AUTERA
Shaping the Autonomous Era
AUTERA

Lightning-fast data logging and prototyping with extensive, hot-swappable storage

Highlights

- Robust in-vehicle system with highest performance
- Best-in-class data logging bandwidth (50 Gbit/s)
- Camera, radar, lidar, and vehicle bus interfaces
- Optional hardware accelerators for data processing and AI

Application Areas

AUTERA is a new product family dedicated to the development of applications for advanced driver assistance systems (ADAS) and autonomous driving (AD). It can be used to log extensive data volumes during test drives for homologation, replaying data at a later stage, or training neural networks, etc. Therefore, it features a high-performance storage solution, the AUTERA Data Storage Unit (AUTERA DSU), in combination with a high-volume AUTERA Solid State Disk (AUTERA SSD). For convenient and high-speed data upload a dedicated AUTERA Upload Station will be available. Furthermore, the AUTERA AutoBox can be equipped with powerful hardware accelerators, such as graphics processing units (GPUs) or field programmable gate arrays (FPGAs), to develop, validate, and optimize sensor fusion and perception algorithms or neural networks.

Key Benefits

The special strength of the AUTERA hardware is its unique combination of high computation power and a wide data bandwidth (50 Gbit/s) in a compact form factor. It provides an accurate time stamp mechanism as well as comprehensive bus and network support based on the latest standards, such as AUTOSAR and FIBEX. Moreover, it supports a wide range of camera interfaces, such as GMSL II, FPD Link III, and CSI II for different camera vendors. Its scalable and flexible setup lets you tailor the system to your requirements and keep up with changing demands in the dynamic environment of ADAS/AD developments. All this is provided in a chassis optimized for in-vehicle use with regards to temperature, robustness, and supply voltage – the AUTERA AutoBox. The system is delivered with a ready-to-use setup based on RTMaps. However, you can also choose your preferred software environment for the application based on a Linux operating system.

Unique Features

- Support of different hardware accelerators, such as GPUs, e.g., NVIDIA Quadro RTX 6000
- Support for relevant automotive busses and networks: connect to (automotive) Ethernet, CAN FD, etc.
- Support of RAW data interfaces for imaging sensors such as GMSL II, FPD-Link III, or CSI II
- Designed for in-vehicle use: compact, robust, car battery voltage supply, extended temperature range
- Seamless integration: Can be combined with other systems, e.g., MicroAutoBox III or SCALEXIO AutoBox
- Hot-swappable AUTERA SSD for easy memory exchange during a test drive
- Scalability: Comfortably expandable to double bandwidth and storage space in one system by adding an additional AUTERA DSU

Technical Data

- Logging bandwidth per AUTERA AutoBox: up to 50 Gbit/s sustained
- Storage capacity per AUTERA AutoBox up to 32 TB
- Intel® Xeon® CPU with 12 cores (12 x 2.0 GHz)
- 32 GB RAM (standard configuration), up-to 512 GB possible on request
- 2 x USB 3.0, 2 x USB 2.0
- 4 x 10 GB Ethernet
- 4 x 1 GB Ethernet
- 1 x Audio I/O and several multi I/O channels
- 6 slots for dSPACE qualified extensions, e.g., CAN FD, Ethernet (100/1000/10000 Base-T, 100/1000 BASE-T1), RAW Data Interfaces (GMSL II, FPD-Link III, CSI II), Hardware accelerators (GPUs, FPGAs)
- In-vehicle power supply 10 - 35 V
- Shock and vibration tested (ISO 16750-3:2007)
- Size: 330 x 376 x 156 mm
- Ambient temperature: up to -20 ... 55 °C