

A Cheaper Way to Convert Labels

A label manufacturer says it has developed a more efficient technique for embedding an RFID inlay into a self-adhesive paper label.

By Jonathan Collins

Oct. 13, 2004—Singapore-based label manufacturer [Innotech Resources](#), which markets its labels online through its [Worldlabel.com](#) Web site, says it has developed a more efficient way to embed RFID inlays into smart labels.

Although reluctant to disclose details of its new technique, the company says its patent-pending method will enable RFID inlays to be embedded into thermal paper label more quickly, accurately and cheaply than existing techniques. In addition, it will also enable smart labels of varying sizes to be created without the need to turn off or reset the machine for each new label size.

Innotech Resources is a 10-year-old company that supplies bar code labels to clients including UPS, FedEx and several major U.S. electronic companies throughout East Asia. The company also has offices in China and Malaysia.

The company maintains that its new technique offers a low-cost way to embed RFID inlays automatically and accurately into paper labels of varying sizes and can place an inlay in different areas of the label. The technique involves peeling away the silicon liner from the thermal transfer self-adhesive label stock and inserting an RFID inlay precisely between the two layers before they are joined again. Not only does the process require no additional adhesive, it also avoids damaging the inlays in making the smart label.

“The whole problem for super-high-speed production of RFID labels is crushing the tags during the process. We believe our patent-pending method allows for high-speed production and, at the same time, saves the integrity of the inlay,” says Russell Ossendryver, manager of Innotech Resources’ U.S. unit, which is based in New York City. “The resulting thermal transfer smart labels are suitable for later printing on standard thermal printers, such as those from Zebra, Intermec and Printronix, already deployed at manufacturers.”

Using a prototype label converter based on its new technique, Innotech has already produced batches of 5,000 and 10,000 4- by 6-inch smart labels with UHF EPC Class 1 and Class 0+ RFID inlays for a number of ongoing RFID pilots by electronics component manufacturers in Asia. The company also offers 4- by 6-inch smart labels available with Philips UCODE EPC 1.19 and HF tags. The company says it can use its technology to deliver smart label orders of up to 400,000 labels within eight weeks of receiving the order.

Innotech, however, is undecided whether it will use its new technology to create its own smart label converter business or will sell the rights to the technology to an existing manufacturer. Innotech believes, however, that a number of companies in Europe and the U.S. are already violating its pending patent.

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