

### 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

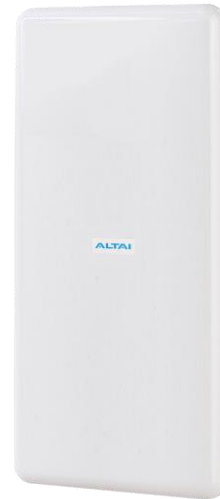
Max. LOS CPE	3 km (2.4 GHz) 2 km (5 GHz)
Max. LOS Smartphones	1 km (2.4 GHz) 800 m (5 GHz)
Max. LOS Bridge	11 km (5 GHz)
Max. Data Rate	450 + 1300 Mbps

### 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.

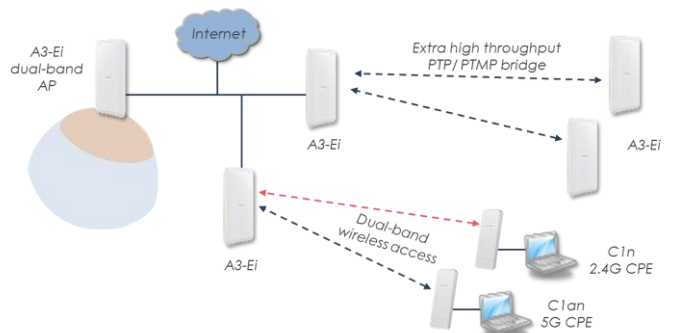
### Altai A3-Ei for Dual-band Wireless Access

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)
- Transmit Power                        30 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 (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
- Transmit Power                        30 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	-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.*

*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.*