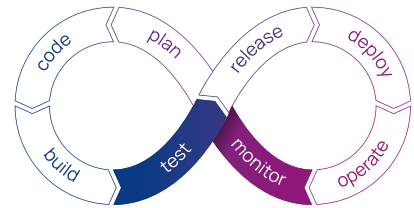


Raw-video-data Measurement and Replay Hardware MHD2.0



High performance data acquisition and replay of raw video and SPI data

ETAS supports and facilitates the development of software-defined vehicles (SDV).
The MHD2.0 includes following:



Areas of application

- The MHD2.0 is a sensor access device designed for measuring raw video data in the context of Advanced Driver Assistance Systems (ADAS) and Highly Automated Driving (HAD) in the vehicle as well as in the laboratory.
- The MDH2.0 is used to measure raw sensor data (e.g. cameras). It interacts with the sensor interface (e.g. TI FPDLink III, TI FPD-Link IV, Maxim GMSL2) without interfering with the control unit.
- The MHD2.0 captures data used for development, testing and validation of HAD functions and saved to a recording device. In addition, the recorded data stream can be used for replay use cases with the same hardware.

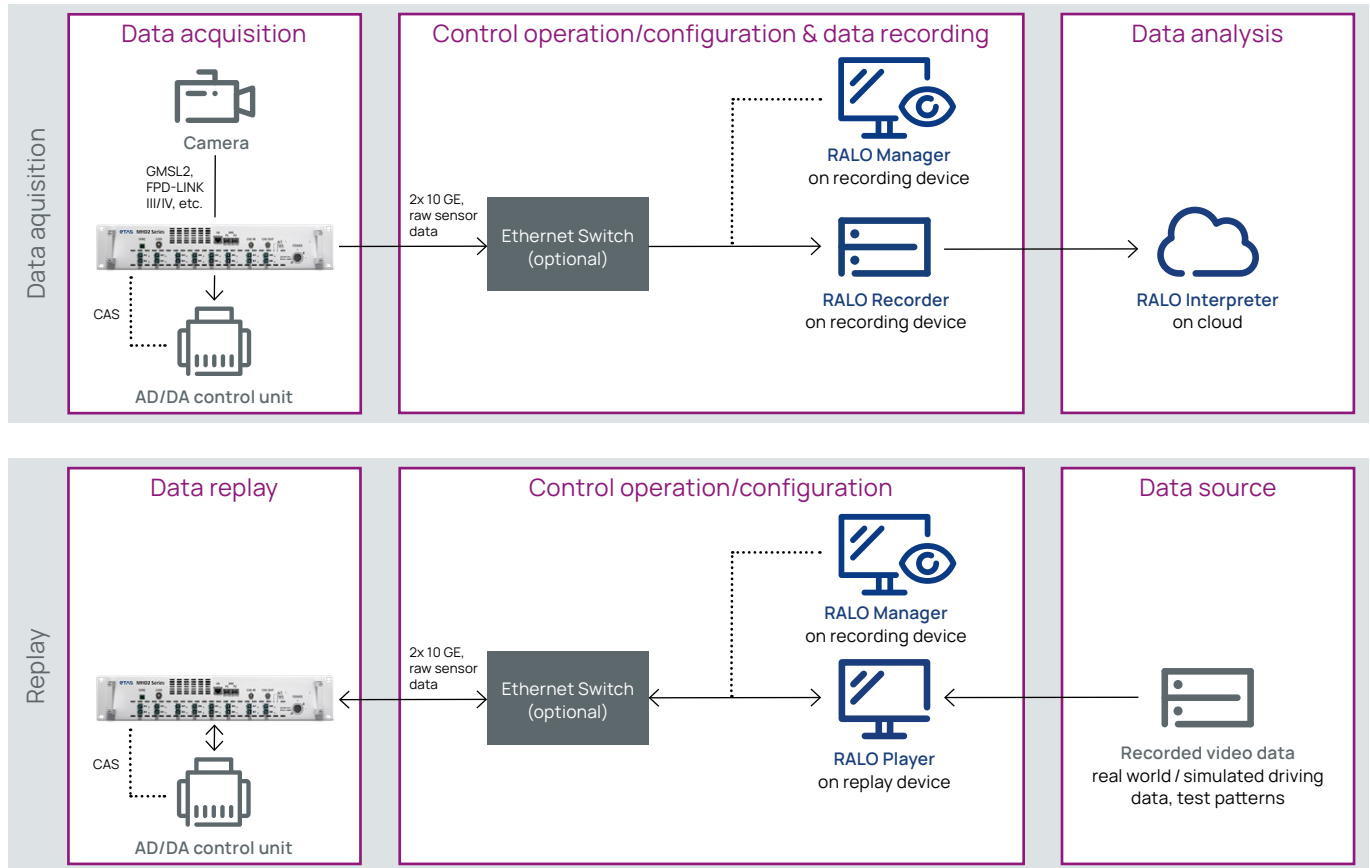
Functions

- High performance data acquisition of raw video sensor data via "man-in-the-middle" approach
- Data acquisition from 8 cameras (max.) per device with up to 20 Gbps combined
- Time synchronization via IEEE1588 precision time protocol (PTP)
- Lossless video compression as optional IP core directly on the device via FPGA
- MHD device is replay ready (HoL/HiL)
- Stand-alone usage or with existing ADAS/HAD control unit

Benefits

- Reduction of test runs/duration due to a high bandwidth and large number of camera interfaces
- Highly compatible with most common video sensors due to sensor interfaces
- Multiple synchronized devices can be used in parallel due to scalable design
- Transparent measurement since raw data is measured without interference with the control unit

Process of data acquisition and replay



Components and key features

MHD2.0	Measurement capacity: 8 cameras with overall system bandwidth of up to 20 Gbps
	Lossless video compression with optional compression IP core
	Sensor interfaces: TI FPD-Link III, TI FPD-Link IV, Maxim GMSL2*
	Power over Coax (PoC) supported
	Optimized form factor for 19-inch rack mounting
	Powered externally with separate power cable
	Cascading (CAS) interface for GPIO status information e.g. wake-up signals etc.
	Active cooling
Adapter cables	Coaxial cable
	Power supply cable
	Cascading (CAS) cable

*further interfaces on request.

Technical data

Dimensions (W x D x H)	403 mm x 220 mm x 88 mm
Weight	3.0 kg
Operating voltage	10 V - 15 V
Operation current	typical 6 A
Operation temperature	-20 °C to 50 °C (-4 °F to 122 °F)
Humidity	0 % to 95 %
Altitude	max. 4,000 m / 13,100 ft

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