



NXP First to Receive Common Criteria Certification for Standalone V2X Secure Element

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LAS VEGAS, January 6, 2020 – NXP Semiconductors N.V. (NASDAQ: NXPI), the world's largest supplier of automotive semiconductors, has announced that its Secure Element for V2X is now Common Criteria certified by the Netherlands Common Criteria Certification Scheme (NSCIB). The designation makes the NXP SXF1800 the first standalone automotive-qualified Secure Element for V2X applications to receive the Common Criteria EAL4+ certification, a prerequisite for participation in a common European V2X system. The SXF1800 was third party tested to the highest attack level AVA_VAN.5 by Riscure, one of the leading high assurance test laboratories in the world, based in Delft The Netherlands.

Safety is the most important goal of V2X communications, and the security of the V2X system plays a significant role in helping to achieve it. Carmakers need to ensure that messages entering the vehicle via V2X cannot be compromised during transmission and that the authenticity of the sender can be verified.

NXP addresses these security demands by leveraging its heritage in Secure Elements for chip cards and e-passports. The SXF1800, based on a highly secure microcontroller, uses the same security technology that NXP uses to protect mobile payments and to protect ECC private keys from exposure and misuse.

The newly certified SXF1800 gives an assurance to carmakers that the device fulfills the security requirements for being deployed in Europe. The certification, preceded by third party evaluation, simplifies Tier1/OEMs development process by removing one of the biggest hurdles to comply with local regulations.

The NXP SXF1800 Secure Element is already on the roads of Europe as part of [Volkswagen and NXP's effort to Deliver Safety to European Roads with World's Largest Rollout of Communicating Car Technology](#).

NXP is also seeking FIPS 140-2 Level 3 certification from the National Institute of Standards and Technology (NIST). Obtaining these dual certifications means that OEMs and Tier-1s could potentially bridge a regulatory gap for their car models in both the United States and Europe with a single V2X Secure Element.

About the SXF 1800

- Provides cryptographic services per IEEE 1609.2 and ETSI TS 103 097
- Common Criteria certified hardware platform at EAL5+ level per smart card Protection Profile
- Compliant with Car-2-Car Protection Profile for V2X HSM
- Compliant with requirements of FIPS 140-2 level 3 (level 4 for physical security)
- Crypto agile, with native support for ECC curves in short Weierstrass form (NIST, Brainpool)
- Secure firmware updates, allowing for fixes and new functionality to be added in the field
- Signature generation performance exceeding single and dual-channel requirements, with low latency ensuring freshness of a message
- Secure storage for private keys, as well as for CA certificates and other sensitive data
- Qualified in accordance with AEC-Q100
- Ambient operating temperature: -40 °C to +105 °C
- High-speed SPI interface

For more information contact:

About NXP Semiconductors

NXP Semiconductors N.V. enables secure connections for a smarter world, advancing solutions that make lives easier, better, and safer. As the world leader in secure connectivity solutions for embedded applications, NXP is driving innovation in the automotive, industrial & IoT, mobile, and communication infrastructure markets. Built on more than 60 years of combined experience and expertise, the company has approximately 30,000 employees in more than 30 countries and posted revenue of \$9.41 billion in 2018. Find out more at www.nxp.com

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