Altai AX500 Outdoor 2x2 802.11ac Wave 2 AP
Dual-Band with Integrated 2.4 GHz and 5 GHz Smart Antennas

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The Altai AX500, with Super WiFi Smart Antenna technology and next generation 802.11ac Wave 2 features, is specifically designed to deliver unparalleled Wi-Fi experience and highly reliable and consistent services to mobile users for outdoor deployments.

The AX500 offers several technology breakthroughs to meet today's Wi-Fi challenges:

- Super WiFi Smart Antenna technology adaptively transmits traffic to each client by selecting the best beam that optimizes performance and range

- By allowing simultaneous transmissions from AP to multiple clients, MU-MIMO increases the capacity of AX500 substantially

- Advanced Interference Mitigation Suite, combined with Super WiFi Smart Antenna, provides significant reduction in interference

- AirFi technology enhances the capacity of AX500 by optimizing clients' throughput based on their signal strength and traffic

AX500-S / AX500-T   AX500-X

Applications

- Combined with AltaiCare, the AX500 delivers best-in-class Wi-Fi hotspot solution with its advertisement engine and extensive login options such as free access, email registration, pay-to-access, and social media logins

- The AX500, with AltaiCare On-Premises, is ideally suited for applications such as schools, container ports, warehouses, and stadiums

- Due to its superior range and capacity, the AX500 offers the most cost effective solution for city-wide wireless infrastructure; key applications include wireless broadband service, Smart City, and narrowband IoT

Super Dual-band Coverage

AX500-S Max. LOS Access	800 m (2.4 GHz) 1 km (5 GHz)
AX500-T Max. LOS Access	600 m (2.4 GHz) 600 m (5 GHz)
Max. Data Rate	400 + 867 Mbps

Super WiFi Smart Antenna and MU-MIMO
Optimizes Throughput and Coverage

Key Features and Benefits

- **Multi-Beam Smart Antenna** Super WiFi Smart Antenna technology adaptively transmits traffic to each client by selecting the best beam that optimizes performance and range

- **MU-MIMO Increases Capacity** By allowing simultaneous transmissions from AP to multiple clients, MU-MIMO increases the capacity of AX500 substantially

- **AirFi Optimizes Performance** AirFi technology enhances clients' throughput based on their signal strength and traffic

- **Dual-Band Dual-Concurrent** AX500 delivers data rates up to 867 Mbps in 5 GHz and 400Mbps in 2.4 GHz. This, together with MU-MIMO and Super WiFi Smart Antenna technology, allows a WiFi network to support a large number of mobile users running high bandwidth applications

- **Superior Antenna Design** Integrated high gain dual-polarized antennas offer reliable and consistent performance to mobile clients that constantly change orientation

- **Advanced Interference Mitigation** Advanced Interference Mitigation Suite, combined with Super WiFi Smart Antenna technology, provides significant reduction in interference

- **Hardened for Adverse Environments** IP68 rated outdoor enclosure, which allows AX500 to operate from -40°C to +60°C, provides absolute protection against extreme environmental conditions

- **Flexible Deployment Options** Supported by multiple management platforms: standalone, controller, or cloud-based / on-premises by AltaiCare

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Multiple Solutions. One Source.

Wireless Interface

802.11b/g/n (2x2:2) Radio

• Operating Mode	AP/ CPE/ Bridge/ Repeater
• Standard	IEEE 802.11b/g/n
• Operating Frequency	The range of 2400 – 2500 MHz in Ch 1-13
• Transmit Power	26 dBm (Max.)
• Minimum RX Sensitivity	-100 dBm

802.11a/n/ac (2x2:2) Radio

• Operating Mode	AP/ CPE/ Bridge/ Repeater
• Standard	IEEE 802.11a/n/ac
• MU-MIMO	Up to 2 Streams
• Operating Frequency	The range of 5150-5875 MHz in the frequency band: (5150-5350) MHz, (5470-5725) MHz, (5725-5850) MHz
• Transmit Power	26 dBm (Max.)
• Minimum RX Sensitivity	-95 dBm Receiver Sensitivity

For both 2.4 and 5 GHz

- TX Beam Forming (5 GHz Radio)
- 32 SSIDs (Both Radios)
- 512 Max. Associated Clients (Both Radios)
- 200 Max. Concurrent Users (Both Radios)
- Max. Concurrent User Limit
- 802.11h*, 802.11k*, 802.11r*, 802.11v*, 802.11w*
- Hotspot 2.0/802.11u
- Altai AirFi™ Throughput Optimization
- Nearby AP Scanning
- Band Steering/Load Balancing
- Client Roaming
- WMM (802.11e)

Antenna

AX500-S

2.4 GHz

• Built-in Antenna	8 dBi Sector
• Horizontal Beamwidth	120° (-3 dB)
• Vertical Beamwidth	40° (-3 dB)

5 GHz

• Built-in Antenna	12 dBi Sector
• Horizontal Beamwidth	120° (-3 dB)
• Vertical Beamwidth	20° (-3 dB)

AX500-T

2.4 GHz

• Built-in Antenna	6 dBi Omni
• Horizontal Beamwidth	360°

5 GHz

• Built-in Antenna	8 dBi Omni
• Horizontal Beamwidth	360°

AX500-X

2.4 GHz

• Antenna Connector	2 x N-Female

5 GHz

• Antenna Connector	2 x N-Female

Networking

- Switch (Bridge) and Gateway Mode
- IPv4/ IPv6 Dual-Stack
- NAT
- DHCP Client/ Server
- Soft GRE Tunnel
- PPPoE Client
- VPN (IPsec)*
- VLAN
- Bandwidth Control Per VAP/ Client
- Multicast Rate Filter/ IGMP Snooping
- Packet Capture
- Mesh

Security

- Authentication – Open System, Shared Key, WPA/ WPA-PSK, WPA2/ WPA2-PSK, 802.1x (EAP-PEAP/ TLS/ TTLS/ SIM/ AKA)
- Encryption – WEP, TKIP, AES
- Hidden SSID
- Inter/ Intra-Client Isolation
- MAC-based Access Control (White/ Black List)
- RADIUS, Active Directory*
- Firewall*, WIPS*

Management

- Cloud or Server-based Management by AltaiCare
- Controller-based Management by Access Controller
- Web User Interface
- SNMP v1/ v2c / v3
- Syslog
- RF Management – Auto Channel Selection, TX Power Control, Spectral Analysis*, KPI Monitoring*, Client OS Detection*

Physical Specification

AX500-S/AX500-T

• Dimensions	343 mm x 287 mm x 138 mm
• Weight	3.8 kg (Without Mounting Kit)

AX500-X

• Dimensions	285 mm x 218 mm x 54 mm
• Weight	1.9 kg (Without Mounting Kit)
• Network Interface	2 x 10/100/1000 Mbps Ethernet Ports
• Mounting	Pole or Wall-Mount

Power Supply

• Power Supply	802.3at PoE PD or 54V Passive PoE PD
• Power Consumption	10 W (Typical) 20 W (Max.)

Environmental Specification

• Operating Temperature	-40 °C to +60 °C
• Humidity	Up to 95% (Non-Condensing)
• Lightning Protection	EN 61000-4-5 (6kV)
• Wind Loading	Up to 216 km/h (134 mph)
• Weatherproof	IP68 Compliance

Certification

- FCC / CE / Others*
- RoHS2 Compliance
- Wi-Fi Alliance Certified*

Product Ordering Information

AX500-S (Part No.: SD.AX500-2231-000)
- AX500-S Outdoor 2x2 802.11ac Wave 2 AP with Integrated 2.4 GHz and 5 GHz Smart 120° Sector Antennas
- Mounting Kit

AX500-T (Part No.: SD.AX500-2232-000)
- AX500-T Outdoor 2x2 802.11ac Wave 2 AP with Integrated 2.4 GHz and 5 GHz Smart Omni Antennas
- Mounting Kit

AX500-X (Part No.: SD.AX500-2233-000)
- AX500-X Outdoor 2x2 802.11ac Wave 2 AP with 2.4GHz and 5GHz Antenna Connectors for External Antennas
- Mounting Kit

Optional Accessories
- 54V Passive PoE Injector

Contact Us
- Email: sales@altaitechnologies.com

AX500-PB-170818

Will be available in the future
Note: Coverage or range may vary depending on environmental conditions. Max. transmit power varies according to country regulations.
Note: Specifications are subject to change without notice

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