

AeroGuard™ MIMO Wireless LAN Solution

The first available wireless Mesh solution based on True MIMO™ technology that offers a new paradigm in WLAN performance for scalable *all-wireless* business networks.

SOHware introduces AeroGuard™ MIMO, a multi-mode WLAN solution that is unprecedented in design and function, offering industry leading performance that enables the wireless network to support today's business applications as effectively as wired Ethernet. The result is a wireless Mesh solution that means greater investment returns for business owners and a competitive edge to VARs who service them.

AeroGuard™ is the first wireless Mesh solution that supports the enhanced range and capacity benefits of True MIMO™ technology. AeroGuard™ supports up to 108Mbps over a single 20 MHz channel, offering typically 2x to 4x range improvement over conventional wireless LAN solutions. These wire speed mesh connections are supported in either 2.4GHz and 5GHz bands, with simultaneous AP coverage that is fully compatible with existing 802.11b, 11g or 11a clients.

Wireless Mesh Networks

Dual radios in the AeroGuard™ MIMO Access Point support *all-wireless* networks by enabling AP coverage and simultaneous wireless mesh links between APs. Built-in intelligence automates the discovery, configuring and monitoring of AeroGuard networks, including dynamic data path routing that self heals in response to Class-of-Service requirements.

Hierarchical Management

AeroGuard™ offers unprecedented scalability and reliability with built-in security and administrative intelligence that supports local and remote management of one or multiple distributed wireless LAN installations. Embedded domain management features in each AP provide breakthrough control and management at the domain level, enabling the VAR to cost effectively deploy WLANs without the addition of separate WLAN controllers.

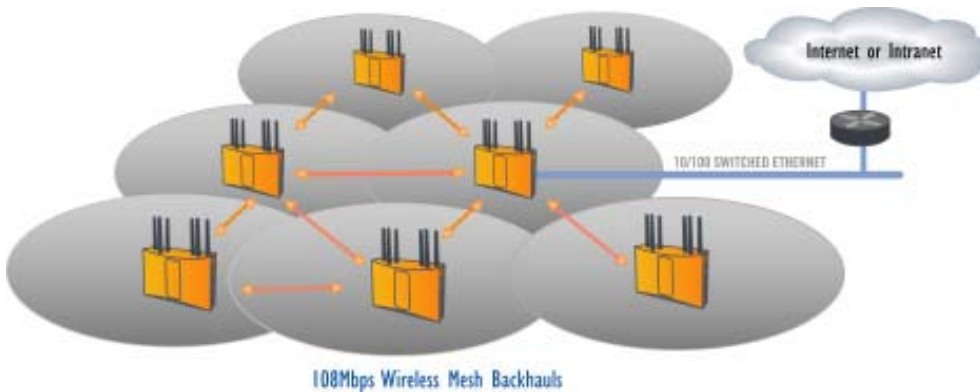
Voice over Wi-Fi Ready

AeroGuard™ can support voice, video and other streaming data like no other WLAN solution with 802.1e compliant QoS that further enhances MIMO's superior range and reliability. AeroGuard™ is the wireless LAN solution of choice for businesses who deploy next generation mobile user applications.



Enabling All-Wireless Mesh Networks

AeroGuard™ MIMO wireless Mesh solutions are purpose-built to support wireless LANs without the use of Ethernet cables; ideal for rapid deployment with minimal capital investment where wiring is either impractical or cost prohibitive.



AeroGuard™

Dual Radio Design

- 802.11b/g (2.4GHz)
- 802.11a (5.8GHz)

MIMO Wireless Mesh

- 108Mbps Backhaul
- P2P and Multi-hop
- Dynamic path routing

Embedded Intelligence

- Auto discovery
- AP Enrollment Control
- Auto Configuration
- Auto Policy Distribution
- CoS and Load Balancing

The True MIMO™ Difference

AeroGuard™ MIMO is like no other wireless LAN solution. The first MIMO based wireless Mesh system available today, RF performance is actually enhanced by the obstacles found in typical environments that would otherwise attenuate a conventional Access Point's range and performance.

Multiple Input - Multiple Output (MIMO)

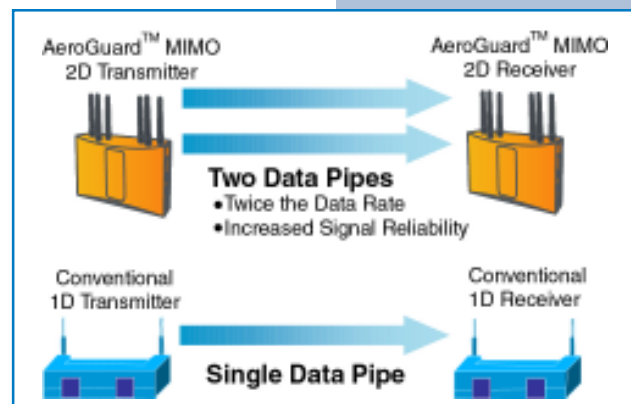
The unique multiple antenna design of MIMO creates multiple data pipes on a single 20 MHz channel for a more robust and reliable RF solution than is possible with conventional Wi-Fi solutions.

MIMO Excels Where Obstacles Occur

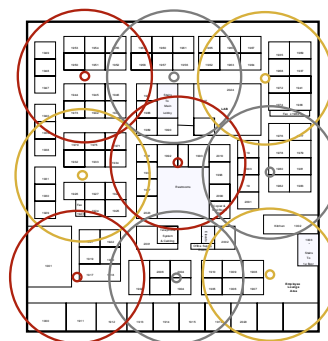
The multiple antenna technology of MIMO is actually enhanced by walls, ceilings, partitions, furniture and other objects. AeroGuard™ is a more effective Wi-Fi solution for real-life conditions.

MIMO reduces infrastructure complexity

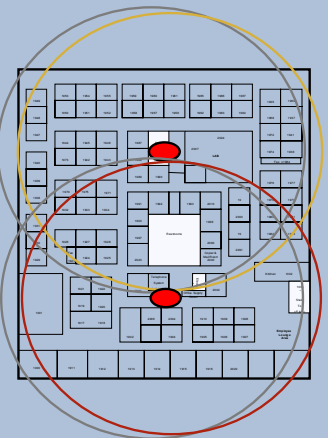
AeroGuard™ MIMO APs do the job of 2, 4 or even 6 conventional Wi-Fi APs, reducing deployment time, cost and complexity and making AeroGuard™ a superior solution for lowering the total cost of ownership.



Conventional APs



AeroGuard™ MIMO APs



An Office Application Scenario

The floor plan depicts a real office environment consisting of cubicles and permanent offices and conference rooms. With conventional Wi-Fi Access Point technology a site survey was conducted which requires 9 APs would register complete coverage with only 2 AeroGuard™ MIMO APs.

Embedded Control and Management Features in Each AeroGuard™ AP

The AeroGuard™ MIMO solution achieves unparalleled scalability and performance through embedded control and management software. The result is purpose-built for business applications ranging from small office to distributed Enterprise and offers superior investment returns over conventional WLAN switch solutions. Each AeroGuard™ Access Point can be enabled as a domain manager known as a *Portal*, which provides complete administration and security for up to 20 AeroGuard™ APs within a subnet. Fault tolerance is inherent in the solution as the *Portal* role is automatically transferrable to another AeroGuard™ AP. Each *Portal* AP can likewise be controlled remotely by the AeroGuard™ NMS appliance for a completely hierarchical management solution.

Management Portal

Network Topology

- AP discovery
- AP enrollment
- Policy Management

Health Management

- Performance and fault monitoring
- RF diagnostics
- Alert definition
- Event statistics log

Software Management

- Configuration export
- Backup and restore
- Distributes updates

Administrative Access

- Secure HTTP - SSL
- Secure CLI - SSH
- Secure SNMP - v3
- Password login

Security Portal

Encryption

- WPA2 / AES
- WPA / TKIP
- WEP - 64/128 Bit

Authentication

- Pre-share Key (PSK)
- 802.1x with auto-key
- EAP-PEAP and EAP-TLS
- Embedded RADIUS

User Access

- Up to 16 VLAN groups
- Guest login portal
- Policy assignment

Rogue Management

- AP Detection
- Alert and description
- Classifies status
- Locates proximity

The Management Portal

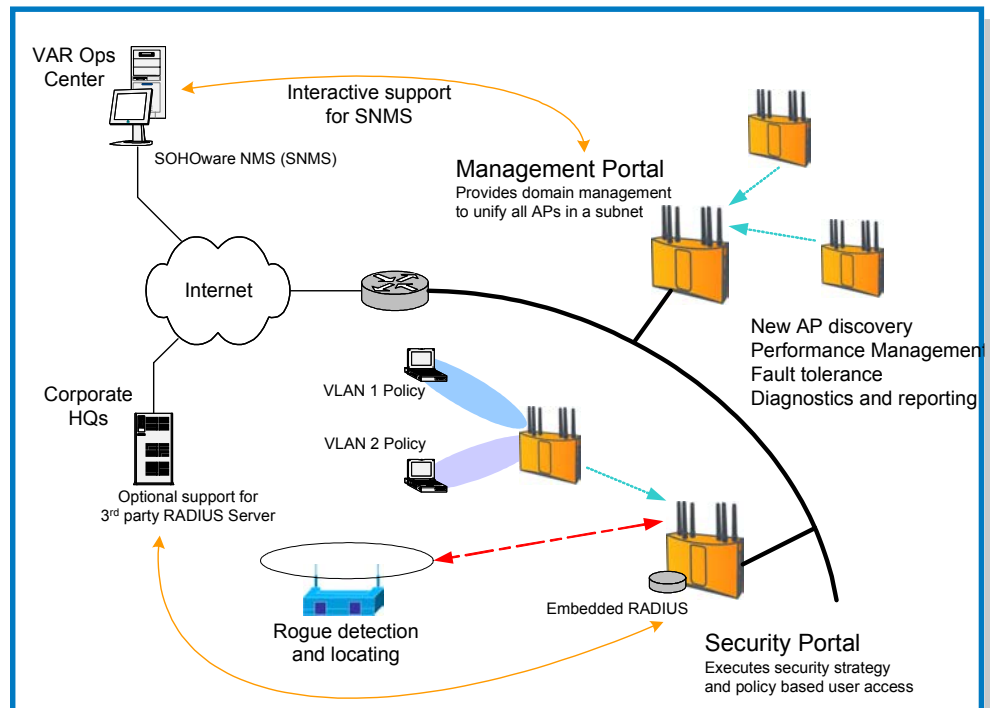
Monitors, updates and aggregates the policies and performance of an AeroGuard™ MIMO network domain, providing real-time interactive communication with the optional NMS remote management appliance (ANMS). Ideally scalable for growing businesses deploying up to 20 APs. Includes all Security Portal functionality as well.

The Security Portal

Each AeroGuard AP can be enabled to provide backup security administration to the Management Portal for access policies, user authentication and Rogue AP detection. The AeroGuard MIMO solution is fully compliant with 802.11i standard, supporting WPA, WPA2 and scalable authentication options including internal or external RADIUS.

AeroGuard NMS (ANMS)

An IPC based appliance, ANMS is an Enterprise scaled remote management solution enabling VARs to offer support services for AeroGuard deployments. ANMS provides single station viewing, monitoring and reporting of AeroGuard networks through specified Management Portal APs at each installation site. Thousands of AeroGuard APs can be managed at multiple sites.



Streaming Support with L3 Roaming

AeroGuard™ includes the most advanced Quality of Service features available in wireless LAN technology. The MIMO AP supports both 802.11e wireless QoS and 802.1p packet tagging that sustain Class-of-Service assignments even for mobile users who roam across multiple subnets. AeroGuard™ is the solution of choice for businesses and institutions that need to assure seamless service connectivity for mission critical voice and streaming applications, such as medical personnel mobile communications and real-time video surveillance.

Upstream - Downstream QoS Identifiers

- 802.1p classification
- Per VLAN and per Station tagging
- Robust QoS priority mapping

Four Class-of-Service (CoS) Levels

- Enables differentiated treatment per user group
- Packet type rules prioritize streaming applications
- 802.11e prioritized (eDCA) and scheduled (HCCA)

More Useable Bandwidth

- Enables differentiated treatment per user group
- Packet type rules prioritize streaming applications
- 802.11e prioritized (eDCA) and scheduled (HCCA)



Interoperability

AeroGuard™ MIMO solutions integrate seamlessly with existing WLAN infrastructure and offer enhanced performance results, even in a mixed conventional and MIMO technology environment.

The AeroGuard™ Solution

AGN1200 Series MIMO Access Points

- 108Mbps MIMO range and performance
- Multi-mode support - 802.11a and 802.11b/g
- Wireless mesh backhaul functionality
- 802.11i ready security
- Embedded Security and Management Portal software
- Fully compliant with conventional Wi-Fi clients



AGN1023PC MIMO CardBus Adapter

- 108Mbps MIMO range and performance to a MIMO AP
- Multi-mode support - 802.11a and 802.11b/g
- 802.11i ready security
- Standard PCMCIA interface for mobile PCs
- Fully compliant with conventional Wi-Fi APs



AeroGuard NMS - Management Appliance

- IPC platform with 1GHz Celeron processor
- Intuitive Web interface
- Single station viewing of multiple AeroGuard sites
- Complete SNMPv3 monitoring, alarms and scheduling



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