Connecting the Back Office to the Plant Floor

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By combining the administrative and plant floor functions onto one network, users can achieve greater efficiency and control over the entire automation operation.

Though industrial Ethernet has been evolving for many years, it is quickly becoming the foundation for many manufacturing applications. Industrial Ethernet provides the connectivity and communication that today's applications demand for productivity and efficiency improvement. With industrial Ethernet, not only is enterprise-wide connectivity possible, but now users have constant access to critical production data, providing the highest level of control and visibility.

With the migration away from traditional point-to-point fieldbus, advanced networking architecture ensures connectivity, collaboration and integration from the device level to enterprise business systems. By examining the performance capabilities and application suitability of EtherNet/IP, Modbus TCP and PROFINET, manufacturers can select the ideal networking solution for continuous, complete control over all production components.

Ethernet Moves Beyond the Office

Industrial Ethernet is based on the IEEE 802.3 standard, for Ethernet commonly found in the office environment but modified for use in industrial automation. In order for Ethernet to be used in the industrial environment, it must be adapted to withstand the environmental conditions that are not found in traditional commercial installations. Most standard uses do not include exposure to extreme temperatures, humidity, vibration, constant flexing and noise that can be induced by drives, robots or other equipment often found on the factory floor.

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