MobileKnowledge offers sleek new design for multiple NFC-secure applications geared to wearable manufacturers

MK100 brings a white label platform for hosting multiple payment, transport and secure access NFC cards in a light, compact module small enough for a ring!

MobileKnowledge, an expert engineering company in contactless and secure applications, introduces the MK100, a reference design to provide full NFC functionality to wearable devices, and small enough to be embedded in a ring.

The MK100 solves the most important challenges wearable manufacturers face today when trying to implement secure contactless applications such as payments or transport. This includes HW and SW integration, worldwide access to any customer's payment cards, banks and service providers, power consumption and over-the-air (OTA) provisioning of the NFC applications

The module, which uses technology from NXP Semiconductors N.V. (NASDAQ:NXPI), features a tamper-proof, banking grade secure element to enable the easy provisioning of any secure contactless applications. Featuring a state-of-the-art antenna design, MK100 is EMVCo pre-certified and includes VISA, Mastercard, Amex, Discover and PBOC applets.

While there has been significant growth in smartphone-based contactless payments in the past two years, especially since the arrival of Apple Pay and similar solutions, the use of wearables for NFC applications has still not reached its full potential.

Currently, a selection of high-end smartwatches currently offer the possibility of storing user's payment cards. The difficulty in designing and integrating the necessary technology into a wearable, plus the complexity of certification and provisioning of the contactless applications, are making most wearable vendors reluctant to explore the possibility of getting into this lucrative market.

Another critical challenge for OEMs is how to give service providers of contactless applications (banks, transport operators etc.) access to OEM devices – without having to negotiate with each of them individually.

That's where the MK100 comes in. As a certified engineering consultant partner to NXP, MobileKnowledge has designed the MK100 using NXP's PN66T NFC secure element, the same which is present in many NFC smartphones, to perform contactless applications

Using the PN66T allows OEMs to benefit from NXP's Open Secure Element functionality. This enables the device to be directly and securely provisioned from the Tokenization Service

Platforms (TSP) of the Payment Network Operators (PNO), via the bluetooth connection of the customer's smartphone to their wearable device.

Wearable device manufacturers and their customers will have access to the hundreds of banks who have already rallied the PNOs tokenization platforms on a constantly growing worldwide basis.

On top of this, a wearable based upon the MK100 will also be able to emulate smartcards based on MIFARE® technology and host any additional authentication credentials (e.g. FIDO).

MK100's compact design also helps reduce the BoM for new devices since it is based upon a compact 2-chip concept. The reference design offers optimized power consumption, enabling the battery to last about six months between charges. The low consumption also offers the option of using a coin-cell non-rechargeable battery. The reference design, measuring only 10 x 15 mm, is ideal for small wearable devices, including rings and bracelets.

"The integration of contactless secure applications with wearable devices is a very significant new business opportunity for hardware and service providers," says Pedro Martinez, founder and CEO of MobileKnowledge. "We are excited to contribute to the acceleration of this market, the optimization of system solutions, and the democratization of new cost-effective, secure provisioning platforms."

MobileKnowledge's extensive experience providing development kits and training on mobile NFC applications, plus its in-house testing facilities, allows it to help OEMs with certification, software development, and final implementation of MK100 in a wearable device.

MK100 is now available for OEM evaluation. MobileKnowledge will be showing the initial reference design during the Mobile World Congress at NXP Booth: Hall 7, #7E30.

About MobileKnowledge

MobileKnowledge is a team of HW & SW system engineers, who are experts in Smart, Connected and Secure technologies and their related applications: NFC, secure micro-controllers, smart cards, mobile applications, reader ICs, smart tags and labels, RFID, MIFARE family, authentication devices and IoT. Services include: Application and system Design Engineering, Hardware and software development, Mobile applications, Antenna design, test and certification, Reference designs, SDKs, development and demo boards and Advanced Technical Training

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