Nokia Optical LAN for universities

Enlighten your LAN with a high-performance connectivity infrastructure that fosters innovative learning, research and collaboration, and saves up to 50% on cost

Today's students demand a learning experience that goes beyond traditional classroom and lab-based teaching environments. Universities need to provide advanced communications networks that support real-time collaboration between students and faculty, new approaches to research, as well as remote and e-learning.

Optical LAN technology can support all the different systems that enable the functioning of dormitories, libraries, faculty offices, recreation areas, F&B outlets, healthcare, security, management facilities and so much more, on a single network.

Optical LAN outperforms traditional LAN

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

- **Capacity.** PON provides an enormous amount of bandwidth with GPON — 2.5 Gb/s downstream and 1.25 Gb/s upstream and XGS-PON – 10Gb/s downstream and 10Gb/s upstream on each fiber so you can converge separate networks, eliminate bottlenecks and deliver gigabit speeds to every user
- **Cost.** Optical LAN is both cheaper to install and cheaper to run than an Ethernet LAN
- **Security.** PON 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.** PON is a mature technology, designed for simplicity and efficiency, easy to understand and manage

Reduce costs from day one

Optical LAN costs significantly less than a traditional copper-based LAN. 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.** Optical LAN 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.** Optical LAN covers 200x more area than traditional LAN, 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

Create a better learning environment with Optical LAN

Optical LAN is suitable for single-site or multi-site campuses with indoor and outdoor spaces spread over wide areas up to 40 km. It is optimized for the increasing volume of digital communications and information exchanges associated with web-casting of lectures, e-learning, remote collaboration and dormitory entertainment. It effortlessly supports large files and data-heavy applications such as video-conferencing, 3D design and digital image processing.

Optical LAN's future-proof capacity enables legacy voice, security, closed-circuit television, public address, 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.

Optical LAN uses less cabling, fewer racks and LAN switches 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 for enhancing learning facilities.

The availability and reliability of a university's operations and education support functions influence its campus spirit and play an important part in maintaining its reputation as an institution of higher learning. Nokia Optical LAN brings carrier grade reliability and military grade security to university network infrastructures.

Nokia: bringing broadband innovation to the university campus

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 Optical LAN solution is designed to help you enhance operations while stimulating learning, living and a sense of campus community. Contact your nearest Nokia partner today.

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