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PRESS RELEASE

EM Microelectronic enables holistic omnichannel consumer experience and product authentication

em|echo-V brings together powerful RAIN RFID supply chain functionalities with seamless NFC consumer engagement and web authentication

Marin, Switzerland, 10 January 2020 – EM Microelectronic, the ultra-low-power semiconductor company of the Swatch Group and an RFID industry pioneer for more than 30 years, today has announced **em|echo-V**, its enhanced product authentication dual-frequency RAINFC technology.

em|echo-V enables brands and retailers to offer their customers a holistic omnichannel experience, allowing them not only to purchase the products anytime, anywhere, but to interact with them throughout their life-cycle without compromise on consumer privacy.

Benefits to consumers

The addition of powerful NFC web authentication capabilities, along with the significant improvement in user experience provided by NFC Type-5, offer the possibility to the consumer to authenticate the product and its distribution channel.

Moreover, the interaction with the product before, during or after purchase, in-store or at home offers a consistent consumer experience, regardless of the channel.

Benefits to brands and retailers

The combination of NFC with RAIN RFID in a single chip makes a powerful all-in-one tool for supply chain management, consumer engagement, and product authentication, offering the possibility to manage the distribution channels and fight the black and grey market. The consumer can verify the authenticity of the purchased product, while the retailer can verify the authenticity of the returned product.

em|echo-V single chip, shared memory combination of RAIN RFID and NFC allows for simple upgrades of existing RAIN RFID installation using the existing infrastructure, with very small effort. Brands and retailers can implement powerful analytics for the consumer interaction with the product both in-store and at home and facilitate after-sales service, support, upselling and cross-selling.

Benefits to inlay and label manufacturers

em|echo-V single chip, shared memory chip allows the production of combined RAIN RFID – NFC labels in one-step assembly. Encoding can also be performed in one step, via either one of the two

communication interfaces, dramatically reducing the overall manufacturing and encoding cost, while offering full flexibility for backwards compatibility with already deployed infrastructure.

Back-to-back... and back!

Traditional RAIN RFID installations provide numerous benefits all the way up to the store or distribution center, but do not allow for true consumer engagement. The addition of an NFC interface on the same chip extends the reach all the way to the consumer via their smartphones.

em|echo-V provides merchandise visibility from manufacturing to the consumer and back to the supply chain, when products are returned, all while guaranteeing the product authenticity and consumer privacy. Furthermore, it supports the sustainability effort by allowing the manufacturer to keep track of the product movement and consumer to verify the corresponding CO₂ footprint.

“As a worldwide leader in trusted identities, HID Global is in a unique position to gain broad market insights into the demand for new technologies that will help customers deliver a wide range of solutions based on RFID,” said Mark Robinton, VP Strategic Business Development, Identification Technologies with HID Global. “We are excited to integrate the em|echo-V chip into our HID Trusted Tag® Services portfolio to further enable advanced supply chain management use cases combined with the next wave of secure IoT applications.”

“EM’s em|echo-V breaks new ground, offering endless possibilities for added value products in the RAIN RFID and NFC space,” said Amir Mobayen, President Transponder Division and Chief Revenue Officer at Smartrac. “Hence, we will leverage our antenna design and manufacturing expertise to provide our customers with innovative, high quality and sustainable RFID inlays and tags that lead the market and make the most out of em|echo-V’s remarkable IC performance.”

Dinesh Dhamija, President Solutions Division and Chief Technology Officer at Smartrac, added: “The availability of innovative RFID products that combine the strengths of EM’s em|echo-V IC with the benefits of Smartrac’s technology know-how enables cutting-edge Smart Cosmos IoT solutions for supply chain visibility, enhanced consumer engagement, secure product authentication and brand protection – all in one tag.”

“r-pac enables retailer and brands to utilize all benefits from connected merchandise - from needle to wardrobe” added Michael Teitelbaum, CEO of r-pac. “With the new em|echo-V chips and the r-trac™ platform, retailer and brands are able to track and trace their merchandise from source to POS using RAIN technology while connecting with their customers via NFC. r-pac is excited to offer em|echo-V enabled labels and this capability.”

Michel Willemin, the CEO of EM Microelectronic added “em|echo-V showcases the specialized True Ultra Low Power (TULP) IC design expertise and the highly optimized in-house semiconductor process available within the Swatch Group. We are proud to offer Swiss innovation to the global RFID market for over 30 years”

Product features

em|echo-V is fully EPC Gen2v2.0.2 and NFC Type-5 compliant and delivers state-of-the-art RAIN RFID radio frequency performance as well as superior user experience thanks to the ISO 15693 interface. Its highly optimized AES-128 cryptographic hardware implementation provides best-in-class Web Authentication brand protection to consumers’ smartphones using dynamic NDEF technology on minimum silicon real estate, while enabling very compact antenna designs thanks to its ISO-15693 air interface.

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Company websites

<http://www.emmicroelectronic.com>

<http://echo.emmicroelectronic.com>

Notes to editors

EM Microelectronic, a company of the Swatch Group, designs and manufactures Ultra-low power ICs for small portable devices and green IoT. A leading Swiss innovator, EM has been serving the RFID market for 30 years with passive, active and semi-active ICs covering all frequency ranges: LF, HF, UHF, 2.4 GHz.

With the first mass deployments more than a decade ago, EM has pioneered the adoption of UHF RFID in retail, paving the way for the emergence of RAIN RFID. The company continues to drive new applications with its em|echo family, combining RAIN RFID and NFC in a single RAINFC IC, enabling new consumer experience and product authentication functionalities on top of traditional use cases.

Pictures

Pictures courtesy EM Microelectronic – Marin SA.

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