

Altai AX600-S Dual-band 2x2 Wi-Fi 6 AP

Outdoor 802.11ax with internal antennas

The Altai AX600-S is a cutting-edge Wi-Fi 6 access point designed to deliver exceptional performance and highly reliable connectivity in outdoor challenging environments. With its advanced features and competitive pricing, it offers an unmatched Wi-Fi experience for a wide range of applications.

Key Features and Benefits



Super Dual-Band Coverage

Max. LOS CPE	300 m (2.4 GHz)* 250 m (5 GHz)*
Max. LOS Smartphones	1 km (2.4 GHz)* 800 m (5 GHz)*
Max. Data Rate	574 + 1201 Mbps*



Wi-Fi 6 Enhanced Capacity

- Utilizes OFDMA and bi-directional multiuser MIMO to significantly increase capacity on both 2.4 GHz and 5 GHz radios.
- Provides a total data rate of up to 1.775 Gbps and supports up to 512 concurrent users.



Hardened for Harsh Outdoor Conditions

- Features an advanced RF filter design to combat interference and ensure optimal performance.
- Housed in an IP67-rated weatherproof enclosure to withstand harsh environmental conditions.
- Equipped with industrial-grade surge protection for enhanced durability.



Robust System Design

- Supports dual-image and fail-safe boot to minimize the risk of system file corruption caused by power supply issues or improper operations.
- Integrates with †Check Point's Nano Agent to fend off sophisticated cyber attacks, including shell injections, memory corruption and control flow hijacking.



Ease of Deployment

- Supports integrated dual-band high-gain sector antennas to eliminate the need for external antennas, saving installation time.
- Easily managed through multiple options of WLAN controllers, including AltaiGate, AltaiCare cloud, or on-premise virtual appliance. Whether you have a smallscale deployment or a massive network with hundreds of APs, our management solutions enable quick and efficient network rollout.



Compatible with:



Use Cases:

Industrial Applications

The rugged design of the AX600-S ensures reliable performance in demanding industrial environments. It is an ideal solution for airports, container terminals, manufacturing facilities, warehouses, oil & gas, mining, energy & utility, agriculture, and construction sites.

Cost-Effective Outdoor Wi-Fi Hotspots

When combined with AltaiCare, the AX600-S provides a powerful advertisement engine and various login options for guest Wi-Fi access, including email sign-up, click-through, and social media logins.

City-Wide Wireless Infrastructure

The AX600-S complements Altai Super WiFi Base Stations for city-wide wireless infrastructure deployments. It enables wireless broadband services, Smart City and IoT applications.

Medium to High-Density Environments

With Wi-Fi 6 support and a built-in directional antenna, the AX600-S is an excellent choice for medium to high-density environments such as stadiums and ad-hoc events.

*The actual distance and performance vary depending on site conditions, device configurations and client capabilities.

†License and firmware upgrade is required for the support of Check Point's Nano Agent.

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Wireless Interfaces

2.4 GHz (2x2:2) Radio

• Operating Mode	AP CPE (STA) Repeater		
• Standard	IEEE 802.11b g n ax		
• Operating Frequency ‡	2.400 – 2.484 Hz (Ch 1-13)		
• Channel Bandwidth	20 40 MHz		
• Transmit Power ‡	28 dBm (Max.)		
	25 dBm (Per Chain)		
• Receiver Sensitivity (Typical, per chain)			
802.11b 1 Mbps	-98 dBm; 11 Mbps	-90 dBm	
802.11g 6 Mbps	-94 dBm; 54 Mbps	-77 dBm	
802.11n HT20, MCS0	-94 dBm; HT20, MCS7	-76 dBm	
HT40, MCS0	-92 dBm; HT40, MCS7	-74 dBm	
802.11ax HE20, MCS0	-94 dBm; HE20, MCS11	-65 dBm	
HE40, MCS0	-91 dBm; HE40, MCS11	-62 dBm	

5 GHz (2x2:2) Radio

• Operating Mode	AP CPE (STA) Repeater		
• Standard	IEEE 802.11a n ac ax		
• Operating Frequency ‡	5.150 – 5.250 Hz (Ch 36-48)		
	5.250 – 5.350 Hz (Ch 52-64)		
	5.470 – 5.725 Hz (Ch 100-140)		
	5.725 – 5.850 Hz (Ch 149-165)		
• Channel Bandwidth	20 40 80 MHz		
• Transmit Power ‡	28 dBm (Max.)		
	25 dBm (Per Chain)		
• Receiver Sensitivity (Typical, per chain)			
802.11a 6 Mbps	-94 dBm; 54 Mbps	-77 dBm	
802.11n HT20, MCS0	-94 dBm; HT20, MCS7	-76 dBm	
HT40, MCS0	-91 dBm; HT40, MCS7	-74 dBm	
802.11ac VHT20, MCS0	-94 dBm; VHT20, MCS9	-71 dBm	
VHT40, MCS0	-91 dBm; VHT40, MCS9	-69 dBm	
VHT80, MCS0	-88 dBm; VHT80, MCS9	-65 dBm	
802.11ax HE20, MCS0	-94 dBm; HE20, MCS11	-65 dBm	
HE40, MCS0	-91 dBm; HE40, MCS11	-62 dBm	
HE80, MCS0	-88 dBm; HE80, MCS11	-59 dBm	

For both 2.4 GHz and 5 GHz Radios

- Client Association Control per SSID by S R Data Rate
- 32 SSID (16 SSID per Radio)
- 802.11e (WMM), 802.11h, 802.11 , 802.11r, 802.11v, 802.11w
- Fast Roaming
- Band Steering#
- Multi-AP Steering#
- Smart Load Balancing#
- Dual-Radio Redundancy
- 1+ Redundancy
- Auto Channel Selection and TX Power Control
- Bandwidth Control Per SSID Client

Certifications

- FCC CE Others
- RoHS Compliance

Antennas

2.4 GHz Antenna

• Built-in Antenna	14 dBi Sector
• Frequency	2.4 – 2.5 GHz
• Polarization	2x2 MIMO ±45° Polarized
• Horizontal Beamwidth	60° (-3 dB), 80° (-6 dB)
• Vertical Beamwidth	13° (-3 dB), 20° (-6 dB)
• VSWR	2 (Max.)

5 GHz Antenna

• Built-in Antenna	15 dBi Sector
• Frequency	5.150 – 5.875 Hz
• Polarization	2x2 MIMO ±45° Polarized
• Horizontal Beamwidth	80° (-3 dB), 110° (-6 dB)
• Vertical Beamwidth	7° (-3 dB), 10° (-6 dB)
• VSWR	2 (Max.)

Networking

- Switch Gateway Mode
- NAT
- DHCP Client Server
- PPPoE Client#
- VLA per SSID per User
- Multicast Rate Filter I MP Snooping

Security

- Authentication – Open, Shared ey, WPA WPA2 WPA3 (Personal Enterprise), 802.1X (EAP-PEAP TLS TTLS SIM AKA)
- Encryption – WEP, TKIP, AES
- Inter Intra-SSID Client Isolation
- MAC-based Access Control (White Blac List)
- RADIUS Active Directory
- Multiple PSK
- Firewall#
- WIDS WIPS#
- Broadcast Multicast Unicast Flooding Control
- Check Point Nano Agent †

Management

- Management Platforms: Standalone, Altai ate, AltaiCare Cloud, AltaiCare On-Premises
- Web User Interface
- Command Line Interface (SSH)
- Remote Factory Reset#
- SNMP v1 v2c v3
- MIB2 IF-MIB Altai Enterprise MIB
- Syslog
- Client OS and Hostname Detection#

Physical Specifications

• Dimension	491 x 221 x 100mm
• Weight	2.68 g (Without Mounting Kit)
• Mounting	Pole or Wall-mounted
• Network Interface	1 x 2.5 bE RJ-45 Port
	1 x optical SFP connector

Power

• Power Supply	802.3bt PoE PD or 48 – 56VDC
	Passive PoE PD
• Power Consumption	20 W (Typical) 45 W (Max.)

Environmental Specifications

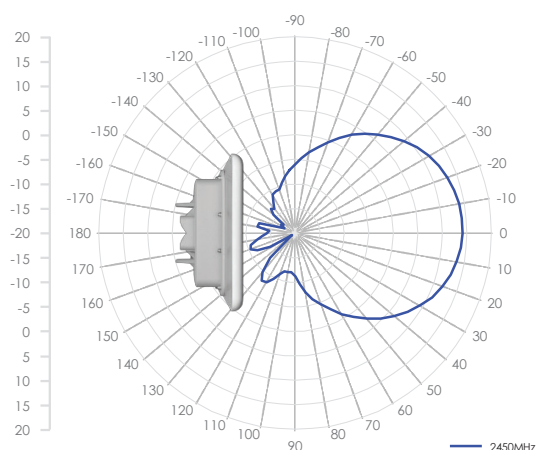
• Operating Temperature	-40 °C to +65 °C (Ambient)
• Storage Temperature	-40 °C to +70 °C
• Humidity	Up to 95% (on-Condensing)
• Lightning Protection	E 61000-4-5
• Wind Loading	Up to 216 m h (134 mph)
• Weatherproof	IP67 Compliant
• MTBF	1,296,138 hours (25°C)
	351,883 hours (65°C)

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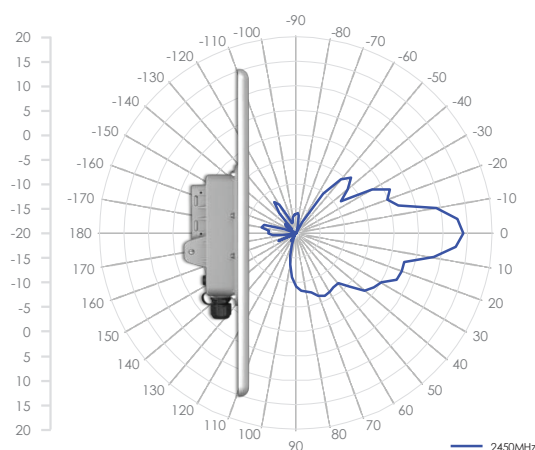
Outdoor 802.11ax with internal antennas

Radiation Pattern

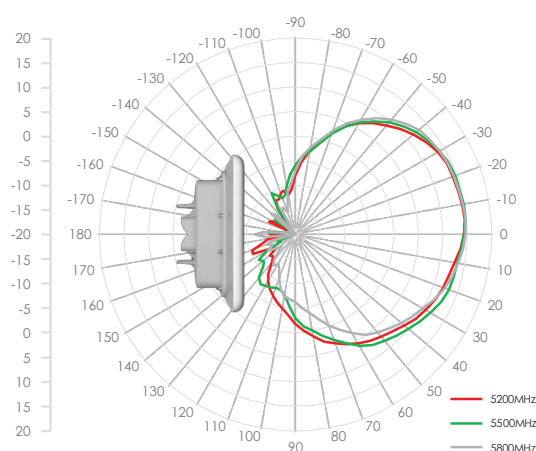
2.4GHz Azimuth Plane



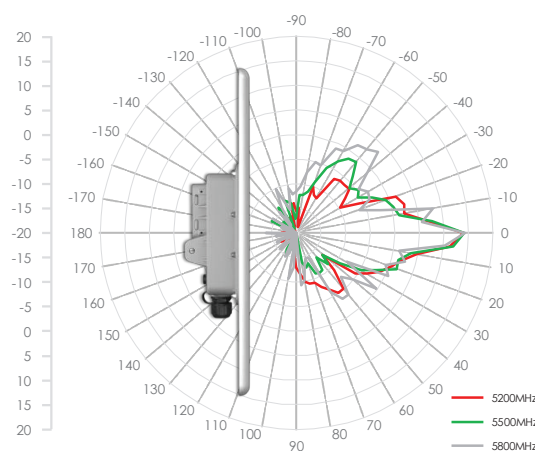
2.4GHz Elevation Plane



5GHz Azimuth Plane



5GHz Elevation Plane



Product Ordering Information

AX600-S (Part No.: SD.AX600-EH40-000)

Standard Package

- AX600-S Dual-band 2x2 Wi-Fi 6 AP with integrated sector antenna (Model o.: AX600-S)
- Standard titling wall pole mounting Kit

Optional Accessories

- 56 VDC 1 b 2.5 b Passive PoE Injector

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