

Juniper AP12 Access Point



- High Performance Wi-Fi
- Automatic RF Optimization
- Dynamic Packet Capture
- Marvis Virtual Conversational Assistant
- Cloud-based Set Up and Updates

AP12 Overview

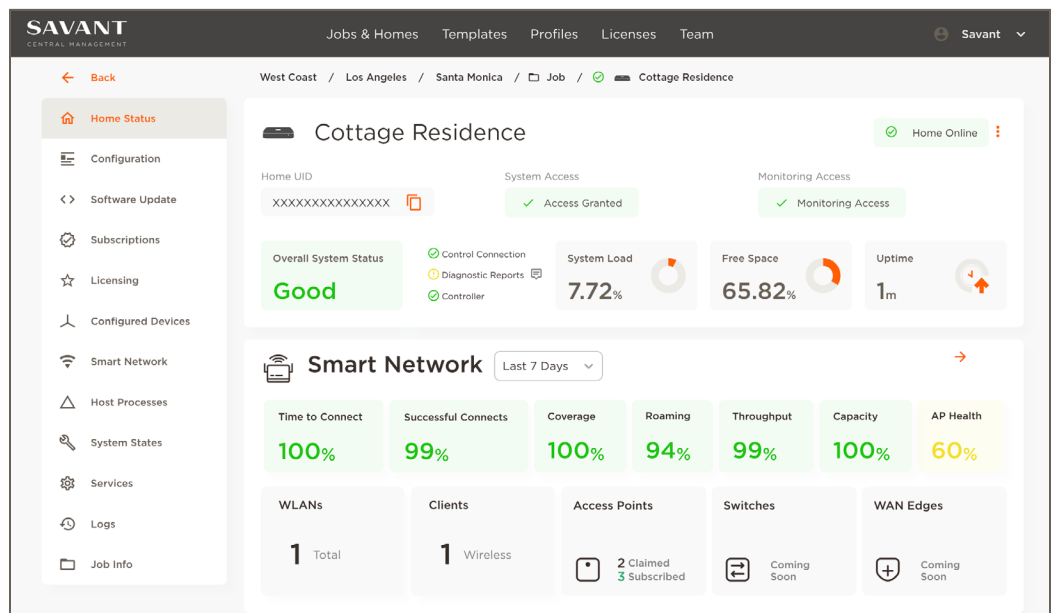
The AP12 is a wall plate mounted 802.11ax access point that integrates AI to automate network operations, boost Wi-Fi performance and provide dynamic network insights. Managed by the Juniper Mist™ Cloud Architecture, it delivers extraordinary user experiences for residential, retail, warehouse, school, clinic, and home office environments.

Savant Smart Networking — AI-Driven Wireless Networking

The AP12 access point combined with Junipers AI-Driven Mist Cloud unlocks automated network operations and boosts Wi-Fi performance, while providing dynamic network insights. A direct integration with Savant Central Management allows Savant integrators exceptional visibility into the user experience through customizable service level expectation (SLE) metrics.

Savant Smart Networking — Powered by Juniper Networks

A Savant Smart Network (SSN) leverages the Juniper Mist AI and it's cloud native architecture to bring unparalleled agility, scale, and resiliency to wireless networking. Savant Smart Networking delivers proactive automation and self-healing AI, replacing manual IT tasks saving time and money. Easily claim the AP12, configure wireless networks and manage all Juniper Access points from Savant Central Management.



High Performance Wi-Fi

The AP12 is a tri-band Wi-Fi (802.11ax) access point, supporting 2x2:2SS in the 5GHz band, delivering a maximum data rate of 1,200 Mbps for high-bandwidth applications. The AP12 also supports 2x2:2SS in the 2.4GHz band, delivering a maximum data rate of 575 Mbps. The integrated third dual-band radio functions as a network, location and security sensor, a synthetic test client radio, as well as a spectrum monitor.

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

The table shown 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).

AI for AX

Savant Smart Networking automates and optimizes new features that 802.11ax (Wi-Fi 6) has introduced. AI for AX capabilities improve data rate transmission scheduling within OFDMA and MU-MIMO and assigns clients to the best radio to boost the overall performance of the network.

Greater Spectral Efficiency

OFDMA improves efficiency to support increasing density of devices on the network. Density has itself become an issue with the rapid proliferation of IoT devices, which often utilize smaller data packets than mobile devices and hence increase 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

Juniper's Mist AI engine continuously monitors coverage and capacity metrics for every client every minute of the day to learn and optimize the RF environment. The learning algorithm uses hysteresis on a 24-hour window to conduct a site wide rebalancing for optimal channel and power assignment.

Marvis Virtual Conversational Assistant

Meet Marvis – your new favorite team member. Marvis is an AI powered network assistant with natural language processing (NLP), a conversational interface, anomaly detection and data driven root cause analysis. The Marvis Virtual Network assistant is included with an active Savant Smart Networking subscription.

Improved IoT Battery Efficiency

Like all Mist APs, the AP12 access point helps to extend the battery life of IoT devices by incorporating the 802.11ax target wake time (TWT) capability and Bluetooth 5.0, as additional clients join the network.

Proactive Analytics and Correlation Engine

A dedicated third dual-band radio collects data for Juniper's patent-pending Proactive Analytics and Correlation Engine (PACE) to monitor SLEs and provide proactive recommendations to ensure problems are resolved quickly or prevented entirely. This radio also functions as a synthetic test client to detect and mitigate network anomalies.

Dynamic Debugging

Savant Smart Networking leverage the Juniper Mist AI engine to constantly monitor services running on the AP12 and sends alerts when a service behaves abnormally. Dynamic debugging prevents APs going offline or any services running on it becoming unavailable.

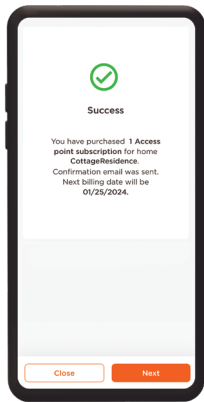
Dynamic Packet Capture

Juniper's Mist AI automatically captures packets and streams them to the cloud when major issues are detected saving time, effort and eliminates the need for sniffers.

Cloud-Based Setup and Updates

Firmware updates are retrieved and installed automatically, ensuring that the network is always up to date with new features, bug fixes and security updates.

Smart Networking - Simplified Deployment



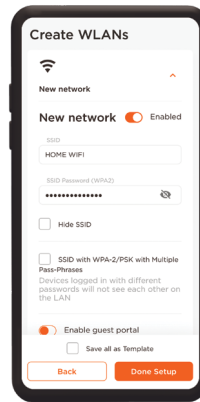
✓ Purchase Subscriptions

Purchase, manage and view previous Savant Essentials and 3rd party subscriptions.



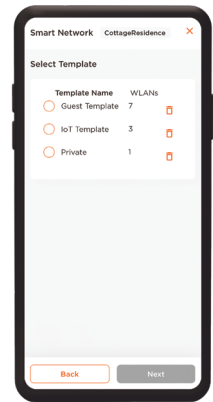
✓ Claim Mist APs

Claim Mist APs after purchase via QR code or manual input.



✓ Create WLANs

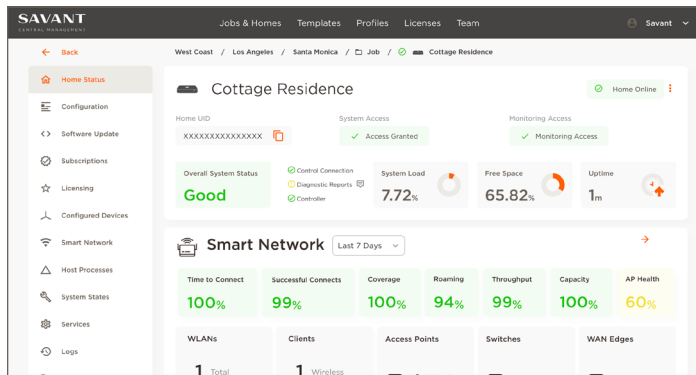
Easily create WLANs from SCM. WLANs are instantly deployed on the site.



✓ Create WLAN Templates

Create WLAN templates to simplify deployment processes.

AI-Driven Wireless Networking

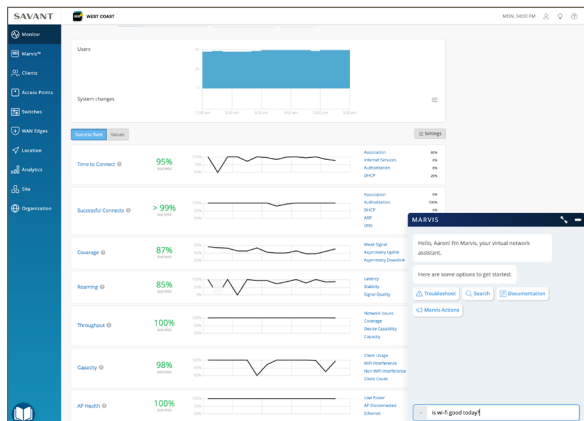


✓ Monitor SLEs

Mist AI uses a combination of artificial intelligence, machine learning, and data science techniques to optimize user experiences and simplify operations across the wireless access.



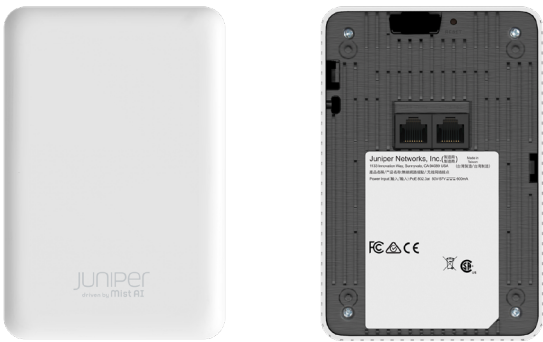
Marvis Conversational Assistant



✓ Marvis Conversational Assistant

Marvis is an AI Powered network assistant that you can talk to. Simply ask Marvis a question and receive instant root cause analysis.

Specifications



AP12

Wi-Fi Standard	802.11ax (Wi-Fi 6), including support for OFDMA, 1024-QAM, MU-MIMO, Target Wake Time (TWT), and Spatial Frequency Reuse (BSS Coloring). Backwards compatibility with 802.11a/b/g/n/ac
Combined Highest Supported Data Rates	1.8 Gbps
2.4 GHz	2x2 : 2 802.11b/g/n/ac up to 400 Mbps data rate; 2x2 : 2 802.11ax up to 575 Mbps data rate
5 GHz	2x2 : 2 802.11ax up to 1,200 Mbps data rate
MIMO Operation	Two spatial stream Single User (SU) MIMO for up to 1,200 Mbps wireless data rate to individual 2x2 HE80 Two spatial stream Multi User (MU) MIMO for up to 1,200 Mbps wireless data rate to up to four MUMIMO-capable client devices simultaneously
Dedicated Third Radio	2.4GHz and 5GHz dual-band WIDS/WIPS, spectrum analysis, synthetic client and location analytics radio
Internal Antennas	2.4GHz omnidirectional antennas with 3 dBi peak gain 5GHz omnidirectional antennas with 6 dBi peak gain
Bluetooth 5.0	Omnidirectional Bluetooth antenna Supports superbeacon mode with iBeacon and Eddystone
Beam Forming	Transmit Beamforming and Maximal Ratio Combining
Power Options	802.3af/at PoE
Dimensions	150 x 100 x 40 mm (5.9 x 3.9 x 1 in)
Weight	0.6 kg (1.3 lbs) excluding mount and accessories
Operating Temperature	Internal antenna: 0° to 40° C
Operating Humidity	10% to 90% maximum RH, non-condensing
Operating Altitude	3,048 m (10,000 ft)
Mean Time Between Failures (MTBF)	Indoor MTBF in hours is 804,043*
Trusted Platform Module (TPM)	Includes a TPM for infrastructure security

*Based on Telcordia SR-332 issue 3, Method I, Case 3 and measured at temperature of 25°C (77°F) for indoor access points, and 65°C (149°F) for outdoor access points.

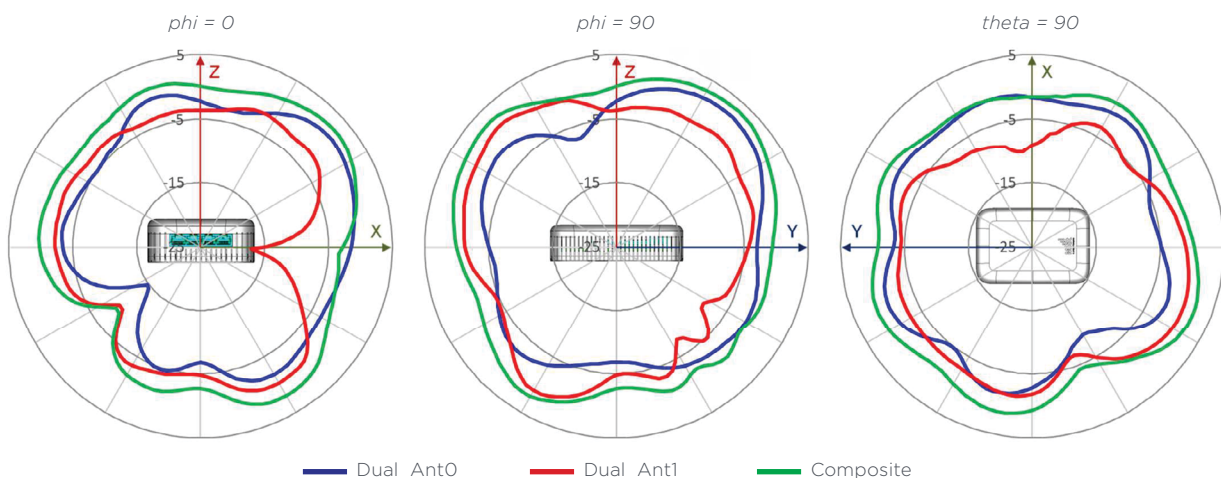
I/O and Indicators

Eth0	10/100/1000Base-T, RJ45; PoE PD
Eth1	10/100/1000Base-T; RJ45 PoE Out class 2 (requires .3at power)
Eth2-3	10/100/1000BaseT, RJ45
Passthru	Passthru
Reset	Reset to the factory default settings
Indicators	One multi-color status LED

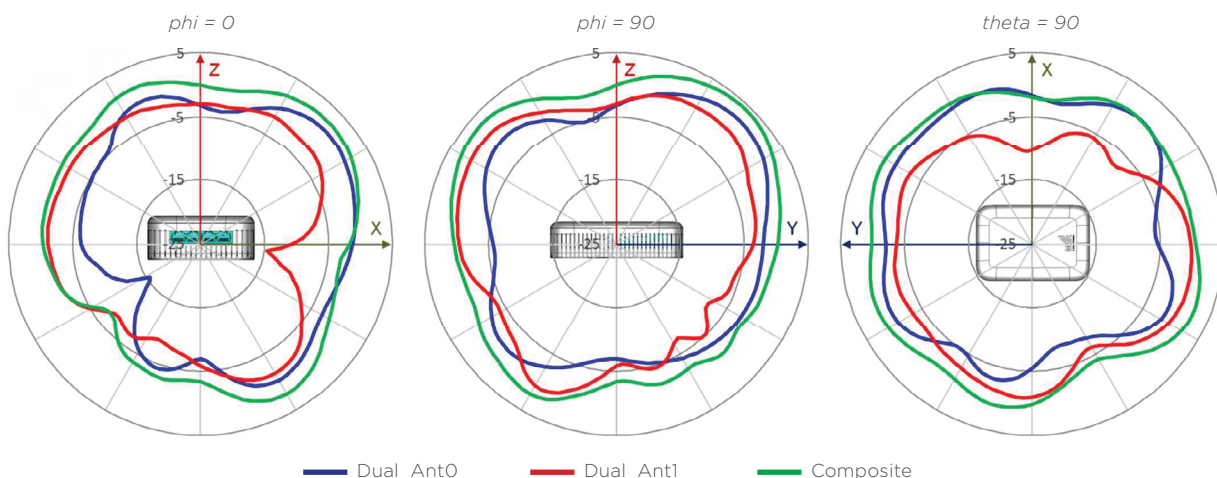
Mounting Brackets

APBR-WP1	Wall plate bracket for AP12
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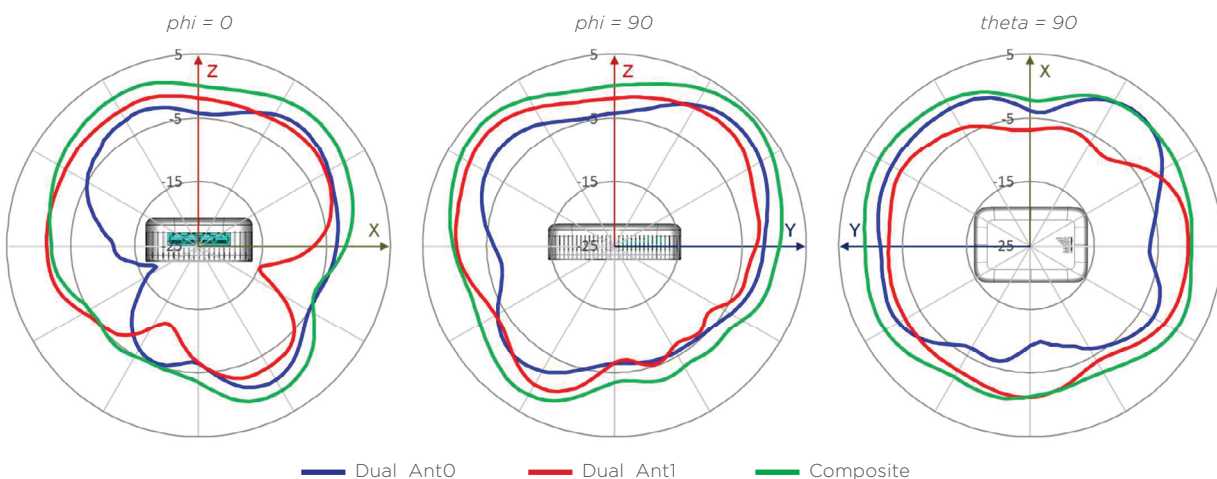
2.4 GHz Wi-Fi @ 2400MHz (R1)



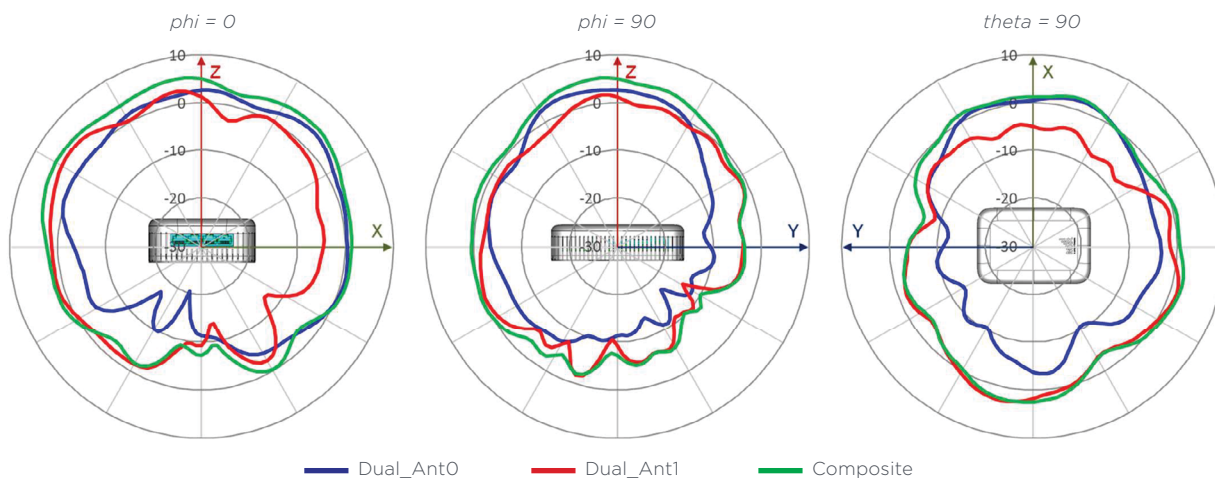
2.4 GHz Wi-Fi @ 2450MHz (R1)



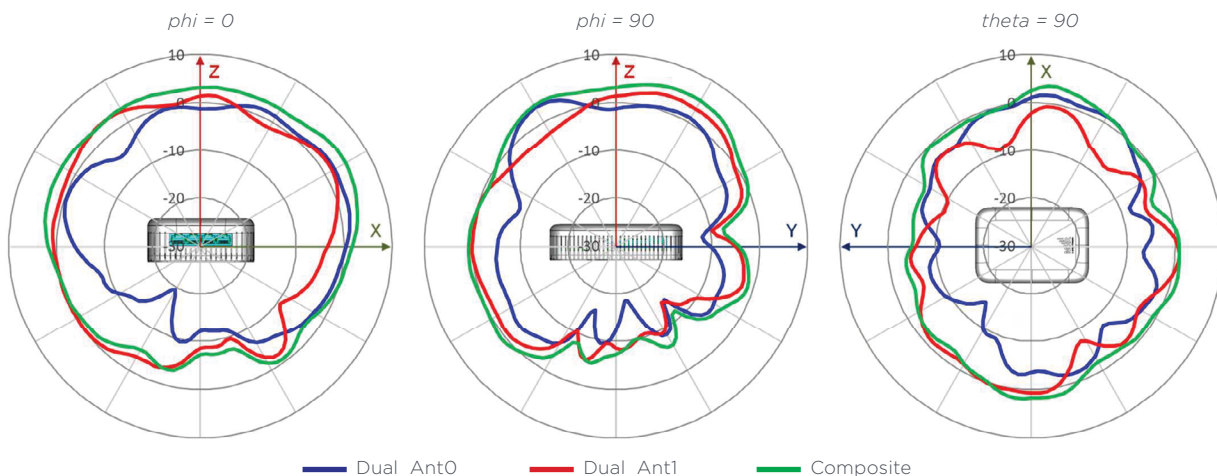
2.4 GHz Wi-Fi @ 2500MHz (R1)



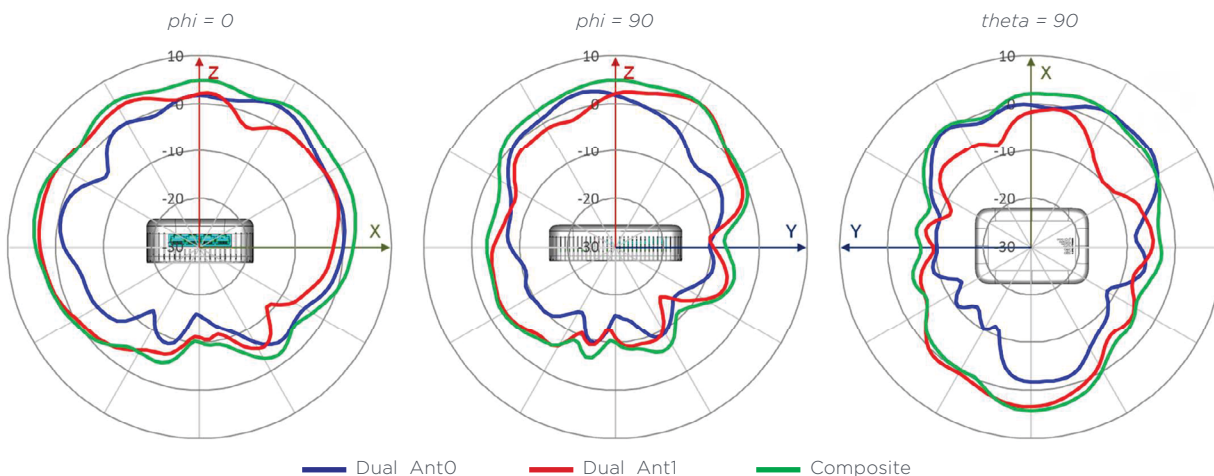
5 GHz Wi-Fi @ 5150MHz (R0)



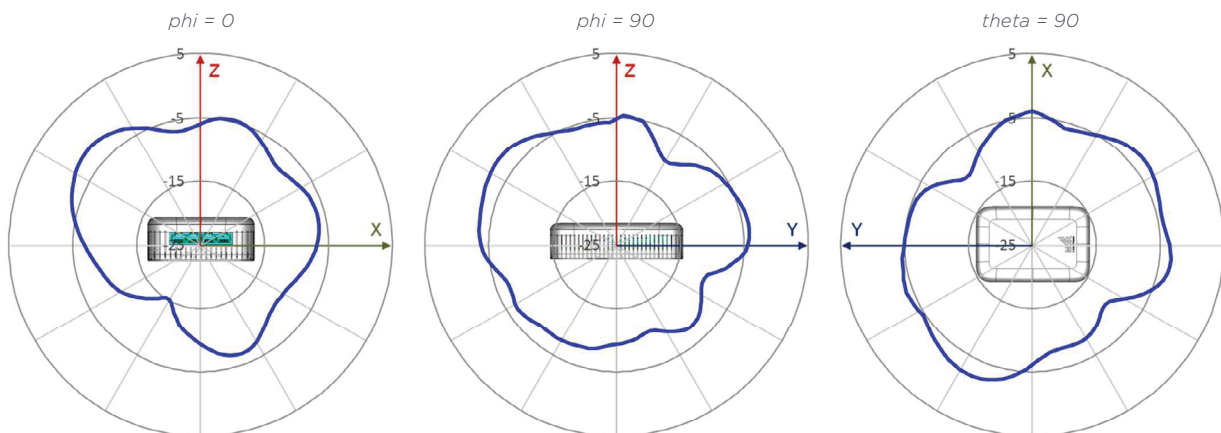
5 GHz Wi-Fi @ 5550MHz (R0)



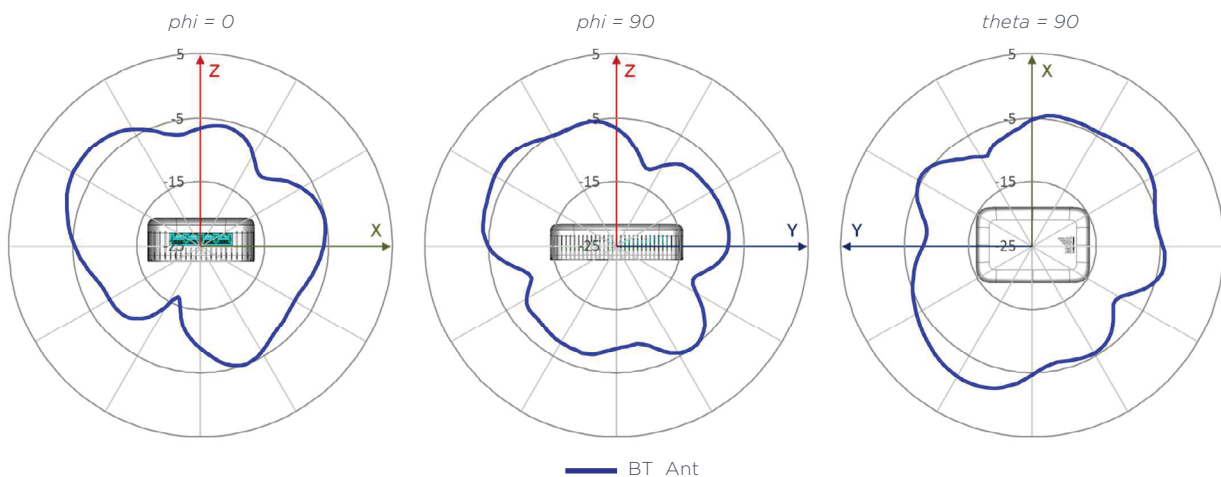
5 GHz Wi-Fi @ 5850MHz (R0)



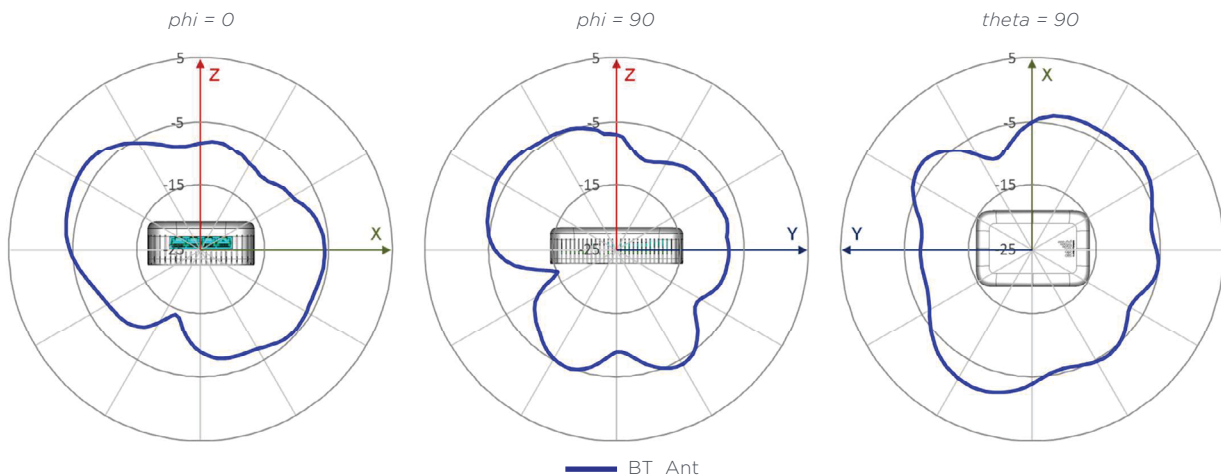
Omni BLE @ 2400MHz



Omni BLE @ 2440MHz



Omni BLE @ 2480MHz



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