

Case Study

Passive Optical LAN

Integrated Solution Saves Time, Money & Space

Client:

Miles & Stockbridge, P.C.

Core Activities:

- Designed, built and installed state-of-the-art Passive Optical LAN system with a fully integrated AV system, access control, sound masking, and video monitoring/ recording system for the new Miles & Stockbridge 113,000 square foot facility.
- Switching from Traditional Active Ethernet to Passive Optical LAN, saved the client time, money and space, while meeting all functional and technological needs.

Miles & Stockbridge P.C., a busy mid-Atlantic law firm, found themselves in a familiar modern predicament. Their office environment had evolved to require multimedia broadband, including high-speed Voice over Internet Protocol (VoIP), data, and video connections; but, their existing infrastructure could not support high bandwidth applications. When, after 80 years in the same building, the firm moved to downtown Baltimore's signature Transamerica Tower, Miles & Stockbridge needed design/build services to integrate Information Technology (IT) for eight floors of new offices; and there could be no disruption to business – all systems had to operate seamlessly throughout the project. To meet these complex IT requirements and functional needs, Miles & Stockbridge chose VT Group.

VT Group specializes in turnkey engineering design and technical services for advanced electronic and communications systems. Unlike many competitors, we design, build and install both the infrastructure and the overlaying technologies. This provides an integrated, customized solution that eliminates layering of subcontractors, saving time and money.

For Miles & Stockbridge, VT Group started with a comprehensive Needs Analysis, working directly with key stakeholders to define end users' requirements. VT Group then gathered the requirements of every system and every appearance of each network and designed a totally converged, fully integrated Passive Optical LAN topology.

A Passive Optical LAN accommodates a tremendous amount of IP traffic over a lightweight, all-fiber passive infrastructure. This technology splits wavelengths of light to provide network connections to an enterprise or campus architecture, eliminating the need for traditional Active Ethernet switches and copper cables. Without switches, communications closets and supporting HVAC can be removed, and this result in a high efficiency building. In addition, because a Passive Optical LAN does not emit electromagnetic radiation and always transmits with 128-bit AES encryption, it is inherently more secure than Active Ethernet.

The Passive Optical LAN for Miles & Stockbridge integrates Electronic Security, Video Teleconferencing and Audio Visual (AV) for 35 rooms onto a single shared medium. It supports over 1500 PoE GigE ports spread across 300+ Optical Network Terminals. Our solution:

- Cut thermal and space requirements, power consumption and overall operating expenses by using an environmentally and economically responsible Passive Optical LAN infrastructure that is more secure than traditional copper based Ethernet LAN.
- Improved internal and external communications by creating a scalable, user-friendly, high-definition environment with enhanced AV conferencing capabilities.
- Provided security with access control, video monitoring/recording of entry doors from common areas of the building, and a specifically tuned background sound which masks specific audio frequencies and provides speech privacy in open office spaces.

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Through detailed engineering and careful coordination, VT Group ensured that systems were managed without interruption from design through implementation. VT Group provided Miles & Stockbridge with an efficient technology solution that started saving money immediately and will far outlast traditional infrastructures. Miles & Stockbridge chose the integrated systems approach, and they are now benefiting from the cost and performance advantages.