Altai A2 (ac) Dual-band 2x2 802.11ac AP/Bridge

The Altai A2 (ac) Dual-band 2x2 802.11ac AP/Bridge is designed to be used in Altai Super WiFi systems to provide high capacity 2.4 and 5 GHz dual-band dual-concurrent access coverage and backhaul for outdoor applications. It is capable of providing the highest possible data throughput and capacity that the 802.11ac 2x2 2-stream MIMO standards can offer.

Altai A2 (ac) for Dual-band Wireless Access

The A2 (ac) can be used for wireless broadband access for both the residential users and commercial customers. It supports concurrent 2.4 and 5 GHz dual-band operations and is a cost effective and flexible solution which supports long access range with an Altai C1n or C1an CPE for 2.4 and 5 GHz operation respectively.

Super Dual-band Coverage

Max. LOS / CPE	1,500 m (2.4GHz 5dBi omni) 1,900 m (5GHz)
Max. LOS Laptops / Smartphones	600 m (2.4GHz 5dBi omni) 330 m (5GHz)
Max. LOS Bridge	15 km (5 GHz)
Max. Data Rate	300 + 867 Mbps

Altai A2 (ac) for Dual-band Micro Coverage

The A2 (ac) has both a high capacity 2.4 GHz (2x2:2 802.11b/g/n) radio and a 5 GHz (2x2:2 802.11a/n/ac) radio which can be operated at the same time for 2.4 and 5 GHz dual-band dual-concurrent access coverage. The external 2.4 GHz antenna ports allow flexible connection to the antenna type needed. The dual-band operations not only provide the highest capacity but also perform better in the less interfered 5 GHz frequency band.

Extra High Capacity PTP Bridging

The A2 (ac) supports up to 867 Mbps data rate in 5GHz for high capacity PTP or PTMP bridging, fulfilling extra high throughput, high user capacity and fully IP-67 weatherproof bridging requirements. This is commonly used for hub site bridging such as campus network, city network or surveillance.
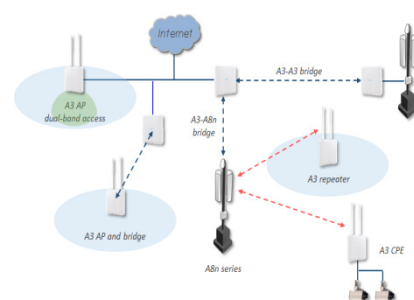
As an integral part of our Super WiFi network infrastructure, key benefits of the Altai A2 (ac) include:

- Multi-operating modes allowed: AP, bridge, repeater mode or CPE
- 2x2:2 MIMO for both 2.4 GHz (802.11b/g/n) and 5 GHz (802.11a/n/ac) radios
- 2 external 2.4 GHz antenna ports and built-in 5 GHz 2x2 high gain panel antennas
- IP-67 rated carrier grade dual-band AP for outdoor applications

- Fill-in coverage area in challenging RF environment
- High capacity PTP or PTMP backhaul
- Standalone, controller-based, or cloud-based management with AltaiCare
- Zero configuration of AltaiCare allows a non-technical person to simply unpack and plug Altai A2 (ac) to WiFi network

Wireless Interface

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

• Operating Mode	AP/CPE/Bridge/ Repeater
• Standard	IEEE 802.11b/g/n
• Operating Frequency	2.400 – 2.484 GHz (Ch 1-13)
• Transmit Power	28 dBm (Max.)
	25 dBm (Per Chain)

• Receiver Sensitivity (Typical)

802.11b	11 Mbps	-90 dBm;	1 Mbps	-100 dBm
802.11g	54 Mbps	-79 dBm;	6 Mbps	-92 dBm
802.11n	HT20	-92 dBm;	HT40	-88 dBm

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

• Operating Mode	AP/CPE/Bridge/ Repeater
• Standard	IEEE 802.11a/n/ac
• Operating Frequency	5.150 – 5.350 GHz
	5.470 – 5.725 GHz
	5.725 – 5.850 GHz
• Transmit Power	28 dBm (Max.)
	25 dBm (Per Chain)

• Receiver Sensitivity (Typical)

802.11a	54 Mbps	-79 dBm;	6 Mbps	-93 dBm
802.11n	HT20	-94 dBm;	HT40	-90 dBm
802.11ac	VHT20	-92 dBm;	VHT40	-89 dBm;
	VHT80	-87 dBm		

For both 2.4 and 5 GHz

- 32 SSID (Max. 16 SSID per Radio)
- 802.11h*, 802.11k*, 802.11r*, 802.11v*, 802.11w*
- Hotspot 2.0
- Altai *AirFi™* Throughput Optimization
- Band Steering
- WMM (802.11e)

Antenna

2.4 GHz Antenna (Optional Accessories)

• External Antenna	5 dBi Omni/12 dBi Panel/ 15 dBi 120° Sector

5 GHz Antenna

• Built-in Antenna	16 dBi Panel
• Frequency	5.150 – 5.875 GHz
• Polarization	Dual Linear V/H
• Horizontal Beamwidth	20° (-3 dB)
• Vertical Beamwidth	20° (-3 dB)
• VSWR	2 (Max.)
• Impedance	50 Ω
• Front-to-back Ratio	-21 dB (Max.)
• Isolation Between Ports	27 dB (Min.)

Networking

- Switch (Bridge) and Gateway Mode
- IPv4/ IPv6 Dual-stack
- NAT
- DHCP Client/ Server
- PPPoE Client
- VPN (IPsec)*
- VLAN
- Bandwidth Control Per VAP/ Client
- Multicast Rate Filter/ IGMP Snooping

Security

- Authentication – Open system, Shared key, WPA/ WPA-PSK, WPA2/ WPA2-PSK, 802.1x (EAP-PEAP/ TLS/ TTLS/ SIM/ AKA)
- Encryption – WEP, TKIP, AES
- 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
- Command Line Interface (SSH)
- SNMP v1/ v2c / v3*
- MIB2/ IF-MIB/ Altai Enterprise MIB
- Syslog
- Auto Channel Selection and TX Power Control
- Spectral Analysis*
- KPI Monitoring*
- Client OS Detection*

Physical Specification

• Dimension	220 x 220 x 60 mm
• Weight	1.3 kg (Unit Weight) / 4.4 kg (Gross Weight)
• Mounting	Pole or Wall-mounted
• Network Interface	2 x 10/100/1000 Mbps Ethernet Port

Power Supply

• Power Supply	802.3at PoE PD, 56V Passive PoE PD, -48V DC
• Power Consumption	10 W (Typical) / 25 W (Max.)

Environmental Specification

• Operating Temperature	-40 °C to +60 °C (Ambient) 0 °C to +40 °C (PoE Injector)
• Storage Temperature	-40 °C to +80 °C
• Humidity	5 to 100% (Condensing)
• Lightning Protection	EN 61000-4-5
• Wind Loading	Up to 216 km/h (134 mph)
• Weatherproof	IP67 Compliant

Certification

- FCC*/ CE*/ Others*

Product Ordering Information

Standard Package
- A2 (ac) Dual-band 2x2 802.11ac AP/Bridge (Model No.: A2-2222-000)
- PoE Injector and Mounting Accessories

Contact Us
- Email: sales@altaitechnologies.com

A2AC-PB-160727

* Will be available in future.
The coverage range will be varied depending on NLOS and interference conditions.
The transmit power may be varied according to country regulation.
Although Altai has attempted to provide accurate information in these materials, Altai assumes no legal liability for the accuracy and completeness of the information. All specifications are subject to change without notice.