HPE JUNIPER networking

Data sheet

JUNIPER AP36 HIGH-PERFORMANCE ACCESS POINT AND JUNIPER AP37 HIGH-PERFORMANCE ACCESS POINT

HPE

Product overview

The Juniper AP36 High-Performance Access Point and Juniper AP37 High-Performance Access Point are HPE Wi-Fi 7 access points with built-in advanced location services and Juniper Mist integration.

AP37 and AP36 benefits

— Maximizes 6 GHz band, providing increased channel width and enabling multigigabit speeds

— 4x4 MIMO on 5 and 6 GHz

— Tri-band with dedicated fourth radio for supporting growing mobility demands

— Patented vBLE technology delivers industry-leading indoor location services accuracy and ease of use

— Flexible integrated omnidirectional, directional, and external antenna options

Juniper Mist benefits

— Fast and reliable deployment and ease of ongoing management

— Centralized control and visibility

— Quick access to new features and functionality with no disruption to services

— Agility to scale as network needs grow

Product description

The AP37 and AP36 Series indoor Wi-Fi 7 tri-band APs are engineered to deliver multigigabit throughput and resilient converged-connectivity in demanding enterprise, retail, and campus environments.

AP37

The AP37 delivers purpose-built Wi-Fi 7 performance for growing organizations requiring advanced wireless capabilities. With a tri-band (2.4 GHz, 5 GHz, and 6 GHz) configuration and a dedicated scanning radio, it provides exceptional coverage and capacity to meet your needs. The AP37 enhances wireless experiences through patented virtual BLE (vBLE) technology, enabling personalized location services including user engagement, asset visibility, and contact tracing, making it ideal for retail, education, and mid-sized enterprise deployments seeking a balance of performance and specialized features.

AP36

The AP36 offers streamlined Wi-Fi 7 connectivity designed for efficient deployments across diverse enterprise environments. Featuring the same powerful tri–radio, tri-band (2.4 GHz, 5 GHz, and 6 GHz) configuration and dedicated scanning radio as the AP37, it delivers resilient performance without compromise. The AP36 provides an accessible path to next-generation wireless technology, making it the perfect solution for organizations seeking essential Wi-Fi 7 capabilities with deployment flexibility for campus, retail, and business settings. The AP36M offers the additional flexibility of software selectable built-in directional antennas or the use of pluggable external antennas from a single AP.

Combining enterprise-grade Wi-Fi with patented virtual Bluetooth LE (vBLE) technology, the AP37 further enhances wireless networks through support for personalized location services, including user engagement, asset visibility, and contact tracing. The unique engineering of the AP37 and AP36 eliminates the need for battery-powered BLE beacons or manual calibration. By providing one-to-three-meter accuracy, the AP37 and AP36 set the standard in location services while ensuring business continuity and operational efficiency.

While wired and wireless networks are business critical, without the right architecture they can be harder to operate given the sheer number of mobile and IoT devices—not to mention the extensive variety of hardware, operating systems, and applications currently in use. Traditional architectures—highly manual and network-centric—lack the scale, flexibility, and end-to-end visibility required to support modern mobility requirements and the IT departments that manage them.

HPE Juniper Networking AI-native network

Juniper Mist brings true innovation to wireless networking with the world's first AI-Native wireless LAN (WLAN). Mist, HPE AI-native networking platform makes Wi-Fi predictable, reliable, and measurable, offering unprecedented visibility into the user experience through unique service-level expectation (SLE) metrics.

Proactive, AI-native automation and a self-healing network replace time-consuming manual tasks, lowering Wi-Fi operational costs and saving substantial time and money. All operations are managed using the open and programmable microservices that are based on the Mist platform's cloud architecture.

The Mist platform's cloud architecture

The Mist platform's cloud-native, AI-native 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 the Juniper Access Points. HPE Juniper Networking AI solutions for Wi-Fi optimize operator and user experiences with secure client-to-cloud automation, insight, and AI-native actions. With Mist, purpose-built to leverage AIOps, the AP37 and AP36 harness the faster speed, power, and performance of Wi-Fi 7 and assure an excellent experience for all users and devices and the best end-to-end operator experiences.

HPE Juniper Networking access point family

The real-time microservices in Mist platform's cloud manage the Juniper AP family.

— Wi-Fi 7: AP47, AP37, AP36, and AP66

— Wi-Fi 6E: AP45, AP34, AP24, and AP64

Table 1 compares the supported major functions of the Juniper APs to help in selecting the most appropriate model(s).

Services available for the AP37 and AP36 Wi-Fi cloud services

Juniper Wi-Fi Assurance

For IT and NOC teams

— Predictable and measurable Wi-Fi

— SLE support

— WLAN policy fabric for role-based access

— Customizable guest Wi-Fi portal

— Radio Resource Management (RRM), driven by AI

Marvis AI Assistant

For IT help desk teams

— AI-native virtual network assistant

— Natural language processing interface

— Anomaly detection

— Client SLE visibility and enforcement

— Data science-driven root cause analysis

	AP47	AP37	AP36	AP66
Deployment	Indoor	Indoor	Indoor	Indoor/Outdoor
Wi-Fi standard	Wi-Fi 7 802.11be (4x4:4)	Wi-Fi 7 802.11be 5/6 GHz: (4x4:4) 2.4 GHz: (2x2:2)	Wi-Fi 7 802.11be 5/6 GHz: (4x4:4) 2.4 GHz: (2x2:2)	Wi-Fi 7 802.11be (2x2:2)
Number of Wi-Fi radios	4	4	4	4
Wi-Fi radio modes	2.4/5/6 GHz + 5 GHz + 6 GHz	2.4 GHz + 5 GHz + 6 GHz	2.4 GHz + 5 GHz + 6 GHz	2.4 GHz + 5 GHz + 6 GHz
Scanning radio	Dedicated	Dedicated	Dedicated	Dedicated
Antenna options	Internal / Directional / External	Internal	Internal / Directional / External	Internal / Directional
Virtual BLE	Yes	Yes	No	No
Ultra-Wideband (UWB)	Yes	No	No	No
USB	Yes	Yes	Yes	No
IoT sensors	Pressure, temperature, accelerometer	Pressure, temperature, accelerometer	Pressure, temperature, accelerometer	Accelerometer
GNSS/GPS	L1/L5	L1/L5	L1/L5	L1/L5
Secondary Ethernet port	Yes, dual PoE failover	Yes	Yes	No
Warranty	Limited lifetime	Limited lifetime	Limited lifetime	One year

Bluetooth cloud services

HPE Juniper Networking mobile engagement

For digital experience teams

— Accurate (1-3m) turn-by-turn navigation

— Sensor fusion with dead reckoning

— Unsupervised machine learning

— Virtual beacons with custom notifications

— Mobile SDK for iOS and Android™

Juniper Asset Visibility

For process and resource improvement teams

— Identification of assets by name and location visibility

— 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 Premium Analytics

For network teams

— Baseline analytics features come included with Wi-Fi Assurance, User 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, User 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

Access point features

High performance Wi-Fi

The AP37 and AP36 Series are four-radio, 802.11be Wi-Fi 7 APs. Three four-spatial stream data serving radios with maximum data rates of 11528 Mbps in the 6 GHz band, 5764 Mbps in the 5 GHz band, and 688 Mbps in the 2.4 GHz band. A dedicated fourth tri-band scanning radio provides WIDS/WIPS, spectrum analysis, sensor and location analytics. With 802.11be Multi-Link Operation (MLO), Orthogonal Frequency Division Multiple Access (OFDMA), Multi-User Multiple Input Multiple Output (MU-MIMO), and BSS Coloring technologies, both AP37 and AP36 Series offer performance at unprecedented levels to support new bandwidth-hungry applications and soaring device densities.

Wi-Fi 7 amendment

The new 802.11be amendment (Wi-Fi 7) expands the capabilities of Wi-Fi 6E, including the use of up to 1200 MHz of the 6 GHz band for higher throughput and improved application performance. New capabilities include 320 MHz channels which provides double the throughput, MLO for more efficient load balancing and failover, Multi-Resource Units (Multi-RU), preamble puncturing, and 4K QAM for higher transmission rates and better user experiences. Only Wi-Fi 7 and 6E client devices can use the 6 GHz band so there is no interference due to IoT or legacy devices.

AI for AX

HPE automates and optimizes Wi-Fi 7 features with AI for AX capabilities to optimize BSS Coloring, improve data transmission scheduling within OFDMA and MU-MIMO, and assign clients to the best radio to boost the overall performance of the network.

Improved IoT operations

The AP37 Series extends network monitoring and insights to vBLE (AP36 supports omnidirectional BLE), Thread*, Zigbee*, or Matter* to increase IoT capabilities with dual 802.15.4 radios for concurrent location services and electronic shelf labels (ESL).

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 that 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.

*future considerations

Automatic RF optimization

Reliable RF optimization is even more critical with the addition of 6 GHz spectrum. Radio Resource Management uses a dedicated sensor radio to automate dynamic channel and power assignments, thus avoiding Wi-Fi and external sources of interference. The Marvis 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.

In some regulatory domains, there are special rules to govern the usage of 6 GHz when the AP has either removable External Antennas or is weatherized.

6 GHz device classification

AP36/AP37-US/-WW:

— Low Power Indoor and Standard Power

AP36M-US:

— Low Power Indoor and Standard Power with built-in directional antenna

— Standard Power only with External Antennas

AP36M-WW:

— Low Power Indoor and Standard Power with built-in directional antenna

— Low Power Indoor and Standard Power with External Antennas in most regulatory domains

— Standard Power only with External Antennas in some regulatory domains (Canada)

Proactive insight and action

A dedicated, tri-band fourth radio collects data for Juniper Mist, 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 6.0, AP3 and AP36 Series APs help extend the battery life of IoT devices, particularly as additional ones join the network.

Dynamic debugging

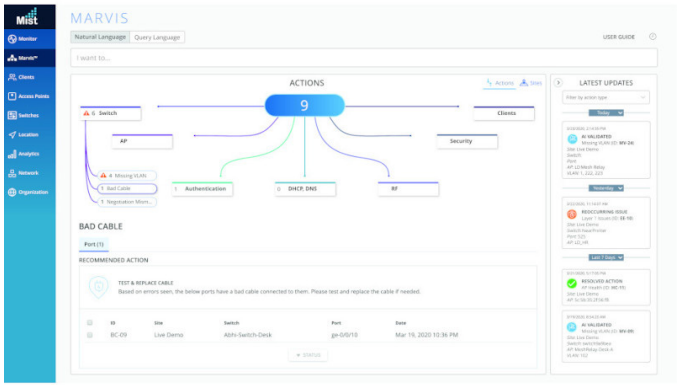
Constantly monitor services running on the AP37 and AP36, sending alerts whenever a service behaves abnormally. Dynamic debugging relieves IT of having to worry about an AP going offline or any services running on it becoming unavailable.

Dynamic packet capture and dynamic spectrum capture

The Juniper Mist platform automatically captures packets and radio frequency spectrum and streams them to the cloud when major issues are detected. AI-native dynamic packet capture and dynamic spectrum capture enable "network rewind" to identify and resolve wireless interference issues more efficiently. Both features save IT teams time and effort. They use sniffers to reproduce and capture data for troubleshooting, which eliminates the need for truck rolls.

Marvis AI Assistant

Marvis AI Assistant is a natural language processing-based assistant with a conversational interface that helps with the understanding of user intent and goals, simplifies troubleshooting, and collects network insights. Marvis AI Assistant 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. Marvis AI Assistant eliminates the need to manually hunt through endless dashboards and CLI commands.

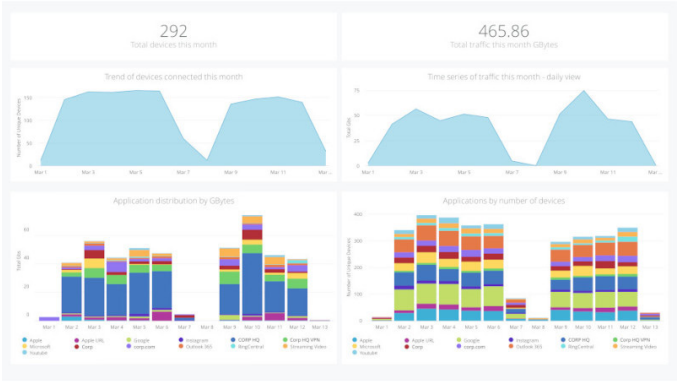


Effortless, cloud-based setup and updates

The AP37 and AP36 automatically connect to the Mist platform's cloud, download its configuration, and join 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.

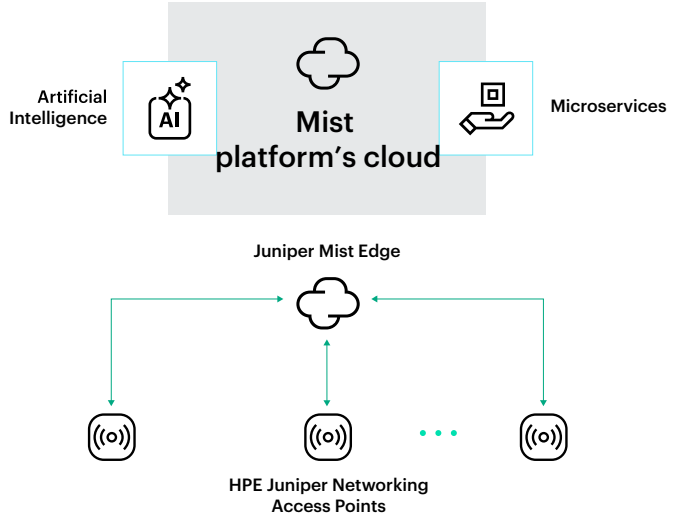
Premium analytics

Juniper Wireless Assurance, User engagement, and Asset visibility services include a base analytics capability that analyzes up to 30 days of data, which simplifies 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 Premium Analytics service is available as an additional subscription.



High-accuracy indoor location

The AP37 has patented vBLE technology controlled from the Mist platform's cloud. Passive antennas enhance the power of a single transmitter and produce directional beams (or can be combined to act as an omnidirectional radio) to accurately detect distance and location with 1-3-meter accuracy. With HPE next-generation, patented vBLE technology, you can deploy an unlimited number of virtual beacons in your physical environment with no need to install battery-powered physical BLE beacons. This maximizes scalability and optimizes your deployment investment in location-based services. Support for Bluetooth 6.0 boosts IoT device range and battery life.



Juniper Mist Edge

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

Top view of AP36 and AP37

Bottom view of AP36 and AP37

Specifications

Wi-Fi Standard	Wi-Fi 7 802.11be backwards compatibility with 802.11a/b/g/n/ac/ax
Wi-Fi Radios	2.4 GHz 802.11b/g/n/ac/ax/be radio 5 GHz 802.11a/n/ac/axbe radio 6 GHz 802.11ax/be
Combined Highest Supported Data Rates	Tri-Band: 17.98 Gbps—2.4 GHz + 5 GHz + 6 GHz
2.4 GHz	2x2:2 802.11be up to 688 Mbps data rate
5 GHz	4x4:4 802.11be up to 5.76 Gbps data rate
6 GHz	4x4:4 802.11be up to 11.53 Gbps data rate
MIMO Operation	4 spatial stream SU-MIMO for up to 11.53 Gbps wireless data rate to individual 4x4 EHT320. 4 spatial stream MU-MIMO for up to 11.53 Gbps wireless data rate to up to four MU-MIMO capable client devices simultaneously.
Dedicated Fourth Radio	2.4 GHz, 5 GHz, and 6 GHz tri-band WIDS/WIPS, spectrum analysis, sensor and location analytics radio.
Internal Directional Antennas—AP36M	Pattern approximately 60 x 60 degrees, Four 2.4 GHz directional antennas with 6 dBi peak gain Four 5 GHz directional antennas with 8 dBi peak gain Four 6 GHz directional antennas with 8 dBi peak gain
IoT radios—AP37	Dual core 802.15.4 radios and dual omnidirectional antennas, vBLE directional antenna array, Bluetooth 6.0.
IoT radios—AP36/AP36M	Dual core 802.15.4 radios and dual omnidirectional antennas, Bluetooth 6.0.
Beam forming	Transmit Beamforming and Maximal Ratio Combining
Power options	PoE PD Support via Eth0: 802.3bt: Full function. 802.3at: Reduced functionality. 802.3af: All radios disabled, cloud connectivity only.
Product dimensions	AP37, AP36, AP36M: 230 mm x 230 mm x 45 mm / 9.1" x 9.1" x 1.8"
Shipping box	274 mm x 291 mm x 82 mm / 10.8" x 11.5" x 3.2"
Product weight	AP37: 1.55 kg / 3.42lbs, AP36: 1.5 kg / 3.31lbs, AP36M: 1.53 kg / 3.37lbs
Operating temperature	AP37, AP36: 0°C to +40°C (32°F to 104°F), AP36M: –20°C to +50°C (–4°F to 122°F)
Operating humidity	10% to 90% maximum relative humidity, non-condensing
Operating altitude	3,048 m (10,000 ft)
Trusted Platform Module (TPM)	Included a TPM for infrastructure security
Supported frequency bands (country-specific restrictions apply)	2.400 to 2.4835 GHz ISM 5.150 to 5.250 GHz U-NII-1 5.250 to 5.350 GHz U-NII-2A 5.470 to 5.725 GHz U-NII-2C 5.725 to 5.850 GHz U-NII-3/ISM 5.925 to 6.425 GHz U-NII-5 6.425 to 6.525 GHz U-NII-6 6.525 to 6.875 GHz U-NII-7 6.875 to 7.125 GHz U-NII-8

I/O and indicators

IoT sensors	Pressure, temperature, accelerometer
GNSS/GPS	GNSS L1 supporting GPS, Galileo, GLONASS, BeiDou, and QZSS
USB	USB 2.0 support interface (up to 4.5W)
Eth0	100/1000/2500/5000/10000 Base-T (802.3bz); RJ45, PoE PD
Eth1	10/100/1000 Base-T; RJ45, PoE 15.4W PSE mode (requires 802.3bt on Eth0)
AP36M external antenna	Two pluggable antenna connectors; 2.4/5 GHz (4 pin), 6 GHz (6 pin)
Reset	Reset to the factory default settings
Indicators	One multicolor status LED
Traffic forwarding options	Eth0, Juniper Mist Edge

Specifications (continued)

Mounting brackets

APBR-U[1]	Universal bracket
APBR-ADP-M16	16mm threaded rod (M16-2)
APBR-ADP-T12	1/2" threaded rod
APBR-ADP-T58	5/8" 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

Ordering information

United States only	AP37-US (Internal Omni Antenna, vBLE), AP36-US (Internal Omni Antenna), AP36M-US (Directional Antenna & External Antenna)
Outside of United States	AP37-WW (Internal Omni Antenna, vBLE), AP36-WW (Internal Omni Antenna), AP36M-WW (Directional Antenna & External Antenna)

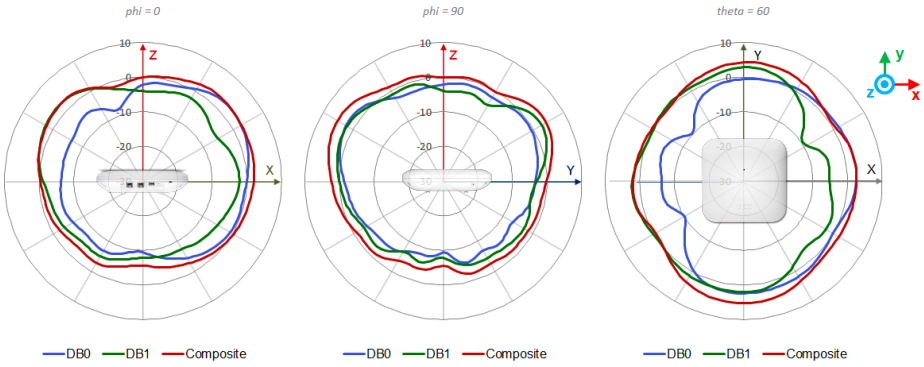
[1]The AP package includes one universal bracket APBR-U, also available separately as an accessory purchase.

HPE products are manufactured in accordance with local regulations specific to certain regions and countries. For example, customers should not use any SKUs designated for outside of the U.S. in the U.S. Customers are responsible for ensuring that any regional- or country-specific SKUs are only used in the specified authorized area and accept all associated liability. Failure to comply with the applicable regional designations of SKUs may void the warranty of the HPE products.

AP37 Antenna Plots

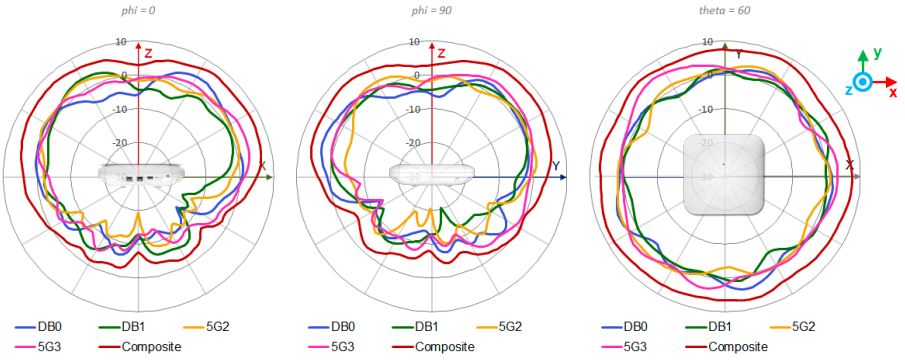
AP37 2.4 GHz Wi-Fi Antenna Plots

2.4 GHz @ 2450MHz



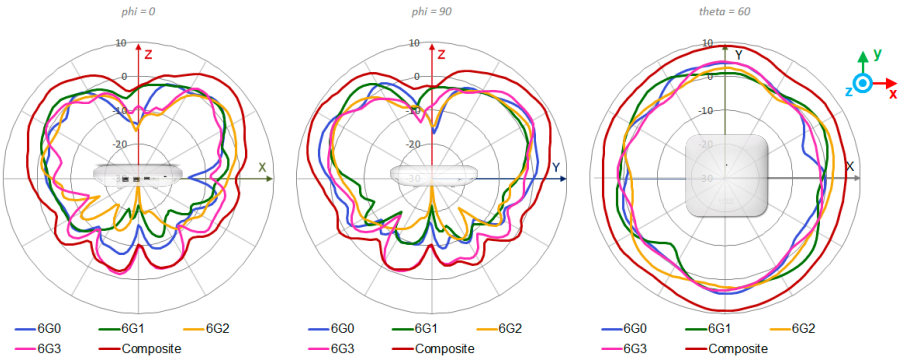
AP37 5 GHz Wi-Fi Antenna Plots

5 GHz @ 5550MHz



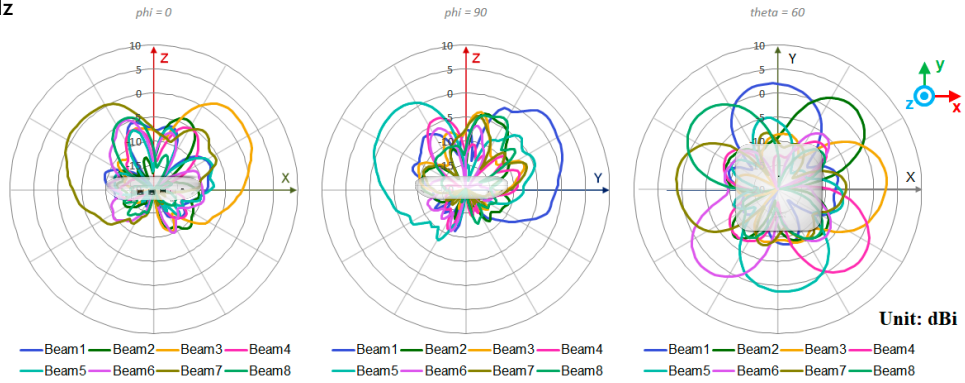
AP37 6 GHz Wi-Fi Antenna Plots

6 GHz @ 6565MHz



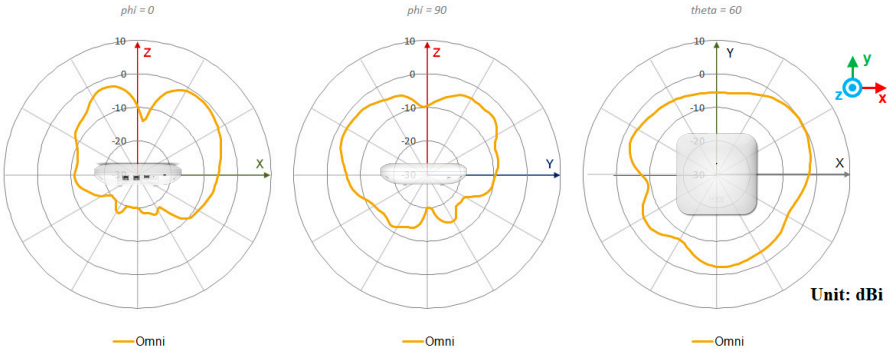
AP37 2.4 GHz Directional BLE Antenna Plots

2.4 GHz @ 2440MHz



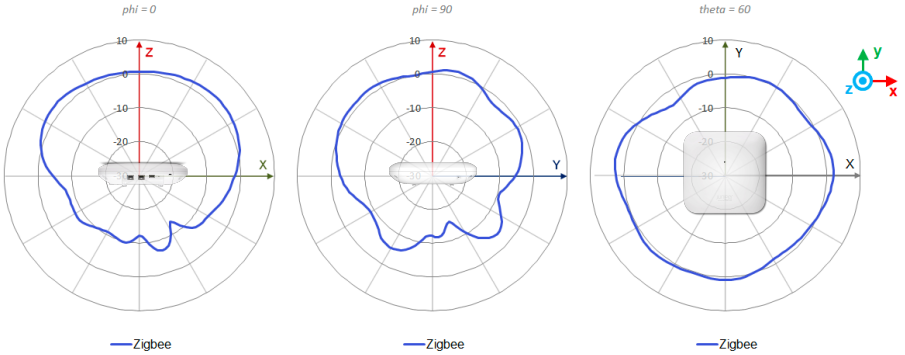
AP37 2.4 GHz Omni BLE Antenna Plots

2.4 GHz @ 2440MHz



AP37 2.4 GHz Zigbee Antenna Plots

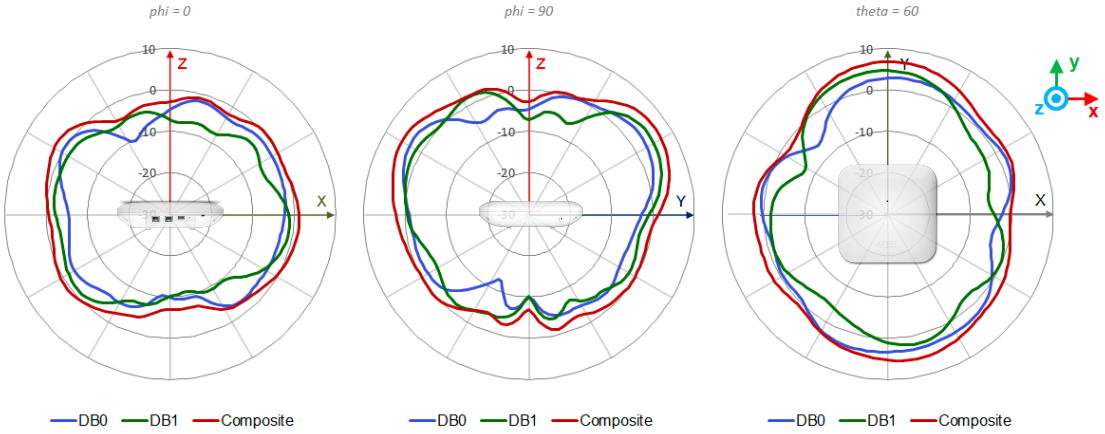
2.4 GHz @ 2440MHz



AP36 Antenna Plots

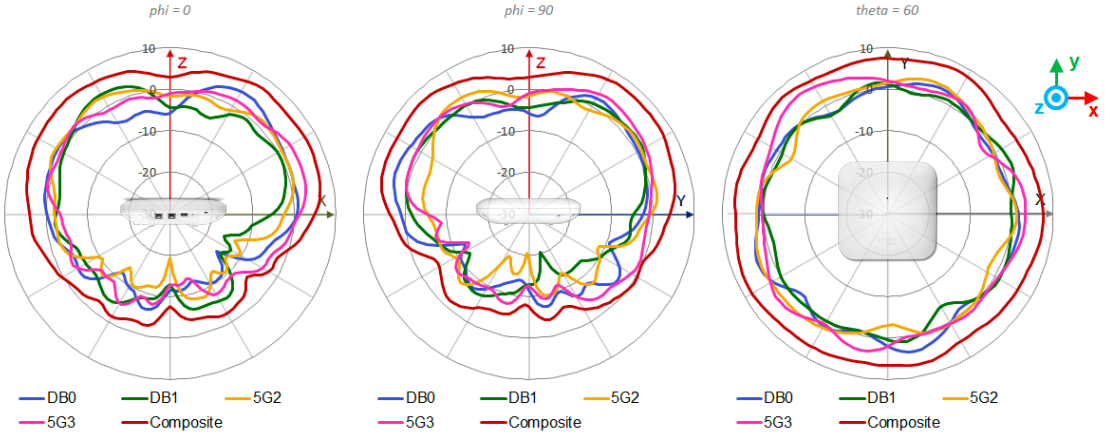
AP36 2.4 GHz Wi-Fi Antenna Plots

2.4 GHz @ 2450MHz



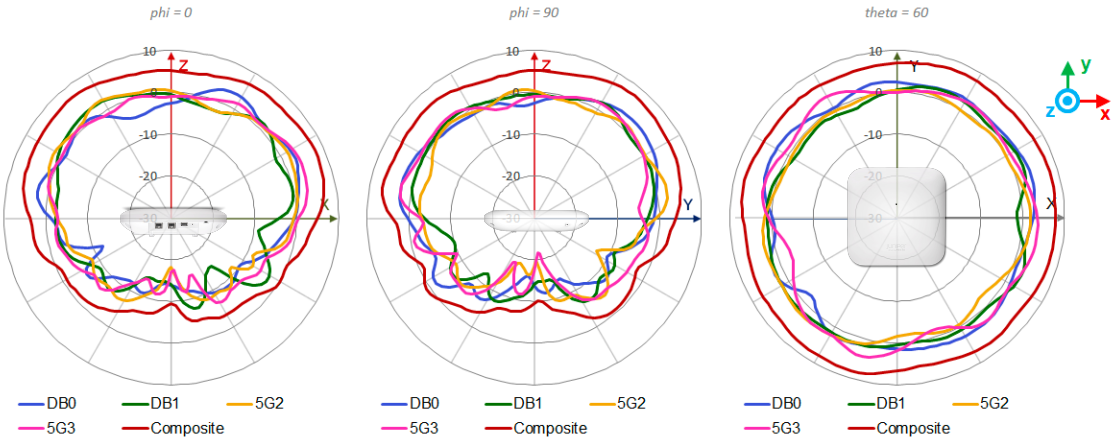
AP36 5 GHz Wi-Fi Antenna Plots

5 GHz @ 5550MHz



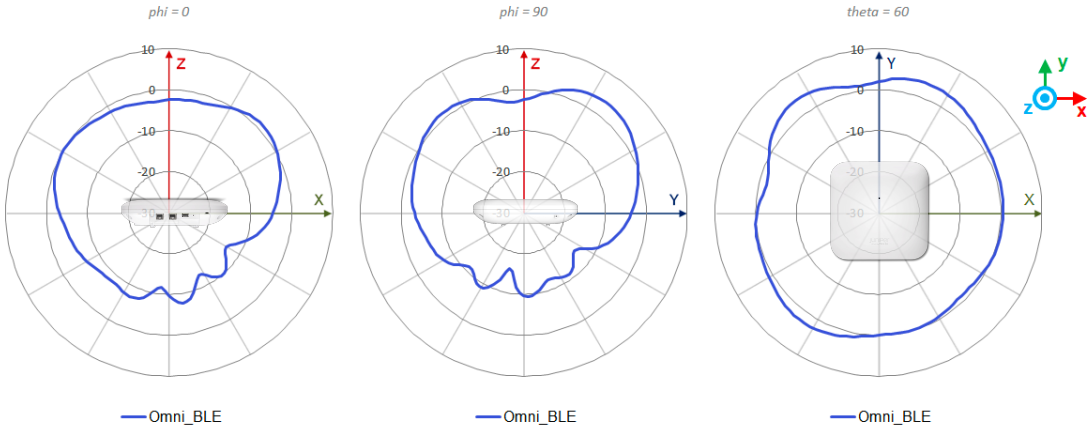
AP36 6 GHz Wi-Fi Antenna Plots

6 GHz @ 6565MHz



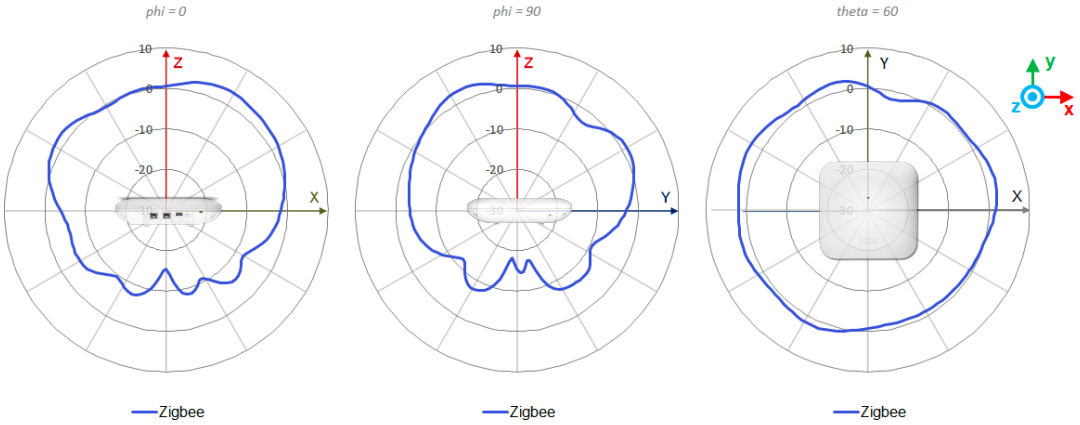
AP36 2.4 GHz Omni BLE Antenna Plots

2.4 GHz @ 2440MHz



AP36 2.4 GHz Zigbee Antenna Plots

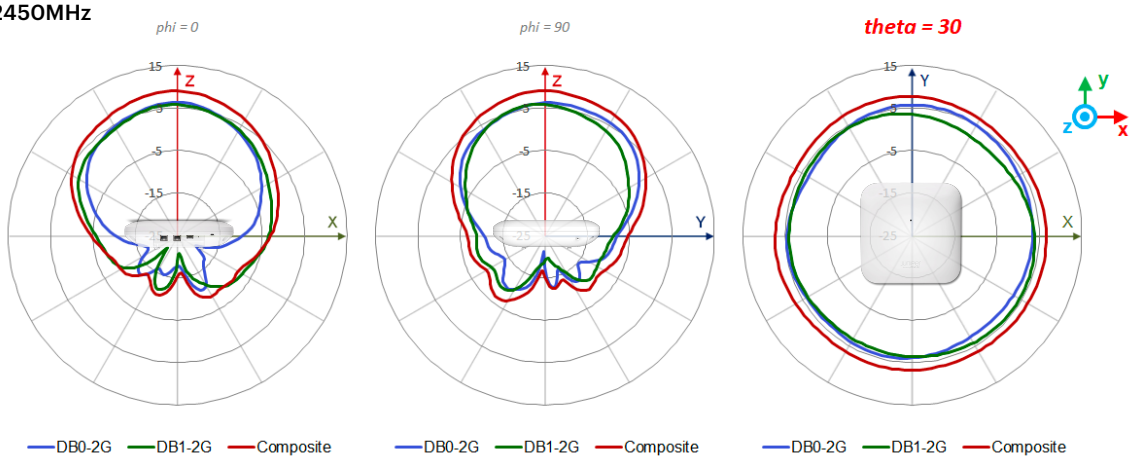
2.4 GHz @ 2440MHz



AP36M Antenna Plots

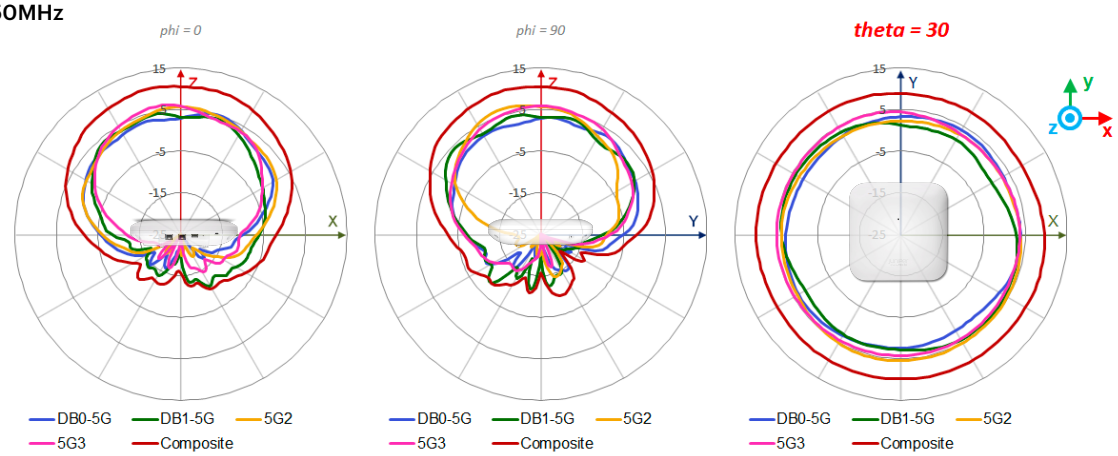
AP36M 2.4 GHz Wi-Fi Antenna Plots

2.4 GHz @ 2450MHz



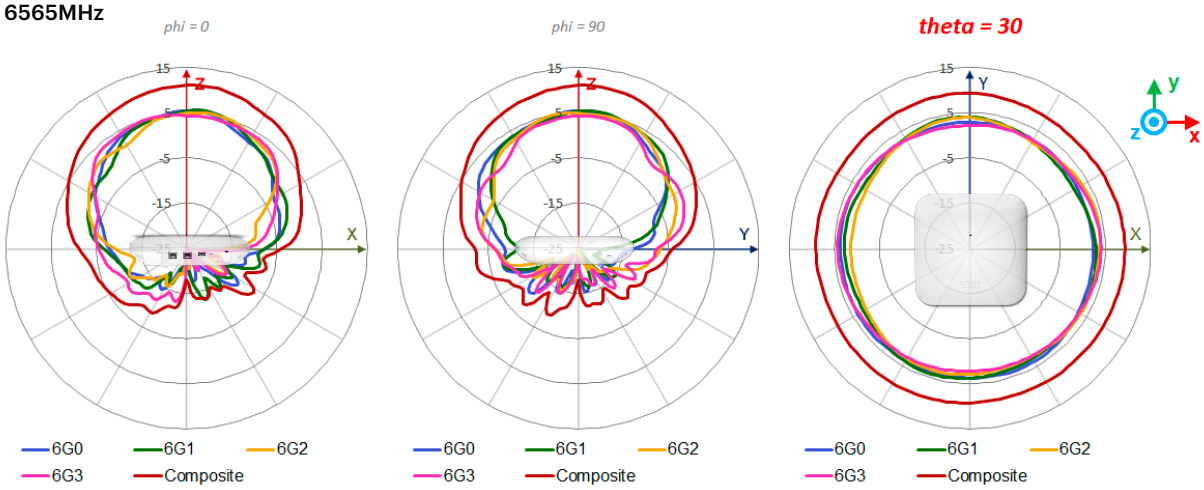
AP36M 5 GHz Wi-Fi Antenna Plots

5 GHz @ 5550MHz



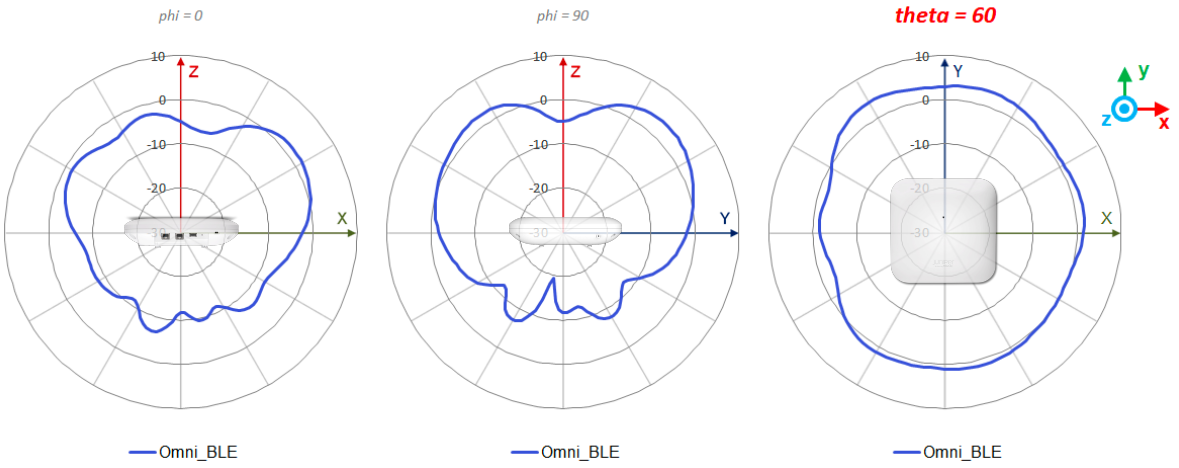
AP36M 6 GHz Wi-Fi Antenna Plots

6 GHz @ 6565MHz



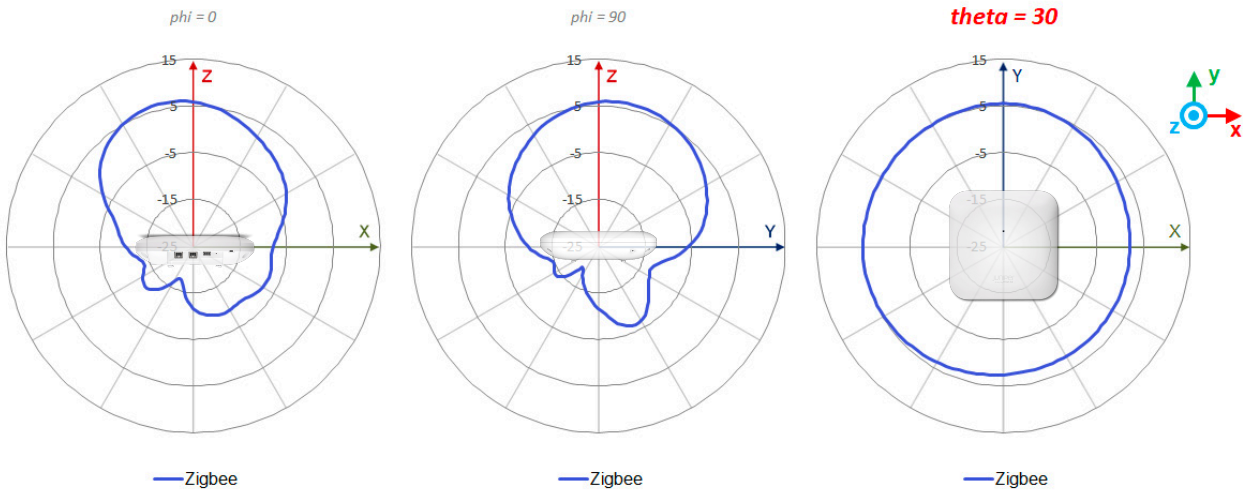
AP36M 2.4 GHz Omni BLE Antenna Plots

2.4 GHz @ 2440MHz



AP36M 2.4 GHz Zigbee Antenna Plots

2.4 GHz @ 2440MHz



About HPE

HPE is a leader in essential enterprise technology, bringing together the power of AI, cloud, and networking to help organizations achieve more. As pioneers of possibility, our innovation and expertise advance the way people live and work. We empower our customers across industries to optimize operational performance, transform data into foresight, and maximize their impact. Unlock your boldest ambitions, with HPE. Discover more at HPE.com.

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a50014091ENW, Rev. 1

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