and Analytics

Analytics Cloud Services

Juniper Mist Premium Analytics

For Network Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- End-to-End Network Visibility
- Orchestrated Networking and Application Performance Queries
- Simplified Network Transparency

For Business Teams

- Baseline Analytics Features Come Included with Wi-Fi Assurance, Mobile Engagement, and Asset Visibility Subscriptions
- Customer Segmentation and Reporting Based on Visitor Telemetry
- Customized* Dwell and Third-Party Reporting for Traffic and Trend Analysis
- Correlation of Customer-Guest Traffic and Trend Analysis
- Correlated Customer-Guest Traffic and Trend Analysis

*Juniper Mist Premium Analytics service subscription is needed

Access Point Features

High Performance Wi-Fi

The AP34 is comprised of tri-band, quad-radio 2x2 802.11ax with maximum data rates of 2400 Mbps in the 6GHz band, 1200 Mbps in the 5GHz band, and 575 Mbps in the 2.4GHz band. The fourth radio functions as a network, location, and security sensor, as well as a spectrum monitor. With 802.11ax Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, the AP34 offers performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

AI for AX

The added performance and spectrum efficiency of 802.11ax ([Wi-Fi 6](#)) has added to the complexity of configuring and operating wireless networks. Juniper automates and optimizes AP management and performance with AI for AX capabilities. Juniper access points reduce interference due to congestion and ensure consistent service to multiple connected devices in high-density environments by optimizing BSS Coloring, improving data transmission scheduling within OFDMA and MU-MIMO, and assigning clients to the best radio to boost the overall performance of the network.

Greater Spectral Efficiency

OFDMA improves spectral efficiency so that an increasing density of devices can be supported on the network. Density has become an issue with the rapid growth of [IoT](#) devices, which often utilize smaller data packets than mobile devices and hence increase the burden and contention on the network.

Additionally, BSS Coloring improves the coexistence of overlapping BSSs and allows spatial reuse within a given channel by reducing packet collisions.

Automatic RF Optimization

Radio Resource Management automates dynamic channel and power assignment, taking Wi-Fi and external sources of interference into account with a dedicated sensor radio. The AI engine continuously monitors coverage and capacity SLE metrics to learn and optimize the RF environment. A learning algorithm uses hysteresis on a 24-hour window to conduct a sitewide rebalancing for optimal channel and power assignment.

Proactive Insight and Action

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

Improved IoT Battery Efficiency

By incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.0, AP34 access points help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic Debugging

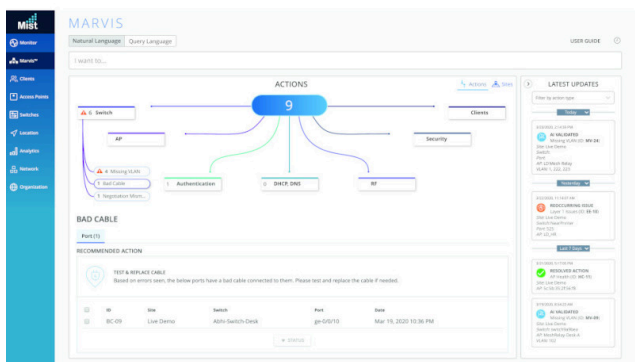
The AP34 has constant monitoring services and sends alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or that any services running on the AP become unavailable.

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 to reproduce and capture data for troubleshooting.

Marvis Virtual Conversational Assistant

[Marvis](#) is a natural language processing (NLP)-based assistant with a Conversational Interface to understand user intent and goals, simplifying troubleshooting and the collection of network insights. It uses AI and data science to proactively identify issues, determine the root causes and scope of impact, and gain insights into your network and user experiences. It eliminates the need to manually hunt through endless dashboards and CLI commands.

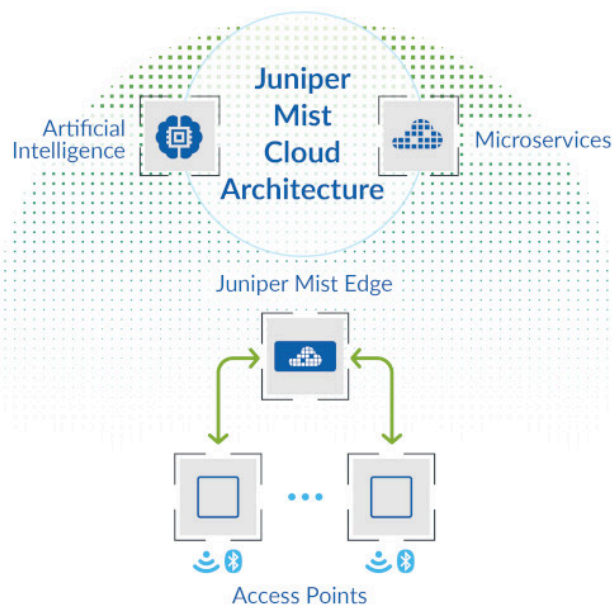


Effortless, Cloud-Based Setup and Updates

The AP34 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.

Premium Analytics

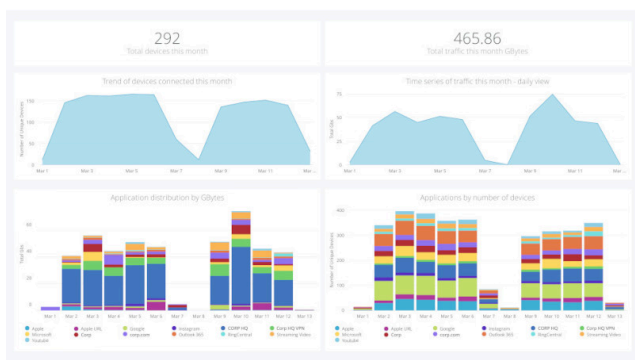
Our [Wireless Assurance](#), [User Engagement](#), and [Asset Visibility](#) services include a base analytics capability for analyzing up to 30 days of data, which enables you to simplify the process of extracting network insights across your enterprise. If you require dynamic insights like motion paths* and other third-party* data and would like the option of customized reports, the [Juniper Mist Premium Analytics](#) service is available as an additional subscription.



Juniper Mist Edge

Juniper APs offer a flexible data plane. The Juniper Mist Edge is an on-premises appliance that runs a tunnel termination service. Traffic can be broken out locally or tunneled to a Juniper Mist Edge.

Juniper Mist Edge use cases include: seamless mobility in large campus environments, tunneling of guest traffic to a DMZ, IoT segmentation, and teleworker services. Learn more about [Juniper Mist Edge](#).





Specifications

| | |
|--|--|
| Wi-Fi Standard | 802.11ax (Wi-Fi 6), including support for OFDMA, 1024-QAM, MU-MIMO, Target Wake Time (TWT), Spatial Frequency Reuse (BSS Coloring). Backwards compatibility with 802.11a/b/g/n/ac |
| Combined Highest Supported Data Rates | 2.4 GHz / 5 GHz: 1.8 Gbps +6 GHz: 4.2Gbps |
| 2.4 GHz | 2x2: 2 802.11ax up to 575 Mbps data rate |
| 5 GHz | 2x2: 2 802.11ax up to 1,200 Mbps data rate |
| 6GHz | 2x2: 2 802.11ax up to 2,400 Mbps data rate |
| MIMO Operation | Two spatial stream SU-MIMO for up to 1200 Mbps wireless data rate to individual 2x2 HE160 Two spatial stream MU-MIMO for up to 1200 Mbps wireless data rate to up to two MU-MIMO capable client devices simultaneously |
| Dedicated Fourth Radio | 2.4GHz, 5GHz, and 6GHz tri-band WIDS/WIPS, spectrum analysis and location analytics radio |
| Internal Antennas (AP34) | Two 2.4GHz omnidirectional antennas with 4 dBi peak gain Two 5GHz omnidirectional antennas with 6 dBi peak gain Two 6GHz omnidirectional antennas with 6 dBi peak gain |
| Bluetooth 5.1 | Omni Bluetooth Antenna |
| Beam Forming | Transmit Beamforming and Maximal Ratio Combining |
| Power Options | 802.3af: Single radio, cloud connectivity only 802.3at: Full functionality |
| Dimensions | 230mm x 230mm x 50mm |
| Weight | 1.89 kg |
| Shipping Box | 289mm x 268mm x 191mm |
| Operating Temperature | Internal antenna: 0° to 40° C |
| Operating Humidity | 10% to 90% maximum relative humidity, non- condensing |
| Operating Altitude | 3,048m (10,000 ft) |
| Trusted Platform Module (TPM) | Includes a TPM for infrastructure security |

I/O and Indicators

| | |
|-----------------------------------|--|
| IoT Sensors | Temperature, Accelerometer |
| USB | USB 2.0 support interface, 900 mA output |
| Eth0 | 100/1000/2500/5000Base-T (802.3bz); RJ45; PoE PD |
| Reset | Reset to the factory default settings |
| Indicators | One multicolor status LED |
| Traffic Forwarding Options | Eth0, Juniper Mist Edge |

Mounting Brackets

| | |
|----------------------|----------------------------|
| APBR-U* | Universal bracket |
| APBR-ADP-M16 | 16mm threaded rod (M16-2) |
| APBR-ADP-T58 | 3/8" Threaded Rod |
| APBR-ADP-CR9 | 9/16" T-Rail, Channel Rail |
| APBR-ADP-RT15 | 15/16" T-Rail |
| APBR-ADP-WS15 | 1-1/2" T-Rail |
| APBR-ADP-T12 | 1/2" threaded rod |

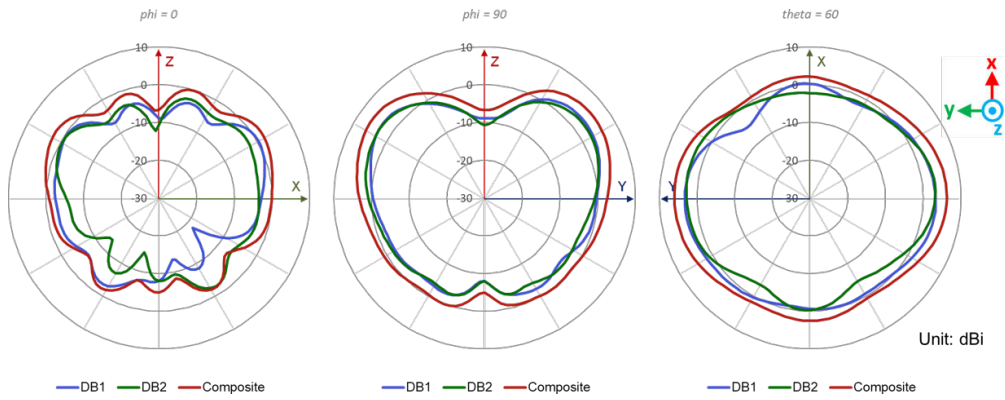
*The AP package includes one Universal Bracket. APBR-U is also available separately as an accessory.

Ordering Information

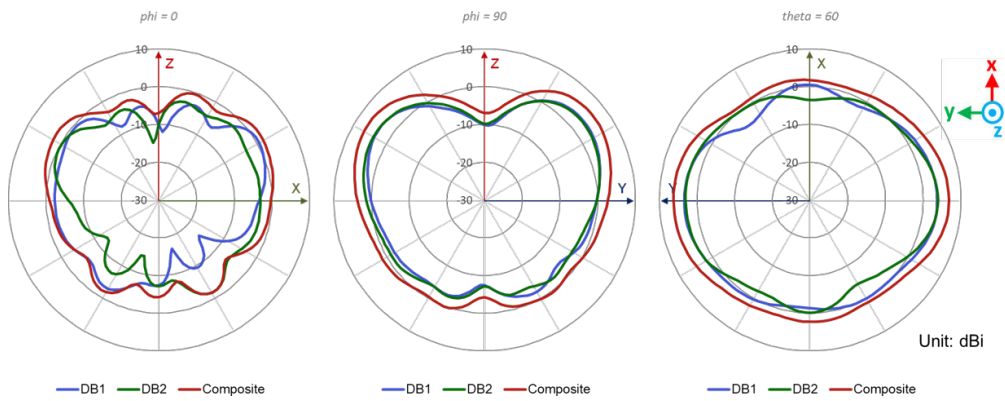
| | |
|--------------------------|----------------------------|
| US/FCC Domain | AP34-US (Internal Antenna) |
| Rest of the World | AP34-WW (Internal Antenna) |

AP34 2.4 GHz Radio Wi-Fi

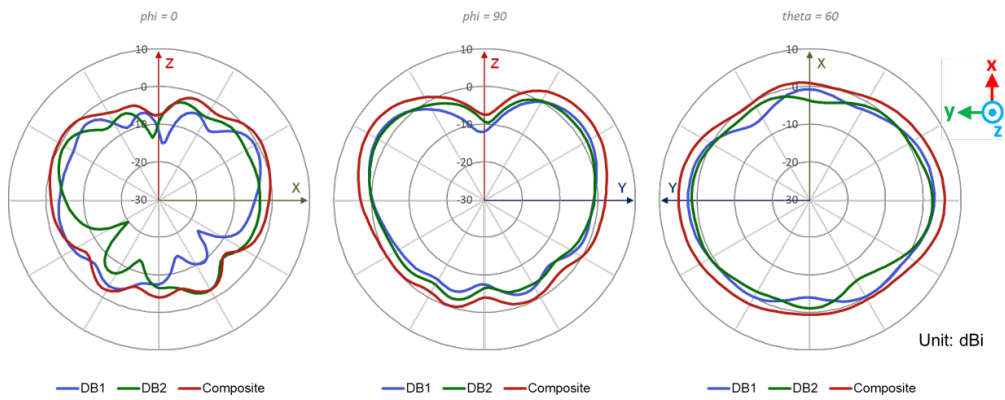
AP34 Wi-Fi @ 2400MHz



AP34 Wi-Fi @ 2450MHz

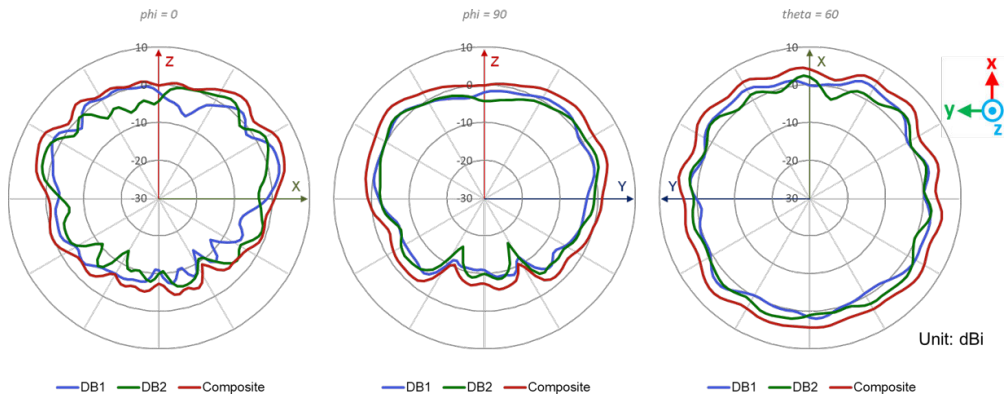


AP34 Wi-Fi @ 2500MHz

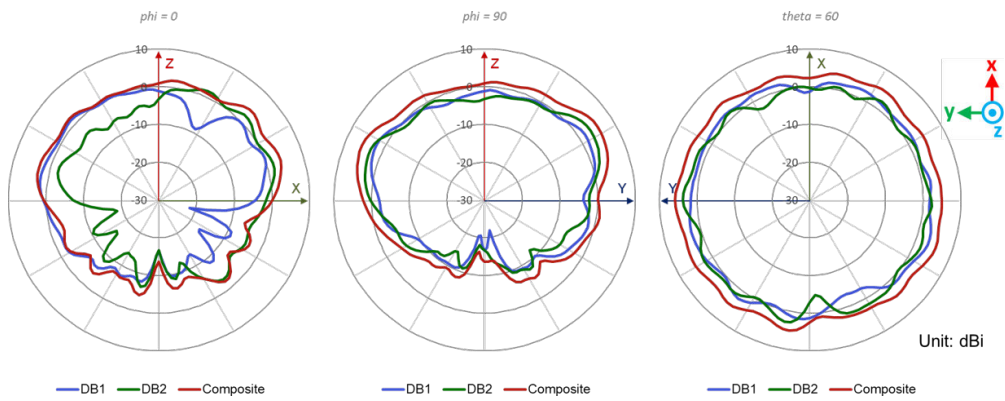


AP34 5GHz Radio Wi-Fi

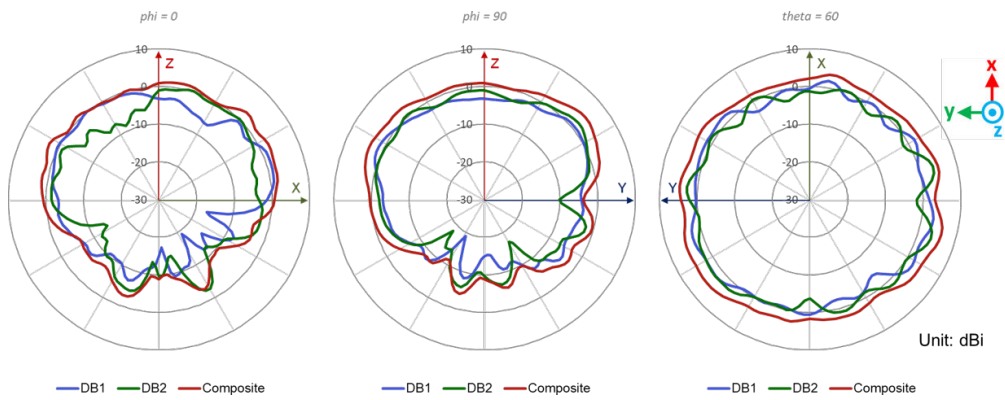
AP34 Wi-Fi @ 5150MHz



AP34 Wi-Fi @ 5550MHz

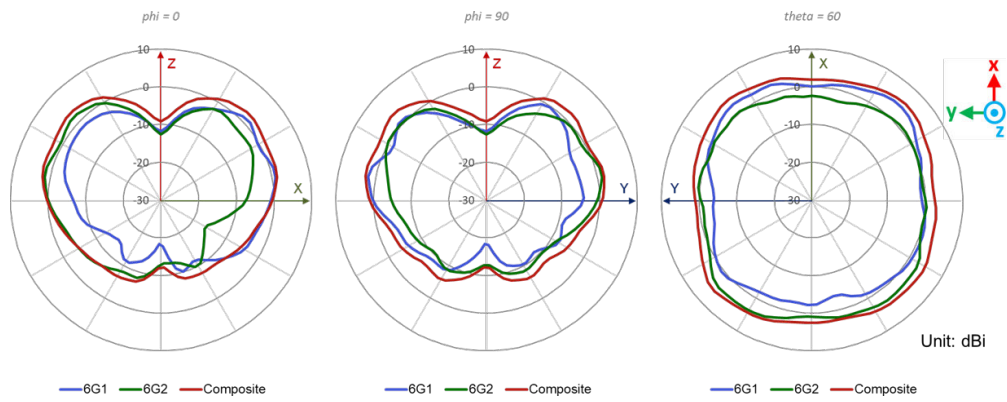


AP34 Wi-Fi @ 5850MHz

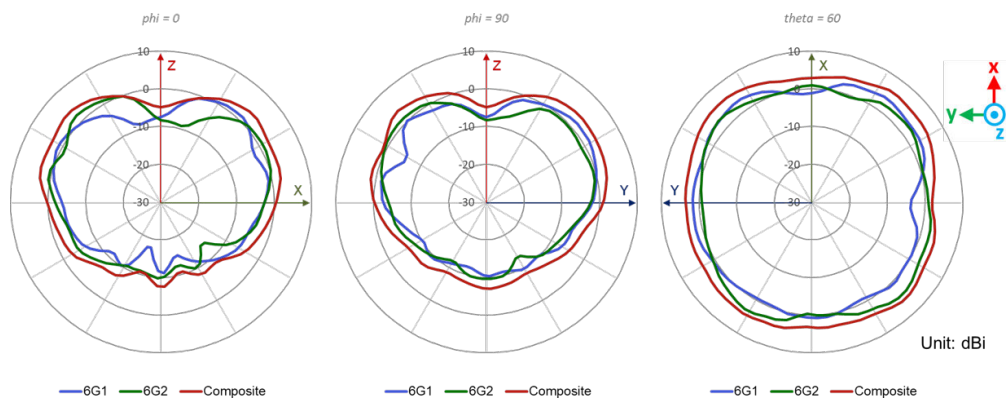


AP34 6GHz Radio Wi-Fi

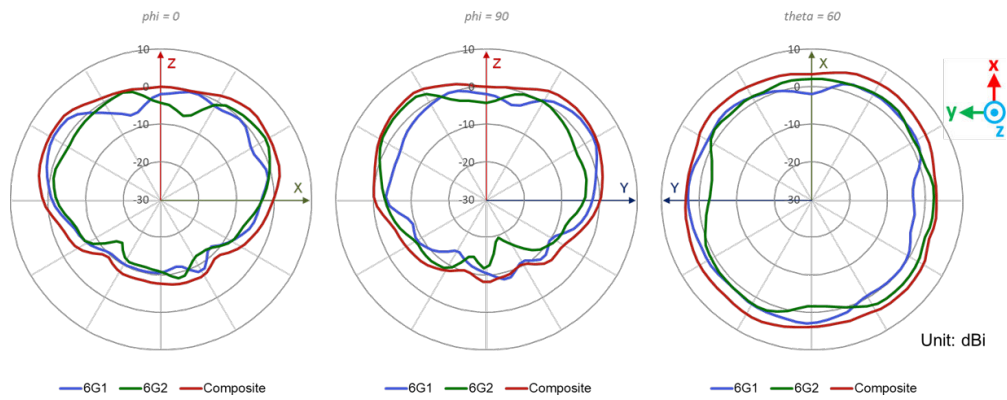
AP34 Wi-Fi @ 5925MHz



AP34 Wi-Fi @ 6565MHz

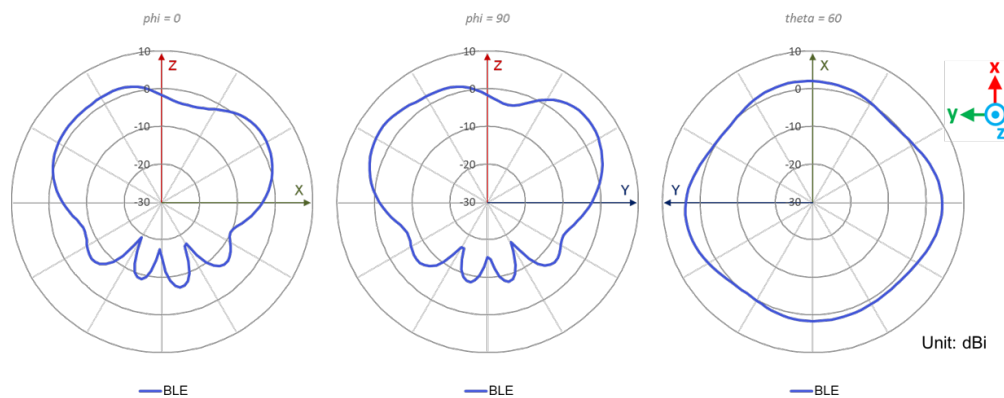


AP34 Wi-Fi @ 7125MHz



AP34 802.15.4/BLE Radio

AP34 Omni BLE @ 2440MHz



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 [AI](#) 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.

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