The Altai A8n Super WiFi Base Station is the world’s leading 802.11n WiFi outdoor access point optimized for maximum coverage and highest throughput from a minimum number of installation sites. The Altai A8n has been designed to provide industry best coverage and capacity without complicated networking protocols or the need for a high density of transmitters.

The A8n is a multi-radio base station utilizing 8x8 MIMO smart antenna technologies and a patented signal processing algorithm to provide the industry’s best coverage per base station, especially in non-line-of-sight (NLOS) environments. The multiple antennas of the A8n can be configured to provide coverage that is optimized for area, pattern and elevation. Using up to 80% fewer access points than other WiFi systems to cover the same area enables less complex network design and provides lower latency for improvement in handling real-time applications such as VoIP and video streaming.

Whether deployed for a single location, a campus area or city-wide network coverage, the Altai A8n is designed to minimize the total cost of ownership with significant savings in network equipment, broadband access, planning, site acquisition and installation.

The Altai A8n can serve as last mile infrastructure for a wide range of wireless broadband access applications. It provides low deployment cost and fast provisioning of WiFi systems with the greatest coverage and bandwidth per installed base station.

The A8n Super WiFi Base Station can be deployed in conjunction with existing 3G networks to provide low cost high bandwidth mobile data offloading solution. The A8n can be co-located with existing 3G cell sites allowing immediate WiFi provisioning at much lower acquisition and operating costs.

As an integral part of our Super WiFi network infrastructure, key benefits of the Altai A8n include:

- Extended coverage in a Non-Line-of-Sight (NLOS) environment which matches the footprint of most 3G deployments in dense urban environments
- High 11n throughput capacity up to 300 Mbps data rate
- 4-sector x dual-diversity advanced Smart Antenna Technology provides flexible 90 to 360-degree and large vertical beamwidth coverage with minimal holes in dense urban environments
- Multi-radio 8x8:2 MIMO platform maximizing both uplink/downlink performance and access redundancy

- Link integrity, backhaul link self healing and access link safe mode
- Adaptive interference control mitigates the influence from surrounding interfering sources
- Standard 802.11b/g/n access and 802.11a/n backhaul
- Giga Ethernet or integrated 802.11a/n wireless backhaul
- Flexible antenna deployment for various site conditions
- Remote configuration through the Altai Wireless Management System (AWMS)
### Wireless Interface

**802.11b/g/n (8x8:2)**
- **Operating Mode**: Access Point
- **Standard**: IEEE 802.11b/g/n
- **Operating Frequency**: 2.412 – 2.472 GHz (Ch 1-13)
- **Transmit Power**: 27 dBm (Max.); 5 – 24 dBm (Per Chain) in 1 dB step
- **Receiver Sensitivity (Typical)**:
  - 802.11b: 11 Mbps -90 dBm; 1 Mbps -95 dBm
  - 802.11g: 54 Mbps -80 dBm; 6 Mbps -93 dBm
  - 802.11n HT20: -94 dBm; HT40: -89 dBm
- **Connect up to 8 Antennas**
- **Interference Mitigation**
- **Direction Finding***

**802.11a/n (2x2:2)**
- **Operating Mode**: Access Point/Bridge
- **Standard**: IEEE 802.11a/n
- **Operating Frequency**:
  - 5.15 – 5.35 GHz
  - 5.47 – 5.725 GHz
  - 5.725 – 5.825 GHz
- **Transmit Power**: 20 dBm (Max.)
  - 17 dBm (Per Chain)
- **Receiver Sensitivity (Typical)**:
  - 802.11a: 54 Mbps -77 dBm; 6 Mbps -94 dBm
  - 802.11n HT20: -93 dBm; HT40: -90 dBm

### Security

**802.11a/b/g/n**
- **Authentication** – Open system, Shared key, WPA/ WPA-PSK, WPA2/ WPA2-PSK, 802.1x (EAP-TLS/ TTLS/ SIM/ AKA), PEAP
- **Encryption** – WEP, TKIP, AES
- **WAPI**
- **MAC based Access Control List (White/Black List)**
- **SSID Suppression**
- **Inter/ Intra-VAP Client Isolation**

### Management

- **Web-based Administration Tool**
- **CLI-based Administration Tool (Console and SSH)**
- **SNMP v1/ v2c, Altai MIB**
- **3 User Access Levels for Web Login**
- **Remote Firmware Upgrade (HTTP, FTP)**
- **Performance Statistics/ Alarm Information Display**
- **WiFi Client Association Status/ Bad Client Disassociation**
- **Customized Configuration File/ Product Info Display**
- **Syslog Support**
- **Packet Capture Diagnosis**
- **Throughput Test Utility**

### Physical Specification (BTS Unit)

- **Dimension**: 360 x 234 x 80 mm (Chassis)
- **Weight**: 4 kg (Unit Weight) / 6.5 kg (Gross Weight)
- **Mounting**: Pole or Wall-mounted
- **Network Interface**: 10/100/1000 Mbps Ethernet Port

### Power Supply

- **Power Source**: PoE Injector (AC or -48V DC)
- **Power Consumption**: 30 W (Typical) / 65 W (Max.)

### Environmental Specification

- **Operating Temperature**: -40 °C to +60 °C (Ambient)
- **Storage Temperature**: -10 °C to +40 °C (PoE Injector)
- **Humidity**: 5 to 100% (Condensing)
- **Lightning Protection**: EN 61000-4-5
- **Wind Loading**: 100 mph (Operational) / 135 mph (Survival)
- **Weatherproof**: IP67 Compliant

### Certification

- **FCC*, CE*, IC*, Others**

### Product Ordering Information

**Standard Package**
- A8n Super WiFi Base Station (PoE Power) (Model No.: WA8011N-X)
- Smart Antennas
- RF Cables
- PoE Injector and Mounting Accessories

**Other Package**
- A8n (bgn) Package Removed 11a/n Radio

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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.