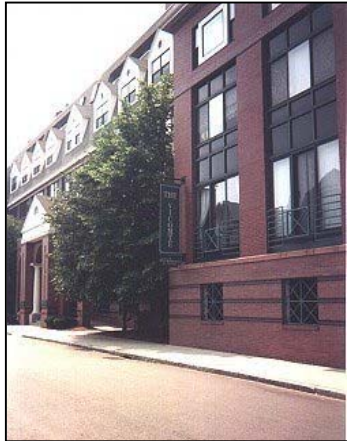


# Solution Paper: Broadband Wireless Access for MTU/MDU

May 5, 2006 revised

## Broadband Wireless Access for MTU/MDU

The Multi-Tenant market continues to attract Service Providers for the simple reason that few other deployment segments offer such high subscriber density for the



infrastructure investment. SOHware is responding to the demand with the industry's first Integrated Wireless Broadband MTU/MDU Solutions designed to optimize investment returns. Total expertise for delivering, distributing, and securing IP services to tenants are thoroughly addressed in SOHware's approach that eliminates the inefficiencies of scaling associated with bundled solutions aggregated from multiple vendors.

As MTU/MDU encompass both residential and business customers, Service Providers must have the flexibility to meet a wide range of applications needs. This includes security worthy of Enterprise customers, multiple billing option support desired by consumers, and Class-of-Service reliability demanded by all tenants. SOHware's integrated approach combines best of breed features and performance that broaden deployment possibilities for residential condo and townhouse complexes, strip malls and professional office parks; all are examples of multi-tenant properties often located in multiple buildings.

## The Right Time to Go to Market

Broadband market research from In-stat/MDR and others continue to hail the **vast subscriber opportunity** available in residential Multi-Dwellings (MDU) alone. Why then have Service Providers found such poor returns in the past when approaching these markets? Until now, their trial deployments have relied primarily on one technology, such as Wi-Fi or VDSL, which by themselves cannot truly leverage the scalable value each technology is able to contribute. For example, a VDSL solution alone is cost prohibitive when distributing services all the way to each tenant, while outdoor fixed wireless will likely fail to provide adequate coverage throughout the interior of each tenant's unit resulting in lower satisfaction and higher churn. In addition, WLAN performance can be difficult to manage in the unique conditions found on a given site resulting in high support costs.

With SOHware's integrated approach, Service Providers can now pursue the MTU/MDU market with



confidence. SOHware combines the best in WLAN, VDSL, UTM security and subscriber management, assuring platform interoperability backed by a systems approach to solutions engineering. Yet, as with all SOHware solutions, we never lose sight of our SMB focus on ease-of-use, affordability, and manageability. VARs and Service Providers have come to expect and enjoy. SOHware can help you define the best approach to a property deployment through our FAE directed design-win program, where systems level design assistance and one-on-one technical support are available to Partners at no additional cost. Now is the time to go to market in MTU/MDU.

## Best of Breed Integrated Solutions

### BroadScan™ UTM Appliance

Provides comprehensive gateway and security features combined in one WAN appliance, eliminating the need for discrete devices for security and connection redundancy.

- Routing and NAT functions
- Firewall and IDS/IPS
- Virus, Spam and Spyware blocking
- WAN load balancing



### AeroGate™ Access Service Gateway

A subscriber management solution with built-in self-provisioning, session control, and status monitoring, plus full options to enable amenity or fee based services.

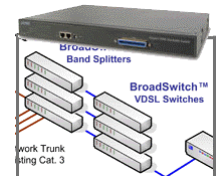
- IP redirection and L2 privacy
- Brand customizable login portal
- Internal or external AAA RADIUS
- Multiple billing and reporting options



### BroadSwitch™ VDSL Solution

VDSL is ideal for reliable high bandwidth trunking to each tenant building, where a terminal VDSL modem provides an Ethernet link for a WLAN within the building.

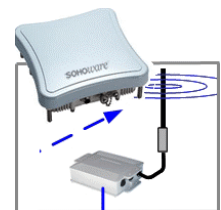
- End-to-end VDSL - switch, splitter and modem
- 10Mbps symmetrical bandwidth up to 4000 feet
- Stackable platform scales to fit deployment



### AeroExtend™ Outdoor Wireless

When cabling to each building is not possible, an outdoor wireless bridge is effective for linking wired networks; AeroExtend is a dedicated outdoor device for all-weather.

- P2P and PMP Bridge, Access Point, Repeater modes
- 802.11a/b/g support in dual radio platform
- Supports simultaneous 11a backhauls with 11b/g AP
- Highly secure 802.11i based AES encryption



### AeroGuard™ MIMO WLAN

To distribute Wireless Broadband Access within the tenant building, SOHware offers leading edge MIMO technology, the most reliable WLAN available for subscriber access.

- 108Mbps True MIMO range and capacity
- Multiple VLAN / SSID network support
- Wireless Mesh backhaul option to extend the WLAN
- Centralized management including NMS

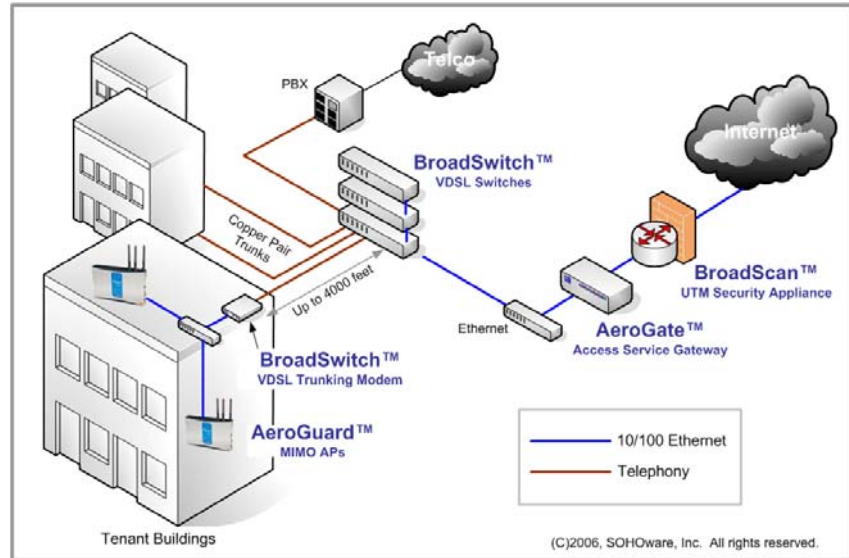


## How it all works

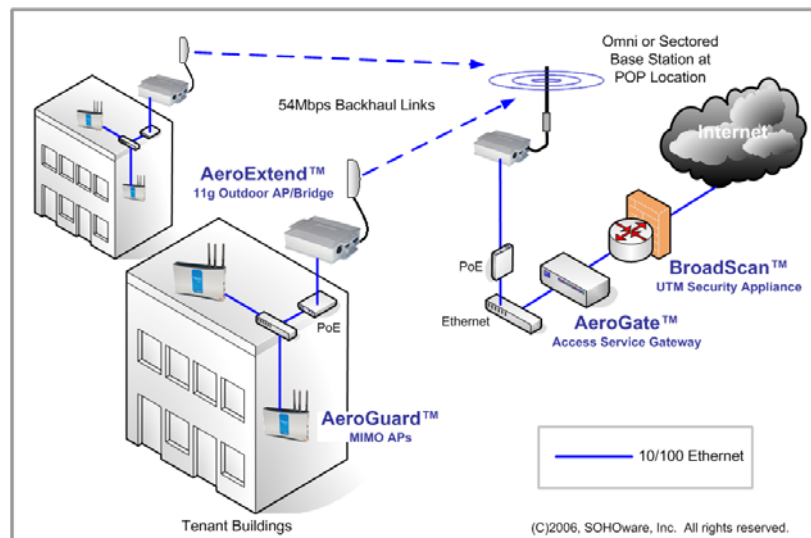
SOHware's integrated approach to Wireless Broadband Access for MTU/MDU properties combines innovative industry leading performance anchored by proven standards based technology. At the Point of Presence (POP) are the comprehensive UTM appliance, BroadScan™ and provisioning Access Control Gateway, AeroGate™, which provide comprehensive perimeter security and network access control.

The solution then utilizes multiple options to form network trunks from the POP to each tenant building, or floor if in a multi-story building. Where copper pair phone line is available for use, VDSL can be selected to combine data over the copper pair infrastructure, which

supports extended network backhauls at Ethernet data rates up to 4000 feet. Available in BroadSwitch™ VDSL switches, VDSL is terminated using a complimentary VDSL modem located at the tenant building or floor where the wireless network devices are deployed. VDSL is particularly useful in multi-story apartment buildings.



SOHware's Integrated Wireless Solutions for MTU/MDU – VDSL Trunking



SOHware's Integrated Wireless Solutions for MTU/MDU – PMP Campus WLAN

If Copper pair infrastructure is unavailable, the solution can utilize wireless trunking options, either with dedicated outdoor, AeroExtend™, or wireless Mesh indoor, AeroGuard™ MIMO, both dual radio platforms that dedicate bandwidth to backhaul trunking.

Within the building, an Ethernet network is used to connect the MIMO access points, AeroGuard™, deployed to provide total building coverage from the inside to optimize BWA availability to

each tenant. AeroGuard™ provides the option to extend the WLAN by enabling wireless Mesh networking that utilizes dedicated 5GHz radios for the backhaul. The total solution is carrier-class robust, flexible to meet a wide range of property layouts, and end-to-end manageable from a network operations center (NOC).

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**For more information**

SOHware's Integrated Wireless Broadband solutions for MTU/MDU are available through registered channel partners, including Broadband Service Providers and VARs specializing in the Multi-Tenant market. For more information about the solution or how to become a partner contact our Partner Marketing executives or visit our web site.

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