



### Versatile Coverage & Long-Range Bridging Solutions with Ext. Antennas

The Altai AX600-X is a cutting-edge Wi-Fi 6 access point designed to deliver exceptional performance and reliable connectivity in challenging outdoor environments. It supports various external antenna types, making it suitable for last-mile coverage, point-to-point (PTP) and point-to-multipoint (PTMP) bridging, and mobile customer premises equipment (CPE). Built for industrial and business-critical applications, the AX600-X provides an excellent Wi-Fi experience for many different uses.

Compatible with:



### Key Features and Benefits



#### Enhanced Capacity with Wi-Fi 6 Support

Harnesses Wi-Fi 6 features such as OFDMA and bi-directional multi-user MIMO to significantly increase capacity on both 2.4 GHz and 5 GHz bands, ensuring superior performance.

|                       |                                                                     |
|-----------------------|---------------------------------------------------------------------|
| Total Data Rate       | 2.976 Gbps<br>- 2.4 GHz Radio: 574 Mbps<br>- 5 GHz Radio: 2402 Mbps |
| Max. Concurrent Users | *512 (256 for each radio)                                           |



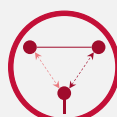
#### Dual-Image Design

Supports dual-image and fail-safe boot to minimize the risk of system file corruption caused by power supply issues or improper operations.



#### Seamless Mobility

Enables low-latency roaming and resolves sticky client issues with support for 802.11k/v/r and Altai's Smart Roaming and Steering algorithm.



#### Multi-Link Redundancy

As a STA (CPE), the AX600-X supports dual-radio simultaneous links or can work with other CPEs to form a 1+N redundancy group through Altai's proprietary AlwaysConnect feature. This ensures a highly reliable wireless connection while maintaining optimal link quality and low latency for mission-critical and high-mobility applications.



#### Super Dual-Band Coverage

|           | *Expected Line-of-Sight Distance between **AX600-X AP and Smartphone |       |
|-----------|----------------------------------------------------------------------|-------|
|           | 2.4 GHz                                                              | 5 GHz |
| Open Area | 380 m                                                                | 380 m |
| Rural     | 220 m                                                                | 220 m |
| Suburban  | 100 m                                                                | 100 m |
| Urban     | 50 m                                                                 | 50 m  |



#### Extended 5 GHz Long-Range Point-to-Point Bridge

| Local Bridge | Remote Bridge | *Expected Line-of-Sight Distance |
|--------------|---------------|----------------------------------|
| §AX600-X     | §AX600-X      | 10+ km                           |
|              | §A660-S/      | 10+ km                           |
|              | §A600-X       |                                  |



#### Robust Security Protection

- Supports WPA3 for secure Wi-Fi access, offering advanced encryption protocols to safeguard data transmission.
- Integrates with †Check Point's Nano Agent to fend off sophisticated cyber-attacks, including shell injections, memory corruption and control flow hijacking.



#### Weatherproof Housing

Built to withstand outdoor environments, it is well-suited for various deployments from smart cities and ports to construction sites.



#### Ease of Deployment

Compatible with either cloud or on-premises WLAN controllers, including AltaiGate, AltaiCare cloud/virtual appliance/mini appliance, enabling quick and efficient network rollout regardless of the network size.

\* The distance values listed in the table are applicable for basic connectivity only. For high-bandwidth and time-sensitive applications, a stronger signal is required, which translates to shorter distances. Please note the actual number of concurrent users and performance can vary based on site conditions, distance, device configurations, and overall capabilities

\*\* Assume the 2.4 GHz 5 dBi omnidirectional antennas and the 5 GHz 9 dBi omnidirectional antennas are used.

§ Assume 5 GHz 22 dBi panel or 32/34dBi dish antennas are used.

† The Check Point's Nano Agent feature is supported via AltaiGate feature license upgrade.

### Wireless Interfaces

#### 2.4 GHz (2x2:2) Radio

- Operating Mode AP/STA (CPE)/Repeater
- Standard IEEE 802.11b/g/n/ax
- Maximum Data Rate 574 Mbps
- ‡Operating Frequency 2.400 – 2.484 GHz (Ch 1-13)
- Channel Bandwidth 20/40 MHz
- ‡Transmit Power 28 dBm (Max.), 25 dBm (Per Chain), Adjustable in 1 dB step
- Modulation CCK, BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM

#### 5 GHz (2x2:2) Radio

- Operating Mode AP/STA (CPE)/Repeater/Bridge
- Standard IEEE 802.11a/n/ac/ax
- Maximum Data Rate 2402 Mbps (Proprietary: 2882.4 Mbps)
- ‡Operating Frequency 5.150 – 5.250 GHz (Ch 36-48)  
5.250 – 5.350 GHz (Ch 52-64)  
5.470 – 5.725 GHz (Ch 100-140)  
5.725 – 5.850 GHz (Ch 149-165)
- Channel Bandwidth 20/40/80/160 MHz
- ‡Transmit Power 28 dBm (Max.), 25 dBm (Per Chain), Adjustable in 1 dB step
- Modulation BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM

### AP Features

- 16 SSID (8 SSID per Radio)
- Hidden SSID in Beacons
- Hybrid WDS mode (Single SSID for WDS Links and End Clients)
- Client Association Control per SSID by SNR and Data Rate
- Bandwidth Control Per SSID/Client
- Auto Channel Selection and Interference Mitigation Suite
- Dynamic Frequency Selection (DFS) in 5 GHz Spectrum
- #Band Steering
- #Multi-AP Steering and Stickiness Optimization (802.11k/v)
- Fast Roaming (802.11r)
- QoS: 802.11e (WMM), 802.1p (PCP), DSCP, U-APSD
- Frame Aggregation: A-MPDU, A-MSDU
- RTS/CTS Protection
- IGMP Snooping and Multicast to Unicast Conversion
- Multicast Rate Filter

### STA Features

- Target AP Locking
- Preferred AP Association
- Fast Roaming (802.11r)
- Advanced Roaming Optimization
- #Dual-Radio and 1+N Redundancy
- MAC Cloning
- Bandwidth Control

### Networking

- Switch/Gateway Mode
- IPv4/IPv6 Dual-Stack
- Spanning Tree Protocol (IEEE 802.1D)
- NAT
- DHCP Client/Server
- #PPPoE Client
- VLAN (Trunk/Access) per SSID
- VLAN per User (Dynamic VLAN)
- VLAN Pooling
- Port Forwarding
- SoftGRE/EoIP Tunneling

### Security

- Authentication – Open, Shared key, WPA/WPA2/WPA3 (Personal/Enterprise), 802.1X (EAP-PEAP/TLS/TTLS/SIM/AKA)
- Encryption – WEP, TKIP, AES
- Management Frame Protection (802.11w)
- Inter/Intra-SSID Client Isolation
- MAC-based Access Control (White/Black List)
- RADIUS Client
- Multiple PSK
- External Captive Portal
- Trusted IP Management Access
- WIDS/WIPS
- Wireless Access Traffic Right
- Check Point Nano Agent

### Management

- Management Mode: Fat AP (Standalone), Thin AP
- Local Management:
  - Web User Interface (HTTP/HTTPS)
  - Command Line Interface (SSH)
  - Secondary IP Address
- Remote Management:
  - AltaiCare Private Cloud
  - AltaiCare On-Premises
  - AltaiCare Mini
  - AltaiGate
  - SNMP v1/v2c/v3
  - MIB2/IF-MIB/Altai Enterprise MIB
  - Reverse SSH
- Syslog
- Diagnostic Tools: Channel Scanner, Packet Capture, Ping, Traceroute
- Backhaul Connectivity Health Check and Safe Mode Access
- Ping Watchdog
- Remote Factory Reset

‡ The transmit power and operating frequency may vary according to country regulations.

# Will be available in the future.

**Antennas****2.4 GHz Radio Antenna**

- Antenna Type External, 2 x N-Female

**5 GHz Radio Antenna**

- Antenna Type External, 2 x N-Female

**Physical Specifications**

- Dimensions 246 x 218 x 23 mm
- Weight 2 kg (Without Mounting Kit)
- Mounting Pole or Wall-mounted
- Network Interface 1 x 2.5 Gbps RJ-45 Port (PoE In)  
1 x 2.5 Gbps SFP Port
- Console 1 x RJ-45 Port
- Indicator 1 x Power Status  
1 x System Status  
2 x Ethernet Interface Status  
3 x Radio Interface Status  
3 x Received Signal Strength
- Reset Button Onboard

**Power**

- Power Supply 802.3bt PoE PD, or  
Passive 48 – 56 V PoE PD
- Power Consumption (Max.) 20 W (-5 °C or above)  
30 W (Below -5 °C)

**Environmental Specifications**

- Operating Temperature -40 °C to +65 °C (Ambient)
- Storage Temperature -40 °C to +75 °C
- Humidity 5% – 90% (Non-Condensing)
- Lightning Protection EN 61000-4-5
- Wind Loading 216 km/h (134 mph)
- Weatherproof IP67 Compliant

**Certifications**

- FCC/CE/Others
- RoHS Compliance

**Warranty**

- 1-Year Limited Hardware Warranty

## Product Ordering Information

## Standard Package

|                             |                                                                                                                                                                                                             |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part No.: SD.AX600-2244-001 | <ul style="list-style-type: none"> <li>AX600-X Outdoor Dual-Band 2x2 Wi-Fi 6 Access Point with RF connectors for External Antennas (Model No.: AX600-X)</li> <li>Standard Wall/Pole Mounting Kit</li> </ul> |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Optional Accessories – PoE Injector

|                         |                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Part No.: SD.PE-0016-GS | <ul style="list-style-type: none"> <li>Indoor AC to 56VDC 2.5 Gigabit 56W Passive PoE Injector</li> <li>No Power Cords/Wires included</li> </ul> |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|

## Optional Accessories – PoE Switch

|                             |                                                                                                                                                                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part No.: SD.IS120-1223-000 | <ul style="list-style-type: none"> <li>MIS120P Industrial 6-Gigabit-Port Managed Layer 2+ PoE Switch</li> <li>Optionally used in conjunction with 1) 120 W 48 VDC Industrial Power Supply (SD.PE-0001-MW), or 2) 240 W 48 VDC Industrial Power Supply (SD.PE-0002-MW)</li> </ul>  |
| Part No.: SD.IS200-3323-000 | <ul style="list-style-type: none"> <li>MIS200P Industrial 14-Gigabit-Port Managed Layer 2+ PoE Switch</li> <li>Optionally used in conjunction with 1) 120 W 48 VDC Industrial Power Supply (SD.PE-0001-MW), or 2) 240 W 48 VDC Industrial Power Supply (SD.PE-0002-MW)</li> </ul> |

## Optional Accessories – Antenna

|                          |                                                                                                                                                                                                                                 |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part No.: SD.AN-2M5M-HL  | <ul style="list-style-type: none"> <li>2.4 GHz 5 dBi N-Male Omnidirectional Antenna</li> <li>Direct mount</li> <li>Quantity required: 2 per AX600-X</li> </ul>                                                                  |
| Part No.: SD.AN-2M5F-00  | <ul style="list-style-type: none"> <li>2.4 GHz 5 dBi N-Female Omnidirectional Antenna</li> <li>Pole mount</li> <li>Used in conjunction with 1 x RF cable: SD.CA-RF02-LS-00</li> <li>Quantity required: 2 per AX600-X</li> </ul> |
| Part No.: NS.AN-2M08-HL  | <ul style="list-style-type: none"> <li>2.4 GHz 8 dBi N-Male Omnidirectional Antenna</li> <li>Direct mount</li> <li>Quantity required: 2 per AX600-X</li> </ul>                                                                  |
| Part No.: SD.AN-2M8F-00  | <ul style="list-style-type: none"> <li>2.4 GHz 8 dBi N-Female Omnidirectional Antenna</li> <li>Pole mount</li> <li>Used in conjunction with 1 x RF cable: SD.CA-RF02-LS-00</li> <li>Quantity required: 2 per AX600-X</li> </ul> |
| Part No.: SP.AN-2S14-01  | <ul style="list-style-type: none"> <li>2.4 GHz 14 dBi N-Female Sector Antenna</li> <li>Pole mount</li> <li>Used in conjunction with 2 x RF cable: SD.CA-RF02-LS-00</li> <li>Quantity required: 1 per AX600-X</li> </ul>         |
| Part No.: SD.AN-2S15-00  | <ul style="list-style-type: none"> <li>2.4 GHz 15 dBi N-Female Sector Antenna</li> <li>Pole mount</li> <li>Used in conjunction with 2 x RF cable: SD.CA-RF02-LS-00</li> <li>Quantity required: 1 per AX600-X</li> </ul>         |
| Part No.: SD.AN-5M109-01 | <ul style="list-style-type: none"> <li>5 GHz 9dBi N-Male Omnidirectional Antenna</li> <li>Direct Mount</li> <li>Quantity required: 2 per AX600-X</li> </ul>                                                                     |
| Part No.: SD.AN-5S16-00  | <ul style="list-style-type: none"> <li>5 GHz 16 dBi N-Female Sector Antenna</li> <li>Pole Mount</li> <li>Used in conjunction with 2 x RF cable: SD.CA-RF02-LS-00</li> <li>Quantity required: 1 per AX600-X</li> </ul>           |

|                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part No.: SD.AN-5P22-KB                                                                                                                                           | <ul style="list-style-type: none"> <li>• 5 GHz 22 dBi N-Female Panel Antenna</li> <li>• Pole Mount</li> <li>• Used in conjunction with 2 x RF cable: SD.CA-RF02-LS-00</li> <li>• Quantity required: 1 per AX600-X</li> </ul>                                                                                                                        |
| Part No.: NS.AN-5D32-00                                                                                                                                           | <ul style="list-style-type: none"> <li>• 5 GHz 32 dBi N-Female Dish Antenna</li> <li>• Pole Mount</li> <li>• Used in conjunction with 2 x RF cable: SD.CA-RF02-LS-00</li> <li>• Quantity required: 1 per AX600-X</li> </ul>                                                                                                                         |
| Part No.: NS.AN-5D34-00                                                                                                                                           | <ul style="list-style-type: none"> <li>• 5 GHz 34 dBi N-Female Dish Antenna</li> <li>• Pole Mount</li> <li>• Used in conjunction with 2 x RF cable: SD.CA-RF02-LS-00</li> <li>• Quantity required: 1 per AX600-X</li> </ul>                                                                                                                         |
| <b>Optional Accessories – RF Cable</b>                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                     |
| Part No.: SD.CA-RF02-LS-00                                                                                                                                        | <ul style="list-style-type: none"> <li>• 2-Meter N-Male to N-Male RF Cable</li> </ul>                                                                                                                                                                                                                                                               |
| <b>Optional Accessories – Ethernet Surge Protector</b>                                                                                                            |                                                                                                                                                                                                                                                                                                                                                     |
| Part No.: NS.MS-0001-PT                                                                                                                                           | <ul style="list-style-type: none"> <li>• Outdoor 60W Gigabit Ethernet Surge Protector</li> </ul>                                                                                                                                                                                                                                                    |
| <b>Optional Accessories – Transceiver</b>                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |
| Part No.: NS.SF-0001-ST                                                                                                                                           | <ul style="list-style-type: none"> <li>• 1.25G 20km Single Mode Duplex LC SFP Transceiver</li> </ul>                                                                                                                                                                                                                                                |
| <b>Warranty Extension</b>                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                     |
| Part No.: SV.HW-AX6002-00                                                                                                                                         | <ul style="list-style-type: none"> <li>• 2<sup>nd</sup> Year Extended H/W Warranty for AX600 Series</li> </ul>                                                                                                                                                                                                                                      |
| Part No.: SV.HW-AX6003-00                                                                                                                                         | <ul style="list-style-type: none"> <li>• 3<sup>rd</sup> Year Extended H/W Warranty for AX600 Series</li> </ul>                                                                                                                                                                                                                                      |
| Part No.: SV.HW-AX6004-00                                                                                                                                         | <ul style="list-style-type: none"> <li>• 4<sup>th</sup> Year Extended H/W Warranty for AX600 Series</li> </ul>                                                                                                                                                                                                                                      |
| Part No.: SV.HW-AX6005-00                                                                                                                                         | <ul style="list-style-type: none"> <li>• 5<sup>th</sup> Year Extended H/W Warranty for AX600 Series</li> </ul>                                                                                                                                                                                                                                      |
| <b>Annual Technical Support and Warranty Extension</b>                                                                                                            |                                                                                                                                                                                                                                                                                                                                                     |
| Part No.: SV.AS-0508-01                                                                                                                                           | <ul style="list-style-type: none"> <li>• 2<sup>nd</sup>/3<sup>rd</sup> Year Extended H/W Warranty and Technical Support</li> <li>• Quantity: 1 for the 2<sup>nd</sup> Year Extended H/W Warranty and Technical Support</li> <li>• Quantity: 2 for the 2<sup>nd</sup> and 3<sup>rd</sup> Year Extended H/W Warranty and Technical Support</li> </ul> |
| Part No.: SV.AS-0508-02                                                                                                                                           | <ul style="list-style-type: none"> <li>• 4<sup>th</sup> Year Extended H/W Warranty and Technical Support</li> </ul>                                                                                                                                                                                                                                 |
| Part No.: SV.AS-0508-03                                                                                                                                           | <ul style="list-style-type: none"> <li>• 5<sup>th</sup> Year Extended H/W Warranty and Technical Support</li> </ul>                                                                                                                                                                                                                                 |
| <b>Contact Us</b>                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                     |
| Email: <a href="mailto:sales@altaitechnologies.com">sales@altaitechnologies.com</a> or <a href="mailto:info@altaitechnologies.com">info@altaitechnologies.com</a> |                                                                                                                                                                                                                                                                                                                                                     |

AX600X-PB-250729

The information contained herein is subject to change without prior notice.