OEMs need to continuously improve car functions and react fast on security issues. That requires short update cycles which can be achieved through software updates over the air (OTA).

**EB cadian Sync – Secure software updates over the air**

Elektrobit has developed EB cadian Sync, a reliable, scalable, flexible, and secure toolchain for software updates over the air. It enables OEMs to perform firmware updates on ECUs and supports various operating systems such as AUTOSAR, Adaptive AUTOSAR, Linux, or QNX. Software updates for applications that run on ECUs or on a hypervisor in virtualized environments are also enabled.

Elektrobit’s decade-long experience in AUTOSAR, automotive security, backend operations, and vehicle diagnostics are the cornerstones of this solution.

**MORE THAN A DISTRIBUTION PLATFORM**

EB’s backend is a service platform. The scalable, modular, and agnostic solution includes software version management, campaign management for defining and processing update campaigns as well as fleet management for managing the targeted vehicles. The backend also provides interfaces for third-party software, e.g., to directly feed software updates into the system for distribution to the vehicle fleet. EB’s backend can be optionally extended by additional services such as EB cadian Analytics for remote diagnostics or EB security products.
A PROACTIVE APPROACH TO CYBER SECURITY

In the area of security, EB is partnered with ARGUS to prevent cyberattacks in vehicles. By joining forces, we make it easier for car manufacturers to take a proactive approach to cyber security.

Features:
- Ready-to-use software distribution platform
- Platform-independent, modular, on-board components for over-the-air software updates
- Standard diagnostic protocols for updates
- Scalable backend
- Secure end-to-end communication and data storage
- Differential updates and data compression
- Ad-hoc updates upon request
- User interface (UI) for vehicle, campaign, and software management

Benefits:
- Add new functions to vehicles on the road as an additional source of revenue
- Save warranty costs by mitigating the impact of software-related recalls and security issues
- Increase drivers' trust due to reliable data protection
- Flexible deployment of on-board software components

A PROACTIVE APPROACH TO CYBER SECURITY

EB cadian Sync - The update process

<table>
<thead>
<tr>
<th>BACKEND</th>
<th>CONNECTIVITY CLIENT</th>
<th>UPDATE MASTER</th>
<th>UPDATE SLAVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sends jobs which need to be executed on-board to the connectivity client</td>
<td>Downloads data packages &amp; uploads reports</td>
<td>Executes jobs, downloads updates via the connectivity client, and sends status reports to connectivity client</td>
<td>Install updates on target ECUs</td>
</tr>
</tbody>
</table>

ARGUS cyber security offering

Stand alone in-vehicle solutions

- In-Vehicle Network Protection
  Prevents, detects, and responds to attacks on the in-vehicle network by monitoring network communication from a central location.

- Connected ECU Protection
  Prevents, detects, and responds to attacks on all connected and high-performance ECUs.

Out-of-vehicle solutions

- Fleet Protection
  Provides situational awareness of the cyber health of the fleet and the ability to secure vehicles throughout their lifespan through analytics, forensics and software updates over-the-air (OTA). Works with Argus in-vehicle solutions and stand alone.

- Professional Services
  Expert automotive cyber security team provides threat analysis and risk assessment, vulnerability analysis, penetration testing & more.

End-to-end modular offering based on over 50 granted and pending automotive cyber security patents supporting all vehicle components.

Contact us!
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