

A photograph of a modern office interior with several desks, black office chairs, and a large window with blinds. The right side of the image is overlaid with a blue gradient containing text.

LANscape[®] Passive Optical Solutions for Local Area Networks

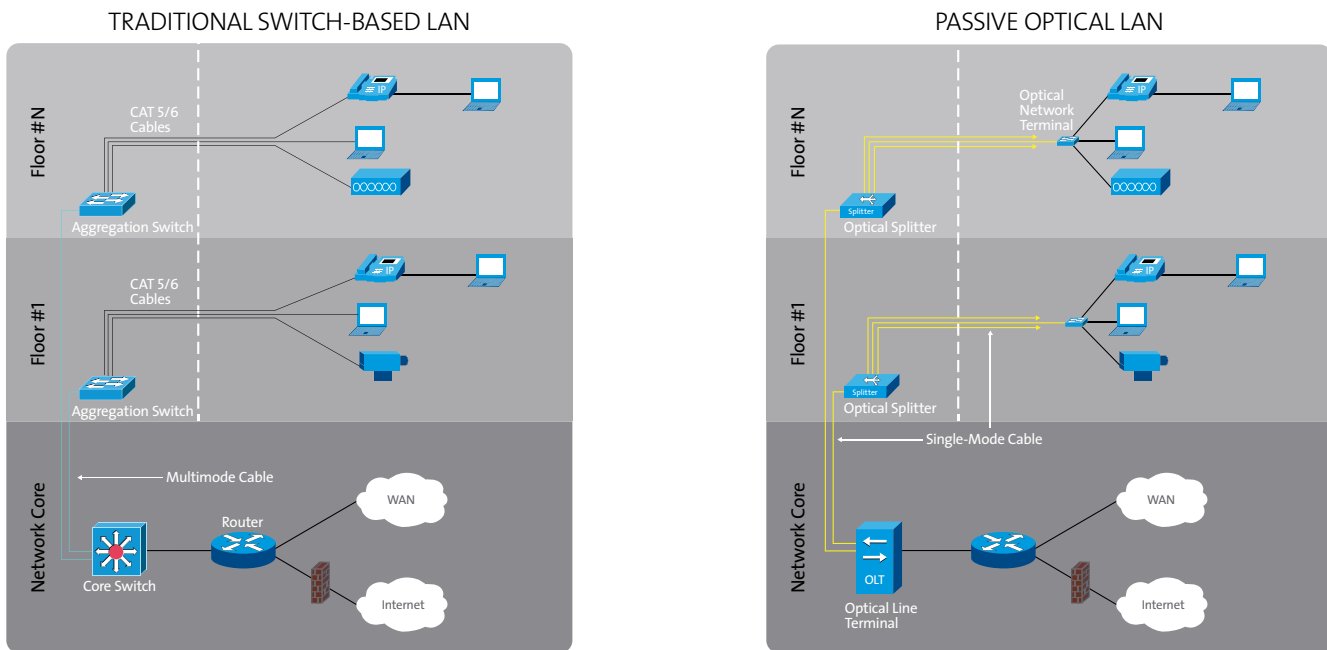
Bring fiber optics all the way through your horizontal network for less than the cost of traditional copper-based systems. That's right – you can bring fiber to your desk, workstation or room for less than the cost of copper. It's called a passive optical local area network (POL), and it's changing the game in enterprise networks.

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What Is Passive Optical LAN?

In a traditional switch-based architecture, multiple tiers of electronics are used to connect users. Ethernet switches in the equipment room are connected via optical fiber to aggregation switches in telecommunication closets. Individual copper cables extend to each end-user device.

In contrast, POL replaces aggregation electronics and copper cables with passive optical splitters and single-mode fibers. This creates an architecture that is lower in cost to purchase, install and maintain – and with a far longer life-span – than traditional copper architectures.



Why Passive Optical LAN?

Day 0

- Eliminate access-layer electronics between the core switch and the workstation
- Smaller cabling infrastructure footprint reduces or eliminates telco closets, freeing up floor space
- **The result?** Reduced capex (an average of 20-50 percent) compared with copper-based LANs

Days 1-10,000

- Fewer electronics equals less maintenance, troubleshooting
- Fewer actives reduces power, HVAC requirements
- Simple network design reduces time, cost of provisioning and upgrades
- Single-mode fiber means no “rip and replace” of the cabling as bandwidth demand grows
- **The result?** Reduced opex (up to 50 percent on average) compared with traditional copper LANs

Depending on the size of your LAN, with POL you can realize:

- 20-50 percent savings on the cost of the cabling technology
- 30-50 percent savings on the cost of network installation
- 30-100 percent reduction in telecommunications closet footprint
- 50-75 percent reduction in the total installed cable weight in your ceilings, floors and walls
- Up to 60 percent reduction in the total installed cable length

What Should You Look for in a Passive Optical LAN Solution?

The beauty of the passive optical LAN architecture is how proven the technology is – with its roots in fiber to the home (FTTH), it offers true carrier-class robustness and reliability.

But that doesn't mean you should deploy FTTH technology designs into your LAN. FTTH infrastructure was designed to maximize splitter use for low-density, static environments like neighborhoods and apartment buildings. Enterprise environments like office buildings and campuses require cabling system infrastructures designed for higher density and ongoing moves, adds and changes (MACs).

Ensure your splitter technology integrates seamlessly into the enterprise.

Corning's POL solution was designed specifically for local area networks. Our optical splitters integrate directly into LANscape® Solutions wall- and rack-mountable hardware – no special hardware requirements here. Place it side-by-side with your legacy network, and use the same hardware and cable types for the ultimate ease of design, ordering and installation – not to mention MACs.

Choose optical splitters that are proven and reliable.

Optical splitters, while passive, are an advanced optical technology and require precise manufacturing and engineering capabilities. Corning optical splitters have been installed worldwide in thousands of deployments, with “five nines” quality and reliability.

Leverage bend-insensitive technology.

LANscape Solutions for Passive Optical LANs uses Corning® ClearCurve® ZBL single-mode fiber. This innovative “zero-bend-loss” fiber provides unmatched ruggedness, reducing the risk of downtime from bent, pinched, pulled or twisted cables throughout the lifetime of the network.

Match your installation method to your design requirements.

Corning's POL solution offers both preterminated and field-terminated installation options. You select the POL technology that best suits your project's timing, cost and labor skill considerations. This also gives you more options in the future with MACs or with field repairs.



Corning's POL splitter modules integrate seamlessly into our popular LANscape Solutions hardware, with the universal CCH panel footprint.



ClearCurve fiber reduces the risk of downtime from cables pinched, pulled, bent or twisted in a dynamic enterprise environment.



Corning offers both preterminated and field-terminated solution options.

At Corning, we position companies at the forefront of network innovation, pioneering many of the global products and solutions commonly used in state-of-the-art cabling systems. With a track record of more than 160 years, we have built our business on a culture of customer collaboration, listening to their needs, staying abreast of market trends and responding with innovative products and unparalleled customer care.

Corning's LANscape® Solutions offer our enterprise network customers complete tip-to-tip product and service solutions for your fiber optic needs. LANscape Solutions ensure the successful and efficient foundation of your data center, local area network, intelligent traffic system and industrial network.

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