

V2X Security



Comprehensive cybersecurity for vehicle-to-everything communication

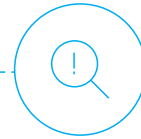
AUTOCRYPT establishes and maintains trust in Cooperative Intelligent Transport Systems (C-ITS) through its tri-standard compliant V2X PKI and security library for V2X end entities.



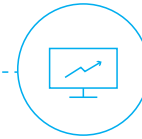
Security Module for End Entities



V2X PKI Backend



Misbehaviour Detection



SCMS Admin Dashboard

PKI Backend

Vehicle-to-everything (V2X) communications are secured by a PKI-based authentication system, ensuring that road users can anonymously verify one another's identity during message exchanges. The V2X PKI architecture is standardized as the **Security Credential Management System (SCMS)**.

AutoCrypt® V2X-PKI

Cloud-Hosted SCMS as-a-Service

AutoCrypt® V2X-PKI is an SCMS platform that facilitates the enrolment, issuance, and revocation of certificates for V2X end entities (OBUs in vehicles and RSUs in roadside infrastructure).



Lifecycle Management

- Manages the entire certificate lifecycle, from issuance to revocation
- 24/7 monitoring system and customer support



Worldwide Compliance

- World's first and only V2X PKI platform that supports all three major SCMS standards (US SCMS, EU CCMS, and Chinese C-SCMS)



Scalability

- Easily scalable as V2X deployment grows
- Supports deployment of millions of certificates



Cost Reduction

- No need for local servers
- No need for software installation and maintenance

*On-premises deployment available upon request

End Entities

AutoCrypt® V2X-EE

Embedded Module for OBUs and RSUs

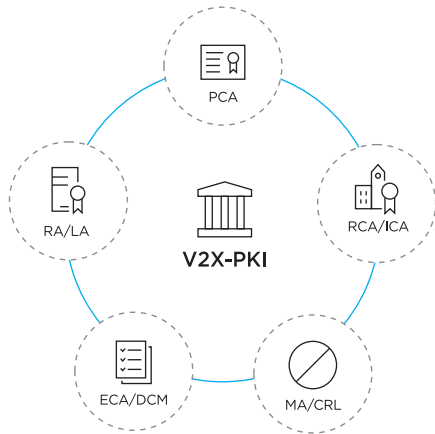
AutoCrypt® V2X-EE consists of a security module that can be readily integrated into OBUs and RSUs. It enables the end entity to join the SCMS and sign and authenticate V2X messages.

- Compatible with IEEE 1609.2 (WAVE) and C-V2X units
- Testing complete with all major V2X stack companies
- Supports a wide range of hardware security modules
- Proprietary Local Certificate Manager stores relevant certificates within each end entity, ensuring industry-leading message verification speeds

The V2X Verification Process

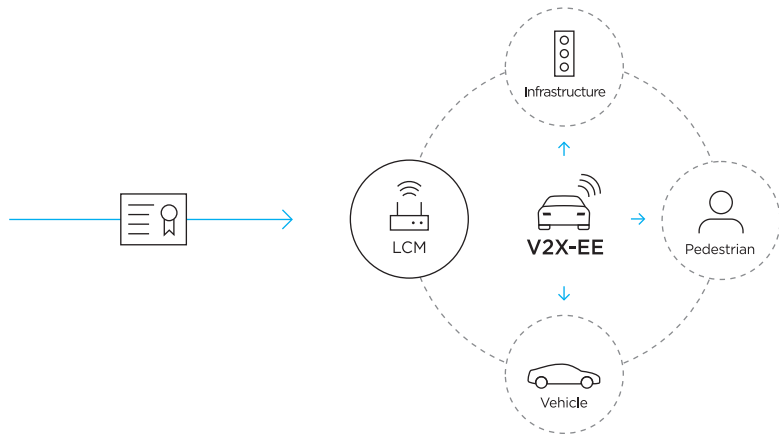
AutoCrypt® V2X-PKI

AutoCrypt® V2X-PKI issues, distributes, and revokes certificates in the backend server.



AutoCrypt® V2X-EE

AutoCrypt® V2X-EE signs and verifies V2X certificates during message exchanges.

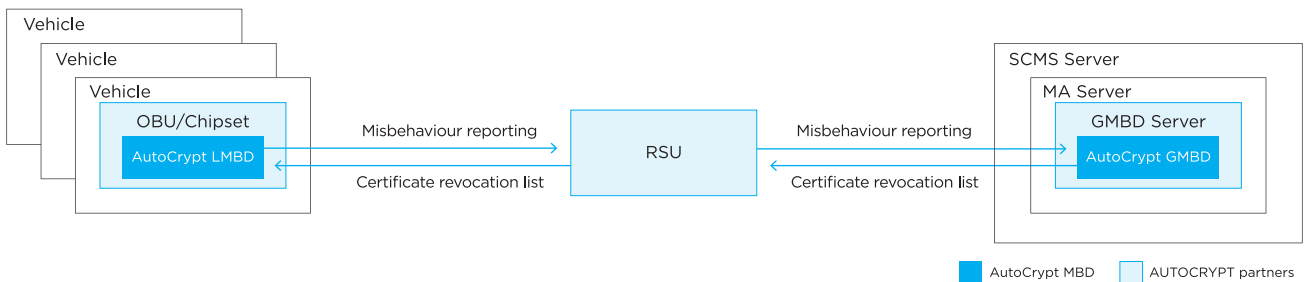


AutoCrypt® MBD

Misbehaviour Detection and Reporting

AutoCrypt® MBD is a misbehaviour detection software implemented on the V2X PKI platform, enabling misbehaviour reporting and certificate revocation for V2X communications.

- Consists of a local MBD embedded into OBUs, and a global MBD deployed in the V2X PKI server



AutoCrypt® IMS

SCMS Admin Dashboard

AutoCrypt® IMS is an integrated management system designed for OEMs and SCMS operators to supervise and manage their entire SCMS across all regions. Custom UI development is provided to fit each client's needs.

Supported certificates:

- Enrolment certificates
- Identification certificates (for OBUs)
- Pseudonym certificates (for OBUS)
- Application certificates (for RSUs)

