

Nexans



**Telecom Access solutions
to enhance your Triple-Play performance**

New telecom challenges...

Due to falling voice revenues, technological advances, and rising customer expectations, telecoms are transforming their operations through strategic investments which vary greatly throughout the world.

Asia, the Americas and Europe are continuing to move inexorably towards higher data speeds for larger sections of their populations; while developing countries who have leapfrogged into mobile services are eagerly awaiting the chance to move massively into new broadband services.

The next phase will be the worldwide proliferation of Triple Play which combines voice, television and Internet on a high-speed platform.

This will eventually segue into a Quadruple Play environment, when wireline networks, wireless and mobile seamlessly merge. That is why telecom operators urgently need to leverage their infrastructure assets and reconfigure their copper and optical fiber infrastructures.

What OEMs and telecoms expect from cable manufacturers:

- Complete range of telecom products from one experienced supplier
- Familiarity with their special regional needs, and regulations
- Technical and Marketing expertise for Value Creation
- Easy and progressive upgrades to higher data speeds, both xDSL and FTTx
- Extended reach to previously ineligible subscribers
- Optimized prices for quality products
- Lifetime reliability and high Quality of Service (QoS)
- Input on design, network configuration, maintenance
- Pre-testing of complete telecom solutions
- Outstanding service and delivery levels
- Recycling facilities and dedication to the environment



...require high-speed xDSL-FTTx integration

Nexans supplies a complete range of cables and accessories for telecom infrastructures.

This includes all cables and components of the passive infrastructure needed to support, strengthen and deploy both xDSL and FTTx networks.

This passive infrastructure has to match the Access Network in various configurations: dense urban network, multi-dwelling, residential areas.

We are at home in both wireline and mobile communication systems, and offer Right-of-Way solutions which use existing pathways for both urban and intercity connections: subways, railways, power lines, city sewers, etc. In fact, we are constantly finding ways to lessen the cost of outside plant and cabling — arguably the most significant part of network deployment, especially when land leasing, purchase or expensive civil engineering are involved.

This philosophy is what led us to upgrade our xDSL copper products to the point where they now rival fiber as a transmission medium. It also led us to develop a new generation of fiber-optic micro-cables which can be blown faster and farther in existing duct infrastructure. Both of these important innovations are being applied throughout the telecom landscape in all environments and around the globe.

In addition, we supply equipment manufacturers with the latest cables and accessories needed to serve this rapidly expanding market.

Nexans helps you deploy faster, increase revenue, lower costs

- Unsurpassed range of telecommunications cables and interconnect solutions
- Global expertise for upgrading existing networks and creating new ones
- Resources for layout, design, testing, maintenance, and training
- Ongoing, integrated R&D for both copper and optical fiber cables and interconnect solutions
- Advanced installation techniques for urban/intercities, including ROWs
- Fire-safety cables to protect the public and telecommunications infrastructure
- International industrial and sales organization for integrated global carriers and suppliers
- Proven expertise in Triple-Play convergence of voice-image-data
- Familiarity with merging mobile and land-based services for future 4-Play services
- Innovation and customized development of specific products that become off-the-shelf
- Reliable delivery through dedicated logistics, and plant capacity worldwide
- Environmentally-friendly products with high performance shielding and low EMI
- Open standards, while conforming with telecom legislation and specifications worldwide



Nexans provides wireline and mobile communication cables and components...

WIREFINE BROADBAND FIBER OPTIC ACCESS

From FTTx to FTTH: Introducing broadband services to deliver Triple and Quadruple Play means deploying optical fiber ever closer to the subscriber. To meet your FTTx ambitions, Nexans offers an end-to-end passive infrastructure solution that combines three sorts of expertise: optical fiber cables, full connectivity, and network design engineering.

Ribbon optical fiber cables

Slotted core and tube cables with 4 to 8 fibers per ribbon for a 4 to 432 fiber count. Nexans supplies TeliaSonoria (Scandinavia), Stokab (Sweden) and the Hong Kong Broadband Network for broadband deployment.

Micro-cables

B-Lite for optimized blowability of up to 96-fiber cables in micro-ducts for local loop access and vertical risers in buildings. Belgacom is expanding its FTTC and VDSL networks nationwide using micro-blown cable from Nexans.

Aerial optical fiber cables

All-dielectric self-supporting cables based on round or figure-8 design, including related components. Widely used by Norwegian power utilities, including Adger Energy.

Optical fiber distribution frames

Modular racks for patching, splicing, coiling; and High-Density Distribution Frames (7,680 fibers/rack). Nexans supplied 9 Cegetel (France) for points-of-presence and TeliaSonoria (Scandinavia) for HDDFs.

Optical fiber splicing closures

Dome-shaped, in-line, fully mechanical and reversible closures to connect 6 to 336 fibers in underground, duct or aerial configurations. Nexans was selected for the Hong Kong Broadband FTTH network and the i-21 pan-European network built by Interoute.

Subscriber outlets, splitters and connectivity

Building access, floor distribution, home terminal outlets for xPON and point-to-point Ethernet. Nexans is furnishing the Asturias Project (Spain) with overall FTTH networking

WIREFINE BROADBAND COPPER ACCESS

From PSTN to xDSL: Supporting Triple Play and HD/IPTV means that telecom operators must leverage their main asset: existing copper infrastructure. To support your broadband strategy, Nexans offers an end-to-end passive infrastructure solution that combines three sorts of expertise: copper cables, full connectivity, and optimized xDSL performance.

PSTN outdoor and indoor copper cables

Outdoor pairs or quads, concentric or in bundles for up to 4,000 pairs; and indoor pairs and quads for Central Offices and remote cabinet cabling systems. Worldclass customers like Telefonica (Spain/Portugal), TeliaSonoria (Scandinavia), SwissCom, BT, KT, VNPT, ECI, and Alcatel-Lucent all use these cables.

Enhanced xDSL

Indoor/outdoor copper pairs and quads with optimized xDSL behavior maximize customer eligibility. Incumbent Local Exchange Carriers and telecom OEMs can optimize infrastructure during maintenance and repair.

Automated Main Distribution Frames

New-generation AMDFs decrease the number of human interventions for jumper reconfiguration. Field trials are being conducted on remote cabinets and Main Exchanges for ADSL2+ services.

Filtered wiring block

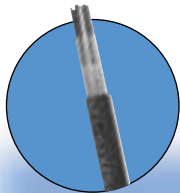
New wiring blocks with DSL filters reduce numbers of cables and patch cords when migrating POTS and data connections to the main distribution frame. France Telecom has deployed filtered wiring blocks nationwide in Main Exchanges.

Digital Termination Interface – RJ45

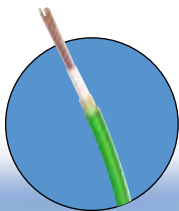
A demarcation disconnection outlet with a standard RJ45 interface enables easy line tests from home to establish limit of responsibility. France Telecom widely uses the DTI to provide secure and reliable line testing.



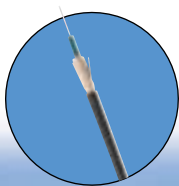
Ribbon optical fiber cables



Micro-cables



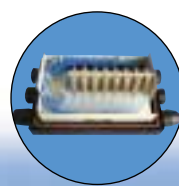
Aerial optical fiber cables



Optical fiber distribution frames



Optical fiber splicing closures



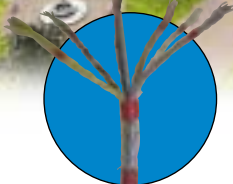
Subscriber outlets, splitters and connectivity



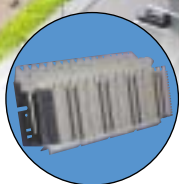
PSTN outdoor & indoor copper cables



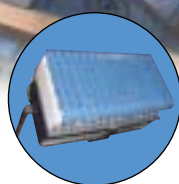
Enhanced xDSL



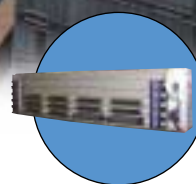
Telecom interconnect cables



Interconnect components



Filtered wiring block



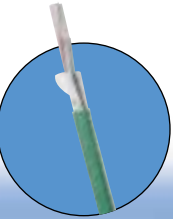
Automated Main Distribution Frames



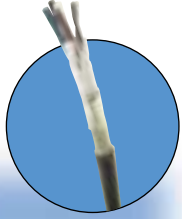
Digital Termination Interface — RJ45

...for next-generation Triple and Quadruple Play

Hybrid fiber cables for feeders



Remote Electrical Tilt/AISG cable



MOBILE COMMUNICATION BROADBAND ACCESS

From 2G, 3G to 4G: Delivering Triple Play anytime and everywhere to nomadic mobile users is forcing equipment vendors to move ever closer to 1 Gbits/s, the 4G target. To satisfy the demand for mobile TV, interactive gaming, and video downloads, Nexans offers interconnect cables and components, and advanced coaxial, remote electrical tilt, and hybrid fiber cables.

Telecom interconnect cables

Connect mobile equipment (switches, network controller, base station, etc.) to heterogeneous networks. Allow OEMs to move easily from 2 and 3G towards fourth generation (4G) mobile services based on Fiber-to-the-Antenna, which will revolutionize customer mobile access to information and entertainment.

Interconnect components

A copper pre-connectorized wiring block system (2G) simplifies interconnection of mobile equipment to the network. A fiber-optic system serves Universal Mobile Telecommunications System (UMTS). Alcatel-Lucent chose Nexans for its wireless equipment interconnections.

Elcurigid cable for antennas

Available in 35, 50, 60, 75 and 100 Ohm versions, they are widely used in base station antennas. These intraconnect cables offer miniaturization, heat-resistance and high-power transmission capability.

Twinax high-speed cables

Offer low attenuation, impedance stability and low skew levels for high-speed protocols (Infiniband, Fiber Channel, SATA and 10GE). OEMs appreciate their data transmission performance in high-speed mobile applications.

Remote Electrical Tilt/AISG cable

RET/AISG cables connect the Remote Control Unit with the antenna on base stations, allowing quick and optimized adjustment of the system, and 20% cost reduction. These cables come in PVC, Halogen-Free Flame-Retardant, or PUR (oil-resistant) versions with UL approval to fit various environments

Hybrid fiber cables for feeders

These cables provide power and data for Node B systems, where the radio unit is installed as close as possible to antennas and linked to the base band or system cabinet via fiber optic hybrid cables. Hybrid fiber cable can be used as vertical risers in buildings, or along highways and railways.

SERVICES FOR NETWORK ENGINEERING AND VALUE CREATION

Network Engineering Service

You wish to focus assets and resources on enhancing customer service, so you need network design support. That is why Nexans has created an engineering platform to:

- redesign the network, taking into account existing assets
- define passive infrastructure and related bill of materials and CAPEX calculation
- create a project definition file for customer approval
- support installers with engineering/training on the chosen solution

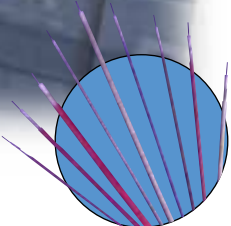
xDSL Application Center

You also want to optimize your network's DSL performance. Nexans has built up a complete infrastructure layout from Main Exchange to subscriber premises which can:


- diagnose the current PSTN network in terms of DSL performance
- design an enhanced xDSL cable from existing cable specifications
- test the proposed xDSL cable in real life conditions
- measure improvement in terms of customer eligibility



Twinax high-speed cables



Elcurigid cable for antennas



Extensive services for broadband

GLOBAL EXPERTISE

Present in Europe, Asia and the Middle East, and a long-term strategic partner to ILECs, CLECs and OEMs worldwide, Nexans understands telecom infrastructure and how to integrate telecom equipment — from Central Office to subscriber premises — using multiple technologies: copper, fiber, coax, etc.

LOCAL PRESENCE

Nexans supports its customers domestically, either through local plants or logistics centers. It serves customers in terms of requirements, specifications and standards, and hires and trains personnel (including installers), often transferring technologies to strengthen national telecom industries.

TECHNICAL LEADERSHIP

Value creation is key. With enhanced xDSL cable, Nexans improves broadband performance in terms of reach and data rate, increasing subscriber eligibility and operator revenue. Innovative FTTH network solutions also help customers master CAPEX and OPEX while guaranteeing Quality of Service.



Global expert in cables and cabling systems

With energy as the basis of its development, Nexans, the worldwide leader in the cable industry, offers an extensive range of cables and cabling systems. The Group is a global player in the infrastructure, industry and building markets. Nexans addresses a series of market segments from energy, transport and telecom networks to shipbuilding, oil & gas, nuclear power, automobiles, electronics, aeronautics, material handling and automation.

With an industrial presence in more than 30 countries and commercial activities worldwide, Nexans employs 21,000 people and had sales in 2006 of 7.5 billion euros. Nexans is listed on the Paris Stock Exchange.

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