Microsec V2X PKI is a security framework for providing the safety of vehicle-to-everything communication. In such environments, public key infrastructures are used to secure the environment by verifying the participants' permissions with the usage of certificates. Microsec V2X PKI does this so with the most up-to-date cryptographic solutions, including Elliptic Curve Cryptography (ECC) which has more advantage in the current system than the widely used RSA algorithm.

Microsec operates several EU C-ITS security Credential Management System (CCMS) service levels. The current data sheet refers to the European Certificate Trust List (ECTL) Level 0 registered service for tests and pilots. Commercial CCMS service is also available.

- Provides security certificates for Road-Side Units (RSUs) and Onboard Units (OBUs)
- ECTL Level 0 registered 24/7 available service (Level 2 ready)
- User portal with helpful tools and features
- Challenged at ETSI Plugtests™ events
- Used by a global early user group for tests and pilots
- Registration requests: https://v2x-pki.com

FREE OF CHARGE SERVICE ACCESS IS AVAILABLE

Microsec V2X PKI – CCMS details

- Complies with the following standards:
  - IEEE Std 1609.2 (IEEE Standard for Wireless Access in Vehicular Environments)
  - ETSI TS 102 940 (ITS-S security (PKI) architecture and application groups)
  - ETSI TS 102 941 (Trust and Privacy Management)
  - ETSI TS 103 097 (Certificate and message structure definitions for C2CPKI)
- Microsec Root CA registered on the European Certificate Trust List (ECTL)
- Backed by the Microsec operated eIDAS Qualified Trust Service Provider infrastructure
- Benefits of more than 15 years of CA operation experience with solid PKI background
- Several implementation options:
  - SaaS (Microsec infrastructure)
  - SaaS Cloud (e.g. Amazon, Azure, nShield as a Service)
  - On-premise (within the Partner's infrastructure)

User Portal features and tools

- Easy to use and quick device management.
- Company level bootstrapping/device registration for initial enrolment management, based on ETSI TS 102 941 canonical identifiers.
- Event log for with detailed information about the requests
- Easy to access CA certificates and trust list information
- Device side configuration is required only (OBU/RSU)
- Tools for easy and fast testing:
  - Online COER decoder tool
  - Offline Authorization Ticket (AT) generator tool for offline devices

Microsec Ltd. is a mid-sized qualified trust service provider (QTSP) and a PKI technology expert independent software vendor (ISV), located in Budapest, Hungary. The firm works with 100+ colleagues, including a growing team dedicated to the vehicle to everything communication security certificate services (CCMS, SCMS). Regarding only V2X-related associations, the company is a member of the European Telecommunications Standards Institute (ETSI), the 5G Automotive Association (5GAA), the OmniAir Consortium, the CAR 2 CAR Communication Consortium (C2C-CC) and the C-ROADS Project, also actively participating in the work of these organizations. The firm has bilateral partnerships with V2X-related manufacturers, road operators, research centers and test sites. To learn more, please visit: **https://www.microsec.hu/en/v2x-pki**