Internet of Things – from Vision to Reality
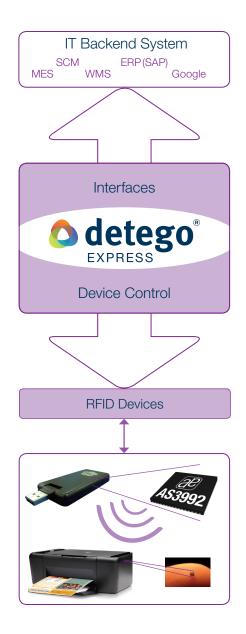
Smart Interfacing, Smart Advertising, Smart Theft Protection are now available as Plug&Play solution

International technology leaders demonstrate a Plug&Play solution, a major step towards the Internet of Things

Connecting everyday items to the internet through embedding short-range mobile transceivers enables a new medium of communication between people and objects and between objects themselves. Novel RFID products are presented allowing large scale integration of ubiquitous computing in a way triggering innovative ideas of high value applications for the everyday life. Easy to install, one-click downloadable software makes the technology utilizable for experts and novices alike.

Microelectronics Technology Inc. (MTI), **austriamicro-systems**, **NXP Semiconductors** (NXP) and **RF-iT Solutions** have teamed up to take the lead in paving the way to the Internet of Things.

Use Cases

Some exciting end application examples have been implemented by the partners to demonstrate the easy way of using the innovative technology:

▶ Smart Interfacing

Plug MTI'S RFID USB Dongle (RU-888-100) to a USB port of your PC, download the **detego® EXPRESS** software from RF-iT's homepage and feed EPC data to any IT-Backend system of your choice. Through a series of interfaces defined data (ID, timestamp, location) is provided to seamlessly integrate into your IT backend systems like SAP, Navision, Sage and numerous others.

▶ Smart Advertising

Download the Internet link option from RF-iT's homepage and optionally feed EPC data to search engines like Google. Find out evaluable information about products and services by just presenting a tagged item to MTI and austriamicrosystems RFID reader USB Dongle with RF-iT's software application seamlessly connecting EPC data to the world wide web.

▶ Smart Theft Protection

The recently announced NXP Semiconductors UCODE G2iL+ presents many exciting new features never before available from EPCglobal C1G2 compliant UHF tag silicon. One application that the partners have leveraged from the UCODE G2iL+ and demonstrate is the activation and deactivation of electronic devices over the RFID link. By integrating NXP's tiny G2iL+ silicon into a tag, and then embedding this within an object or item, or even a printed circuit board (PCB) of a device such as a mobile phone, MP3 player or printer, the product can be stored on the sales floor in a deactivated state minimizing its value to potential shoplifters. Activation and downloading of relevant software or firmware of the device can be done at home after proper registration on the vendor's homepage, or alternatively at the POS, whichever is most convenient.

Microelectronics Technology

MTI was founded in 1983 as the first RF and microwave design and manufacturing company in Taiwan. Internationally recognized today as a global leader in supplying RF and microwave products, MTI designs and manufactures products for cellular base station backhaul, remote radio heads for LTE, satellite receivers, upconverters and transceivers, terrestrial PTP and PTMP radios, and broadband wireless access solutions. MTI is currently focusing its resources on developing innovative RFID UHF reader products for high-volume manufacturing and to enable triggering of mass market and ubiquitous adaptation of RFID. Since 2004 MTI has been supplying RFID reader products into the market, in 2005 MTI introduced its first UHF RFID EPC Gen2 reader and distinguished itself as the first company in Asia to achieve EPC Gen 2 certification. MTI was presented the Hsinchu Science Park 2007 Innovation Product Award for its UHF RFID reader solutions, and in 2008 received the Excellence Award for Engineering Innovation from Taiwan's Ministry of Economic Affairs (MOEA). In 2009, MTI partnered with ODIN technologies to win the industry's most prestigious "Best in Show" award presented at RFID Journal Live! 2009. For more information contact Darryn Prince, Strategic Business Development, prince_darryn@mti.com.tw or visit: www.mti.com.tw

austriamicrosystems

With over 15 years of RFID experience, austriamicrosystems continues to help simplify the customer's designs and help them achieve the fastest time to market. Our reader ICs are different than competition because our architecture is optimized for RFID. Other solutions adapt a classic non-ideal RF transceiver architecture which compromises performance, increases complexity, and consumes significantly more power. The AS3992 is pin to pin compatible with the existing "Simply Gen 2" portfolio, enabling customers to achieve the right balance of performance vs. cost with a family of products without changing the board. austriamicrosystems is a leading designer and manufacturer of high-performance analog ICs, combining more than 25 years of analog design capabilities and system know-how with its own state-of-the-art manufacturing and test facilities. austriamicrosystems leverages its expertise in low power and high accuracy to provide industry-leading customized and standard analog products. Operating worldwide with more than 1,000 employees, austriamicrosystems focuses on the areas of power management, sensors & sensor interfaces, portable audio and car access in its Communications, Industry & Medical and Automotive markets, complemented by its Full Service Foundry activities. austriamicrosystems is listed on the SWX Swiss Exchange in Zurich (ticker symbol: AMS).

NXP Semiconductors

UCODE G2iL series offer leading edge read range enabling simple antenna design solutions that increase the cost effectiveness of RFID solutions. An extensive set of unique features, including the Digital Switch, Data Transfer, Tag Tamper Alarm, battery assist mode and advanced privacy features make RFID more reliable, more flexible and easier to work with. NXP Semiconductors provides High Performance Mixed Signal and Standard Product solutions that leverage its leading RF, Analog, Power, Digital Processing and manufacturing expertise.

These innovations are used in a wide range of automotive, industrial, consumer, lighting, medical, computing and identification applications. Headquartered in Europe, the company has about 28,000 employees working in more than 25 countries and posted sales of USD 3.8 billion in 2009. News from NXP is located at www.nxp.com

RF-iT Solutions

RF-iT Solutions GmbH stands for expert consulting, successful project implementation and the development of advanced RFID solution modules. As the developer of the leading RFID platform **detego**® You-R OPEN and a leading European provider of integrated RFID solutions, we offer with **detego**® standard modules for the optimization of business processes. At the same time, we focus our research and development capabilities continuously on innovative technologies in the Auto-ID field, to create a clear value for our customers. Since our founding in 2005, we witnessed a steady growth and have gained many new partners, employees and customers. For further information about RF-iT Solutions GmbH and the solution modules of **detego**® please visit: www.rf-it-solutions.com

detego® **EXPRESS** is your cost effective and professional entry to the RFID technology. Select an interface of your choice to the IT backend system and download **detego**® **EXPRESS**. Through a series of interfaces (Oracle, MySQL, MS SQL, OLE DB, ODBC, HTTP request, File, Web-Service) defined data (ID, timestamp, location) are provided by **detego**® **EXPRESS** for your IT backend systems (SAP, Navision, Sage and numerous others). Other interfaces such as message queuing and TCP/IP Sockets are available on request and can quickly be implemented.

With the Internet link option product code information can be directly fed to internet search engines like Google and UPC. The software can be downloaded for free for a four weeks trial period. After the evaluation period you will receive details for an affordable unlimited license, which you can obtain immediately. www.rf-it-solutions.com/express