

## Wireless Access Controllers

### Versatile HotSpot Solution



HSG-200



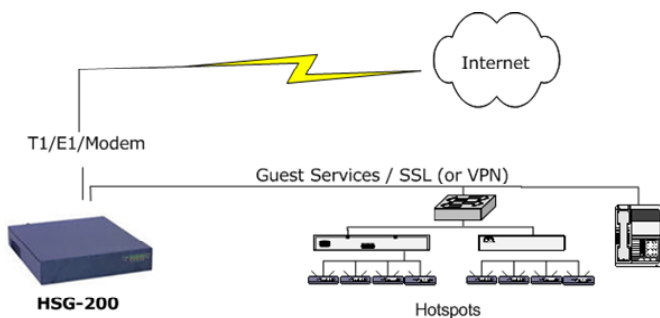
HSG-1000

The **HSG** access controllers, applies to public access network such as Wi-Fi hotspots, network management, guest access, global roaming, and hospitality deployments - With **reliability, capacity, efficiency, and ultra security.**

- **A**uthentication: Firewall, SSL / IPsec VPNs, 802.1X, VLAN, VPN free client software
- **A**uthorization: Guest/Role accounts and external Kerberos, RADIUS, LDAP
- **A**ccounting/Billing for instant Hotspot
- **A**uditing: Client Session control, OS fingerprints detection, IP & bandwidth monitoring, network latency, server logs
- **A**lert: Intrusion Detection / Prevention Systems (IDS / IPS) as optional
- Seamless wireless / wired IP roaming
- Full stateful packet filter (firewall)
- Large number of access points (APs)
- Up to 250 (HSG-200) or thousands (HSG-1000) simultaneous users
- Support Credit card gateways, prepaid cards
- 802.11i, 802.1X, VPN with VLAN Security
- Full Quality of Service (QoS) functions
- Millions of transaction records for database
- Centralized management with associated APs and Customer Premise Equipments (CPEs)
- Remote administration and reconfiguring for Gateway and associated APs / CPEs (WAP/CAP)
- Data Roaming among HSG gateways
- CARP Firewall failover and redundancy for backup
- Walled Garden for redirection to customized pre/post/failure of authentication pages
- Optional 3G interface radio with major brands
- Optional high power onboard Access Point (up to 300mW) as radio for base station

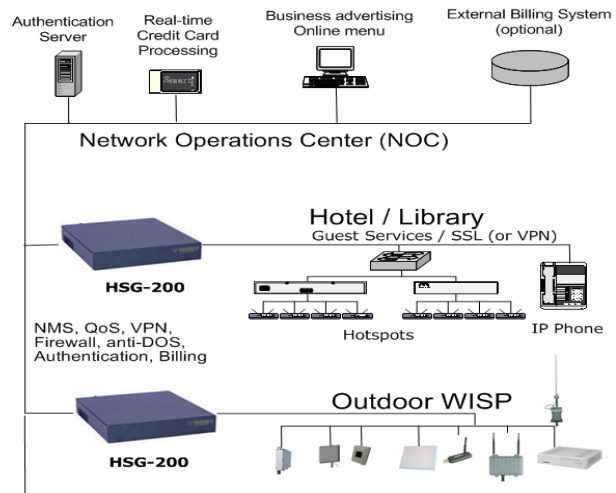
### HSG can be deployed in two roles:

1. Backhaul Controller for small-to-medium venues



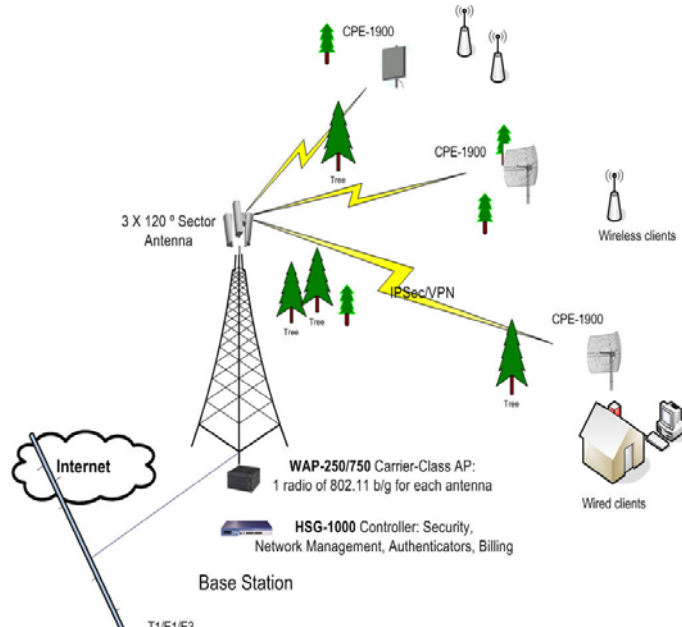
An all-in-one, self-contained solution for authentication, vpn, billing, firewall, network management. It can be used at venues such as hotel, park, office for large group of users.

2. Local controller as part of a large hotspot network



## Functions

- Authentication (Walled Garden): single sign-on (SSO) client with authentication integrated into the local authentication environment through local/domain Kerberos, LDAP, RADIUS, MAC authentication, and 802.1x.
- Authorization: access control to network resources such as protected network with intranet, internet, bandwidth, VPN, and fully stateful packet firewall rulesets.
- Accounting: sophisticated and complete billing system that generates account information and invoices, perform real-time credit-card processing. Interfaces based on PostgreSQL database are available to integrate with external billing/accounting systems and RADIUS servers.
- Redirection of clients to customized webpage of the hotspot provider, for authentication, billing, etc. Customizable company information, logo, web page and background.
- Clientless (VPN Bypass) mode for maximized hotspot efficiency. This also allows easy access to internet in a corporate environment while protecting sensitive information on the intranet.
- Secure clients via HTTPS for all platforms are provided as alternative to VPN.
- Where VPN is needed, open-standard IPsec and SSL/TLS protocols with AES, DES, 3DES, SHA-1, and Blowfish algorithms are supported to provide strong client-to-gateway integrity, authentication, and encryption for Windows 2000/XP/PocketPC, and most UNIX variants. No extra client licenses required.
- Accommodates a large number of 802.11 a/b/g APs of multiple vendors, with up to 250 (HSG-200) or unlimited (HSG-1000) concurrent users
- Remote web based and serial console admin through SSL/TLS, configuration backup.
- Seamless IP roaming allows clients the freedom to move among connected APs.
- Optional onboard high power radio (200mW or 300mW) acts as radio for base station.
- Quality of Service (QoS) allows role based control of inbound/outbound bandwidth by prioritizing traffic.
- Comprehensive firewall ruleset and templates allow extremely granular control over network traffic.
- Guest/Role accounts can be defined and customized for VPN, bandwidth, billing, and are fully separated from the intranet for security. Local users' policy management that include session time limits, time-of-day restriction, etc.
- Centralized AP logging, remote syslog server, real-time traffic monitoring and analysis system. Revocation of VPN and non-VPN clients for illegal usages.
- Performance: up to 100 Mbps unencrypted traffic, and 5 to 50 Mbps encrypted 3DES IPsec traffic for VPN clients.
- Optional SIP servers / telephony interface with Siproxd and Asterisk



## Protocols/Standards Supported

- Windows 2000, XP, PocketPC, MacOS, and most UNIX variants for VPN clients, VoIP, media devices
- WLAN DHCP server, DNS server, NTP time server, NAT gateway, log servers, HostAP
- Protocols: 802.11 (a, b, or g variants), 802.1x, ARP, DNS, NTP, DHCP, ICMP, TCP/IP, UDP, NetBIOS, SNMP V2, HTTP, HTTPS, IPsec, AES, IKE (ISAKMP) and ESP tunnel modes, IPv4, IPv6, DES, 3DES, Blowfish, SHA-1 hashes, MD5, SSH, LDAP, RADIUS, Kerberos V (Heimdal), SSL, SSL2, TLS, SSH2, PKCS12, X.509, OSPF, BGP, RIP, SIP/SER, H.323, VOIP, CARP, PFSYNC, OSPFD, BGPD, GPRS, GSM, UMTS, HSDPA, 802.16e

## Typical Hardware Specs

- Processor: P4 2.4GHz GHz (HSG-1000); Celeron 1GHz (HSG-200), with 512MB memory
- I/O Ports: HSG-1000: 4 x GbE and 4 x FE LAN; HSG-200: 4 x FE LAN. RJ-45 port x4. common I/O: RS-232 port x 1, USB port x 2, internal VGA port x 1 and keyboard/mouse port x 1. HSG-1000 with 2 PCI expansion slots
- Storage Device: Compact Flash, or 2.5" / 3.5" HDD
- LED: HDD activity indicator, power on/off LED indicator
- Dimension: HSG-200: 177(W) x 228.6(D) x 51(H) mm; HSG-1000: 426(W) x 379.8(D) x 43.5(H) mm (16.8" x 14.95" x 1.72")
- Certificates: CE/FCC/UL