

**THE ADDRESS**

Chard, Somerset

THE REQUIREMENTS

- Wi-fi coverage and security to enable stock control using hand-held barcode scanners

THE TECHNOLOGY

- Dual Aruba 6000 Mobility Controllers for redundancy
- Sixty Seven Aruba AP61 Access Points

THE BENEFITS

- Peace-of-mind reliability from having two controllers and saturated wireless coverage
- Effortless roaming throughout the plant as equipment is automatically transferred between access points
- Seamless coverage for authenticated laptop users

Customer Overview

Numatic is best known for its Henry vacuum cleaner, instantly recognisable due to the smiley face with the nose being the vacuum hose. The company manufactures domestic, commercial and industrial cleaning and maintenance equipment at its Somerset factory, distributing in the UK as well as France, Germany, The Netherlands and South Africa.

Started in 1969 in a factory smaller than a garage, Numatic is proud to be able to still supply replacement parts for all the vacuum cleaners it has produced – right back to the very first one.

Business Situation

Numatic employs over 700 people on a site of more than 10 hectares, producing over 4,000 products a day, and facilities are continuously expanding.

Thirty computer-controlled injection moulding machines, the majority equipped with six-axis or beam robots, produce the principle components. Larger tanks and containers are rotationally moulded on a four arm 'carousel' machine or a massive 'shuttle' machine. Sophisticated robotic welding, computer-controlled laser cutting and many other state-of-the-art operations contribute to the high build quality.

Design and development is done using state-of-the-art CAD-CAM systems and Rapid-Prototype modelling facilities.

All the important business processes are controlled by a fully-integrated computer network of more than 400 PCs with powerful Oracle ERP systems.

The impressive sales warehouse facility covers over 16,000 square metres, enabling Numatic to control its stock levels more tightly and provide customers with fast availability.

REACT's Solution

With Henry vacuum cleaners and over 150 other cleaning products rolling off the production line in a continuous stream at Numatic's Chard headquarters and factory, stock control and monitoring is critical to the continued success of the business.

Inventory is managed by barcodes on each item of stock and these can then be read using hand-held scanners. REACT Technologies needed to supply a wi-fi network across the companies series of warehouses and building so that the information recorded using the barcode scanners was automatically and immediately uploaded to the main computer system and became available to staff throughout the company.

Because staff moved between buildings and needed continuous access to the network, the wi-fi equipment had to be able to be able to monitor the location and strength of signal from each scanner and other computer equipment authorised to work on the network.

Numatic also wanted to have the capability to implement a Voice-over-IP (VoIP) telephony system at a later stage in a fixed-mobile convergence project.

REACT Technologies mapped the site and buildings to establish the number and optimal placement of the access

points (AP) needed to provide redundant coverage of about 80% of Numatic's operations. Signal strength and interference patterns were overlaid on schematics of the site and APs were positioned to ensure that all areas were covered by multiple signals. This ensured that an outage of one AP would not result in a loss of connectivity.

Two Aruba 6000 Mobility Controllers were installed in separate buildings on the site to provide secure, redundant management for the wi-fi system. Three separate wireless networks (WLAN) were configured to enable the barcode scanners to operate on one and laptop users on a second.

The barcode scanners, carried over from Numatic's previous system, were configured to function with the Aruba system and enable users to roam across the manufacturing site, remaining in contact with the network at all times.

The system has been tailored and fine-tuned since implementation as business needs have evolved and experience of how equipment is used was gathered.

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