



Nokia Passive Optical LAN for the public sector

Improve public services, free up real estate and save energy with a powerful LAN solution up to 50% cheaper than traditional Ethernet

Taxpayers rely on a number of public sector services to support their daily activities. Local Area Networks (LAN) are at the heart of these services, connecting public sector employees to each other as well as to the tools and information they need to help citizens.

Passive Optical LAN (POL) technology performs significantly better than traditional Ethernet LAN, supporting more complex e-Government processes and enabling faster, more efficient services. Most importantly, it optimizes the use of limited public funds.

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

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 public services with passive optical networks

POL is an industry-leading ultra-broadband fiber technology that demonstrates progressive public thinking and offers benefits to all government departments for years to come.

With POL delivering 1 Gbps bandwidth to the desktop, every department is better equipped to process the continuously increasing volume of digital communications and information that government organizations must manage quickly and efficiently every day.

This future-proof capacity enables voice, data, security, public address, and closed-circuit television (CCTV) 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.

The availability and reliability of public sector services play an important part in maintaining public confidence. A system breakdown

cannot be tolerated. A Nokia POL brings carrier grade reliability and military grade security to the network infrastructure supporting these services.

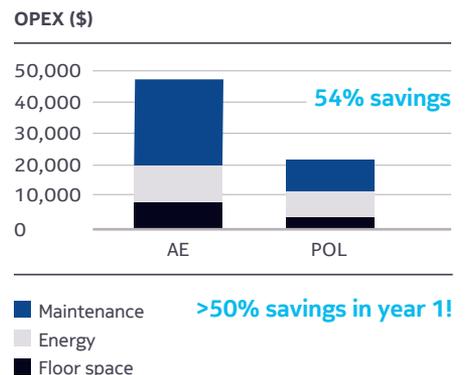
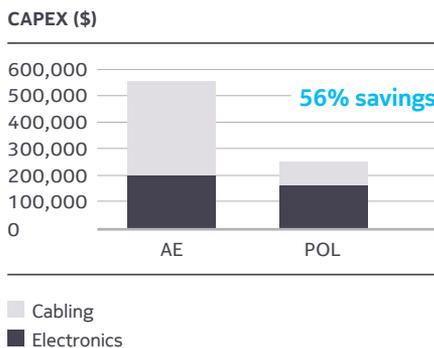
POL needs less cabling, fewer racks, LAN switches, patch panels and associated power supplies, air-conditioning and special cable channels. This eliminates the need for telecom equipment closets on each floor or at every 100m. As a result, POL enables large savings on capital and operating expenditure. And the floor space freed up by eliminating unnecessary equipment can be used more productively.

Nokia: bringing broadband innovation to public sector organizations

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 public services and slash costs. Contact your nearest Nokia partner today.

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



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