



## High-performance Automotive Ethernet/IP Firewall and Router

### Overview

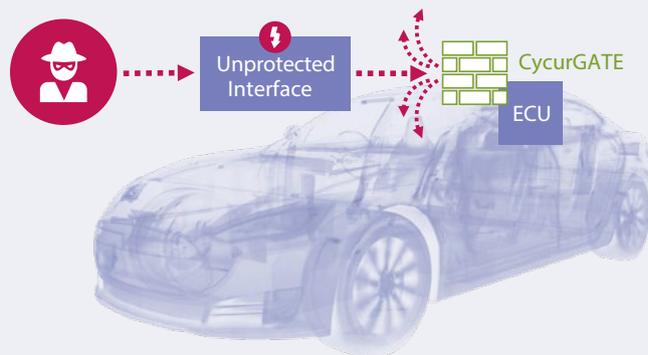
Automotive Ethernet is on the rise. But an Ethernet-based E/E architecture calls for particularly powerful security functions. That's why automotive firewalls will play a key role in monitoring and controlling electrical system communications in the future.

ESCRYPT's CycurGATE automotive firewall offers protection against denial-of-service attacks and supports permitted Ethernet communication throughout the domain structure.

#### Perfectly balanced hardware-software co-design

CycurGATE 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. The firewall 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.



## Features & Benefits

### Multiple use cases

- CycurGATE works equally well with central or distributed security functions (central firewall vs. distributed firewall).

### Comprehensive

- Supports the domain structure on all levels of the Ethernet and IP stack: packet filter, stateful packet inspection (SPI), deep packet inspection (DPI).

### Highly configurable

- Communications policy can be customized, including whitelisting and blacklisting.

### Future-proof

- Anticipates expected developments in transmission standards and E/E architectures.

### Powerful

- High-performance processing of data packets thanks to optimized hardware-software co-design.

### Cost-effective

- CycurGATE runs entirely on switch, which makes it easy to integrate into any ECU and easy to configure.

## System solution

### Security strategy for the entire vehicle life cycle

- Intrusion detection and protection calls for continuously effective, comprehensive security mechanisms.
- The CycurIDS intrusion detection system monitors network traffic to detect and log anomalies and typical attack signatures. In addition, ESCRYPT also offers a cyber-defense center backend: 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.

