

Provide Gigabit Broadband to Apartment Residents on Existing Wiring



Many broadband operators are missing out on significant revenue by literally passing by brownfield Multi-Dwelling Units (MDUs) because of the unpleasant prospect of rewiring the building. Over 30 million people live in apartments in the United States, and at least half of those buildings do not have updated wiring. The cost of wiring a building with fiber can be cost prohibitive (up to \$600 per tenant). However, contrary to what you might think, apartment buildings that have not been rewired for broadband service are actually your best MDU opportunity because of G.hn Technology.

G.hn is a proven standard that allows you to quickly and easily offer gigabit broadband to apartment units over existing telephone wire or coaxial cable. With G.hn you can deliver advanced services such as Gigabit High Speed Residential Internet and 4K IPTV without the high capital and operational expenses associated with a fiber retrofit.

Each G.hn subscriber port supports up to 1.7 Gbps of dynamically allocated bandwidth for near symmetrical Gigabit services. G.hn dynamically adjusts the allocation of the bandwidth between the downstream and upstream direction to reflect the real-time traffic conditions for optimal performance under all conditions. And, on existing phone lines G.hn can operate on either a single pair (SISO), or by bonding two (2) pairs on a single port (MIMO) to extend the reach of a Gigabit offering to over 800 feet.

Simple to Deploy

All you need to start serving apartments is a G.hn Access Multiplexor (GAM) at the building demarcation point and a G.hn endpoint device for anyone that subscribes to your service. The GAM can be purchased as a small rack-mount unit for inside installations, or a hardened unit for outside deployments. The G.hn client device is a small endpoint unit that plugs into the existing wiring in the apartment, which simply converts the G.hn signal to Ethernet. An Ethernet cable from the endpoint device then plugs into a gateway router, a PC or other customer device. It's that simple.

The GAM is typically installed inside a wiring closet and comes with multiple 10 Gigabit SFP+ interfaces to support any type of fiber or PON standards (using an ONT as required). The SFP+ ports can also be used to support additional GAM units in medium to large MDUs. Rack-mount GAM Units are available in 12 and 24 port configurations for both Twisted Pair and Coax. GAMs using twisted-pair cabling operate in Point-to-Point mode, while on coax infrastructure it is Point-to-Multipoint mode where each COAX port can serve up to sixteen endpoint devices.

Hardened units are also available in 4 and 8 ports for Twisted Pair and 4 ports for Coax. The hardened devices can be reverse powered by each G.hn endpoint device over the copper wiring or COAX cable so they are perfect for harsh environments where there is no local power source.

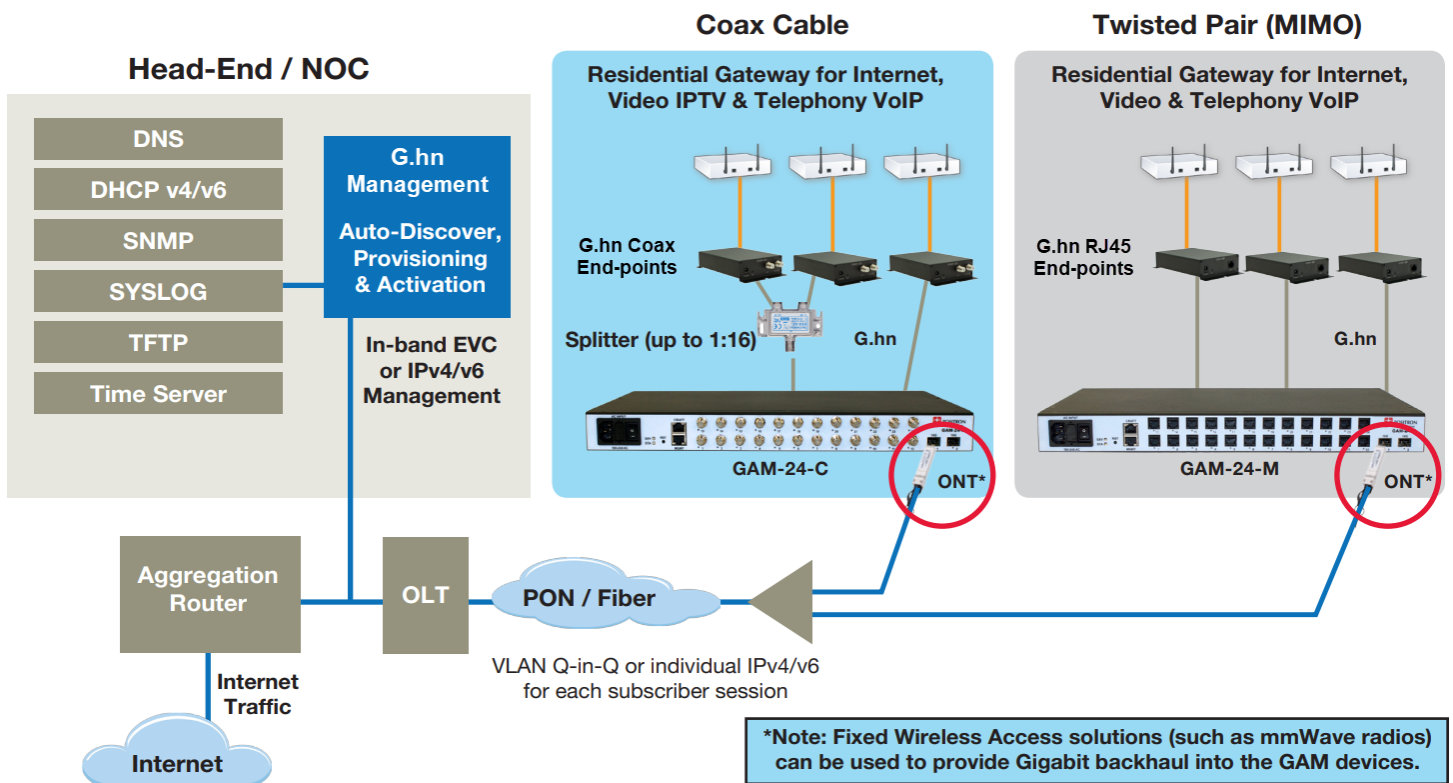
Easy to Manage

GAM Management software provides management capabilities to each G.hn endpoint to simplify deployment and management of the service. GAM hardware enforces per-subscriber bandwidth profiles to guarantee equitable use of the link at all times, including for value-added services such as IPTV and video streaming. VLAN support (including Q-in-Q) allows for seamless integration with your fiber services and the OSS and BSS functionality.

Subscriber Self-Installation and Zero-Touch Provisioning

When deployed with the optional GAM Captive Portal, the GAM provides a subscriber self-install process that guides new subscribers through the registration and activation process. It also facilitates seamless Wi-Fi roaming across the MDU common areas covered with Wi-Fi.

Typical G.hn Deployment on Coax and Twisted Pair



4 & 8-Port RJ45



4-Port Coax

Hardened GAM units are available for outside deployments and can be configured to support Reverse Power Feed from each G.hn end-point.