

## The State Government of Lower Saxony Opts for FTTO Networking Solutions by Nexans Future-proof LAN for Public Authorities



The modernised network of the federal state of Lower Saxony includes 5,000 FTTO installation and desktop switches. LANactive FTTO solutions developed by Nexans enable a smooth migration of data, voice and other value-added services to a unified IP network. Full Gigabit Ethernet and advanced security features distinguish the modernised Local Area Network (LAN) and allow for various new applications and services.

Challenges	Solution	Benefits
<ul style="list-style-type: none"> <li>• Create a modern, multiservice and flexible LAN infrastructure for public administration in Lower Saxony</li> <li>• Improve network security</li> <li>• Enable various applications based on Gigabit Ethernet, VoIP, WiFi, PoE, building automation and physical security</li> <li>• Improve network efficiency through centralised configuration and management</li> </ul>	<ul style="list-style-type: none"> <li>• LANactive FTTO systems by Nexans</li> <li>• Fibre cable directly from the building distributor to the workplace</li> <li>• NexMan as a network management tool for network monitoring and control</li> <li>• Over 5,000 FTTO Gigabit Ethernet Switches in use</li> </ul>	<ul style="list-style-type: none"> <li>• Bandwidth of 1 Gbps per User</li> <li>• Cost savings in TCO due to less active components, installation costs and no cooling in the distribution rooms</li> <li>• Reliable, redundant and scalable network</li> <li>• Secure network, secure data</li> <li>• Flexibility in modernisation projects</li> </ul>

### IT Service Provider for Public Administration

IT.Niedersachsen (ITN) is the central IT service provider of the state administration of Lower Saxony. Under the motto "In Lower Saxony - for Lower Saxony" ITN designs and develops the IT landscape of the federal state regarding users' expectations, preferences and needs and meeting set budgetary targets. As an IT service provider it is responsible for the procurement, operation and management of the state's ICT infrastructures and places particular emphasis on the security, reliability and efficiency of its services. ITN monitors the market for the latest technologies and implements them.

### The Challenging Project

To implement the Client Project for a high performing network, both the existing network and the service infrastructure had to be modernised. This would include over 200 offices of the federal state administration of Lower Saxony. The aim was to equip the ministries and public administrations across Lower Saxony with a new, modern Gigabit LAN on the basis of the Internet Protocol TCP/IP.

In this pioneering project the previously separate data and voice networks of the administrative divisions of Lower Saxony, including both landline and mobile communications, were to be merged. All the departments were to get a new, highly

automated and converged IT infrastructure based on a uniform operating model. The new LAN had to be scalable and flexible, in order to make systems of various manufacturers interoperable. It was also important to smoothly connect Wireless Access Points and PoE applications to the network and to ensure a secure and reliable network operation.

### FTTO as a Solution

After extensive market research which also included thorough testing of various solutions available on the market, ITN opted for the innovative Fibre to the Office (FTTO) solution from Nexans known under the brand name "LANactive".

**FTTO enabled a faster migration to a service neutral, universal, powerful, multiservice and highly available network.**

Now the LAN network in public administration offices of Lower Saxony supports wireless LAN, VoIP and SIP, video conferencing, IP video surveillance, central alarm management, building automation and electronic reporting. All the locations which are crucial to the network availability and security are equipped with redundant components and/or connections. Access rights to FTTO switches as well as user port settings are managed centrally with NexMan, a software management tool developed by Nexans to make IT administration even easier.

Currently about 5,000 FTTO Gigabit Ethernet Switches ensure the smooth operation of the network. At their workplace, users enjoy full 1 Gbps connections.

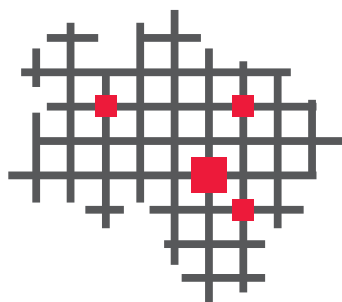
“Summing up our experience with the FTTO technology we can state that the GigaSwitch series of Nexans LANactive switches brought a reliable, homogeneous and secure solution with significant operational benefits through the centralised control and integration into the end-to-end monitoring. This makes it easier for us to operate large complex networks which are also distributed in space”, says Detlef Gnad, Head of the IT Department “Networks” at IT.Niedersachsen, Germany.



## Fibre to the Office

Fibre to the Office (FTTO) is an innovative cabling technology that enables Gigabit Ethernet in the office LAN. A fibre optic cable is pulled from the core switch in the building distributor directly up to the workplace and connected to intelligent FTTO switches. These FTTO switches convert optical signals into electrical, and vice versa. The digital end user devices at the workplace are connected to the switches with RJ45 patch cords. There are no floor distributors and no technical rooms, which yields more useable space. Through their PoE+ (Power over Ethernet) functionality the switches also deliver power to the terminal devices, eliminating the need for additional power supplies.

FTTO-based networks are highly efficient. They provide enough broadband reserves to power resource demanding applications. Such networks are extremely flexible, they enable enhanced redundancy and support advanced IT security concepts. All in all, FTTO networks combine flexibility, reliability and high availability and help achieve important TCO (Total Cost of Ownership) savings.



# IT.Niedersachsen

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