Wireless plays an important role in factories and processing plants. Industries such as consumer goods manufacturing, metals, automotive, pharmaceutical, food processing, packaging and material handling can benefit greatly from wireless technologies. Tangible benefits include cost reduction, more reliable control/processing systems and improved worker productivity.

Wireless is also an excellent solution for communication to controllers on moving platforms for material handling systems such as overhead cranes, automatic guided vehicles (AGVs), transfer cars, turntables and conveyor systems. Wireless provides high speed communications (such as for Ethernet) while not suffering from mechanical wear and tear as wiring harnesses, festooning, inductive rails and slip rings commonly do. Wireless is a great strategy to improve production by eliminating downtime.

Video is becoming an important part of industrial systems both for remote surveillance (security) and remote process monitoring. High speed wireless technologies offer a way to cost-effectively add video information to the control and monitoring system.

Finally, wireless technologies have expanded beyond traditional serial and Ethernet networks, and to other industrial networks and protocols. Wireless solutions are now available for PROFIBUS and HART permitting remote sensors and actuators to be connected to the main control system (PLC or DCS) without the need for hardwiring.

Factory Automation and Process Control

Wireless plays an important role in factories and processing plants. Industries such as consumer goods manufacturing, metals, automotive, pharmaceutical, food processing, packaging and material handling can benefit greatly from wireless technologies. Tangible benefits include cost reduction, more reliable control/processing systems and improved worker productivity.

Wireless technologies may be used to build a plant-wide wireless network connecting mobile workers to the production and/or business network. Maintenance workers can now access important data (such as a PLC program or recipe) while observing a malfunctioning device or inefficient process. In-rack wireless modules connect remote PLCs to the wireless network, expanding the devices available on the wireless network.

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Wireless is also a very cost-effective SCADA communication solution. Wireless may be used for controls at water pumping stations, power monitoring, machine condition monitoring and HMI displays.

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