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IVN2Eth Capture Module
CM 1000 HIGH

APPLICATION

Capture your Automotive Gigabit Ethernet traffic in the car without interfering the original network

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DESCRIPTION

The future brings connected and self-driving cars, for which an unprecedented amount of data is required. One of the latest technologies that addresses this challenge is Automotive Gigabit Ethernet.

With 12 ports, up to 6 point-to-point 1000BASE-T1 connections can be captured with the **CM 1000 High**. Using a 40 ns resolution hardware timestamp and highly deterministic latency times, AVB/TSN traffic remains synchronized and can be accurately analyzed. For the high amount of data, both Standard Gigabit Ethernet, as well as SFP+ with up to 10 Gbps interfaces provide enough bandwidth for the uplink to modern logging systems.

The traffic is captured without influencing the network, thanks to guaranteed deterministic latency and is delivered with a 40 ns time resolution timestamp, thus analyzing AVB/TSN traffic is possible.

Several Capture Modules, of the same or different types, can be combined and used together on the same measurement network. Thanks to the built-in time synchronization, all the devices will act as one, allowing to share a common understanding of time for all the connected buses and Ethernet networks (100BASE-T1 & 1000BASE-T1). This makes Capture Modules very scalable and allows to add other in-vehicle-network (IVN) technologies to the measurement setup.

Many additional features make this device appropriate for general-purpose testing, such as the definition of active filters, triggering of user events, and to some extent, manipulation of VLANs.

FEATURES AND FACTS

- ✔ 6x Link lines 1000BASE-T1 (12 ports)
- ✔ Technically Enhanced Capture Module Protocol (TECMP), which is royalty free and provides timestamping, source information, etc. (natively supported in Wireshark (v3.4), GPL C libraries for conversion to PCAPNG available at https://github.com/Technica-Engineering)
- ✔ Configure easily via webserver or via dedicated UDP frames
- ✔ Network Time Synchronization supporting several standards- allows to synchronize multiple CM 1000 High or other Capture Module variants
- ✔ Cascading for synchronization of multiple devices
- ✔ Source timestamping with 40 ns resolution
- ✔ High-speed startup
- ✔ Startup buffer
- ✔ Output traffic shaping
- ✔ AVB/TSN capture capable
- ✔ Time-aware injection
- ✔ Rotary switch for manual configuration of the device IP address (Gbit, RJ-45)
- ✔ Wake-up capable
- ✔ Extended power mode for car integration
- ✔ Optimized for automotive and automotive-like use-cases
- ✔ High voltage range: 12 to 24 volt DC
- ✔ Robust galvanized sheet steel with black powder coated housing
- ✔ Size: 186 x 130,4 x 32,5 mm

*TECMP is compatible with PLP Protocol

1x 10 GBIT ETHERNET (SFP+)	3x STANDARD GIGABIT ETHERNET (RJ-45)	6x MATEnet 2 PORT	1x SYSTEM CONNECTOR