High-performance Automotive Ethernet/IP firewall and router ESCRYPT CycurGATE

Overview

With the automotive industry evolving to automated driving while getting more connected, cybersecurity threats can only be faced effectively with a holistic security approach.

The automotive Ethernet firewall ESCRYPT CycurGATE is a market proven solution and indispensable to meet the increased security requirements of current and future gateways.

Perfectly balanced hardware-software co-design

The firewall is integrated directly into the Ethernet switch, where the entire packet flow is monitored and managed centrally – with no resulting interference with the host controller or individual ECUs. It can be used on the switch either as a library or as a stand-alone solution.

Thanks to balanced hardware-software co-design, the firewall solution makes the most of the hardware acceleration on the switch. The switch hardware and software are algorithmically so interwoven that the firewall can process the vast majority of data packets at wire speed.

ETAS' c-library-based firewall solution is tailored to run on microcontrollers and microprocessors.
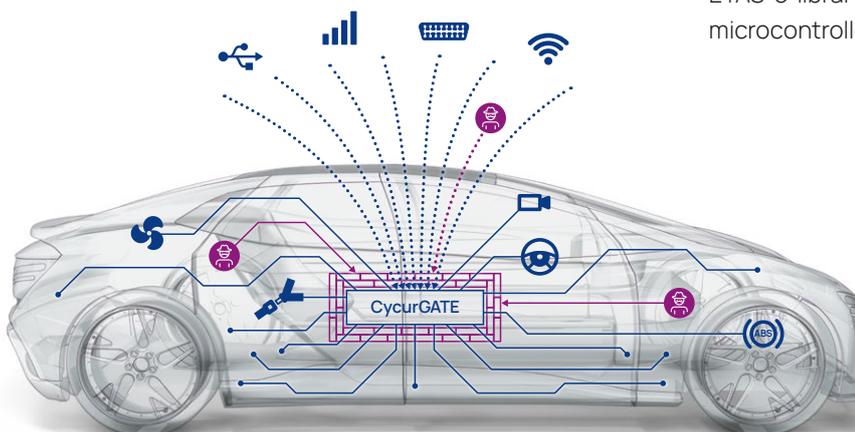
Purpose of ESCRYPT CycurGATE

– Firewall to protect against a wide landscape of cyber attacks
  – Denial of service
  – Blocks illegitimate communication to individual ECUs or the entire network
  – Secure external interfaces

– Routing of data: effective control of data flow between network segments/domain

System solution

Security strategy for the entire vehicle life cycle

– Intrusion detection and protection calls for continuously effective, comprehensive security mechanisms.

– The ESCRYPT CycurIDS intrusion detection system monitors network traffic to detect and log anomalies and typical attack signatures. In addition, ETAS also offers a cyber-defense center backend: ESCRYPT CycurGUARD. This evaluates notifications from IDS components, detects new attack trends, helps determine the causes of security incidents, and defines countermeasures for distribution throughout the vehicle fleet.

Features

– Highly configurable and updatable
  – OTA-Update (over-the-air-update) ready: future-proof solution that can adapt to changing threat landscape

– Supports logging and statistics of suspicious data

– Provides all important filter mechanisms
  – Stateless-Packet-Inspection
  – Dynamic-Stateful-Inspection
  – Deep-Packet-Inspection
  – Black- and Whitelisting of messages

– Routing and firewall functionality
  – Also compatible with ETAS' Ethernet IDS features

Your benefits with ESCRYPT CycurGATE

– **Cost-effective, no additional hardware needed – easy integration**
  – Runs directly on the CPU of the switch, no resource consumption on host microcontroller
  – Software only version also available and can be integrated to any uC/uP
  – No changes needed to your current hardware/ software

– **Transparent**
  – Easy to configure according to your security standards
  – No black box security

– **Continually advancing and future proof**
  – More than three releases per year

– **Highest quality standards**
  – Developed according to the high ETAS quality standards