Nokia Passive Optical LAN for enterprises

Enable higher productivity and profitable, sustainable business growth with a powerful LAN solution up to 50% cheaper than traditional Ethernet

The Local Area Network (LAN) is the central nervous system of every successful organization. It speeds decision-making, delivers customer service, connects employees and supports all the many systems and business processes used to run a business.

But high-bandwidth applications such as video conferencing, ubiquitous Wi-Fi® and cloud computing are reshaping operating practices in every sector. Faster, more efficient LAN capabilities are needed to support new services, improve productivity, lower costs and build a competitive advantage.

Passive Optical LAN outperforms Ethernet LAN

POL brings the LAN up to light speed. It uses fiber-optic cable instead of copper and the Gigabit Passive Optical Network (GPON) transmission protocol. GPON is used to deliver commercial and mission critical broadband services to millions of users worldwide. It outperforms Ethernet in all the key criteria:

- **Capacity.** GPON delivers 2.5 Gbps downstream and 1.2 Gbps upstream on each fiber so you can converge separate networks, eliminate bottlenecks and deliver gigabit speeds to every user

- **Cost.** POL is both cheaper to install and cheaper to run than an Ethernet LAN

- **Security.** GPON provides military-grade security and carrier-grade reliability

- **Longevity.** Fiber is future-proof, robust and scalable, providing value for 50+ years

- **Flexibility.** Deploy anywhere as fiber supports a smaller bend radius than copper cabling and is resistant to signal and noise interference

- **Simplicity.** GPON is a mature technology, designed for simplicity and efficiency, easy to understand and manage

![NOKIA]

Reduce costs from day one

POL costs significantly less than a traditional Ethernet LAN. For example, in a new installation with 2,000 connections across 10 floors, CAPEX savings are 56% and OPEX is lower by 54%. Which makes POL a sound investment for both upgrades and greenfield deployments. Savings come from the following areas:

- **Operations.** Maintain a single network by converging voice, video, data, surveillance, access control, security, and Wi-Fi® onto one simple, centrally-managed LAN

- **Energy.** POL equipment needs less power and cooling

- **Cabling.** Fiber is cheaper to install and easier to maintain than copper. It's also more efficient: fewer cables are needed to connect users and deliver services

- **Real estate.** Reclaim server rooms and additional floor space with smaller and fewer network elements and replace bulky copper bundles with space-saving fiber

- **Expansion.** POL covers 200x more area than Ethernet, making for easy expansion to new campus sites or office floors

- **Long-term.** Fiber is more resilient than copper and is the only medium with unlimited bandwidth potential

Improve productivity and optimize real estate with a passive optical LAN

With POL delivering 1 Gbps bandwidth to the desktop, every employee is better equipped to process the continuously increasing volume of digital communications and information that must be managed quickly and efficiently every day. It effortlessly supports large files and data-heavy applications such as video conferencing, 3D design and digital image processing.

POL's future-proof capacity enables legacy voice, data, security, public address, closed-circuit television and many other services to be converged onto a single network. As a result, it's easier and cheaper to keep these services up and running. Network maintenance is also optimized because there are fewer active electronics on site.

POL requires less cabling, fewer racks, LAN switches and patch panels. This eliminates the need for telecom equipment closets

on each floor or at every 100m as well as associated power supplies, air-conditioning and special cable channels. As a result, POL enables large savings on capital and operating expenditure. And the floor space freed up by eliminating unnecessary equipment can be used more productively.
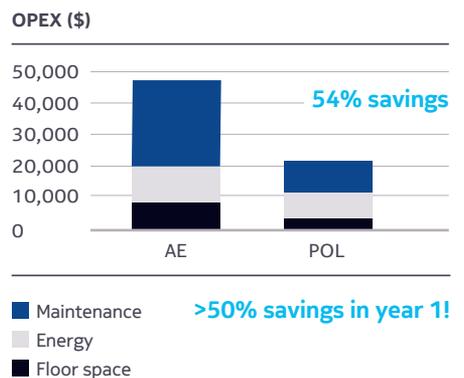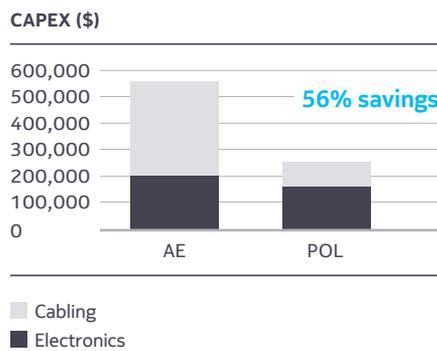
The availability and reliability of an enterprise's operations play an important part in maintaining its reputation. A Nokia POL brings carrier grade reliability, integrity and military grade security to enterprise network infrastructures.

Nokia: bringing broadband innovation to the enterprise

Nokia is the world leader in fixed access technologies. We have 20+ years of broadband experience, and our equipment powers some of the most advanced fiber networks in the world.

The Nokia Passive Optical LAN solution is designed to help you enhance your productivity and slash costs. Contact your nearest Nokia partner today.

POL vs Ethernet LAN: cost comparison for 2,000 end-points over 10 floors

CAPEX ($)

56% savings

▪ Cabling	
▪ Electronics	

OPEX ($)

54% savings

>50% savings in year 1!

▪ Maintenance	
▪ Energy	
▪ Floor space	