ADAS ECU Platform
Solutions for Autonomous driving
The AVL ADAS ECU is an open development platform, which is customizable for prototype and series while being safe and secure.
ADAS ECU – the ADAS/AD platform

AN OPEN DEVELOPMENT PLATFORM
We offer transparency – hardware and software can be provided on demand and integrated in your development environment.

WHICH IS CUSTOMIZABLE
We customize our solution according to your product’s requirements. With the AVL ADAS ECU you get the platform that is adaptable to your needs.

FOR PROTOTYPE AND SERIES
We are on the fast track going from lab to fab! Reuse of prototype development accelerates your SOP project.

WHILE BEING SAFE AND SECURE
Your safety is our top priority. That’s why the AVL ADAS ECU has been developed according to safety and security measures, which have been verified and validated already.
The AVL ADAS ECU contains

AVL knowledge and experience combined in one platform.
The AVL ADAS ECU is a central part in your ADAS/AD System.
Flexible and scalable Hardware

**PERFORMANCE**
Flexible and scalable high performance processing power

**CONNECTIVITY**
Ready for various ADAS/AD sensor setups

**CUSTOMIZATION**
Modular approach offers options of customization

**SOP-READY**
Automotive components and ISO 26262 enable SOP

The Hardware is designed to offer high flexibility.
Development of ADAS/AD Control System to meet Functional Safety requirements.
The AVL ADAS ECU has been developed with a “Security by Design“ approach.

**SECURITY SERVICES**
TARA, Concept Development, Verification & Validation

**COMPREHENSIVE CONCEPT**
Following future regulations and industry best practices

**SECURE OPERATING SYSTEM**
Protecting from the consequences of misuse and malicious attacks
Basic Software easy to migrate

- GENERIC BASIC SOFTWARE MODULES
- ADAPTIVE AUTOSAR
- REUSE OF MODULES FROM R&D TO SOP
- MULTIPLE CHOICES OF OPERATING SYSTEM

Basic Software enables quick development and migration from R&D to SOP.
ADAS/AD Application Software ready

Handles ADAS/AD features up to Level-4, adaptable to customer’s needs.

**PERCEPTION**
Sensor input, Sensor fusion, Perception, Occupancy grid

**TRAJECTORY GENERATION**
Maneuver planning, Trajectory calculation, Embedded quality evaluation

**CONTROL**
Vehicle dynamics models, Longitudinal and Latitudinal vehicle motion controls, Actuators interface
Electromagnetic Compatibility (EMC) is ensured according to customer requirements.
## AVL ADAS ECU mid

### FEATURES
- Scalable high performance central processing unit for ADAS/AD including outstanding power efficient neural network accelerator
- Automotive components & ISO26262 conformant
- Variable connectivity for multiple sensor setups
- EMC optimized design

### APPLICATION
- ADAS/AD perception, fusion and motion control
- Ground truth data recording and life object detection
- Fast prototype and SOP development

### TECHNICAL DATA

| CONTROLLER | 1x Multicore SoC (45KDMIPS, 345GFLOP/s), multiple hardware accelerators, 16GB LPDDR4
|            | 1x Multicore SoC (12KDMIPS), CNN accelerator
|            | Safety controller (Aurix)
| INTERFACES | 12x GMLS Camera interface with power over coax
|            | 12x CAN / CAN-FD
|            | Multiple automotive ethernet 1Gb/s & 100 Mb/s
|            | HDMI / PCI-E
|            | USB 2.0/3.0
| TECHNICAL DATA | Redundant power supply
|                | Power consumption: <80W
| DIMENSIONS (LXWXH) | 320x325x47 mm
| COOLING | Air/Water
Contact

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