Altai C2s Dual-band 2x2 802.11ac WiFi AP/Bridge

The Altai C2s Dual-band 2x2 WiFi AP/Bridge is specifically designed to offer carrier grade Wi-Fi performance at the market's most affordable price point.

Altai C2s combines several technology breakthroughs to deliver unparalleled Wi-Fi experience and highly reliable and consistent services to mobile users:

- Superior RF and filter design, in conjunction with Altai's interference mitigation algorithm, offers optimal capacity and interference rejection

- Much higher TX power over competitions at the highest data rates allows up to 50% more coverage and capacity

- Altai's smart band steering and load balancing technologies allow Altai C2s to effectively utilize both 2.4GHz and 5GHz spectrums for supporting a large number of mobile users running bandwidth hungry applications

Super Dual-band Coverage

Max. LOS Access	600 m (2.4 GHz) 700 m (5 GHz)
Max. LOS CPE	3 km to A8-Ein (ac) (2.4 GHz) 2 km to A3-Ei (5 GHz)
Max. LOS Bridge	10 km (5 GHz)
Max. Data Rate	300 + 867 Mbps

Applications

- In conjunction with AltaiCare and its powerful user access management, Altai C2s offers the most cost effective indoor or outdoor Wi-Fi hotspot solution for MNOs and WISPs

- The low-cost Altai C2s, together with the controller-less, cloud-based AltaiCare and its pay-as-you-grow subscription model, are ideally suited for enterprises and SMEs that want enterprise features such as security and performance but not the price points associated with controller-based solutions

- With 5GHz as backhaul and 2.4GHz as access, Altai C2s is the perfect Wi-Fi CPE for WISPs. Combined with either A8-Ein (ac) or A3-Ei, the solution delivers Wi-Fi coverage up to 3km

- The Altai C2s offers a low-cost solution for high capacity point-to-point and point-to-multipoint infrastructure backhaul for MNOs and WISPs, smart cities, and video surveillance applications

Key Features and Benefits

- **Best value in price/performance** Dual band 802.11ac with extended coverage at the market's most affordable price point

- **Extended coverage requires fewer APs** Up to 50% larger coverage minimizes the number of APs required for any Wi-Fi network

- **Dual-band with 802.11ac** 802.11ac delivers total data rate of more than 1 Gbps. This, together with Altai's smart band steering and load balancing technologies, allows a Wi-Fi network to support a large number of mobile users running high bandwidth apps

- **Best-in-class performance** Superior RF and filter design, in conjunction with Altai's smart interference mitigation algorithm, offers optimal capacity and interference rejection

- **Superior antenna design** Integrated high gain diversity polarized antenna design increases the effectiveness of MIMO for both 802.11n and 802.11ac

- **AirFi optimizes capacity** AirFi enhances Altai C2s' capacity by optimizing client's throughput based on its signal strength and traffic

- **Flexible architecture** Standalone, controller-based, or cloud-based management with AltaiCare

- **Ease of deployment** Zero configuration of AltaiCare allows a non-technical person to simply unpack and plug Altai C2s to Wi-Fi network. Furthermore, support for standard 802.3at PoE (via optional adapter) allows enterprises to use existing PoE switches

Wireless Interfaces

802.11b/g/n (2x2:2) Radio
- Operating Mode   AP/CPE/Repeater
- Standard   IEEE 802.11b/g/n
- Operating Frequency   2.400 – 2.484 GHz (Ch 1-13)
- Transmit Power   27 dBm (Max.)
      27 dBm (HT20/40 @ MCS0)
      22 dBm (HT20/40 @ MCS7)
- Receiver Sensitivity (Typical)

802.11b	11 Mbps	-89dBm	1 Mbps	-92 dBm
802.11g	54 Mbps	-78 dBm	6 Mbps	-92 dBm
802.11n	HT20	-91 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   27 dBm (Max.)
      27 dBm (VHT40/80 @ MCS0)
      20 dBm (VHT40/80 @ MCS9)
- Receiver Sensitivity (Typical)

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

For both 2.4 and 5 GHz

- 32 SSID (16 SSID per Radio)
- WMM, 802.11h, 802.11k, 802.11r, 802.11v, 802.11w
- Passpoint (Release 2)
- Fast Roaming
- Band Steering/Multi-AP Steering*
- Smart Load Balancing
- Dual-Radio 1+ 1 Redundancy*
- Smart Mesh Networking*
- Auto Channel Selection and TX Power Control
- Bandwidth Control Per SSID/Client
- Altai AirFi™ Throughput Optimization

Antennas

2.4 GHz Antenna
- Built-in Antenna   6 dBi Patch
- Frequency   2.4 – 2.5 GHz
- Polarization   2x2 MIMO Diversity Polarized
- Horizontal Beamwidth   65° (-3 dB)
- Vertical Beamwidth   60° (-3 dB)
- VSWR   2 (Max.)
- Impedance   50 Ω
- Front-to-back Ratio   -15 dB (Max.)
- Isolation Between Ports   15 dB (Min.)

5 GHz Antenna
- Built-in Antenna   9 dBi Patch
- Frequency   5.150 – 5.875 GHz
- Polarization   2x2 MIMO Diversity Polarized
- Horizontal Beamwidth   70° (-3 dB)
- Vertical Beamwidth   30° (-3 dB)
- VSWR   2 (Max.)
- Impedance   50 Ω
- Front-to-back Ratio   -15 dB (Max.)
- Isolation Between Ports   15 dB (Min.)

Networking

- Switch (Bridge) and Gateway Mode
- IPv4/IPv6 Dual-Stack
- NAT
- DHCP Client/Server
- PPPoE Client
- Soft-GRE
- VLAN
- Multicast Rate Filter/IGMP Snooping

Security

- Authentication – Open, Shared key, WPA/WPA-PSK, WPA2/WPA2-PSK, WPA3*, 802.1x (EAP-PEAP/TLS/TTLS/SIM/AKA)
- Encryption – WEP, TKIP, AES
- Inter/Intra-SSID Client Isolation
- MAC-based Access Control (White/Black List)
- RADIUS/Active directory
- Dynamic VLAN Assignment
- Firewall
- WIDS/WIPS
- Broadcast/Multicast/Unicast Flooding Control

Management

- Management Platforms: AltaiGate, AltaiCare, AtlaiCare Appliance
- Web User Interface
- Command Line Interface (SSH)
- Remote Factory Reset
- Trusted Management IP List
- SNMP v1/v2c/v3
- MIB2/IF-MIB/Altai Enterprise MIB
- Syslog
- Spectral Analysis*
- KPI Monitoring*
- Client OS and Hostname Detection

Physical Specification

- Dimension   280 x 80 x 27 mm
- Weight   0.4 kg
- Mounting   Pole, Wall or Window-Mounted
- Network Interface   2 x 10/100/1000 Mbps Ethernet Ports

Power Supply

- Power Supply   24V Passive PoE PD or 802.3at PoE PD via Adapter
- Power Consumption   6 W (Typical)/12 W (Max.)

Environmental Specifications

- Operating Temperature   -20 °C to +55 °C
- Storage Temperature   -40 °C to +80 °C
- Humidity   Up to 95% (Non-condensing)
- Wind Loading   Up to 200 km/h (124 mph)
- Weatherproof   Outdoor UV Stabilized Plastic IP55 Compliant

Certifications

- FCC/CE/Others*
- RoHS Compliance

Product Ordering Information

C2s (Part No.: SD.C2-2221-0UK/0US/0EU)
Standard Package
- C2s Dual-band 2x2 802.11ac WiFi AP/Bridge (Model No.: C2-2221-000)
- DC Injector and AC Adapter (UK, US or EU)
- Cable Ties
- Quick Start Guide

Optional Accessories
- 802.3at to Passive PoE Adapter

Contact Us
- Email: sales@altaitechnologies.com

C2S-PB-191213

Will be available in the future.
The coverage range will vary depending on NLOS and interference conditions
The transmit power may vary according to country regulation