



**Trunk line and radio system optical fiber
for multileveled analogue
and digital railway applications**

Nexans, worldwide leader in cables and cabling systems

As a global expert in cables and cabling systems, Nexans brings an extensive range of advanced copper and optical fiber solutions to three key sectors of the economy: **infrastructure, industry and buildings.**

Its cables and systems can be found in every area of people's lives, from rolling stock and railway infrastructure to telecommunications and energy networks, aeronautics, aerospace, automobiles,

petrochemicals, windmills, medical applications, etc.

The presence of Nexans in over 65 countries gives it a full mastery of both national and international standards. Its 10 Competence Centers and International Research Center work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions.



Trunk line and radio system optical fiber to assure your infrastructure growth

The efficiency of any train system is dependent on an infrastructure which provides reliable energy for rolling stock, and data and telecommunications for train management and control. Whether for a tramway, subway or high-speed train, operators are anxious to streamline costs, future-proof their systems, upgrade customer services, and assure a high level of public safety.

Nexans produces a wide range of energy and telecommunication cables and components specifically adapted to the various rail environments, many with enhanced fire-performance characteristics. We also give expert advice about network architecture and evolving standards, and can provide customized engineering, installation and maintenance worldwide.

Complex railway infrastructures need multileveled transmission media in order to deliver both analogue and digital applications for everything from automatic train control, to emergency communications, trackside maintenance, and passenger services. The new interoperable radio-based ERTMS/ETCS (European Rail Traffic Management System/European Train Control System) is continuing to consolidate systems which once required separate cabling for each, usually analogue, application.

To help you achieve this, Nexans offers high-performance **Trunk line & radio system optical fiber cables** for the railway environment.



**Trunk line & radio system
optical fiber cables**

for communications and train control

Trunk line and radio system optical fiber: the backbone for railway radio communications



Today, the basic backbone is optical fiber for long-haul transmission between distant cities, medium-haul between stations, and as a link to the radio Base Transmitter Stations (BTS). Nexans provides reliable, singlemode fiber in cables especially designed for railway conditions, including customized mechanical protection to meet changing environmental specifications. In addition Nexans offers advanced right of way (ROW) solutions, which include aerial installation, and tough rail-attached fiber cables.

This Nexans solution gives you:

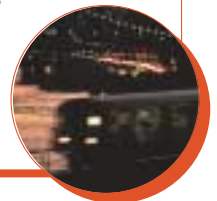
- A full portfolio of cables and components for the railway environment, including new trackside installation techniques
- Customized engineering for cable protection: rodent-resistance, waterproofing, metal-free for longitudinal voltages induced by catenaries, compression resistance, vibration protection
- High fire performance for optical fiber in tunnels: Halogen-Free, Fire-Retardant (HFFR) or even fire resisting constructions mean that data will continue to flow in emergency situations
- Easy installation through Optical Ground Wire (OPGW), self-supporting optical fiber cables for trackside pylons, and rail-attached fiber cables with impact-resistant stainless steel sheaths
- Full connectivity to support fiber-to-radio interfaces
- Longevity and future-safe long-haul solutions





Nexans wins approval for new microtube optical cable

Because Swiss railways wanted a new and lighter cable design that could deliver fiber-to-the-home (FTTH) features within the railway environment,

Nexans R&D and production teams worked hard to meet numerous mechanical and thermal specifications. The result was a brand new microtube cable design which is more compact and user-friendly in closures and ODFs for both installation and splicing. Fully-approved by the national railway, Nexans delivered the first 300 km for long-haul links between train control centers.



Optical Underground cables (OUC)

Product families	Product family names	Standards / Specs
<p>Trackside cables</p> 	<p>Communication</p> <p>CT 2242 K209 BR 1837 RT/E/PS/00014</p> <p>Metal free optical cables with rodent protection</p> <p>DGGT/1200</p> <p>Metal free optical cables with double sheath and intermediate buffer layer</p> <p>GASLLDV 290394</p> <p>Metal free optical cables with double sheath and intermediate buffer layer</p> <p>GRSLLDV 290394</p>	<ul style="list-style-type: none"> • LSZH • HFFR • SBB specification • Stokab spec. • Banverket spec.
<p>Duct cables</p> 	<p>Metal free optical cables with glass armour</p> <p>DT-AcwT600</p> <p>Metal free optical cables with glass armour</p> <p>GASGLDV</p> <p>Metal free optical cables</p> <p>GRSLDV</p>	<ul style="list-style-type: none"> • BLS Alptransit

Optical Aerial cables (OAC)

Product families	Product family names	Standards / Specs
 <p data-bbox="213 874 288 911">Neoport cable</p> <p data-bbox="113 341 314 368">Short span cables</p>	<p data-bbox="339 341 641 389">Form eight short span optical aerial cable</p> <p data-bbox="339 419 426 443">Neoport</p> <p data-bbox="339 469 609 517">Short span self supporting optical cable</p> <p data-bbox="339 547 426 571">KKT/600</p> <p data-bbox="339 596 609 644">Short span self supporting optical cable</p> <p data-bbox="339 675 443 699">KKT/1200</p> <p data-bbox="339 724 609 852">Short span self supporting optical cable with related accessories for tensioning, suspensioning, guiding, coiling, etc.</p> <p data-bbox="339 877 594 901">GRSSLDV and GRSSLLDV</p>	
 <p data-bbox="213 1155 288 1192">KKT/5000 cable</p> <p data-bbox="113 954 314 981">Long span cables</p>	<p data-bbox="339 954 605 1002">Long span self supporting optical cable</p> <p data-bbox="339 1032 443 1056">KKT/2500</p> <p data-bbox="339 1082 605 1129">Long span self supporting optical cable</p> <p data-bbox="339 1155 443 1179">KKT/5000</p>	



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