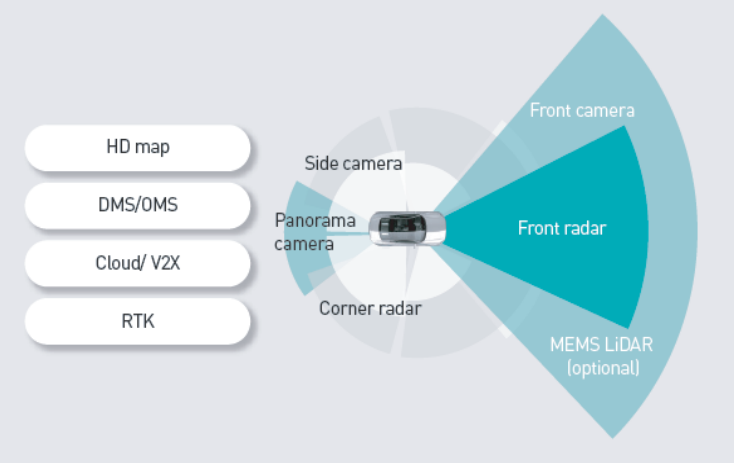
ADCU - Autonomous Driving Control Unit

> Challenges

- Autonomous vehicles makes public transport more attractive and at the same time more climate-friendly in future.
- The software-defined-vehicle (SDV) is the next evolutionary step in the automotive industry.
- Powerful computer units are needed that centrally collect and group all sensor information and make a holistic decision.
- This results in a continuous increase in the complexity of devices and the associated increase in costs.
- The management of development and certifications in global production is not only complicated by the different regions, but also partly by political conflicts by reusing different chipsets or sensor partners across multiple regions.



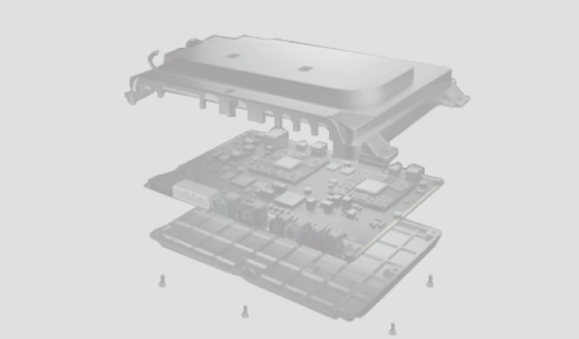
Schematic diagram of external sensor equipment supported

>Features

Scalable System on a chip (SOC)	Full-redundancy design; extensible functions Easily extendable memory- & processing power
Optimized product design	Lightweight design & water cooling concept
Rich interfaces	Up to 12 displays, 12 ports for camera and Integrated Ethernet switch up to 10 Gbps
Highly flexible Middleware	Incl. debug trace and simulation with JMT (JOYNEXT Middleware Toolset)
Safety compliance	Extensive functional safety concepts to meet all standards for cockpit & ADAS (L2/L2+/L3)

> Values

- Scalability across entry-, mid-, and premium car segments
- Managing development and certifications and political conflict across geography for global OEM
- Collaboration with multiple algorithm suppliers in Europe, China & US
- Highly flexible integration and development environment
- Reducing complexity of multiple devices and cost effective automotive solution



Exploded-view drawing of hardware of nDrive H-ADAS Domain Controller

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