Integrated Provisioning and Link Management Appliance

AIRlok 520 for WLANs and WISPs

Link Control
Dynamic bandwidth aggregation, carrier diversity and link failover using multiple WAN connections.

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/BiNAT
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 $75K+ for this headache?

The AIRlok 520 Appliance is a entry-level enterprise multi-site integrated link management/control and network provisioning device for corporate WLANs and ISP WPOPs with fewer than 500 simultaneous users. The 520 is ideally suited for locations with aggregated access points such as office buildings, hotels, conference centers, resorts, towns, apartment complexes, universities, 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 520 can utilize and load-balance any combination of up to six T-1, DSL, cable modem, or other uplinks allowing increased bandwidth, carrier diversity, and high availability. Alternate solutions comparable to the AIRlok 520 entail deploying multiple devices, possibly costing over $75,000—many times the price of a single AIRlok 525 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, 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 a 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

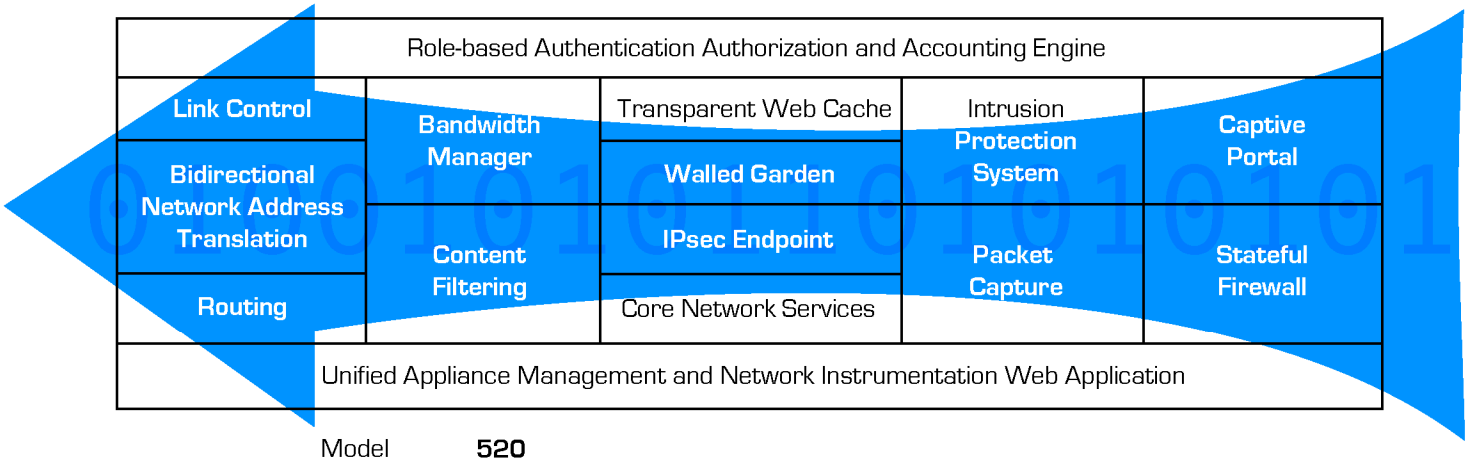
The absence of a client-side support obligation results from the AIRlok Appliance's ultra-thin client architecture. Nothing executes on the client, resulting in few user inquiries.

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.



Model	**520**
Form Factor	1-U tall by 26.5" deep
Size	17" (W) x 26.5" (D) x 1.7" (H)
Weight	30 lbs
Primary CPU	1 x Opteron 240 AMD64
Frontside Bus	800 MHz
Security Processor	HiFn 7955 ASIC with Random Number Generator
Hard Disk	160 GB, 7200 RPM, 8 MB Cache
RAM	1 GB Registered ECC 400 MHz
Network Interfaces	3 x 1000BaseTX Gigabit Ethernet (assignable)
(link control optional)	Single 100BaseTX Ethernet (assignable)
Power Supply	400W
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	54 db @ idle
Guaranteed Throughput	6 Mbps
Concurrent Users	500 Sessions
Local Database Capacity	125,000 Accounts
Direct Attached Console	PS/2 or USB keyboard & VGA HDB15, Optional DB9 Serial (9600,8,N,1)

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