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STMicroelectronics achieves EMVCo certification for biometric-payment platform, cutting time-to-market for card issuers

ST's complete certified technology platform combines embedded secure element and ultra-low-power general-purpose microcontroller for cost-effective and robust protection

Geneva, November 28, 2022 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has announced it has completed EMVCo[1] certification for its STPay-Topaz-Bio biometric payment card platform. Certification confirms the security of the platform and its interoperability with payment systems. Mastercard and Visa payment schemes certifications are expected by early 2023.

The achievement makes STPay-Topaz-Bio and the underlying secure hardware the first one-stop-shop EMVCo-certified platform to comprise a biometric secure element and secure operating system (OS). The market for biometric payment cards is forecasted to grow at over 200% CAGR through 2026.

"*Card issuers everywhere can now take advantage of our certified STPay platform to deliver new products to market quickly, protected by biometric authentication that is extremely robust as well as easy to use*," said Laurent Degauque, Marketing Director, Secure Microcontroller Division, STMicroelectronics. "*The secure element IC that anchors this solution leverages our expertise in hardware security for computing and Internet-of-Things (IoT) applications and is built for contact and contactless transactions.*"

ST's ST31N600 secure element IC provides state-of-the-art defenses for card-payment applications and sensitive processes. These include the biometric template matching for cardholder authentication, which uses software libraries developed with Fingerprint Cards AB (Fingerprints™). The ST31N600 runs a secure OS and the latest Arm® SecurCore® architecture for secure microcontrollers. In addition, designers can introduce value-added card features by securely connecting various types of peripherals.

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[1] EMVCo is the organization that manages the EMV® specifications and test programs used by the global card payments industry. These facilitate convenient and secure payment services and ensure interoperability between card payment products. Founded by American Express, Discover, JCB, Mastercard, UnionPay, and Visa, the organization works with almost 100 Associates that contribute to developing the specifications.

Co-packaged with ST's [STM32L443 ultra-low-power general-purpose microcontroller](#) in a module compliant with EMV® specifications, STPay-Topaz-Bio delivers a cost-effective Biometric System-on-Card (BSoC) solution. The STM32L443 handles non-sensitive aspects including managing the card's fingerprint sensor module and ensures seamless experiences for users. Also featuring energy harvesting for batteryless operation, STPay-Topaz-Bio meets EMV ISO 7816, ISO 14443, standards for contact and contactless cards.

About STMicroelectronics

At ST, we are 48,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An integrated device manufacturer, we work with more than 200,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and connectivity. ST is committed to becoming carbon neutral by 2027. Further information can be found at www.st.com.

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