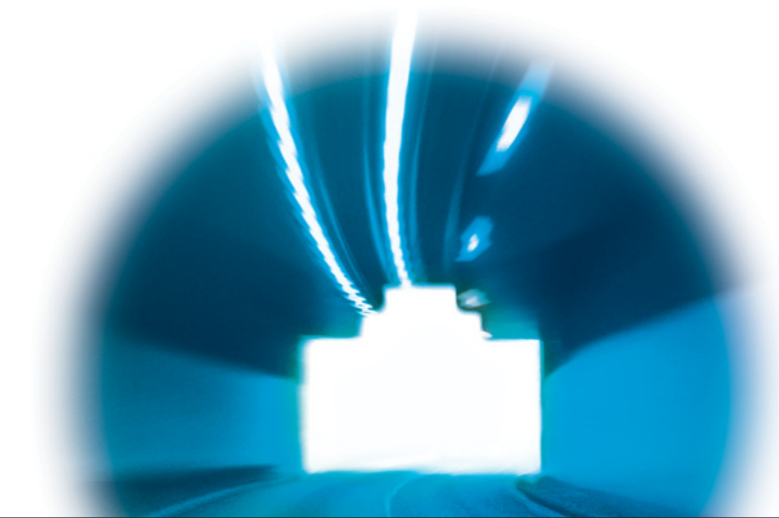




Global expert in cables and cabling systems



For zero risk
10 Gigabit
Ethernet Solutions

France
Rue Mozart, 4-10
92587 Clichy CEDEX

Tel +33 (0)1 56 69 84 00
Fax +33 (0)1 56 69 86 38

Belgium
Alsebergsesteenweg 2, b3
1501 Buizingen

Tel +32 (0)2 363 38 00
Fax +32 (0)2 365 09 99

UK
2 Faraday Office Park
Faraday Road
Basingstoke RG24 8QG • UK
Tel +44 (0) 845 2300 488
Fax +44 (0) 1256 486650

11/2006 © Nexans Cabling Solutions

LANmark 10G Solutions

10G over copper cabling: Why 10G ?

Cabling technology has evolved at a rapid pace. New applications like storage area networks (SAN) and data centres require more bandwidth, higher capacity and higher density. Fibre solutions already exist BUT the market needs a 100m copper solution that you can use together with your existing equipment. This offers significant cost advantages.

Higher frequencies

10GBase-T is a protocol defined for transmission rates up to 500MHz over copper cabling systems with channel lengths up to 100m.

This is twice the frequency of Cat6/Class E as defined in the standards in 2002.

Additional cabling requirements are necessary to ensure 10 Gigabit support for both Link and Channel, as well as for individual components.

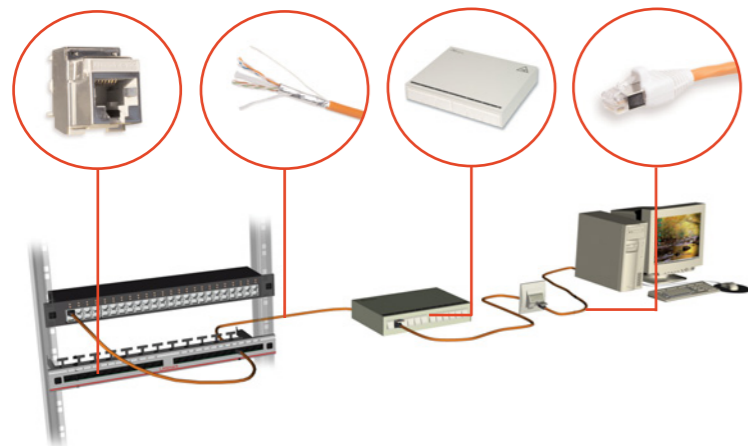
High sensitivity

10GBase-T is the most sensitive application developed for copper cabling so far.

- 10^{-12} bit error rate (BER)
 - very high Signal to Noise ratio
- If a failure happens, transmission will not slowly degrade but stop immediately.

10GBase-T is especially sensitive to :

- signals from adjacent cables (described by Alien NEXT and Alien FEXT)
- external noise



LANmark-6 10G

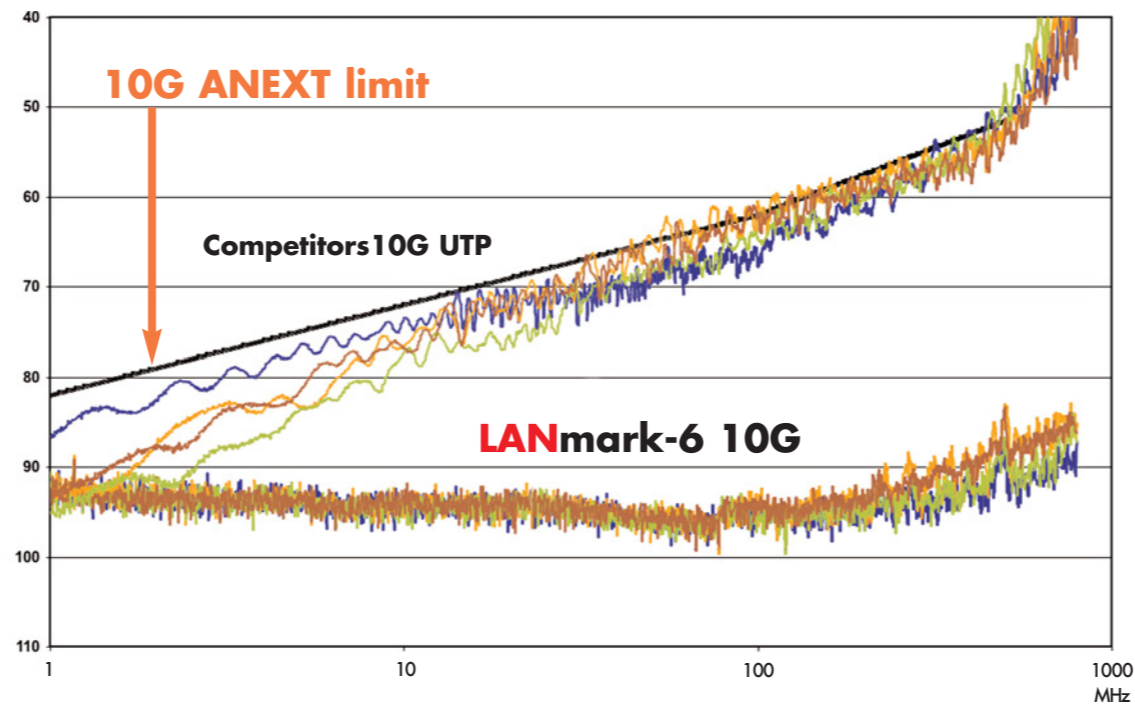
LANmark-7



Choice of solutions

Nexans offers two copper solutions all guaranteed to support 10GBase-T :

- **LANmark-6 10G**
exceeds application requirements to support 10GBase-T
IEEE802.3an, TSB155, ISO/IEC TR24750
compliant with next generation cabling drafts
Cat 6A TIA568B.2-1ad.10 and ISO/IEC 11801 2002 am 1.1 Class E_A
- **LANmark-7** (RJ45 mode)
Cat6A with future upgrade potential to Cat 7 using GG45 cords



Nexans 10G zero risk solutions

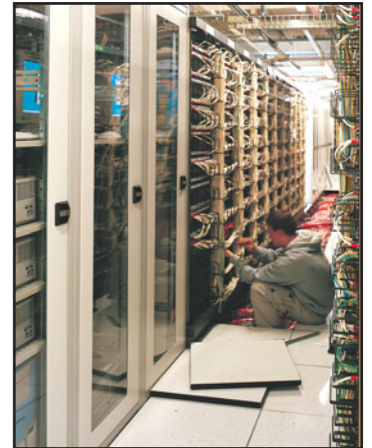
- Multiple solutions available
- All individual 10G components are specified up to 500MHz
- Full 100m support
- Guaranteed to support 10GBase-T application – IEEE 802.3an
- Guaranteed headroom on Alien Xtalk
- No field testing needed for Alien Xtalk
- No hidden cost
- Easy to install

10GBase-T over shielded cabling is better

Nexans is one of the major suppliers of UTP into the market, but for 10GBase-T the advantages often associated with UTP become void and the benefits of screened solutions are overwhelming :

Testing and Verification

At best 10G UTP solutions are only marginally compliant for Alien Xtalk and therefore need to be tested - but this is impractical to test in the field today.



Nexans screened solutions pass the alien crosstalk requirements with massive headroom so you can be confident that installed systems will be compliant.

Ease of Installation

Screened 10G systems are easier to install than 10G UTP solutions. Nexans 10G cables are physically smaller with a smaller bend radius than most of the 10G UTP solutions on the market.

Nexans cords are small, flexible and come in standard lengths whereas 10G UTP cords often have large solid conductors.

Cost

10G UTP is not necessarily cheaper than a screened system. The technology required to eliminate Alien Xtalk in UTP is comparable with cost of screening. 10G UTP is physically larger than FTP so will require more containment. The larger patchcords require extra management reducing cabinet densities.

Guaranteed Channel Margin against IEEE, TIA and ISO 10GBase-T standards

	LANmark-6 10G	LANmark-7 (RJ45 mode)
Insertion Loss	min 1.5%	2.5 %
NEXT	3 dB	3.5 dB
PSNEXT	4 dB	4.5 dB
ELFEXT	6 dB	7 dB
PSELFEXT	9 dB	10 dB
Return Loss	2 dB	2 dB
PSAlienNEXT	15 dB	20 dB
PSAlienELFEXT	10 dB	15 dB