

CANticate

CAN Message Frame Authentication

TECHNOLOGY:

Arilou **CANticate** provides vital **Message Authentication Code (MAC)** authentication and integrity verification – bridging the existing security gaps of current **Controller Area Networks (CAN)**.

CAN Message Frame Authentication

- **Secure Message Transmission**

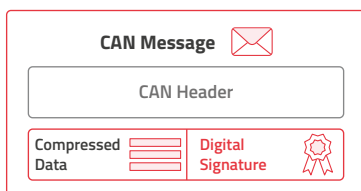
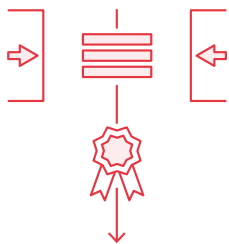
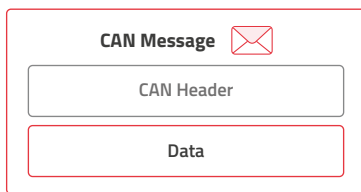
Ensures the authenticity and integrity of CAN messages, preventing replay attacks.

- **Selective Implementation**

Implementation can be tailored for use with only specified messages.

BENEFITS:

Software-based, **CANticate** is lightweight and unobtrusive. Compatible with heterogenous buses, the solution functions flawlessly in environments where only select ECUs make use of the **CANticate** mechanism.



- **Backward Compatibility:** No need to change gateways or nonparticipating ECUs as frame format remains unchanged.
- **Heterogeneous Compatibility:** Works with bus architectures where only select ECUs make use of the mechanism.
- **Verification:** Message freshness is verified, preventing replay attacks.
- **Real-time:** No significant latency added.
- **Compact:** Lightweight, unobtrusive code allows for optimal performance.
- **Stateless:** Each message frame is independently authenticated.
- **Reduced Overhead:** When relayed on optional Arilou compression technology there is no increase in traffic.
- **Software-Based:** No heavy resources required allowing for the use of legacy and modern CAN architectures, reducing cost.
- **Flexible:** Can use Arilou or OEM authentication algorithm and employ hardware acceleration, platform permitting.
- **Standardized:** ISO 9001, ISO 26262 and ASIL-B compliant

ABOUT ARILOU:

Arilou Automotive Cybersecurity, part of NNG Group, believes in an automotive future secured against cyber-attack. A leading provider of pioneering cybersecurity solutions for the automotive industry, Arilou was the first to introduce CAN (**Sentinel-CAN**, **Sentinel-TRK**) and automotive Ethernet (**Sentinel-ETH**) in-vehicle network security.

Winner of **Frost & Sullivan's** 2019 Technology Innovation award, and independently tested by **UMTRI**, with perfect results, Arilou's **Sentinel-CAN** software intrusion detection and prevention system and **Sentinel-PHY** electronic fingerprint authentication offer supreme detection and prevention rates with zero false alarms. With its holistic approach and low-cost multi-layered solutions, **Arilou** is making full protection for vehicles a reality.

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