

**N**exans



**High-quality, customized microcables  
for safe and comfortable medical devices**



## Prevention, diagnostics, treatment and home care...

**The practice of medicine once relied upon simple diagnosis, curative drugs and operative intervention when necessary. We are now entering a new era of high-tech medicine where electronic technology is playing an ever more important role.**

Medicine is now focusing on prevention as well as treatment, and diagnostics is using electronic devices like miniaturized biosensors, monitors for blood, urine and drug concentration, high-precision exploratory probes (catheters) and sophisticated imaging equipment.

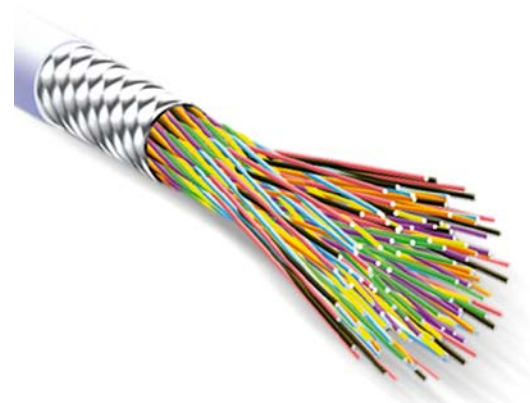
Recent breakthroughs in video laparoscopy and telerobotics are opening new dimensions in operating

rooms, providing minimally invasive solutions as an alternative to complex open surgical techniques.

Finally, there is a growing trend towards home care, driven by aging populations, rising health care costs and the need for diagnosis and even treatment on the spot. This has led to improved pacemakers, wearable sensors and advanced delivery systems to improve the bioavailability of drugs, biopharmaceuticals and insulin.

Eventually, electronic devices will be able to detect, evaluate, treat and report to the clinical doctor automatically via remote patient monitoring (RPM) and a wireless net-linked system, bringing advanced health care out of the hospital and right into the home.

Much of this exciting medical revolution depends on high-quality microcables.

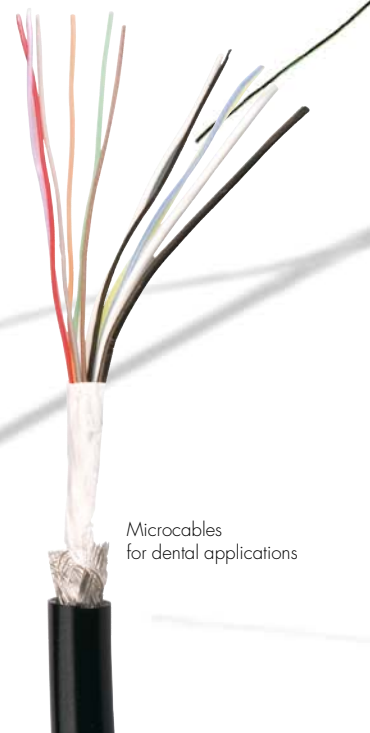


### CUSTOMIZED MICROCABLES FOR YOUR SPECIFIC NEEDS

- Conformity with norms (FDA or ISO 10993) in terms of biocompatibility
- Resistance to all sterilization techniques: chemical, heat, gamma rays, etc.
- Optimal flexibility for biosensors, monitors, catheters and in vivo imaging
- Compactness and lightness for portable devices and wearable applications
- Cosmetic appearance and comfort, especially for probes and pacemakers
- Electromagnetic compatibility (EMC) in the "busy" clinical environment
- Consumable solutions for invasive, monitoring, and post-operational devices
- Intelligent cables to measure, transmit information and initiate action



Microcables for dental imagery



Microcables for dental applications



## ...depend on advanced microcables solutions

Nexans medical microcables offer **reliability, high-performance, flexibility, biocompatibility, EMI protection and easy sterilization. Due to their miniaturized yet complex constructions they allow OEMs to save space and weight while building more intelligence into all investigative, diagnostic and therapeutic devices. Physicians and patients especially appreciate their safety, comfort and esthetic discretion.**

We meet your special needs and applications through custom-designs, and simulation to reduce your development and testing time.

Our microcables are totally safe, and conform to EU and other international directives.

### Solutions for invasive applications

Custom-designed for diagnostic cardiac catheters and pacemakers, they offer high mechanical resistance, especially to tension, torsion and bending.

#### Design:

- Biocompatible materials
- Miniaturized, mono and multi-wire constructions
- Cosmetic adaptability



#### Catheters:

Various types of conductors: gauges AWG 28 to 46; 2, 4 or 6 conductors laid up in pairs. Lower cross-sections can be developed according to need.

#### Pacemakers:

Wire or coaxial cable AWG 28 to 34, with stainless-steel conductor

#### Microcables for medical imaging

A wide range of multi-microcables for a numerous devices used in obstetrics, gynecology, cardiology, dentistry, endoscopic applications and the veterinary sciences.

#### Design:

- Various types of conductors
- Bundles with identification thread
- Colored insulation
- Specific color by micro-coax
- From 2 to 528 micro-coax
- Capacitance within the 55-95 pF/m range for ultrasound probes
- Single wires and coaxial cables in various constructions for CCD cameras

#### Sterilization:

Both kinds of cable are resistant to various sterilization methods, including chemical (ETO, Stera, Cidex, gas), gamma rays, and standard alcohol, ethanol, propanol, etc.

### BENEFITS OF NEXANS MICROCABLES

- Full biocompatibility, sterilization ease and operational flexibility
- High data capacity and multi-constructions in miniaturized format
- Cosmetically designed to offer patients exceptional comfort
- EM-shielded for safe clinical, home and on-the-job operation
- Based on ongoing R&D in dedicated Nexans competence centers
- Industrial capacity adapted to OEM production; prototypes customized to device
- Supported by Nexans experience in parallel areas: aeronautics and LANs
- Shared expertise, laboratory technical support, extensive service program



Electrophysiologic probe



Global expert in cables and cabling systems

With energy as the basis of its development, Nexans, worldwide leading expert in the cable industry, offers an extensive range of cables and cabling systems. The Group is a global player in the infrastructure, industry, building and Local Area Network markets. Nexans addresses a series of market segments: from energy, transport and telecom networks to shipbuilding, oil and gas, nuclear power, automotives, electronics, aeronautics, material handling and automation. Nexans is a responsible industrial company that regards sustainable development as integral to its global and operational strategy. Continuous innovation in products, solutions and services, employee development and engagement, and the introduction of safe industrial processes with limited environmental impact are among the key initiatives that place Nexans at the core of a sustainable future.

With an industrial presence in 40 countries and commercial activities worldwide, Nexans employs 23,700 people and had sales in 2010 of more than 6 billion euros.

Nexans is listed on NYSE Euronext Paris, compartment A.

For more information, please consult [www.nexans.com](http://www.nexans.com) or [www.nexans.mobi](http://www.nexans.mobi)

Nexans

140-146, avenue Eugène Delacroix - BP 1 - 91211 Draveil

Tel.: +33 (0)1 69 83 78 00 - Fax: +33 (0)1 69 42 05 70

[www.nexans.fr](http://www.nexans.fr) • [electronic.products@nexans.com](mailto:electronic.products@nexans.com)



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