AP-One

Long Range Indoor / Outdoor Hotspot AP with Instant Install

AP-ONE
Instant Indoor / Outdoor Hotspot

Best in Class Indoor/Outdoor Hotspot

The AP-One is a dual-radio 802.11a/b/g outdoor hotspot solution. Unlike many other solutions, the AP-One system offers industry highest output power, industry best sensitivity, and an intuitivitive, yet powerful software operating system and user interface. The AP-One is the perfect solution for setting up an instant outdoor campus-wide hotspot.

Zero Configuration Setup

The AP-One solution comes pre-configured to instantly provide user authenticated hotspot access over a large area. From there, security, QoS, and other features can be easily implemented through an intuitive user manager interface. It is a high-performance, advanced solution that is specifically designed for simple, fast, and powerful network deployments.
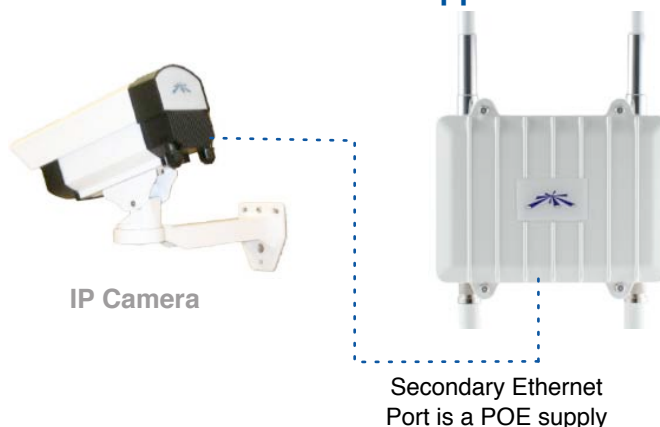
Advanced Features

Once an AP-One is setup, a variety of advanced features can be utilized. Security options such as radius support, WEP, WPA, WPA2 are all readily available. In addition, advanced routing, firewall and quality of service features give network administrators powerful control over the network operation.

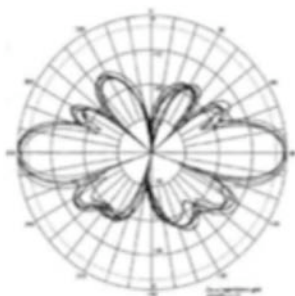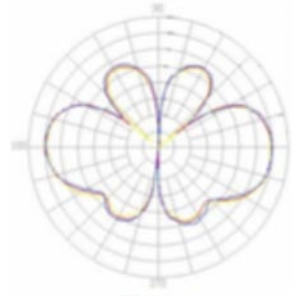## Easily Distribute Bandwidth (Control Network Hogs)

With AP-One's advanced bandwidth management engine, your network can always appear fast to targeted end-users. Using a powerful yet intuitive user interface, operators can easily allocate or restrict bandwidth using variables tied to MACID, application (such as Peer to Peer; Kazzaa, Limewire, etc.), subnets, protocols, and many other factors.

Video and Additional Appiications

IP Camera

Secondary Ethernet
Port is a POE supply

AP-One
Technical Specifications

SYSTEM INFORMATION	
Processor Specs	Atheros AR5312 SOC, MIPS 4KC, 220MHz
Memory Information	32MB SDRAM, 8MB Parallel Flash
Networking Interface	2 X 10/100 BASE-TX (Cat. 5, RJ-45) Ethernet Interface

RADIO 1 OPERATING FREQUENCY 2412MHz-2462MHz

	RADIO 1 2.4GHz TX SPECIFICATIONS				RADIO 1 2.4GHz RX SPECIFICATIONS		
	DataRate	TX Power	Tolerance		DataRate	Sensitivity	Tolerance
802.11b	1Mbps	28 dBm	+/-1dB	802.11b	1Mbps	-97 dBm	+/-1dB
	2Mbps	28 dBm	+/-1dB		2Mbps	-96 dBm	+/-1dB
	5.5Mbps	28 dBm	+/-1dB		5.5Mbps	-95 dBm	+/-1dB
	11Mbps	28 dBm	+/-1dB		11Mbps	-92 dBm	+/-1dB
802.11g OFDM	6Mbps	28 dBm	+/-1dB	802.11g OFDM	6Mbps	-94 dBm	+/-1dB
	9Mbps	28 dBm	+/-1dB		9Mbps	-93 dBm	+/-1dB
	12Mbps	28 dBm	+/-1dB		12Mbps	-91 dBm	+/-1dB
	18Mbps	28 dBm	+/-1dB		18Mbps	-90 dBm	+/-1dB
	24Mbps	28 dBm	+/-1dB		24Mbps	-86 dBm	+/-1dB
	36Mbps	26 dBm	+/-1dB		36Mbps	-83 dBm	+/-1dB
	48Mbps	24 dBm	+/-1dB		48Mbps	-77 dBm	+/-1dB
	54Mbps	23 dBm	+/-1dB		54Mbps	-74 dBm	+/-1dB

RADIO 2 OPERATING FREQUENCY   5745MHz-5825MHz

	RADIO 2 5GHz TX SPECIFICATIONS				RADIO 2 5GHz RX SPECIFICATIONS		
802.11a OFDM	6Mbps	28 dBm	+/-1dB	802.11a OFDM	6Mbps	-94 dBm	+/-1dB
	9Mbps	28 dBm	+/-1dB		9Mbps	-93 dBm	+/-1dB
	12Mbps	28 dBm	+/-1dB		12Mbps	-91 dBm	+/-1dB
	18Mbps	28 dBm	+/-1dB		18Mbps	-90 dBm	+/-1dB
	24Mbps	28 dBm	+/-1dB		24Mbps	-86 dBm	+/-1dB
	36Mbps	26 dBm	+/-1dB		36Mbps	-83 dBm	+/-1dB
	48Mbps	24 dBm	+/-1dB		48Mbps	-77 dBm	+/-1dB
	54Mbps	23 dBm	+/-1dB		54Mbps	-74 dBm	+/-1dB

2.4GHz Antenna (2 included)		5 GHz Antenna (2 included)	
Gain	7.4dBi (2400-2500MHz)	Gain	7.0dBi (5700-5850MHz)
Polarization	Vertical	Polarization	Vertical
Surival Wind	190 km/hr	Surival Wind	216 km/hr
Weight	0.156kg	Weight	0.07kg
Dimensions	20x445 mm	Dimensions	22x183 mm

Vertical Radiation Pattern

Vertical Radiation Pattern

PHYSICAL / ELECTRICAL / ENVIRONMENTAL	
Enclosure Size	7.2 in x 5 in x 1.9 in (18 cm x 12.5 cm x 4.75 cm)
Weight	2.75 lbs (1.25kg)
Enclosure Characteristics	Outdoor rated die cast metal (water tight)
Mounting Kit	Pole Mounting Kit included
Max Power Consumption	14 Watts
Power Supply	48V, 0.5A (24 Watts). Supply included
Power Method	Passive Power over Ethernet (pairs 4,5+; 7,8 return)
Daisy Chain Power	Secondary Port capable of 48V (0.2A) output
Operating Temperature	-40C to 85C (System PCB optimized for hi-temp)
Operating Humidity	5 to 95% Condensing
Shock and Vibration	ETSI300-019-1.4
Regulatory Approvals	FCC

AP-One
Real-World Super Range Coverage

The AP-One exhibits incredible range which makes it an ideal solution to cover campuses, warehouses, multi-dwelling units, hotels, parks, and other environments requiring wide non-line of sight coverage. In the example below, a business park complex was completely covered by a single outdoor AP-One that was deployed at door level (not elevated). Signal penetration was good enough to maintain a solid link while roaming throughout the entire complex.
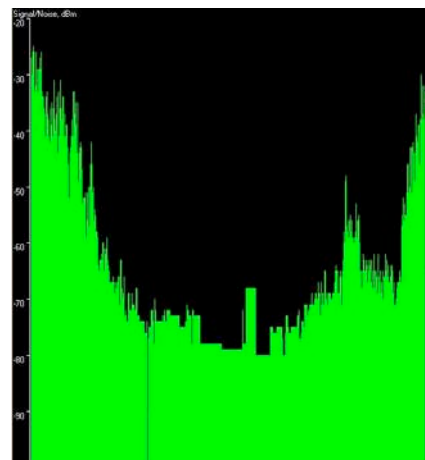

Map of Business Complex with Measured Receive Signal

Signal Strength Key	
	-50dBm+
	-50 to -70dBm
	-70dBm and below

View of Business Complex from Installed AP-One Unit

Signal Strength vs. Time while wireless client completed path around complex perimiter

AP-One
Software Introduction

Advanced Features

Layer 2 Quality of Service: 802.11e support for voice and video clients
Layer 3 Quality of Service: Bandwidth management and advanced traffic shaping configurable based on interface, source subnet, port, MACID, protocol, and application
Data Security: WEP / WPA / WPA2 with 128 bit AES encryption
Network Support: DHCP Server, NAT, PPPoE relay, PPTP, Vlan 802.1Q
Enhanced modes: Atheros Super mode featuring bursting, fast frames and compression.
Layer 3 Routing: RIP
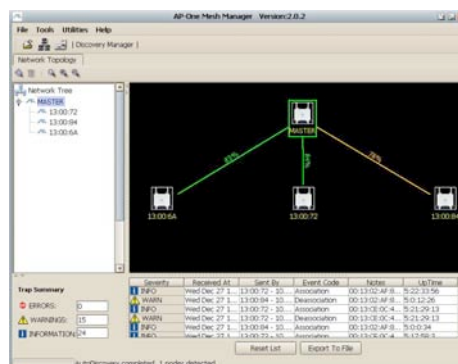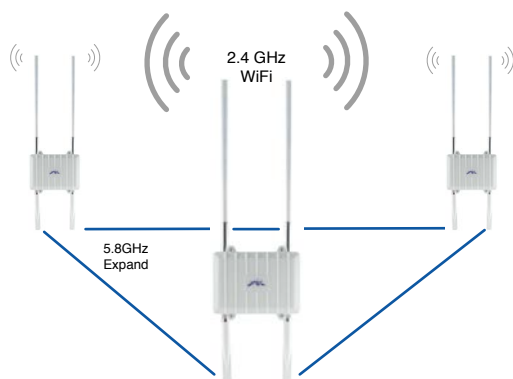**Hotspot:** Radius Client, Walled Garden, Log in Page Customization, Radius Statistics
Performance Monitoring: System time vs. throughput realtime tracking
Utilities: Node auto-discovery, ping, trace route
Services: SNMP, NTP, HTTP Server, SSH

Intuitive, Simple Network Scalability

The AP-One features a secondary radio configured to extend the coverage of an exiting AP-One outdoor HotSpot network to a campus-size area. Without any user intervention, new AP-One's that are powered up within the range of a "master" AP-one (connected to the Internet) will be instantly added to the network in the manager screen and ready to be configured. The process is 100% automatic and requires zero initial configuration.