

## 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	7 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 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 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 (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

- 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
- 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 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 Specification

- Operating Temperature -20 °C to +55 °C
- Storage Temperature -40 °C to +80 °C
- Humidity 5 to 95% (Non-condensing)
- Wind Loading Up to 200 km/h (124 mph)
- Weatherproof Outdoor UV Stabilized Plastic IP55 Compliant

## Certification

- FCC / CE / Others\*

## Product Ordering Information

### Standard Package

- C2s Dual-band 2x2 802.11ac WiFi AP/Bridge (Model No.: C2-2221-000)
- Cable Ties
- Quick Start Guide

### Accessories

- DC Injector and AC Adapter (UK, US or EU)
- 802.3at to Passive PoE Adapter

### Contact Us

- Email: [sales@altaitechnologies.com](mailto:sales@altaitechnologies.com)

\*Will be available in the future. C2S-PB-170224  
 The coverage or range may vary depending on environmental conditions.  
 The transmit power may vary according to country regulations.  
 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.