

Xtalk

by Nexans Cabling Solutions

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Nexans leading the 10 Gigabit Race

The constant evolution and demand for greater bandwidth and speed has accelerated the development of two new Ethernet applications to support 10 Gigabit over a copper.

- **Existing 10 Gigabit Applications**

10 Gigabit is available today but normally using a fibre infrastructure. However there are also definitions and products for copper links to support short distance server or storage networks. The existing copper solutions use three different protocols, Fibre Channel, Infiniband or Ethernet (10GbaseCX4). Although these existing copper solutions can all support a 10GBps data rate the current distance is limited to approximately 15m.

Nexans has been working in partnership with chip manufacturers for several years and recently conducted a joint test with **Mysticom**, an innovative supplier of high-speed communications IC's to determine if higher performance cabling would benefit the existing technologies. The **tests confirmed** that superior performance and extended distances can be reached when a LANmark-7 infrastructure is used to transport the existing 10GbaseCX4 protocol.

The tests concluded that combining Mysticom transceivers with **Nexans LANmark-7 cabling** can provide a cost effective 10 Gigabit Ethernet solution for Data Centres for extended links up to 25m, as has been announced in the Press Release with Mysticom from 26th November 2003.

- **Standardisation of 10GbaseT Moves Forward**

In recent weeks you may also have heard news about another 10 Gigabit Ethernet protocol : 10GbaseT (IEEE 802.3an).

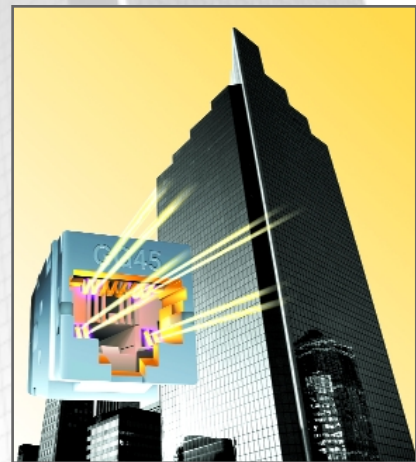
This working groups wants to invent a **new protocol** to be able to transmit 10 Gigabit Ethernet over **100m**, the typical distance for LAN applications and structural cabling. Due to the complex encoding envisaged, higher frequencies, and new important parameters such as Alien Crosstalk, the project definition of "10Gbase T" has taken over a year of discussion but now states that the complete distance of 100m will be achievable at least over **Cat.7 and Class F**. A Class E solution may only be able to support 55m depending on the version and components used.

Although there is no final decision made how a future 10Base T will be implemented and what the protocol will look like, one conclusion can be drawn already: **the safest solution is LANmark-7.**

- **Conclusion**

Existing 10 Gigabit applications are supported with LANmark-7 system using the **GG45 connector**. This standardized GG45 connector also gives suppliers of passive & active equipment the chance to integrate into their new devices for the support of the upcoming new 10GbaseT protocol.

A safe bet for the industry with products that are already standardized and are available today!!



**For more information on 10GbaseT support
over copper cabling systems please download our Application note
www.nexans.com/ncs**