Avnet Silica, Actility and Trusted Objects demonstrate live secure provisioning and secure data exchange between a LoRaWAN sensor and a cloud-hosted backend

Avnet Silica, Actility and Trusted Objects demonstrate an unrivalled level of end-to-end security between a LoRaWAN Visible Things sensor and a cloud-hosted backend over a ThingPark Wireless powered private network, thanks to a hardware-based security solution

Mobile World Congress, Barcelona, February 27, 2017 – Avnet Silica, an **Avnet** (NYSE: **AVT**) company, Actility, the industry leader in low power wide area networking, and Trusted Objects, a provider of secure firmware and security services, today announced the availability of a demonstrator showcasing hardware-secured Over-the-Air Activation of a LoRaWAN™ sensor with an Actility LoRaWAN Join Server also including Hardware Security Module (HSM) technology followed by end-to-end encrypted data exchange between the sensor and a cloud-hosted backend through Actility's ThingPark Wireless internet of things (IoT) network platform.

The solution relies on the TO136-LoRaWAN-OTAA secure element, the only low-power secure element in the market, which can secure battery-powered applications without impacting their battery life.

The TO136 secure element is mounted on Avnet Silica's Visible Things™ LoRaWAN modem PMOD plugging into a temperature sensor. This sensor board connects wirelessly to an Actility base-station provisioned on ThingPark Wireless providing the LoRaWAN Join Server capability required by the Over-the-Air Activation and the link to a cloud-hosted control panel. Upon automatic LoRaWAN 1.0.2 compliant secure activation between the secure element on the device and Actility's HSM in the network, the sensor is able to communicate privately end-to-end with the cloud-hosted backend without exposing any secret key at any time.

Guillaume Crinon, Innovation Technical Marketing Manager for security with Avnet Silica comments: "After announcing the availability of our lowest power TO136-LoRaWAN family of secure elements, we are proudly demonstrating a typical use case of an Over-the-Air Activation of our Visible Things LoRaWAN PMOD over Actility's network. Secret keys have been personalized at our factory and exchanged with Actility's Join Server by means of a secure key-ceremony. We are now ready to roll-out with our LoRaWAN public and private network partners and customers bringing security on LoRaWAN networks to new heights."

Olivier Hersent, founder and CTO of Actility, adds: "The latest ThingPark brings LoRaWAN security to a new maturity level. Our secured Join Server features carrier-grade network security through the use of FIPS certified Hardware Security Modules, and we are now integrating with Avnet/Trusted Objects secure elements on the device side. This will allow not only end to end data security from device to application servers, but also complete secured lifecycle management for high security use cases requiring the commissioning of symmetric keys on both device and network in an integrated way. The ThingPark solution integrated with secure element manufacturers will simplify the way device manufacturers can design in security, and makes LoRaWAN system security resistant not only to wiretapping, but also to direct hardware attacks."

Hervé Roche, Vice-President of Marketing, Trusted Objects, adds: "Thanks to our partnership with Actility and Avnet Silica, we are proud to demonstrate that our security solution based on the TO136 Secure Element provides the root of trust allowing a highly secure over-the-air activation and an end-to-end secure data exchange between a LoRaWAN sensor and a cloud-hosted backend. Specially customized to comply with LoRaWAN 1.0.2 specification, Trusted Objects hardware-based security solution is available to all developers of applications looking for enhanced security on LoRaWAN."

The demo will be displayed at Actility's booth Hall 8.0C3 at Mobile World Congress, Barcelona, February 27 – March 2, 2017. Do come and visit us!

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About Avnet Silica

Avnet Silica is the European semiconductor specialist division of Avnet, Inc., one of the leading global technology distributors, and acts as the smart connection between customers and suppliers. The distributor simplifies complexity by providing creative solutions, technology and logistics support. Avnet Silica is a partner of leading semiconductor manufacturers and innovative solution providers over many years. With a team of more than 200 application engineers and technical specialists, Avnet Silica supports projects all the way from the idea to the concept to production. For more information, visit www.avnet-silica.com

About Avnet

From components to cloud and design to disposal, **Avnet** (NYSE:**AVT**) accelerates the success of customers who build, sell and use technology globally by providing them with a comprehensive portfolio of innovative products, services and solutions. For more information, visit www.avnet.com.

About Trusted Objects

Trusted Objects provides security firmware designed to meet the security needs of the IoT applications such as authentication, privacy, intellectual property protection, secure exchanges, among others.
These firmware are embedded in a secure microcontroller to form an optimized "Secure Element" which is the heart of the end-to-end security solutions built to address market expectations in terms of tamper resistance, footprint, consumption, ease of integration and competitiveness. Trusted Objects also delivers personalization services tailored to the fragmented market of IoT and security consulting services for a fast deployment of comprehensive solutions that meet the highest security requirements.
For more information, visit **www.trusted-objects.com**

About Actility

Actility is the industry leader in LPWA (Low Power Wide Area) large-scale infrastructure and the innovator behind the ThingPark IoT Solution platform. Actility's ThingPark enables scalable LPWA networks and interoperable IoT applications and services. ThingPark Wireless is a core network management and supervision solution for LPWA connectivity designed from the beginning for carrier-grade solutions, and already deployed in over half the national LPWA network rollouts globally. ThingPark OS is a central IoT management service to connect sensors to applications with bidirectional interaction. ThingPark X is a data analytics and control framework which exposes data from connected things to applications and connects with cloud platforms, and also offers off the shelf IoT industrial applications. ThingPark Market is a B2B ecommerce platform for buyers and sellers, aggregating, distributing and connecting IoT devices and applications to the ThingPark platform. Actility is a founding member of the LoRa Alliance.
http://www.actility.com

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