

ALTAI



**Smart antenna-based WiFi solution
for wide area coverage**

Altai WiFi Solution



City / Rural Wireless Broadband Network

- Altai A8 WiFi cellular system provides cost-effective metro scale WiFi solution to network operators for a wide range of broadband applications.
- Utilizing smart antenna technologies and advanced signal processing algorithm, A8 WiFi Cellular Base Stations effectively provide much larger coverage than any other outdoor WiFi APs available in the market.
- As total solution offering, Altai provides an A0 Wireless Bridge to facilitate wireless backhaul deployment and an A2 WiFi Pico Access Point to complement with A8 to optimize coverage/capacity requirement. To manage all these network elements, Altai's Wireless Management System (AWMS) provides network operators full suite of element and network management functions for WiFi networks.
- Additional CPEs may be deployed to extend Altai WiFi coverage to farther areas or to provide better indoor wireless broadband coverage.
- Service controller is another critical element for the network operators to provide comprehensive management of user access and bandwidth control.

Public Safety Services

- Altai's longer reach smart radio technology requires significantly fewer units per square mile of coverage with savings of more than 40% and improved latency over conventional mesh systems, making Altai an ideal solution for public safety services.
- With Altai system, the video surveillance area per base station can be 6 to 10 times larger than traditional AP and thus the deployment cost can be greatly reduced.
- Altai system provides 20 Mbps high throughput to ensure smooth running of real-time high resolution video surveillance for public security, highway traffic monitoring and campus asset monitoring.

Enterprise Network

- Altai WiFi solution is geared toward deployment for enterprise customers such as large scale manufacturing sites, logistics, education, hospitality, recreational parks and many others.
- Altai WiFi system provides exceptional performance for enterprise connectivity. It provides stable and reliable wireless broadband coverage for real-time multimedia applications.
- Altai system is highly scalable, it can be extended easily from single site to wide area coverage.

VoIP

- Altai provides an ideal VoIP solution for the network operators to run VoIP over WiFi for increasing their revenue streams.
- The total VoIP solution offered by Altai allows service providers to integrate the solution into their existing services easily, providing a wide array of communication offerings such as mobile calling, long distance calling, messaging, web browsing, interactive multimedia communications to customers with substantial cost savings.

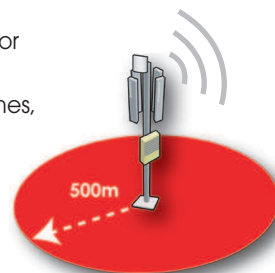
Taking WiFi Farther and Faster

Altai Product Family



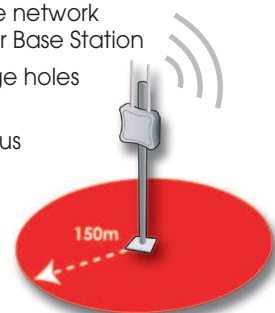
A8 WiFi Cellular Base Station

- World's leading WiFi outdoor base station optimized for maximum coverage with minimal installation sites
- Enhance outdoor WiFi signal coverage area by 10 times, particularly in non-line-of-sight environment
- Multiple-radio smart antenna platform supports 360-degree coverage
- Flexible antenna configuration for different site conditions such as rooftop or towers
- Support standard 802.11b/g access and 802.11a backhaul radio



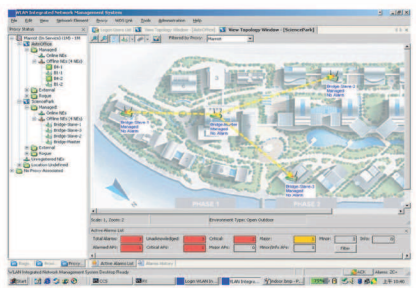
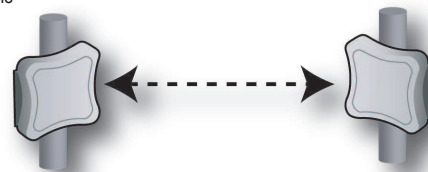
A2 WiFi Pico Access Point

- Low cost pico access point to expand the aggregate network capacity under the coverage area of A8 WiFi Cellular Base Station
- Ideal for extending WiFi coverage or filling in coverage holes in challenging RF environments
- Can be used as a standalone access point for campus area coverage
- Support standard 802.11b/g access and 802.11a backhaul radio
- Light-weight and weatherproof design with built-in lightning protection



A0 WiFi Bridge

- Based on 802.11a standard for point-to-point as well as point-to-multipoint bridge communications
- Integrated flat panel antenna or external antenna for long range transmission
- Interoperable with Altai A8 base stations or other standard WiFi bridges to form 5GHz wireless backhaul
- Light-weight and weatherproof design with built-in lightning protection



Altai Wireless Management System (AWMS)

- Managed all the network elements offered by Altai
- AWMS provides network operators a centralized way to remotely administer and control WiFi base stations in the network, significantly reducing the workload for local configuration and monitoring
- AWMS facilitates operational functions including configuration management, fault management, performance monitoring and security management

Technical Data Sheet

	A8 WiFi Cellular Base Station	A2 WiFi Pico Access Point	A0 WiFi Bridge
Wireless Interface			
802.11b/g Radio Transmit Power Multi-Radio / Smart Antenna Algorithm 2.4G Antenna Port Receive Sensitivity 802.11b 802.11g 802.11a Radio Point-to-Point Bridging Point-to-Multipoint Bridging Transmit Power Turbo Mode Receive Sensitivity 802.11a	5-23dBm in 1dB step 8 -90dBm@11Mbps -95dBm@1Mbps -73dBm@54Mbps -92dBm@6Mbps 17dBm -70dBm@54Mbps -88dBm@6Mbps	Max. 20dBm 2 -90dBm@11Mbps -95dBm@1Mbps -68dBm@54Mbps -88dBm@6Mbps Max. 20dBm -68dBm@54Mbps -88dBm@6Mbps	Max. 20dBm 2 -68dBm@54Mbps -88dBm@6Mbps
Antenna System			
802.11b/g Antenna Gain 3-dB Horizontal Beamwidth 3-dB Vertical Beamwidth Antenna Connector 802.11a Antenna Gain 3-dB Horizontal Beamwidth 3-dB Vertical Beamwidth Antenna Connector	4 X-pol External or Tube Antenna Max. 14dBi 70° ±3° 11° ±2° Dual N-female 1 Optional Antenna (External) 18dBi Flat Panel or 8dBi Omni 18° ±3° (Flat Panel) 360° (Omni) 18° ±3° (Flat Panel) 15° (Omni) N-female	2 Optional Antennas (External) 5dBi Omni (Recommended) 360° 30° N-male Built-in 17dBi Flat Panel 20° ±3° 20° ±3°	Built-in or External 17dBi Flat Panel 20° ±3° 20° ±3° N-female
Networking			
Multiple SSID/VAP VLAN DHCP Dynamic NAT PPPoE Client PPPoE Pass-through VPN Pass-through Switch and Gateway Mode 10/100Mbps Ethernet Port WMM Backhaul link integrity / resilience	16 Client / Server / Relay 16 Client / Server / Relay	16 Client / Server / Relay 16 Client / Server / Relay	Client Client
Security			
802.11b/g Authentication Encryption MAC-based access control SSID suppression Inter/intra VAP client communication control 802.11a Encryption	Open system, Shared key WPA/WPA-PSK WPA2/WPA2-PSK 802.1x (PEAP, TLS, TTLS) WEP, TKIP, AES WEP	Open system, Shared key WPA/WPA-PSK WPA2/WPA2-PSK 802.1x (PEAP, TLS, TTLS) WEP, TKIP, AES WEP	WEP, TKIP, AES
Management			
Web-based administration tool CLI-based administration tool Remote Firmware Upgrade SNMP Performance Monitoring RF Statistics Reporting Syslog Support	16 Client / Server / Relay 16 Client / Server / Relay	16 Client / Server / Relay 16 Client / Server / Relay	Client Client
Physical Specification (exclude external antenna)			
Dimension Weight Mounting	290 x 210 x 89mm 5kg (unit weight) 7.6kg (gross weight) Pole or Wall-mounted	198 x 198 x 63mm <2kg (unit weight) 6.6kg (gross weight) Pole or Wall-mounted	198 x 198 x 63mm <2kg (unit weight) 6.6kg (gross weight) Pole or Wall-mounted
Power Supply			
Voltage Power Consumption Frequency	80-264 V AC 20W (Typical) 58W (Max.) 47-63 Hz	48 VDC (with power injector) 12W (Typical) 20W (Max.)	48 VDC (with power injector) 12W (Typical) 20W (Max.)
Environmental Specification			
Operating Temperature Storage Temperature Humidity Lightning Protection Wind loading	-33°C to +55°C (Ambient) -40°C to +80°C 100% (Condensing) EN 61000-4-5 100 mph (Operational) 135 mph (Survival)	-33°C to +55°C (Ambient) 0°C to +60°C (PoE power injector) -40°C to +80°C 0-95%, non-condensing IEC 1000-4-2 90 mph (Operational) 125 mph (Survival)	-33°C to +55°C (Ambient) 0°C to +60°C (PoE power injector) -40°C to +80°C 0-95%, non-condensing IEC 1000-4-2 90 mph (Operational) 125 mph (Survival)
Certification			
	CE, FCC, Others	FCC, Others	CE, FCC, Others

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