

► nData – Data Storage System for Autonomous Driving

An autonomous driving data storage system with compliance, controllable costs and high scalability.

► Technical Details

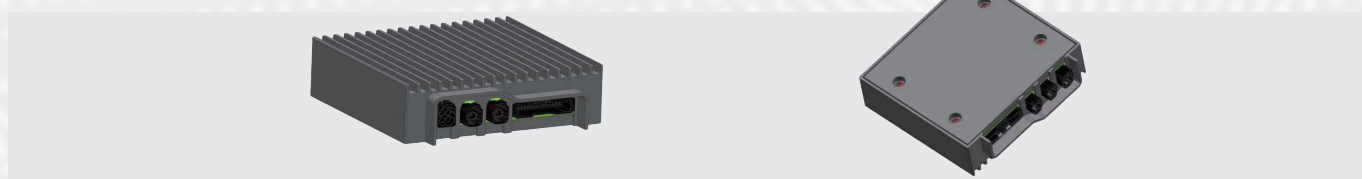
- ◉ **Highly integrated system:** Single SoC with mature process node (16/28nm)
- ◉ **Local sourcing of chip**
- ◉ **High efficiency H/W & S/W architecture:** Optimized DRAM/Flash capacity
- ◉ **H/W encryption & video encoding**
- ◉ **Interfaces:** CAN (FD), Ethernet, LVDS, (FlexRay)
- ◉ **S/W Arch:** Linux + AUTOSAR CP/RTOS
- ◉ **Power-failure safe storage**
- ◉ **Cybersecurity and ASIL-B level design**
- ◉ **Protection level:** Up to 300G - impact resistant, IP67 – waterproof
- ◉ **Universal data retrieval interface:** DoIP
- ◉ **Variants:**
 - Basic – Regulation compliance
 - Extended – More sensors for data recording, cloud upload & scenario reconstruction

► Features

- ◉ **Compliance**
 - Fully compliant with the national standard – “Intelligent and Connected Vehicle-Data Storage System for Automated Driving”
- ◉ **Self-control and autonomy**
 - Build on the mature Chinese chipset which based on the mature 28nm processes
 - Hardware solution for the China commercial cryptography algorithms
- ◉ **Cost advantage**
 - Support multiple vendors’ solution
 - Single SoC approach
 - Support raw video streaming and hardware codec
- ◉ **JOYNEXT in-house cloud service**
 - Matching with requirements for storage system while automated vehicles are in charge for driving
- ◉ **Virtual scenarios creation**
 - Creating virtual scenarios out of recorded data from automated vehicle to make available for OEM to retrain autonomous driving models and to learn from the streets

► Application

- ◉ Commercialization of high-level autonomous driving (L3-L5)
- ◉ A standalone system which monitors, collects, records, and stores related data when ADS engages



Hardware diagram of JOYNEXT Data Storage System for Automated Driving