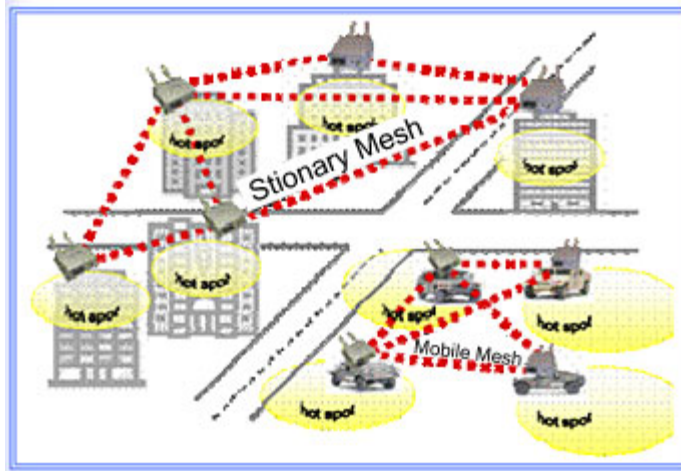# Airvenue-AG Wireless Mesh Networking

Model 525C-2 Wireless Mesh Access Point …

Benefits:

- **Self-configuring, self-healing Mesh networks - up to 40 nodes**
- **802.11a/b/g access point & bridge with Turbo A and Super G**
- **Least cost solution - indoor & outdoor**
- **Rapid deployment, simplified installation**
- **Dynamic bandwidth scaling**
- **Non-line-of-sight solution**
- **Robust, built-in security**
- **Rugged, high throughput with extended range**
- **Wireless hotspot provisioning**

Self-Configuring

Originally developed for mobile battlefield communications, the Airvenue-AG Model 527-2 Wireless Mesh Access Point will auto-form a mesh network with up to 40 other nodes. It creates dynamic 54/108Mbps node-to-node links on the fly, while providing local hotspot connectivity up to 108Mbps. With it, high performance and scalable broadband networks can be built spontaneously and at low cost. The 527-2 Mesh AP has multiple RFs: 802.11a/b/g for WLAN and 802.11a/b/g for wireless bridging and repeating both with Turbo A and Super G data rates of 108Mbps. In addition, it has an integrated 8-port switch, an encrypted WAN port with Power over Ethernet (PoE). Its case is IP66 rated for harsh environments such as outdoor and industrial use.

An Airvenue-AG mesh network is self-organizing and does not require manual configuration. Adding new AP nodes or relocating existing APs is simple – power them up and turn them on. In almost all cases, no network cabling is required – just power. The network discovers the new nodes and automatically incorporates them into the existing mesh configuration.

Self-Healing

An Airvenue-AG mesh network is not only reliable, it's also highly adaptable. If a potential hotspot or group of client devices is too far away for a solid RF link, you just add one or more 527-2 APs to fill-in the network gaps.

If an AP or link in an Airvenue-AG mesh network disconnects, data is sent around it via other bridge paths and other APs. Loss of one or more APs doesn't necessarily affect the mesh network's operation. An Airvenue-AG Mesh network is self-healing because rerouting is automatic -- no human intervention is required.

Flexible Configurations

Mesh networks using Airvenue-AG APs are decentralized and inexpensive, as each AP need only transmit as far as the next AP. The model 527-2 APs function as repeaters to transmit data from nearby APs to peers that are too far away to reach, resulting in a network that can span large distances

This is especially useful over rough topology in the country side or in urban settings. Extra coverage or bandwidth can be installed by simply adding more Airvenue-AG 527-2 APs.

Airvenue-AG Mesh Networks Support either Fixed & Mobile Configurations

They provide an excellent infrastructure for:

- Hotspots
- Ad hoc mobile networks
- Links between buildings & campuses
- Replacing low speed outdoor leased lines.

Stay Connected

Airvenue-AG mesh solutions are the perfect choice to expand existing networks or build out new ones. Telcos, data providers, and ISPs are always seeking ways to increase coverage and thus revenues. The transportation industry is an ideal candidate for mobile Internet services, since people can stay connected even while traveling or commuting. However, simple Wi-Fi access does not offer the mobile or constant connectivity required for network access on moving vehicles.
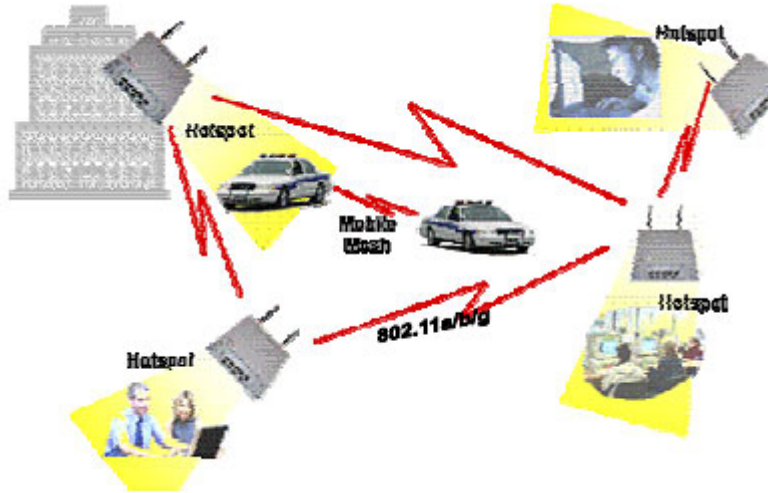
Airvenue-AG Meshed Hotspots

By extending wired LANs and satellite networks with Airvenue-AG mesh networks, people on the move can stay connected – anywhere, anytime. Mobile high speed data applications for the Military, Police, and Government agencies are easily implemented. Also, stationary applications such as sensor networking, video surveillance, business and residential hot spots can be provided with the same Airvenue-AG mesh products.

Ports

- 10Base-T / 100Base
    - Auto Switching
    - 1 LAN port (for configuration)
    - 1 WAN Ethernet port/PoE
    - 1 Encrypted Ethernet port for DSL
    - 6 Mode-dependent ports
- AP = WAN ports, Gateway = LAN ports
- Connections for external antennas

Environment & Safety

- Operating Temperature:
    - 5° to +50° C standard;
    - 30° to +70° C option with TEC
- Storage Temperature: -40° to +80 ° C
- Operating Humidity: 0-95% non-condensing
- UL 60950
- cUL Canada
- TUV Europe
- Global Approval
- FCC

model 527-2
Wireless Mesh Access Point

Wireless Features

- Multiple RFs: 802.11a/b/g on AP & bridge ports with Turbo A and Super G data rates up to 108Mbps data rate
- Auto-form/auto-healing Mesh up to 40 nodes
- Operation mode: AP, GW, Bridge/Repeater
- Channel No.: Fix or Auto channel selection (optimum)
- Adjustable Tx power
- IP Aliasing in gateway mode
- Configuration File Transfers
- Load balancing of wireless clients
- Security
    - Rogue AP detection with email notification
    - MAC address filtering
    - Enable/disable broadcast SSID
    - Non-FIPS
        - WEP – Auth: Open system, shared key or both
        - 64, 128, 152-bit WEP
        - 802.11i / WPA2
        - WPA-PSK
        - WPA-Dynamic
        - AES-CCMP
        - Static AES/3DES
    - FIPS 140-2
        - 802.1x (EAP-TLS)
        - 128/192/256 bit AES/3DES encryption
        - Dynamic key exchange
- Wireless AP and client activities monitoring
    - Signal strength & MAC address listing of clients

Airvenue™ Inc.