



# Integrated Provisioning and Link Management Appliance



## AIRlok 318 for WLANs and WISPs

### RBAC AAA Engine

Role-based authentication, authorization and accounting engine with per-user roaming profiles, billing, and real-time credit card processing.

### Captive Portal

Redirect web requests to an integrated user management portal supporting directory services and billing capture.

### Intrusion Protection System

Defend against viruses and attackers with behavioral anomaly detection and automatic blackholing.

### IPsec Endpoint

Defend wireless users against packet interception/spoofing and provide secure remote access to resources.

### Bandwidth Management

Enforce packet prioritization and bandwidth utilization policies.

### Content Filtering

Prevent users from reaching websites hosting offensive content.

### Walled Garden

Host custom web content, applications and streaming media with integrated HTTP and RTP/RTSP servers.

### Transparent Web Cache

Implicitly cache all HTTP responses to reduce bandwidth consumption/costs and improve end-user experience.

### Packet Capture

Archive all transferred packets in a searchable database with integrated dissection, graphing and statistics.

### Network Instrumentation

Centrally controlled sensors for node monitoring and management as well as diagnosis of network issues.

### Routing with NAT/BI NAT

Manage multiple IP blocks with multiple physical ports and address sharing.

### Stateful Firewall

Filter packets by IP range, role and type.

### Core Network Services

Integrated DHCP and DNS servers.

### Adaptive Unified Web GUI

Single administrative control point for all functionality accessible from any web browser, even PDAs.

## Why pay \$20K+ for this headache?



The AIRlok 318 Appliance is a single-site integrated link management/control and network provisioning device for WLANs and WISPs with fewer than 100 simultaneous users. The 318 is ideally suited for hotspots, branch offices, motels, marinas, or anywhere a business requires one or more broadband connections to support a user-base and provision a network. With the optional Link Controller, the 318 can utilize and load-balance any combination of up to three T-1, DSL, cable modem, or other uplinks allowing increased bandwidth, carrier diversity, and high availability. Alternate solutions comparable to the AIRlok 318 entail deploying multiple devices, possibly costing over \$20,000—many times the price of a single AIRlok 318 Appliance.

### In a Nutshell

The AIRlok's IP packet processing platform integrates a suite of network provisioning and management systems into a single scalable and secure appliance. Based on an exo-kernel, unified memory architecture, the AIRlok is a high performance and flexible platform that offers a broad range of functionality today, and can be upgraded to meet future provisioning needs as business and its bandwidth and/or networking requirements grow. A single AIRlok Appliance removes the headache of selecting, buying, installing, integrating, and supporting multiple devices from disparate vendors to manage a network and provision uplinks to its end-users.

### Authentication

Role based access control drives every aspect of the AIRlok experience. Users are authenticated via a captive portal where they are redirected to an SSL-secured web application. Supported credentials include traditional username/password as well as single-use instant access tokens. Alternatively, the network administrator can authenticate devices by IP or MAC address or slave the AIRlok to a LDAP, Active Directory or RADIUS directory service. A web application, portal driven, local database with real-time signup and billing information capture support is also included with every AIRlok for stand-alone deployments.

### Role-based Authorization

Authenticated users are assigned roles that tailor the network experience. Profiles roam with users rather than being statically assigned to a device. For example, the content filter restricts access to certain sites or ranges of addresses based on role.

### Secure Foundation

With OpenBSD - the most secure operating system in the world - as its foundation, combined with a next-generation sensor-fusion automated intrusion protection system, the AIRlok is uniquely capable of defending itself against the latest known as well as future unknown threats. In addition, an integrated hardware random number generator (FIPS 140-1 Level 3 certified) is used to generate cryptographically secure one time instant use tokens as well as provide true entropy to seed PRNGs used in cryptographic functions (e.g., IPsec VPN and SSL web applications).

### Web-based GUI Administration

Administrators can access the appliance remotely using any web-capable device. XHTML 1.0 has been strictly followed so even limited PDA browsers can be used. Quantitative HCI techniques have been used to ensure the effectiveness and ease of use of the administrative console.

## Enabling Wireless Environments

The AIRlok Appliance is access point agnostic and allows:

- Radios to be thin, inexpensive, and essentially disposable.
- Users to roam among hot-spots without re-authenticating.
- Geographically distributed hot-spots to be managed using a single appliance.

## QoS and Bandwidth Management

The AIRlok Appliance's integrated transparent web-cache and bandwidth management modules result in enhanced quality of service - including VoIP and streaming video - and lower costs. Reduced monthly bandwidth charges result in an immediately quantifiable ROI for deploying an AIRlok.

## Transparent and Reliable Open Systems

The AIRlok Appliance incorporates open systems wherever possible. Also, it slavishly follows all standards and conventions promulgated by IEEE and W3C. This fosters interoperability, allowing the AIRlok to operate transparently, reliably, and globally.

## Ultra-Thin Client Architecture

The absence of a client-side support obligation results from the AIRlok Appliance's ultra-thin client architecture. Nothing executes on the client, resulting in few user inquiries.

## Benefits of an AIRlok Appliance

Compared to other forms, appliances provide six benefits according to IDC:

- Reduced Complexity
- Avoidance of Software Installation & Proliferating Servers
- Install and Forget
- Synergy with High-end Software Solutions
- Less Operator Interaction
- Troubleshooting Ease

## WISP-In-A-Box

The AIRlok Appliance is a self-contained single device network provisioning system. Just add uplink and radios for a complete hot-spot or WPOP deployment. Multiple locations can be provisioned independently or centrally by a directory server.

Role-based Authentication Authorization and Accounting Engine				
Bidirectional Network Address Translation	Bandwidth Manager	Transparent Web Cache	Intrusion Protection System	Captive Portal
		Walled Garden		
Routing	Content Filtering	IPsec Endpoint	Packet Capture	Stateful Firewall
		Core Network Services		
Unified Appliance Management and Network Instrumentation Web Application				

Model	318
Size	8.2 in x 12.7 in x 7.4 in (W x D x H)
Weight	16 lbs
Primary CPU	AMD Athlon 64 2800+ @ 1.8GHz
Frontside Bus	800MHz
Security Processor	HiFn 7955 ASIC with Random Number Generator
Hard Disk	40 GB, 7200 RPM, 8 MB Cache
RAM	256MB Unbuffered @ 400MHz
Standard Network Interfaces	Dual 100BaseTX (1 WAN uplink, 1 LAN)
Power Supply	250W
Input Voltage	100 - 240 VAC
Operating Temperature	+32 to +131 Degrees Fahrenheit / 0 to +55 Degrees Celsius
Non-operating Temperature	-40 to +158 Degrees Fahrenheit / -40 to +70 Degrees Celsius
Operating Humidity	10% to 90% relative humidity (Rh), 28 Degrees Celsius Wet Bulb Temperature
Acoustic Noise	35 db @ idle
Guaranteed Throughput	1.5 Mbps
Concurrent Users	100 Sessions
Local Database Capacity	5,000 Accounts
Direct Attached Console	PS/2 or USB keyboard & VGA HDB15, Optional DB9 Serial (9600,8,N,1)