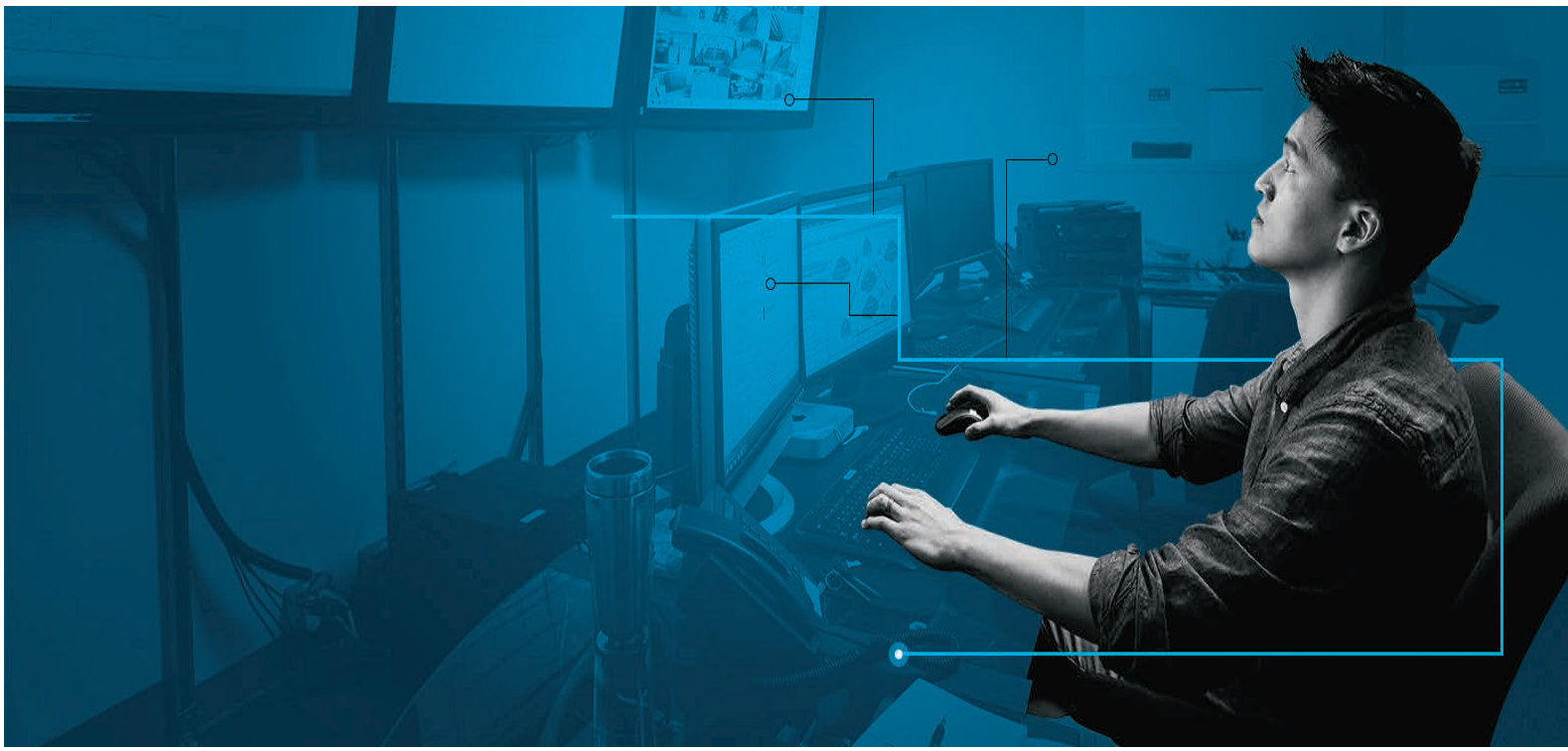
DZS®



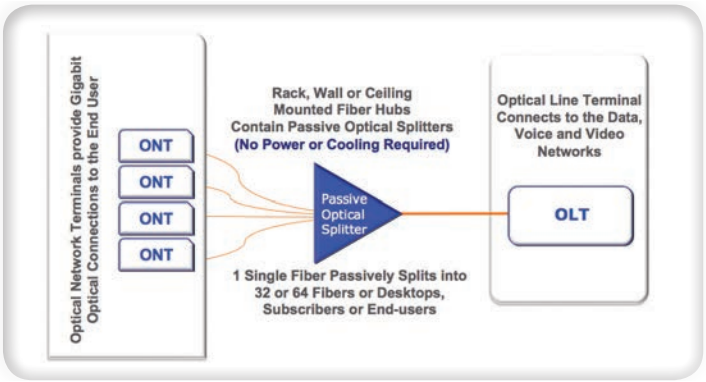
Passive Optical LAN

What is Passive Optical LAN

A Passive Optical Network is a proven GPON architecture that shares a single mode fiber to offer point-to-multipoint network connectivity to subscribers using passive optical components.

The results are:

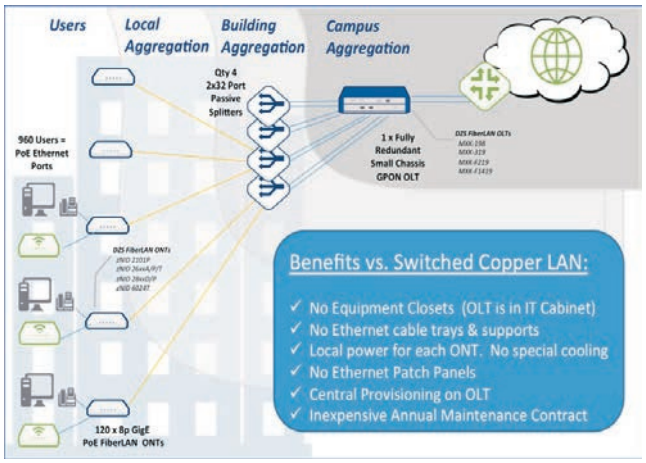
- More Bandwidth (2.5G Downstream and 1.2G Upstream
- Higher security
- Better reach
- Lower CAPEX and OPEX
- Future proof infrastructure



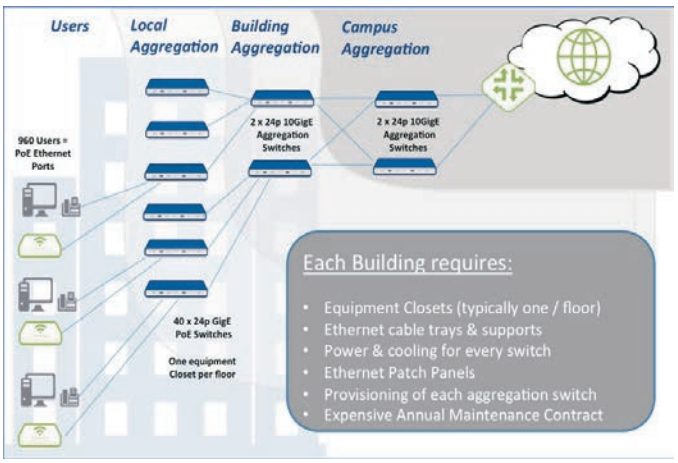
Proven Technology

- First standards developed in 1995
- ITU and IEEE standards based
- Billions of dollars invested in perfecting PON technology
- Fiber Broadband subscribers now surpass cable subscribers

Passive Optical LAN



Typical Copper LAN



Why Passive Optical LAN (POL)

In a connected world, organizations rely on their data networks now more than ever. Based on carrier-class equipment, Passive Optical LAN typically provides 99.999% availability with redundant and high availability options to increase uptime even further.

Passive Optical LAN (POL) is an innovative extension of well-established fiber broadband technology that delivers the bandwidth, security, reliability, cost and space savings of fiber to enterprise LAN environments.

Corporate Campus

In an era where almost any device can connect to the Internet, organizations depend on their network to make better and faster decisions, service their customers, and support all the processes to run their businesses. Passive Optical LAN from DZS delivers the highest performance at the best value for high-speed data, voice and video applications. It can be deployed in offices, rooms or other facilities, delivering comprehensive connectivity for any Local Area Networking requirement

Hospitality

Imagine the space savings if all the rooms in your hotel can be served from a single 2U Optical Line Terminal (OLT) in the MDF. There is no longer a need for multiple racks of equipment and patch panels on each floor. Passive Optical LAN from DZS brings the benefits of fiber such as enhanced security, lower cost, space savings, lower power utilization and greater bandwidth to the hospitality industry.

Education

Today's students live in a connected world: digital learning technologies, entertainment via high-speed Internet, smart phones and wireless TV are just a sample of the technologies that students consider essential. Passive Optical LAN from DZS delivers secure, high-speed Internet access to educational institutions in support of a variety of services including: WiFi access in rooms and common areas, remote learning capabilities, Smart Boards, interactive projectors, workstations and more.

Stadiums / Arenas

Thousands of fans are simultaneously streaming and posting to social channels during an event. High-speed Internet capabilities are required to enhance the customer and end-user experience in addition to supporting Internet-dependent services required to run the facilities. Passive Optical LAN from DZS delivers secure, high-speed network access to sporting venues in support of a variety of services including: high-fidelity audio, stadium video, surveillance cameras, ubiquitous WiFi access, Point of Sale (POS), and building management.

Why Fiber vs. Copper?

Fiber

- Less Expensive
- Less Power
- Less Space Needed
- Future Ready
- More Secure
- More distance (up to 12 miles)

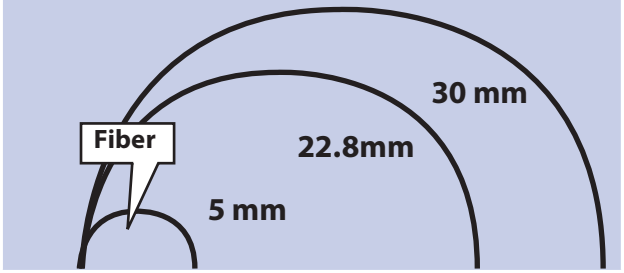
Copper

- More Expensive
- Mire Power
- More Space Needed
- Frequent Upgrades
- Less Secure
- Less distance (up to xx0

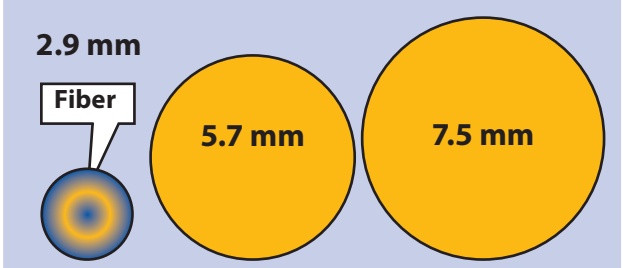
Fiber Optic Cable Vs. Copper Cable in the Horizontal

Riser Rated Cables	Corning Cable Systems ClearCurve™	Tier 1 Vendor Category 5e UTP	Tier 1 Vendor Category 6a UTP
10G Distance	40 km	45 m	100 m
Cable OD	2.9 mm	5.7 mm	7.5 mm
Weight	4 lb / 100 ft	22 lb / 1000 ft	39 lb / 1000 ft
Minimum Bend Radius	5 mm	22.8 mm	30 mm
Tensile Strength (Installation)	48 lbf	25 lbf	25 lbf

Relative Bend Radius Comparison



Relative Cable Diameter Comparison



Annual Power Consumption Comparison

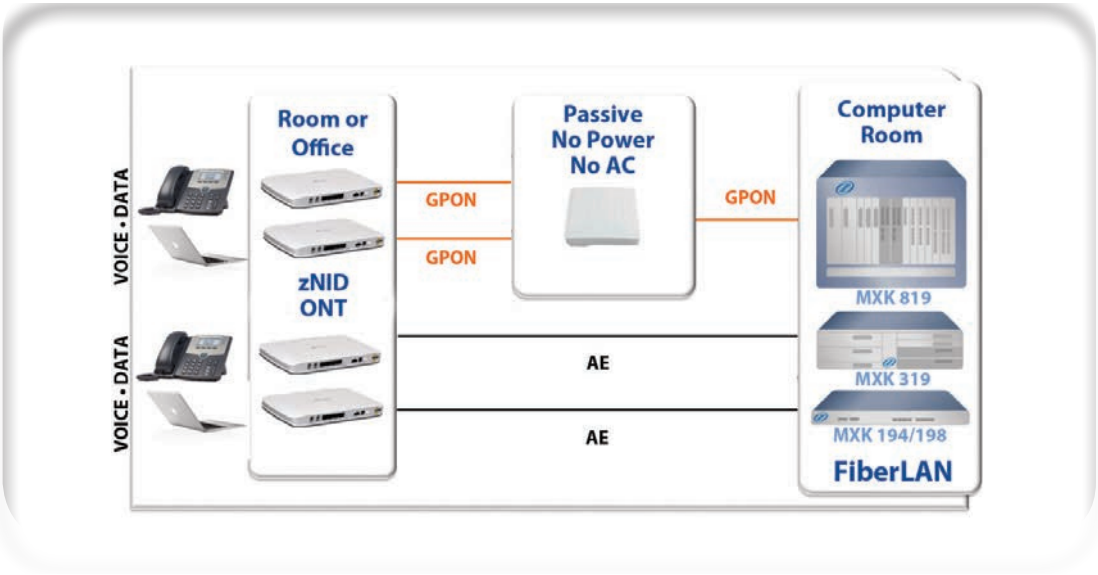
Fiber instead of copper can save up to 75% of the electricity required to run an enterprise network.

		Number of Users		
		250	500	1000
PON	Total Power	3350	5400	9650
	Per User	13.4	10.8	9.65
COPPER	Total Power	11,026.09	20,533.73	39,626.29
	Per User	44.1	41.07	39.63
SAVINGS	Savings	7676.09	15,133.73	29,976.29
	Per User	30.7	30.27	29.98
	% Savings	69.62%	73.70%	75.65%

DZS Passive Optical LAN Infrastructure and Products

- DZS' Passive Optical LAN, called FiberLAN, is a high performance solution built entirely on industry leading standards. This fully converged solution is scalable for a single or multilevel buildings, or large campus environments where customers are installing new facilities or upgrading their current LAN infrastructures.
- Designed as a layer 2 transport medium, DZS' FiberLAN delivers converged voice, video, and data services, at Gigabit levels to the end user, over a single strand of fiber; thus reducing your LAN infrastructure cabling and electronics to a fraction of what is required compared to a conventional Ethernet LAN solution.
- As technology advances, so do ways to conserve energy and reduce operating costs. FiberLAN Optical technology replaces conventional copper and multimode cables used with traditional network infrastructures to a single mode fiber optic cable allowing you to eliminate the traditional workgroup switches, patch panels, and racks in the riser closets. FiberLAN Optical LAN Solution significantly reduces:
  - Power consumption by up to 84%.
  - Space requirements by up to 90%.
  - Capital costs related to network elements by more than 70%, while improving availability and manageability.
  - Cabling costs - single mode fiber is less expensive to procure than Multi Mode fiber or copper.

DZS FiberLAN Passive Optical LAN



Industry Leading Density, Scalability and Switching Capacity

DZS' MXK OLT

- Highest GPON Density in the Industry
- GPON and Active Ethernet for more flexibility
- Designed for Low TCO
- Smallest Footprint in the Industry
- Multiple Form Factors (Central Computer Room)

DZS' zNID ONT

- Small Form Factor
- Wire Speed Throughput
- GPON and Active Ethernet for more flexibility
- Powerful Voice Support (Office or Room)

Passive Optical Splitters

- No electronics
- High density
- Less Space
- No Cooling
- No power
- Completely connectorized
- Reduced Facilities Cost
- Riser cost can be eliminated

Why DZS FiberLAN?

- DZS' Industry Leadership in GPON Globally
- DZS' Industry Leading GPON and AE Products deliver a “Carrier-grade” Passive Optical LAN for enterprise deployment
- DZS' Industry Leadership in Port Density
- DZS' Enterprise Commitment to Passive Optical LAN
- DZS' Global Operations, Support and Deployments

DZS | EVERY CONNECTION MATTERS™

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