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# Taiwan RFID



## Taiwan Int'l RFID Applications Show

## Oct. 7-11, 2008

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# ITRI demonstrates results of RFID research and development

Industrial Technology Research Institute (ITRI) is a public-private non-profit institution which conducts a wide range of research and development in various fields. One of these fields is with RFID, which is conducted by its Identification Security Technology Center (ISTC).

One of the main products that ITRI showcased was an information kiosk which utilizes RFID technology to read data and provide real-time information to people. Intended to be used in public events such as exhibitions, ITRI is actually implementing this system, the RFID Exhibition Service System, at the 2008 RFID show using several kiosks and over 10,000 user tags. The system

works in that visitors and buyers are given ID passes which feature tags on the back. These tags allow data to be transmitted to various receivers placed around the exhibition as well as to access the kiosk.

A visitor can then take his pass and press it onto a kiosk to obtain various kinds of information such as search for the location and directions to other booths or find facilities like washrooms. The kiosk can display a map of the show with the person's current location pointed out as well as the path traveled and booths visited by the person.

If the person belongs to a company and is visiting with others of the same company, he can find their



location and even write messages which can be displayed to his colleagues when they access the kiosk.

Other aspects of ITRI's RFID technology include its food trace-

ability product tracking and its flexible manufacturing system which is used for automated manufacturing lines for semiconductors, optical and electronics.

### Bulletin Board

#### Show Dates & Hours

Oct. 7-10	10:00-18:00
Oct. 11	10:00-16:00

#### Exhibition Extra

#### Organizers:

Taiwan External Trade Development Council (TAITRA)  
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## Asia Smart Tag pioneers vertical, integrated smart label production

Asia Smart Tag Co., Ltd. is a company manufacturing a wide variety of RFID card readers and RFID tags. Products have applications in different sectors including warehousing, packaging and security, among others. An RFID tag made by the firm looks thin yet contains vital information such as passwords and detailed product specification.

The company was founded in the central city of Taichung in 1988 and began as a manufacturer of a variety of remote control devices as well as security systems, all sold domestically. The company in 1994 decided to expand its business overseas. Today, Asia Smart Tag does business with companies all over the world.

To expand further into the high-tech arena, Asia Smart Tag in 1998 entered the RFID market and manufactured card readers, smart tags and other devices for 125KHz door security systems for commercial and residential buildings.

With increasing popularity of RFID, the company has shifted its focus from low-frequency security systems to RFID automation systems to meet market demands and find a niche to develop its business.

In 2002, Asia Smart Tag Co. introduced Taiwan's first integrated smart label production line. Even today the firm is still the only one with the vertical smart label production capability. In 2003, the company began making various HF and UHF tags and signed a deal



with the U.S.-based UHF Reader to be its Taiwan distributor. The company calls itself an "RFID missionary," hoping to bring RFID and related technologies to all parts of the world.

## Smartchip devices boast farm and workplace applications



Smartchip Microelectronics Corp., a leading RFID firm, boasts products so diverse and comprehensive, its general manager Ramon Tsai said he didn't know what to bring to RFID Taiwan.

Smartchip decided on their new RFID technology, the ISO 11784/785 chip that covers a variety

of uses, including animal identification, asset management, and access control.

Tsai qualifies the product as an "active" chip that detects tag frequencies from 30-50 meters. Amidst the chaos of the current milk powder scandal and the fact that mad cow disease is prevalent in many countries, Tsai says the government is paying special attention to the production, growth, and processing of livestock. The "smart" ISO chip, currently being used on cows, goats, and pigs, identifies the animals and accompanies them all the way to the slaughterhouse. This allows health officials to track down animals in

the case of a disease outbreak.

The chip can also be used in the workplace. In the form of asset management, a hospital with numerous important items in storage and often little time to find and retrieve them, can benefit greatly from the ISO 11784/785.

How exactly is the device attached? The chip on display resembles a yellow plastic button that can easily be corded around assets or, as Lee describes, "Stamped into the ear of an animal in the manner of earrings."

Smartchip microelectronics, manufactured from scratch by the company itself, is already in high demand in the industry due to its high quality and affordable prices. "Once people find out our products are from Taiwan, they immediately recognize its quality and want it in large quantities," enthuses Tsai.

## Ming Tai a leader in printing flexible electronic materials

Ming Tai Screen Printing Machine Co., Ltd. is a screen printing equipment manufacture that provides sound technical backup and equipment to help other businesses improve their print quality. With products under the "foreigner friendly" label of Skyhill, Ming Tai has been devoted to screen printing and peripheral equipment for the printing industry for over 20 years.

Albert Lee, from Ming Tai Co., explains that the company produces the only qualified roll-to-roll webbed screen printing machine. Exhibiting at the Taiwan International RFID Applications Show has allowed Skyhill products to be fully showcased; people at the exhibit stop in their tracks to view the process of transparent film being rolled and printed.

"The government has taken a special interest in flexible electronics and has given us the 'green light' when it comes to our produc-

tion of it," Lee says, referring to the printing of flexible electronic materials such as RFID, smart cards, e-books, e-maps, cell-phones, digital watches, e-posters, flexible circuits (FPC), and membrane switches, just to name a few.

"Green light" has new meaning in this context as flexible electronics have the potential to make existing products environmentally friendly. Lee uses the example of solar panels, which are currently made out of glass. "If it were made with thin flexible film instead, it would be more effective in converting solar energy and will weigh less." Flexible film is also recyclable.

"Right now, the concept of solar energy is to turn light into energy. We've taken the approach of looking at how electric energy can be turned into light. This is similar in concept to a lamp, but flexible film can emit 99% of light using less than 1% of the energy," says Lee.

