

## **Industrial Ethernet 10 GB M12 Connector System Offers Future-Proof Solution For High-Speed Requirements**

Tyco Electronics

NUREMBERG, Germany -- Nov. 21, 2011. To support industry requirements for high-speed cabling and interconnect systems, TE Connectivity has developed a new generation of its Industrial Ethernet M12 connector system for industrial applications, allowing data rates up to 10 Gb/s.

The connector system consists of various cable assembly and PBC header types in a standard industrial circular format. Its 8-contact system makes it suitable for both high-speed data applications and power-plus-Ethernet applications. The Industrial Ethernet 10 Gb M12 connector system provides users with a future-proof interface, allowing them a smooth transition to higher bandwidth transmission to meet the requirements of today's 100 Mb/s and 1 Gb/s systems and the expected 10 Gb/s needed in the future. This means that the product will not need requalification or exchange for approximately the next five years.

Applications requiring greater bandwidth and higher data transmission speeds continue to proliferate throughout the industrial environment. High-speed uplinks for Ethernet switches, distributed, real-time motion control systems with demanding jitter and timing requirements, as well as machine vision applications based on standard IEEE 802.3 Gigabit Ethernet, all require cabling and interconnect systems that support higher speed requirements.

In the industrial and harsh commercial space, customer choices for copper-based solutions include encapsulated RJ45 connectors and M12 systems. Some M12 systems limit customer choice to 4-circuit, 2-pair cabling solutions, or 8-circuit solutions in a 4-pair shielded twisted pair only solution. "TE's new Industrial Ethernet 10 Gb M12 connector system enables our customers to future-proof their applications, supporting bandwidths of up to 10Gb over a single interconnect. In addition, the system supports a variety of cabling choices with performance categories from Cat5e through Cat6A utilizing shielded, and also unshielded twisted pair varieties, if a more cost-efficient solution is required," says Kevin McGonigle, Industry Manager for Industrial Data Communications at TE.

Typical applications for the Industrial Ethernet 10 Gb M12 connector include:

- Industrial automation -- bandwidth needs are increasing because of real-time machine control.
- Machine vision -- industrial production processes require the analysis of thousands of data points and related high-speed file transmission supporting complex quality control, requiring high data transmission rates.
- Industrial control applications -- the rapid spread of Ethernet-enabled field devices, coupled with the decentralization of more complex machine control

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systems require systems that can support the greater bandwidth and faster backhaul needed to quickly and efficiently process critical data.

For more information visit [te.com/products/IE-M12-10GB](http://te.com/products/IE-M12-10GB) [1].

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