GAM-24-C

**SYNOPSYS:** GigaMonster recently won a project to deliver Internet services and DirecTV™ for a large upscale condominium tower in downtown Atlanta with 16 floors and 132 doors. The condominium owners are demanding that there be no new construction work required to offer a combined Gigabit and DirecTV service to each unit. This means the only option is to reuse the existing coaxial cabling and make sure it fits seamlessly with the DirecTV Single Wire technology.

## About GigaMonster

GigaMonster

At GigaMonster, it's simple, we're shaping a new environment for Internet services available to multifamily residential communities. Our team strives to deliver an exceptional customer experience, which includes offering speeds up to one (1) Gigabit per second to our customers, whether you live in a condominium, townhome, apartment, loft or a student housing community. We're not your standard Internet provider or ISP – in many cases we will seamlessly connect you directly to your favorite website, like Netflix, without ever going over the 'open' Internet. **www.gigamonster.net**

## Initial Challenges

Although the condominium tower is a recent construction, extending a fiber connection to each unit was out of the question. In addition to the request to avoid any new construction work, there is a strong desire to deliver the triple-play services over a single medium. Since the coaxial cable is the only option for DirecTV and its Single Wire Multiswitch (SWM) technology, this means that Gigabit Internet services not only have to operate over coax; both technologies have to cohabit peacefully and share the same medium.

As is typical with coaxial cabling, the Gigabit Internet service shall operate seamlessly and securely in the presence of coax splitter. The coaxial infrastructure relies on 1:8 splitters to cost effectively reach all of the doors of the building. With all of the units able to subscribe to Gigabit services, there is a need to handle bandwidth demand for all subscribers on the same coaxial feed and deliver the bandwidth in the downstream and upstream direction as per the "real" bandwidth demands and not with a static ratio as is the case with DOCSIS. While Quality of Service is important for value-added services such as IP telephony and Over-the-Top Streaming, minimizing latency and jitter are critical to achieve the best possible Quality of User Experience.

## Why G.hn and Positron

While GigaMonster sometimes attempts to use or install CAT-5 or CAT-6 structured cabling, the only viable technology for this project is the Positron G.hn **GAM-24-C** solution. With each coaxial port of the GAM able to serve up to 16 subscribers, supporting an average of 5-6 subscribers per port is easy. Furthermore, the **G1001-C** (G.hn to Ethernet Bridge) incorporates a coaxial splitter to easily connect to the DirecTV set-top box and eliminate to install another splitter in each unit. A Gigabit Ethernet port of the **G1001-C** connects to the Residential Gateway (usually a Wi-Fi router). GigaMonster installed the **GAM-24-C** on the 10th floor (out of 16) and it connects to the Internet via a high-speed Fiber connection brought via an existing conduit.