

Super RFID: UK company driving next-generation development

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The call from RFID (Radio Frequency Identification) integrators for the next generation of technology, dubbed "Super RFID", has been answered by University of Leeds spinout company Instrumentel Ltd.

While it has been predicted that this technology will not be widely available for the next ten years, Instrumentel has already developed a wireless - and notably a battery-less - system that is ripe for manufacture.

Super RFID incorporates sensing using the RFID tag, enabling the supply chain data to be monitored and where necessary, an alert to be sent out - if for example, a refrigerated item should rise above a prescribed temperature limit. There are many benefits of Super RFID; from the economic savings made by reducing supply chain losses, through to increased efficiency and quality control procedures.

Instrumentel's core technology enables critical parameters to be sensed in harsh and difficult-to-access environments. The battery-less operation of the Instrumentel system allows readings or data transfer to take place at scan points in the supply chain for control and asset management.

The system can also actuate, and Instrumentel has designed unique locking mechanisms that can be applied to containers of virtually any size to secure goods throughout the supply chain.

Essentially, Instrumentel has developed three opportunities for Super RFID:

- Super RFID: defined as RFID plus sensing capability
- Super RFID+: the incorporation of RFID with locking
- Super RFID++: RFID featuring both sensing and locking

In addition, the technology can be designed to give access control to authorised personnel only. This technology is suitable for a wide range of applications in the food, consumer goods and security markets, as well as for controlling access to laboratory samples and forensic evidence.

Instrumentel's CEO Steve Couchman says: "We can develop our technology to fit different customer's needs. For instance, a company working with food may need the combination of RFID with sensing and actuation to ensure the quality of food arriving on the shop floor, while for non-food goods, or items that need to be secured during the supply chain, RFID with locking and access control may prove to be the right choice."

Instrumentel's locking system is already being trialled in the supply chain sector by award-winning Sheffield Company Loadhog Ltd (a subsidiary of Gripple Ltd). The combination of Instrumentel's locking system and Loadhog's revolutionary method of securing loads to pallets is gaining significant interest from the supermarket sector.

Mark Jackson, Production Director of Loadhog Ltd explains: "For Loadhog, the Instrumentel technology provides a significant advantage over the use of conventional 'pull to open' security-seals because it effectively prevents its unauthorised removal."

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