When is FTTO a great choice for your infrastructure?

Do you need a future-proof solution with a long lifespan?

- Current applications (server virtualization, cloud computing, IP-telephony, IPTV, security services, video conferencing, etc.) require an ever increasing bandwidth, signal continuity and network scalability.
- Modern networks should be easy to install, adjust and repair. They should be energy efficient, cost effective and survive several generations of active equipment.
- All of that is offered by FTTO.
- FTTO infrastructures grow with the user´s needs from the very start, can easily be adjusted to new bandwidth requirements and applications and ensure higher network availability in critically important environments.
- An average FTTO life span is over 20 years.

Do you need to cover distances greater than 100 m within a building, or interconnect campuses and industrial sites?

- Fibre breaks the 100 m distance limit of copper signal coverage. Large distances between buildings, campuses and industrial sites can be easily bridged by fibre. There are practically no length limitations.
- Unlike copper, fibre is immune to electromagnetic interference and may run along power lines.
- Distances of 550 m can be covered by multimode fibre with no signal attenuation. Neither floor distributors nor signal repeaters are necessary between the central switch and FTTO workstation Switches.
- Fibre needs no grounding, requires minimal cable volume and has a low fire load.

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Nexans network solutions are used throughout the world and have proved their reliability in many different applications. Nexans products are manufactured in Germany on the basis of thoroughly selected components and in line with the current Quality Control Standards (ISO 9001).

Our customers include leading international companies and institutions, i.e. power utilities, hospitals, universities, ministries, railway companies, airports, industrial plants, banks and insurances. We have gathered over 25 years of experience in the research, development and production of FTTO Micro-Switches and in the design of the most sophisticated networks.

A LAN System which grows with the needs of its users has to be designed right from the very start with such a level of flexibility as to accommodate most easily all subsequent moves, add-ons, upgrades and changes.

We guarantee the exceptional quality of our products and provide our partners and customers with extensive support. Please get in touch with us for assistance with your FTTO project.

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Smart Guide to FTTO
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What is FTTO?

- FTTO (Fibre To The Office) is a special centralized cabling technology for LAN network office environments. The solution combines both passive fibre cabling and active FTTO Switches to provide end user devices with Gigabit Ethernet services.

- Fibre is laid up vertically from the central building distributor straight to the office floor, and from the office floor horizontally right up to an FTTO Switch at the workplace. There is no need for Floor Distributors.

Structured cabling
(Copper based)

No limit at 90 m

No need for floor distributors between the Central Switch and End User Devices

More useable area due to less space for technical equipment

Structured Fibre To The Office cabling (Fibre based)
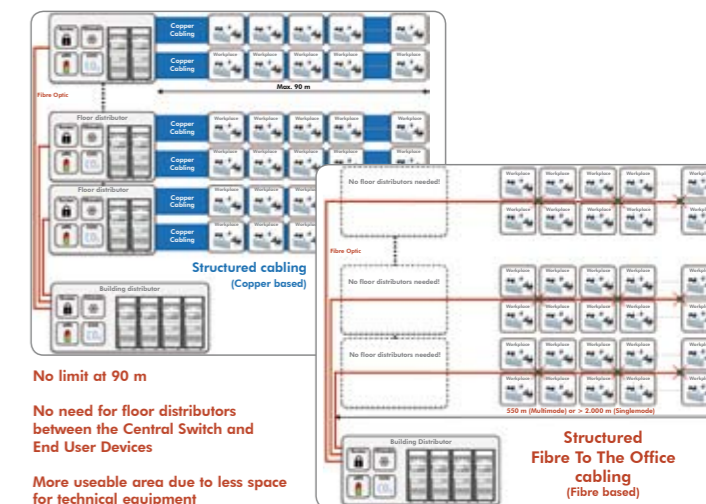
- FTTO intelligently combines both fibre and copper for optimal network performance, offering the speed, reliability and long distance coverage of fibre plus all the Ethernet benefits of copper. This solution meets all current network requirements in terms of both flexibility, cost-efficiency and network interoperability and adds all the practical advantages of fibre.

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Are there space restrictions for floor distributors or cable trays/ducts?

- FTTO eliminates the need for floor distributors. FTTO Switches are directly connected to the central building distributor switch via fibre and feed all terminal devices with energy and data.
- Only a minimal number of wiring cabinets and core switches are needed; the rest is done by compact and discreet FTTO Switches installed in a mounting box at the workstation.
- FTTO solutions require less space, less energy, less cooling and less active components, so there are less maintenance and service costs.

Example of Usage

WLAN
Printer
Desktop PC
IP Phone
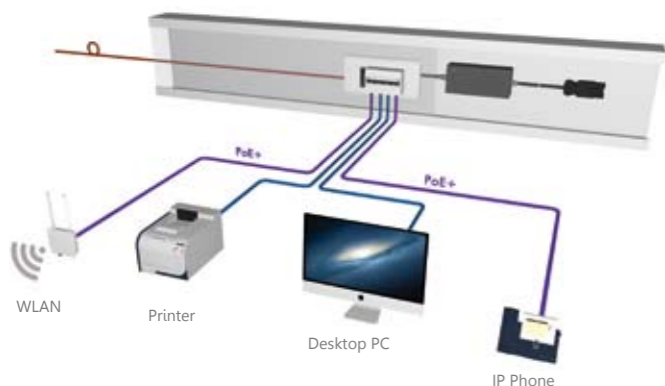
Are redundant network topologies required at the user level?

- FTTO makes it easy to set up ring topologies wherever there is a need for redundancy at the user level. These are established between FTTO Switches and the central switch.
- FTTO uses intelligent managed switches which automatically reroute data traffic to a 'healthy' fibre path, should a fibre link fail. This guarantees the highest network availability to end users.

Do you need to power wireless access points?

- FTTO Switches support WLAN access points.
- FTTO Switches provide full wireless coverage to printers, tablets, projectors, digital signage devices, access control systems, IP cameras and other elements of today's office infrastructure.
- All end user devices can be powered using PoE/PoE+.

Do you want highly efficient Power over Ethernet (PoE/PoE+)?

- An FTTO Switch has four user (copper) ports. An external power supply feeds the switch, which can provide all the connected user devices with PoE/PoE+.
- As PoE/PoE+ is delivered over smaller distances (the last few metres between the FTTO Switch and the end-user device), less signal loss occurs and less energy is required. For example, in an FTTO infrastructure an IEEE 802.3-compliant PoE device saves up to 2.55W/100 m. With PoE+, 5.4W may be saved.
- An FTTO Switch can provide connectivity to other intelligent building automation systems, such as temperature sensors, light sensors and motion sensors.

Do you have heightened security needs?

- FTTO Switches have integrated end-to-end network security mechanisms for full access control.
- Network security features of FTTO Switches include port and management interface, e.g. IEEE 802.1x (login and password), MAC based access control, RADIUS authentication server, SNMP-Traps, Syslog messages, Telnet/HTTPS/SSH/SCP, etc.
- Due to specially developed security technologies there is a high level of protection level against hacking attacks.
- All the stacks are independently tested.

Do you want to lower energy consumption and increase sustainability?

- With FTTO, no floor distributors and cooling elements are needed, so much less energy is consumed.
- FTTO Switches support Energy Efficient Ethernet (EEE) and "Eco Mode".
- As a result, up to 70% power is saved, which makes FTTO networks the greenest solutions on the market.
- FTTO infrastructures leave a much lesser CO_2 footprint and generate less waste.

Is Total Cost Of Ownership (TCO) a key issue?

- Cost-effective FTTO designs help companies, hospitals, universities and airports make important strategic investments in future-proof LAN architectures.
- Up to 40% may be saved compared to traditional network designs, both in completely new networks and refurbishments.

Typical calculation example, medium-sized project

- Less technical rooms means less power consumption and less service man-hours. Less active equipment for data subdistribution and monitoring means less potential failovers.

- Highly efficient, low maintenance FTTO Switches have extensive remote management functions and are foolproof and robust.
- The 'pay-as-you-grow' nature of FTTO solutions means each new workstation is seamlessly integrated into the network and can grow with your IT infrastructure requirements.

Get in Touch with Us

If you have answered yes to more than one question, do not hesitate to get in touch with us.

FTTO infrastructures have an enhanced lifecycle and can outlast several generations of active equipment. They bring considerable benefits in terms of energy consumption, security, network administration, maintenance, rollout and associated costs.

What's more, they are flexible, high performing and easily adjustable, which guarantees excellent network performance for many years to come.

Please get in touch with us for assistance with your FTTO project.

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