



Enhanced xDSL solutions
Deploy faster and lower your costs

Extending the performance of your copper infrastructure

Digital Subscriber Line (DSL) technologies use sophisticated modulation schemes to bring high bandwidth information to homes and small businesses over ordinary copper telephone lines.

Not only does this prolong the life of traditional PSTN infrastructure, but it enables the deployment of new offerings such as High Speed Data & Video as complementary value-added services to Plain Old Telephone Service.

Whether you are a new or an incumbent operator, an Internet service provider or a telecom equipment manufacturer, you have sound reasons to upgrade your systems and provide a wider offer of attractive services.

However, you also have some key concerns: you wish to deploy quickly to gain market share; you want to lower capital and operating expenditure; you need to be able to upgrade to higher speeds; and finally, you want to anticipate the needs of customers and create a vision of broadband for the future.



Nexans enhanced xDSL broadband solutions



Nexans is one of the few cable manufacturers around to have a complete spectrum of services and products to meet the challenge of existing and next generation xDSL:

- Coverage of 100% of passive infrastructure to support higher bandwidth and multiple services
- Full range of cables and components end-to-end for Central Office, Outside Plant, and Subscriber Homes
- Mastery of the two worlds: both copper and fiber
- Innovative designs to lower CAPEX and control rising OPEX costs
- R&D, manufacturing sites and logistics worldwide
- Reliable, well-proven solutions based on over 75 years of telecom experience
- Continuous partnership with Operators and OEMs to develop enhanced solutions.

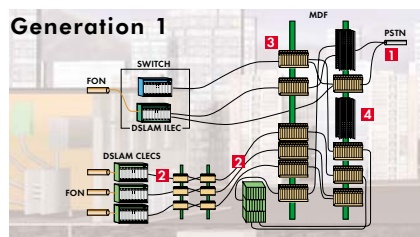


Nexans helps your network evolve

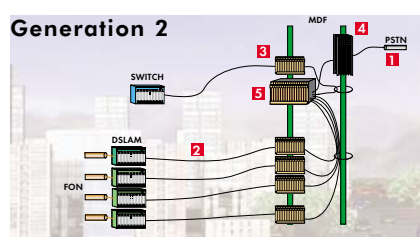


Nexans' enhanced xDSL solutions cut your costs

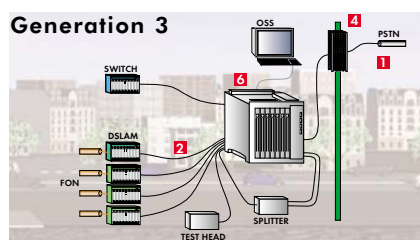
Broadband has opened a new world of services. However, deployment comes at a price. You need to generate maximum revenue per user to cover the CAPEX needed to upgrade your network. Nexans' enhanced xDSL solutions allow simpler, more efficient and optimized cabling configurations, and more space for new telecom equipment. By eliminating manual intervention, system automation brings down operating expenses even further.



• Existing Central Office cabling system



• Re-engineered system based on xDSL filter integration in the wiring block



• Enhanced system based on automated cross-connect

Telecom outdoor cables



Feeding copper cables:

multi-pair or multi-quads up to 4,800 pairs for ducts and direct burial application. *Allows one to use existing cables for xDSL applications.*



Premium copper cables: up to 30 MHz from 25 to 1,200 pairs, largely used for new deployments.

Minimal attenuation and cross talk; and higher data rates.

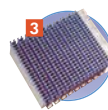
Telecom indoor cables



Twisted pairs or quads:

up to 128 pairs and up to 60 MHz; available in a modularity of 24, 25 and 32 pairs. Also, solutions for mixed services, i.e. ADSL and ADSL 2+ or other DSL services can coexist in the same cable without interfering with each other. *A widely used cable family, with guaranteed speeds and security for futureproof transmission needs.*

Telecom interconnect components



COMPAX (IDC wiring block) or RC8W (wrapping termination blocks):

interconnection module existing in 8 pairs (COMPAX & RC8W) and 10 pairs (COMPAX) to interconnect telecom equipment on Outside Plant cable network. *Establishes the link between Internet services and customers.*



TC 80 base 5 and 7 cable:

interconnect solution (up to 896 pairs) on the customer side of the distribution frame. *Easy-to-connect and provides surge protection.*



Filtered IDC or wrapping wiring block:

interconnection incorporating a splitter that makes it possible to deliver POTS and high-speed services on the same copper pair. *Optimizes the Central Office cabling necessary for delivering voice and Internet.*



ControlPoint automated cross-connect:

a remote robot makes the physical connection between telecom equipment and subscribers (up to 16,200 lines). *Speed and productivity gains by eliminating manual intervention.*

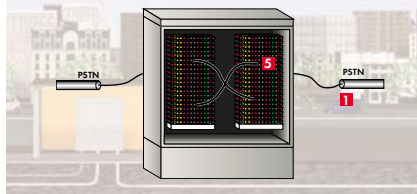
Live... over the years and end-to-end...



Nexans allows fast deployment in metropolitan surroundings

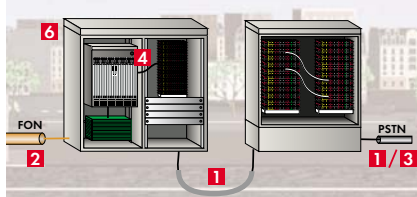
For quality urban and suburban service, Telecom equipment must migrate to the Outside Plant Network, meaning that fiber must move farther from the Central Office and copper closer to the subscriber. This need not be disruptive. Deployment of fiber optic cables, telecom equipment and their interconnection on the existing copper loop network is extremely challenging, and calls for new solutions

Generation 1



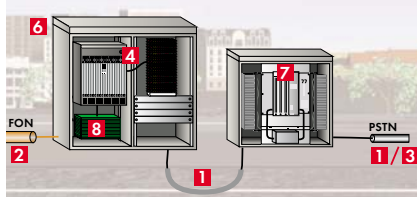
- Existing all-copper cabling system for sub-distribution

Generation 2



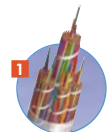
- Moving fiber closer to the subscriber via outdoor cabinets

Generation 3



- Enhanced cabling based on automated cross-connect via remote robot

Telecom outdoor cables



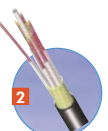
Distribution copper cables:

multi-pairs or multi-quads of up to 400 pairs for ducts and aerial installation. *Familiar, reliable, and of proven quality.*



Premium copper and Copper Plus cables:

available in 25 to 1,200 pairs up to 30 MHz (Premium), and available in 10 to 100 pairs up to 100 MHz (Copper Plus). VDSL compatible. *Futureproofs the network.*



Fiber optic micro-cables:

extremely small (5.6mm) cable containing up to 72 fibers can be blown into mini-ducts; also 3.9 mm, 24 fiber-cable available. *Flexibility and CAPEX management in urban environments.*



Hybrid fiber optic cables:

a bridging technology to anticipate Fiber-to-the-Home deployment with lower CAPEX.

One installation serves both options.

Telecom indoor cables



Twisted pairs or quads:

up to 128 pairs and up to 60 MHz; available in a modularity of 24, 25 and 32 pairs. Also, solutions for mixed services, i.e. ADSL and ADSL 2+ or other DSL services can coexist in the same cable without interfering with each other. *A widely used cable family, with guaranteed speeds and security for futureproof transmission needs.*

Telecom interconnect components



TFSR outdoor wiring block:

highly reliable IDC contacts protected by grease. *Tool-less operation and long-life.*



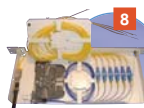
ADW outdoor, double-wall, aluminum cabinet:

to house and protect wiring blocks or sensitive telecom equipment from thermal variation. *Necessary protection to serve distant subscribers with broadband services.*



ControlPoint automated cross-connect:

a remote robot makes the physical connection between telecom equipment and subscriber (up to 800 lines in outdoor environment). *Speed and productivity gains by eliminating manual intervention.*



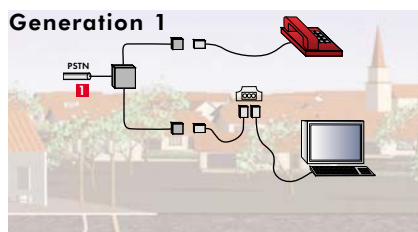
TOPTel Multifunction fiber optic subrack:

for splicing, coiling and/or patching up to 36 fibers. *Compact design for easy integration.*

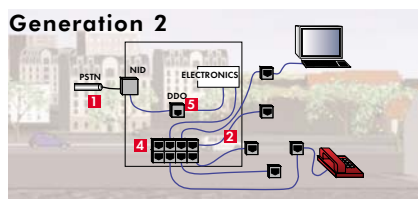
to deliver high-speed broadband.

Nexans futureproofs your home network

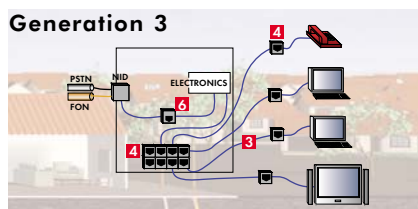
End-users want Quality of Service and high transmission speeds to enjoy triple-play services. However, the domestic network has become the last bottleneck for full broadband capability. To meet this challenge, Nexans offers not only a full range of drop cables, and connection boxes, but a wide choice of cabling types for customized subscriber installations.



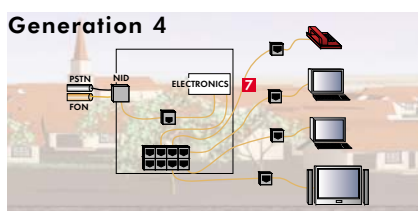
• Existing home connection



• Structured home networking for broader services



• Enhanced home networking to support voice, data and video



• Ultra-enhanced plastic fiber in the home, the ultimate answer

Telecom outdoor cables

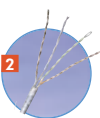


Premium self-supporting drop copper cables: with steel "messenger" wire, can support up to 10 pairs and 30 MHz. *ISP can match superior subscriber infrastructure.*



Copper Plus metallic self-supporting drop cables: as above, but to 100 MHz. *Greatly increased bandwidth.*

Telecom indoor cables



FTP cables (Foiled Twisted Pair) and UTP (Unshielded Twisted Pair) cables: delivering up to 100 and 250 MHz, new grade 1 and 2 are ideal for future high-rate DSL communications (including TV/video on DSL).



STP cables (Shielded Twisted Pair): delivering 900 MHz, new Grade 3 STP outperforms LAN networks to become the only support needed for voice, data & video. *Higher speeds, simplicity, futureproof; will eventually replace current coaxial link for TV.*

Telecom interconnect components



RJ45 and GG45 connectors: the small RJ45 is a standard developed for under 250 MHz, while Nexans GG45 handles over 600 MHz required for TV. Both are universal connectors for home networking.

Compact, backward compatible, very easy to install.



DDO (Demarcation and Disconnection Outlet) with RJ45 interface: a connection box to terminate operator networks, and provide test access for technicians. *Establishes clear subscriber/operator responsibility for line diagnostics.*



RTD (Remote Transmission Diagnostics): this module allows end-users to be remotely disconnected from the Central Office, and performs line-qualification tests. *Better line management, lower costs; the right technician dispatched for troubleshooting.*



Plastic optical fibers (POF): the eventual successor to copper in the home environment or small office; optical fiber sockets are already being installed on xDSL modems. *Flexibility, safety, strength, resistance to interference, and easier to connect (because of larger diameter).*

Acronym/Glossary

ADSL: Asymmetric Digital Subscriber Line. Provides a high bit rate channel to the customer (downstream) and a lower bit rate channel from the customer to the network (upstream)

CAPEX: Capital Expenditure

CLEC: Competitive Local Exchange Carrier

CO: Central Office

DDO: Demarcation and Disconnection Outlet

DSLAM: Digital Subscriber Line Access Multiplexer.

FON: Fiber Optic Network

FTTC: Fiber-to-the-Curb

FTTH: Fiber-to-the-Home

HDSL: High bit rate Digital Subscriber Line

ILEC: Incumbent Local Exchange Carrier

ISP: Internet Service Provider

MDF: Main Distribution Frame

NID: Network Interfacing Device

OEM: Original Equipment Manufacturer

OPEX: Operating Expenditure

OSP: Outside Plant

OSS: Operation Support System

POF: Plastic Optical Fiber

POTS: Plain Old Telephone Service

PSTN: Public Switched Telecommunication Network

RTD: Remote Transmission Diagnostics

SDSL: Symmetrical DSL

VDSL: Very high speed Digital Subscriber Line

xDSL: Generic term for various types of DSL technologies



Global expert in cables and cabling systems

Nexans is the worldwide leader in the cable industry, with an industrial presence in 29 countries and commercial activities in 65. The Group employs 17,000 people. Its sales amount to 4 billion Euros. Nexans brings an extensive range of advanced copper and optical fiber cable solutions to the infrastructure, industry and building markets. Its cables and systems can be found in every area of people's lives, from telecommunications and energy networks, to aeronautics, aerospace, automobiles, railways, buildings, petrochemicals, medical applications, etc.

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