

### Altai A3-Ei Outdoor 802.11ac 3x3 Access Point

The Altai A3-Ei Dual-band 3x3 WiFi Access Point is designed to be used in Altai Super WiFi systems to provide high capacity 2.4 GHz and 5 GHz dual-band dual-concurrent access coverage for both outdoor and indoor areas, and to increase system capacity, extend coverage, fill-in areas of low or blocked signals caused by obstructions. It is capable of providing the highest possible data throughput and capacity that the 802.11ac 3x3 3-stream MIMO standards can offer.



### Super Dual-band Coverage

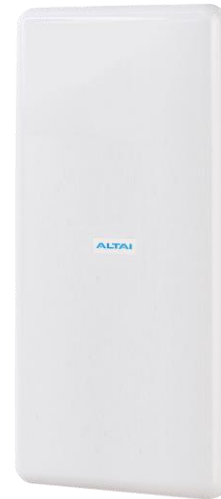
Max. LOS CPE	3 km (2.4 GHz) 2 km (5 GHz)
Max. LOS Smartphones	1 km (2.4 GHz) 800 m (5 GHz)
Max. LOS Bridge	11 km (5 GHz)
Max. Data Rate	450 + 1300 Mbps

### Altai A3-Ei for Dual-band Micro Coverage

The A3-Ei has both a high capacity 2.4 GHz (3x3:3 802.11b/g/n) radio and a 5 GHz (3x3:3 802.11a/n/ac) radio which can be operated at the same time for 2.4 GHz and 5 GHz dual-band dual-concurrent access coverage. The dual-band operations not only provide the highest capacity up to 1.75 Gbps but also perform better in the less interfered 5 GHz frequency band.

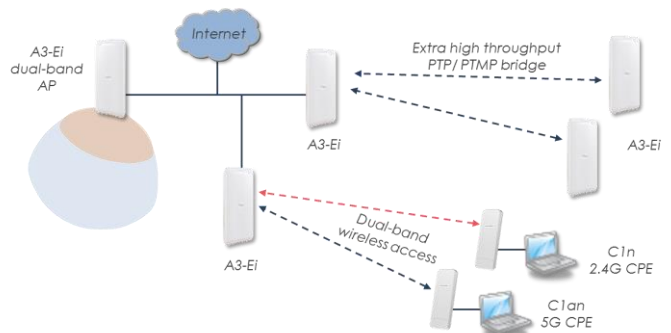
### Altai A3-Ei for Dual-band Wireless Access

The A3-Ei can be used for wireless broadband access for both the residential users and commercial customers. It supports concurrent 2.4 GHz 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 GHz and 5 GHz operation respectively.



### Extra High Capacity PTP/PTMP Bridging

The A3-Ei supports up to 1.3 Gbps data rate high capacity PTP/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 A3-Ei include:

- Multi-operating modes allowed: AP, bridge, repeater mode or CPE
- 3x3:3 MIMO for both 2.4 GHz (802.11b/g/n) and 5 GHz (802.11a/n/ac) radios
- Built-in 2.4 GHz and 5 GHz 3x3 spatial polarized high gain sector antennas
- High capacity 1300 Mbps in 5 GHz and 450 Mbps in 2.4 GHz
- 2.4 GHz and 5 GHz dual-band dual concurrent access
- IP-67 rated carrier grade dual-band AP for both outdoor and indoor applications
- Fill-in coverage area in challenging RF environment
- Light weight with built-in lightning protection
- Easy installation & web-based management

## Wireless Interface

### 802.11b/g/n (3x3:3) Radio

- Operating Mode                      Access Point/CPE/Bridge/  
Repeater
- Standard                                IEEE 802.11b/g/n
- Operating Frequency                2.400 – 2.484 GHz (Ch 1-13)
- EIRP                                        100mW Max.
- 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 (3x3:3) Radio

- Operating Mode                      Access Point/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
- EIRP                                        1000mW Max.
- Receiver Sensitivity (Typical)
 

802.11a	54 Mbps	-79 dBm;	6 Mbps	-93 dBm
802.11n	HT20	-94 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                      12 dBi Sector
- Frequency                                2.4 – 2.5 GHz
- Polarization                            3x3 MIMO Spatial Polarized
- Horizontal Beamwidth                60° (-3 dB)
- Vertical Beamwidth                    25° (-3 dB)
- VSWR                                        2 (Max.)
- Impedance                                50 Ω
- Front-to-back Ratio                    -25 dB (Max.)
- Isolation Between Ports              18 dB (Min.)

### 5 GHz Antenna

- Built-in Antenna                      13 dBi Sector
- Frequency                                5.150 – 5.875 GHz
- Polarization                            3x3 MIMO Spatial Polarized
- Horizontal Beamwidth                80° (-3 dB)
- Vertical Beamwidth                    12° (-3 dB)
- VSWR                                        2 (Max.)
- Impedance                                50 Ω
- Front-to-back Ratio                    -25 dB (Max.)
- Isolation Between Ports              18 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

## 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                                491 x 221 x 73mm
- Weight                                      2.1 kg (Unit Weight) /  
2.5 kg (With Mounting Kit)
- Mounting                                   Pole or Wall-mounted
- Network Interface                      10/100/1000 Mbps  
Ethernet Port

## Power Supply

- Power Supply                            802.3at PoE PD, 56V Passive  
PoE PD or -48V DC PoE Injector
- 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 / SRRC / Others\*

## Product Ordering Information

### Standard Package

- A3-Ei Dual-band 3x3 802.11ac WiFi AP with Built-in 2.4 GHz and 5 GHz Sector Antennas (Model No.: WA3311NAC-E)
- PoE Injector and Mounting Accessories

### Contact Us

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

A3Ei-PB-170302

\* 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.  
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