



The Internet of Things

Brittany Loyd, marketing coordinator at Prime Controls, reports on the increasing importance of smart devices and embedded intelligence on the can making industry

Connecting devices to the Internet and their ability to communicate with each other has been coined with the term the 'Internet of Things' (IoT). Taking it beyond computers, tablets and smartphones, IoT defines a world where anything can be connected and communicated with intelligently and with ease.

Technologies based on IoT are taking the can making industry by storm. Based on a study performed by MPI Group (*Internet of Things Study*), 76 per cent of manufacturers will increase their use of smart devices or embedded intelligence into manufacturing processes in the next two years.

Plant manufacturers are seeking to develop an environment where information ranging from within the plant floor, to along the supply chain, is depicted in real-time, with easy accessibility and with the ability to use the information to improve performance. In today's plants, the IoT can construct a network connecting a range of assets such as production equipment to parts being produced, to quality assurance sensors to HMI devices.

Customers want an ever-expanding amount of data accessible at their fingertips now more than ever. The manufacturing industry is no different; they require improved visibility into equipment performance, resource needs and security threats to effectively maintain performance. With the rise of plant personnel shortages, it is increasingly necessary for maintenance crews to be able to predict a problem before it ever happens, and in the chance something goes awry, it's imperative that today's machinery has the capabilities to notify the operator of the error in order for a prompt repair to be completed.

The majority of older control systems were created with only the machine operation in mind, without even touching on troubleshooting assistance when problems occurred. With today's

modern control systems, companies are able to offer a vast assortment of solutions to assist plant maintenance teams, machine operators and management to maintain an efficiently functioning plant.

It is difficult for this high level of control and information capability to be done at the individual plant level. It takes a company dedicated to providing speciality controls partnering with the plant to offer a system that can be consistent between all plants within their corporation. Now more than ever, EthernetIP communication is becoming more commonplace within manufacturing plants, enabling operators the ability to access and operate machine sensors and controls remotely.

With the increased demand for remote access to systems, companies have had to adapt and improve upon current products to meet the needs of manufacturers. With recent upgrades and improvements, many companies have stepped into the 'digital world' with the ability to connect to the company's network, allowing for remote access to viewing screens and reports. Taking it even further, customers are now able to use a SmartPhone app for screen viewing on the go, making it more accessible than ever. The RSS feeds allow for fault reporting to be sent directly to the manager's inbox, alerting of any issue on the floor.

There are products that combine sensors and electronic processors. Testing sensors can be daisy chained and include infrared reporting and triggers allowing for mounting on a rotating machine without the need for wiring, while providing a variety of features to communicate data and assess the leak quality. This means controllers monitor pressure throughout the cycle; programmable units and custom software offer the flexibility to optimise the test system and data stream. Test valves can be controlled by the sensor and subsequently reduce inconsistencies. 

