



HPE aruba
networking

HPE Aruba Networking and Positron Access Solutions

Extend gigabit network services using existing coax or twisted pair wiring


Hewlett Packard
Enterprise

 **POSITRON**
Access Solutions

Why HPE Aruba Networking and Positron?

- An optimal way to deploy modern, high-speed, always-on Wi-Fi in buildings using legacy coax or twisted pair wiring
- Consolidates all services onto a single Ethernet-based network without ripping into walls or altering the building to accommodate rewiring
- Eliminates the cost and time delay of rewiring for fiber, thus accelerating new services deployment
- Creates new opportunities for Managed Wi-Fi and Smart Buildings for older housing structures
- Increases flexibility with new options for IT architectures to meet customers' needs
- The solution supports Personal Area Network features for full property roaming experiences
- With built-in POE+ from the Positron G.hn endpoint additional power cords are no longer necessary

Introduction

According to data provided by the 2021 US Census¹ nearly 24% of the US population lived in multi-unit dwellings with more than four or more units. The trend over the past few decades shows that this percentage has been steadily increasing. The American Housing Survey analysis conveys that 20.7M multi-unit buildings (with five living units or more) were built before 2010, suggesting many may not be easily or cost effectively re-wired with fiber or structured cabling to each unit.

Service providers continue to deploy fiber (mostly XGS-PON and GPON) to increase their "homes passed" metric. This priority focuses on servicing the more easily fed single-family units (SFUs) along these routes, effectively bypassing Multi Dwelling Units (MDUs) along the same fiber route due to the difficulty and expense of bringing fiber to each living unit within those buildings.

This approach exacerbates the problem known as the "digital divide" and creates a fiber divide for MDU tenants despite nearby access to fiber. Operators have effectively walked away from a significant percentage of their potential revenues by not serving these MDUs due to a lack of awareness of alternative solutions to rewiring.

Positron Access and HPE Aruba Networking solve these challenges of extending gigabit services within buildings where rewiring hasn't been previously feasible. The solution is designed and manufactured by Positron Access, a leading G.hn (ITU-T G.9960) based solution delivering gigabit services to every tenant and guest by repurposing the existing coax or twisted pair wiring. The GAM extends fiber (xPON / Active Ethernet) or fixed wireless access (FWA) services to locations where it hasn't been feasible before. The GAM provides cost-effective alternatives to rewiring brownfield (a term meaning existing or legacy) buildings.

About Positron Access Solutions

Positron Access Solutions manufactures products that increase the bandwidth delivered by Tier-1 carriers and over 250 Tier-2/3 Operators. Positron's G.hn Access Multiplexer (GAM) extends fiber or fixed-wireless gigabit services over the existing in-building wiring in Multi-Dwelling Units (MDU) and Multi-Tenant Units (MTU). With seamless support for XGS-PON flow-through provisioning, it delivers managed real-time non-blocking gigabit speeds to each subscriber without the cost and construction disruption of installing fiber to each door (up to 800 feet over existing telephone pairs or 2,600 feet over existing RG6 coaxial cable and splitters). The GAM is developed, manufactured, and supported in North America. Positron is a proud member of the HomeGrid Forum.

Better together

The Positron GAM is cost-effective for sites of all sizes, from small MDUs to large hotels, resorts, and buildings looking to improve their network infrastructure with state-of-the-art connectivity. HPE Aruba Networking and Positron have partnered to deliver a pre-engineered solution that is deployed without disruption to the building and at lower cost.

This integration brings hospitality, MDU owners and operators a full-featured, secure suite of Wi-Fi capabilities with a bandwidth distribution model that extends the fiber or FWA broadband connection serving the property to create a high-speed converged Ethernet backbone that supports the applications demanded by both sophisticated business travelers and tech-loving families.

¹ [American Housing Survey](#)



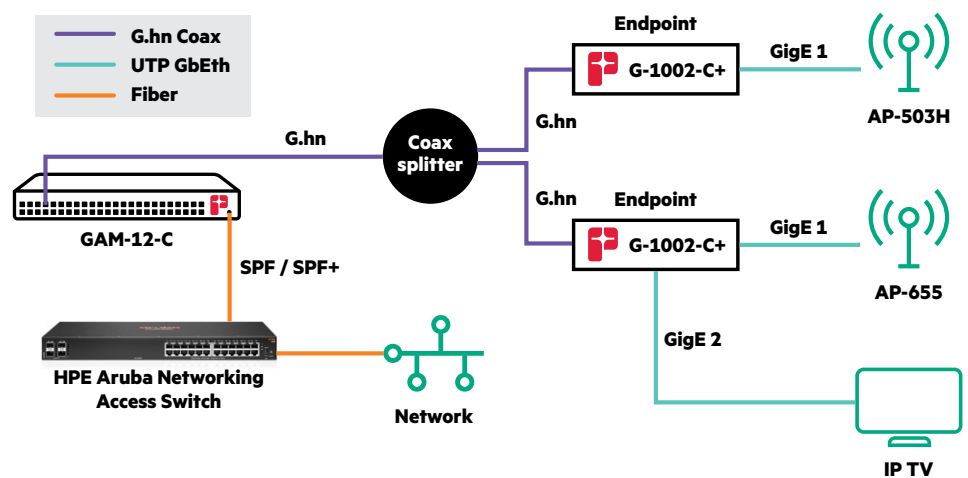


Figure 1. HPE Aruba Networking and Positron Access Solutions integration diagram

Supported customer types

- Hospitality
- Multi-dwelling Units (MDU)
- Multi-tenant Units (MTU)
- Student housing
- Campuses and military bases
- Senior Living and healthcare facilities
- Garden-style homes and apartments
- Commercial centers and malls
- RV and mobile home parks

The solution is well-suited for service providers looking to deploy cutting-edge access solutions promptly. It re-uses the in-building wiring, maximizes time to revenue, and delivers carrier-class reliability and management.

The GAM is an ideal distribution backbone for HPE Aruba Networking Wi-Fi to be added to older hospitality and MDU buildings, potentially saving up to 75% in installation and equipment costs compared to fiber. It dramatically accelerates the time to operation and eliminates disruption to guests and tenants. Furthermore, hotel operators can typically enjoy no negative impact on room availability when compared to demolition and construction that accompany re-cabling upgrades.

With the GAM backbone connected to HPE Aruba Networking switches feeding wireless access points in the rooms, hospitality guests and MDU tenants receive a secure, always-on, high-speed, and property-wide connectivity experience with support for advanced smart-building IoT devices and features.

Unique value proposition

Combining Positron’s robust gigabit Ethernet solution over legacy wiring with HPE Aruba Networking’s deep suite of Wi-Fi access points and secure switching platforms offers property owners and operators a unique opportunity to converge their voice, entertainment, Wi-Fi, and smart building/IoT operations onto a converged Ethernet-based network.



Partner solution overview

Operators save on CAPEX and achieve lower OPEX with a much faster time to revenue. Building owners can enjoy increased property valuations due to improved networking service for their tenants and guests. Guests/tenants can run advanced applications securely from anywhere inside and around the property with superior Wi-Fi coverage.

Our solution partner



Positron Access Solutions provides carrier-grade telecommunications products that extend the uplink bandwidth (fiber or fixed wireless) over the existing coax and telephone pair wiring in brownfield MDU and hospitality properties, creating a Gigabit Ethernet backbone for a managed Wi-Fi infrastructure. Positron uses G.hn technology.

For more information, visit:
www.positronaccess.com

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GAM-24-C Indoor 24-port Coax GAM



G1001-C Coax Endpoint



GAM-4-CX Outdoor 4-port Coax GAM

Figure 2. Positron Access products

Certified interoperable

With the joint solution's certified interoperability, you can be assured of smooth installation, well documented commissioning procedures, carrier-class reliability, and simplified maintenance.

Summary

HPE Aruba Networking's secure Wi-Fi infrastructure combined with the Positron GAM is the ideal approach to delivering gigabit Ethernet Services in brownfield hotels and MDUs. Using the existing coax or copper wiring can provide a cost and time effective solution in these environments. Converging all voice, entertainment, and property-wide Wi-Fi services securely over Ethernet delivers top-tier customer experiences with an efficient and reliable operational model.

Learn more about HPE Aruba Networking access points

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