Overview

Altai Technologies is a leading supplier of carrier-grade Wi-Fi products and technologies. The Altai Super WiFi Solution includes a complete portfolio of indoor and outdoor products for carriers, WISPs, and enterprises to support a wide range of applications such as mobile data offload, public access, WLAN access, and backhaul.

Utilizing patented smart antenna technology, as well as a cloud-based management system called AltaiCare, the Altai Super WiFi Solution is designed from the ground up to deliver Wi-Fi networks that have unprecedented performance, reliability, scalability, and manageability.

Better coverage, reliability, and experience for mobile users

The increased use of smartphones and tablets has caused an explosive growth in wireless traffic. Today, WISPs and enterprises are facing huge challenges on their Wi-Fi networks due to the ever-increasing demand in network capacity and worsening RF conditions where there are more and more clients and interference.

At the heart of Altai Super Wi-Fi Solution is a collection of technology breakthroughs to meet these challenges.
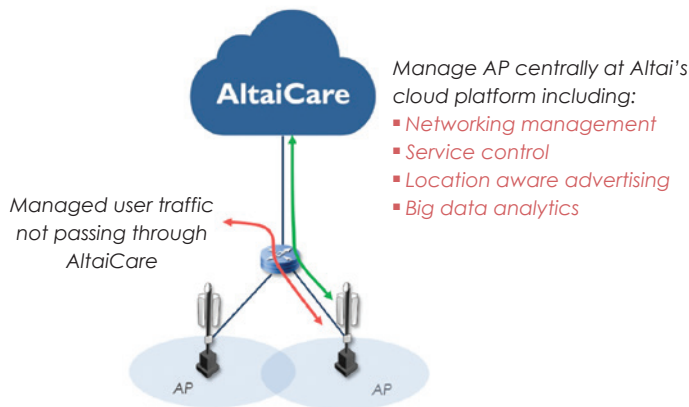
- Altai's patented smart antenna technology adaptively routes traffic to each client by maximizing the signal strength and minimizing the interference and packet errors. Furthermore, Altai's smart antenna arrays are either dual or tri polarized, which increase the effectiveness of MIMO for 802.11n and 802.11ac.

- AirFi enhances an AP's capacity by optimizing each client's throughput based on its signal strength and traffic.

- 802.11ac delivers data rates up to 1.3 Gbps in the 5 GHz band. The increased capacity, together with Altai's smart band steering / load balancing technology, ensure that clients always associate with the best radio for maximum network performance; this allows a Wi-Fi network to support a large number of mobile users running band-width hungry apps such as HD video streaming.

The combination of these technologies allows Altai products up to 10 times the coverage and 5 times the capacity over those of a standard AP. This enables WISPs and enterprises to deliver unparalleled Wi-Fi experience and highly reliable and consistent services to their mobile users.

Simple deployment and zero configuration cloud-based management

Designed for simplicity and ease of use, AltaiCare, a cloud-based network management solution, provides a simple, secure, and cost-effective way for WISPs and enterprises to manage their Wi-Fi networks.

Manage AP centrally at Altai's cloud platform including:
- *Networking management*
- *Service control*
- *Location aware advertising*
- *Big data analytics*

Managed user traffic not passing through AltaiCare

- Zero configuration allows a non-technical person to simply unpack and plug APs to Wi-Fi network; the APs will automatically get configuration and firmware from AltaiCare.

- Due to AltaiCare's local breakout architecture and CAPWEP protocol, management data that goes to the cloud is securely encrypted in SSL, while data and control traffic stays local.

- AltaiCare's cloud-based design ensures the highest possible availability: redundancy and load balancing due to clustering and distribution to multiple data centers.

Flexible access management options for Wi-Fi monetization

In addition to network management, AltaiCare supports an innovative, controller-less, cloud-based architecture for the access management of APs, providing secure admission and service control across a Wi-Fi network. It supports full suite of 802.1x based authentications and captive portal for secure web authentication.

- Allows IT managers of enterprises to quickly set up secure access for their internal network, as well as provide hotspots to accommodate guest access.

- Together with Hotspot 2.0 and the pay-as-you-grow subscription model, AltaiCare enables WISPs to easily deploy, manage, and monetize hotspot services.

- Powered by Altai Beacon and an all-in-one content management engine, AltaiCare delivers location-aware advertising services for mobile users at shopping malls, hotels, and tourist attractions.

For Wi-Fi networks where the more traditional controller-based solution is preferred, Altai Access Controller enables centralized access management that works with any backend authentication database such as RADIUS.

Super Wi-Fi with unmatched value

Altai Super WiFi Solution delivers one of the best price / performance value in the market:

- Because Altai AP's coverage is much larger than the footprint of a standard AP, far fewer APs are required for a Wi-Fi network.

- With AltaiCare, APs can be deployed in a cloud-based architecture to save the cost of controllers.

- Pay-as-you-grow subscription model of AltaiCare results in lower OPEX.

- AltaiCare's location-aware advertising services enables additional revenue from advertising.

By deploying the Altai Super WiFi Solution, the total CAPEX and OPEX of a Wi-Fi network can be greatly reduced. This in turn enables a quicker ROI and TCO.

Market applications

The capability of the Altai Super WiFi Solution has been tested and proven again and again – by the deployments of carriers, WISPs, logistics centers, campuses, exhibition halls, and manufacturing plants in more than 80 countries.
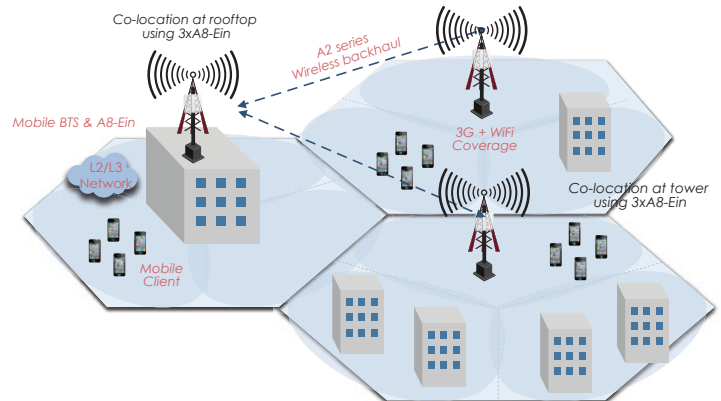
Carriers and WISPs use Altai products to solve capacity and coverage challenges caused by the increasing number of mobile user and interference.

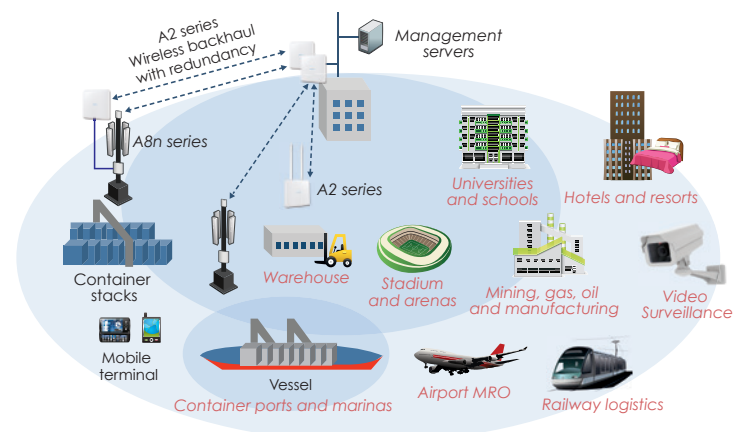### Mobile Site Co-location for Data Offload

Furthermore, Altai APs are specifically designed to co-locate with 3G/LTE cell sites with minimal interference with each other, and therefore are ideal for mobile data offload. They, together with the controller-less, cloud-based AltaiCare, enable plug-and-play deployment and easy monetization of Wi-Fi.

Altai's outdoor products are built to withstand harsh environments, thus making them the best choice for the logistics market. It comes as no surprise that Altai is the world's number one Wi-Fi solution supplier for container port, with world-wide deployment at over 170 ports.

Today's enterprises run on mobile and cloud apps, and the Altai Super WiFi Solution has all the building blocks for a reliable and secure Wi-Fi network with virtually no network downtime. Altai AP's low price point and pay-as-you-grow cloud management solution enables huge savings in both CAPEX and OPEX, which are especially important for SMEs that want enterprise features like security and performance, but cannot afford a more expensive controller-based solution.

Wireless Broadband

e.g. WISP, rural broadband, hotspots, hotzones and city-wide WiFi

WLAN Access in Private Networks

ALTAI Super WiFi

A8-Ein(ac) Super WiFi Base Station

A8-Ein(ac)
8 x 8 MIMO
Highest performance
Mobile data offload and outdoor WLAN access

Standards	a/b/g/n/ac
Data rate	300+ 867 Mbps
LOS access	1.7 km
Max. concurrent user	1024

A8in(ac) Super WiFi Base Station

A8in(ac)
8 x 8 MIMO
Highest performance
Easy to deploy

Standards	a/b/g/n/ac
Data rate	300+ 867 Mbps
LOS access	1 km
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A8n Super WiFi Base Station

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8 x 8 MIMO
Flexible
Mobile data offload and outdoor WLAN access

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Data rate	300+ 300 Mbps
LOS access	1 km
Max. concurrent user	1024

A3-Ei Dual-Band Access Point

A3-Ei
802.11ac
Great price/performance
Easy to deploy

Standards	a/b/g/n/ac
Data rate	450Mbps+ 1.3Gbps
LOS access	1,000/300m (2.4/5G)
Max. concurrent user	512

A2-Ei Dual-Band Access Point

A2-Ei
Easy to deploy
Outdoor WLAN access

Standards	a/b/g/n
Data rate	300+ 300 Mbps
LOS access	1,000/300m (2.4/5G)
Max. concurrent user	512

A2 WiFi Access Point/Bridge

A2
Easy to deploy
Outdoor WLAN access and backhaul

Standards	a/b/g/n
Data rate	300+ 300 Mbps
LOS access	500 m
Max. concurrent user	512

C1n/C1xn Super WiFi CPE

C1n/C1xn
Great price/performance
Outdoor and indoor WLAN access, bridge, and CPE

Standards	b/g/n
Data rate	300 Mbps
LOS access	600m/ext.
LOS CPE	4 km to A8-Ein
	3 km to A2-Ei
LOS bridge	20km
Max. concurrent user	256

C1an/C1xan Super WiFi CPE

C1an/C1xan
Great price/performance
Outdoor and indoor WLAN access, bridge, and CPE

Standards	a/n
Data rate	300 Mbps
LOS access	250m
LOS CPE	1 km to A8-Ein
	2 km to A2-Ei
LOS bridge	13 km
Max. concurrent user	256

A3w Dual-Band Access Point

A3w
Highest indoor performance
Wall mount
Indoor WLAN access for enterprises and SMEs

Standards	a/b/g/an/ac
Data rate	450 Mbps/1.3Gbps
LOS access	800m/200m (2.4/5G)
Max. concurrent user	512

A3c Dual-Band Access Point
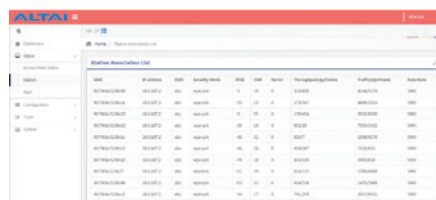
A3c
Highest indoor performance
Ceiling mount
Indoor WLAN access for enterprises and SMEs

Standards	a/b/g/an/ac
Data rate	450 Mbps/1.3Gbps
LOS access	500m/150m (2.4/5G)
Max. concurrent user	512

AltaiCare
Cloud-based network and access management
Pay-as-you-grow subscription

AltaiCare

Access Controller
Centralized network and access management

Models support 250 to 12,000 APs

ALTAI
Super WiFi

China

Malaysia

Turkey

Hong Kong

Morocco

Canada

US

Nigeria

Carrier-grade
Super WiFi Solution
with deployment in
over 80 countries

Hungary

Nepal

Colombia

Jamaica

Indonesia

Altai at a Glance

- Privately held, founded in 2006
- Headquarters in Hong Kong
- Distribution network in over 80 countries
- Patented smart antenna technology enabling 10X better coverage & capacity than standard AP

- Complete portfolio of indoor and outdoor products for carriers, WISPs, and enterprises
- Main market applications are mobile data offload, wireless broadband, WLAN access in private networks, and wireless backhaul

	Outdoor					
	A8-Ein (ac)	**A8in (ac)**	**A8n (ac)**	**A8-Ein**	**A8in**	**A8n**
Supported Bands	Dual concurrent	Dual concurrent	Dual concurrent	Dual concurrent	Dual concurrent	Dual concurrent
Wi-Fi Standards (2.4GHz/5GHz)	802.11b/g/n 802.11a/n/ac	802.11b/g/n 802.11a/n/ac	802.11b/g/n 802.11a/n/ac	802.11b/g/n 802.11a/n	802.11b/g/n 802.11a/n	802.11b/g/n 802.11a/n
Max. Data Rate (2.4GHz/5GHz)	300Mbps 867Mbps	300Mbps 867Mbps	300Mbps 867Mbps	300Mbps 300Mbps	300Mbps 300Mbps	300Mbps 300Mbps
MIMO Type (2.4GHz/5GHz)	8x8:8 2x2:2	8x8:8 2x2:2	8x8:8 2x2:2	8x8:8 2x2:2	8x8:8 2x2:2	8x8:8 2x2:2
Number of BSSIDs	32	32	32	32	32	32
Max. Number of Concurrent Users	1024	1024	1024	1024	1024	1024
Antenna Gain (2.4GHz/5GHz)	19dBi Sector External N x 2	14dBi Sector x 4 External N x 2	14dBi Sector x 4 External N x 2	19dBi Sector External N x 2	14dBi Sector x 4 External N x 2	14dBi Sector x 4 External N x 2
Ethernet Interface	1 x GE	1 x GE	1 x GE	1 x GE	1 x GE	1 x GE
Power Supply	56V PoE PD	56V PoE PD	56V PoE PD	56V PoE PD	56V PoE PD	56V PoE PD
Operating Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
IP Rating	IP67	IP67	IP67	IP67	IP67	IP67
Dimension	467 x 439 x 111 mm	455 x 431 x 163 mm	360 x 234 x 80 mm	467 x 439 x 111 mm	455 x 431 x 163 mm	360 x 234 x 80 mm
Model Number	WA8011NAC	WA8011NAC-H	WA8011NAC-X	WA8011N	WA8011N-HE	WA8011N-X

	Outdoor				Outdoor/Indoor		Indoor	
	A3-Ei	**A2-Ei**	**A2**	**A2e**	**C1n / C1xn**	**C1an / C1xan**	**A3w**	**A3c**
Supported Bands	Dual concurrent	Dual concurrent	Dual concurrent	Dual concurrent	2.4GHz	5GHz	Dual concurrent	Dual concurrent
Wi-Fi Standards (2.4GHz/5GHz)	802.11b/g/n 802.11a/n/ac	802.11b/g/n 802.11a/n	802.11b/g/n 802.11a/n	802.11b/g/n 802.11a/n	802.11b/g/n	802.11a/n	802.11b/g/n 802.11a/n/ac	802.11b/g/n 802.11a/n/ac
Max. Data Rate (2.4GHz/5GHz)	450Mbps 1.3Gbps	300Mbps 300Mbps	300Mbps 300Mbps	300Mbps 300Mbps	300Mbps	300Mbps	450Mbps 1.3Gbps	450Mbps 1.3Gbps
MIMO Type (2.4GHz/5GHz)	3x3:3 3x3:3	2x2:2 2x2:2	2x2:2 2x2:2	2x2:2 2x2:2	2x2:2	2x2:2	3x3:3 3x3:3	3x3:3 3x3:3
Number of BSSIDs	32	32	32	32	16	16	32	32
Max. Number of Concurrent Users	512	512	512	512	256	256	512	512
Antenna Gain (2.4GHz/5GHz)	12dBi Sector 13dBi Sector	14dBi Sector 15dBi Sector	External N x 2 16dBi Panel	13dBi Panel External N x 2	C1n 10dBi Sector C1xn External RP-SMA x 2	C1an 14dBi Sector C1xan External RP-SMA x 2	9dBi Panel 9dBi Panel	3dBi Omni 8dBi Omni
Ethernet Interface	1 x GE	1 x GE	1 x GE	1 x GE	1 x FE	1 x FE	2 x GE	2 x GE
Power Supply	802.3at PoE PD 802.3af PoE PD (Power Safe Mode)	802.3at PoE PD	802.3at PoE PD	802.3at PoE PD	18V PoE PD	18V PoE PD	802.3at 802.3af (Power Safe Mode)	802.3at 802.3af (Power Safe Mode)
Operating Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-20°C to +55°C	-20°C to +55°C	0°C to +40°C	0°C to +40°C
IP Rating	IP67	IP67	IP67	IP67	IP55	IP55	–	–
Dimension	491 x 221 x 73mm	490x 220 x 60 mm	220 x 220 x 60 mm	220 x 220 x 60 mm	C1n 242 x 80 x 27 mm C1xn 280x 80 x 27 mm	C1an 242 x 80 x 27 mm C1xan 280x 80 x 27 mm	230 x 230 x 66 mm	230 x 230 x 66 mm
Model Number	WA3311NAC-E	WA2011N-E	AP5822	AP5822	C1n WA1011N-G C1xn WA1011N-GX	C1an WA-1011N-A C1xan WA-1011N-AX	WA3311NAC-W	WA3311NAC-C

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