DATASHEET

CAPTURE MODULE SENSE

General description

The Capture Module Sense is an analog measurement device designed to measure in-vehicle analog signals, capturing up to 12 low/mid (up to 30A) current channels, 12 configurable high current channels using external transducers and 8 configurable voltage or temperature (using external NTC based sensors) measurement channels. The measured data are HW timestamped and sent out to the data sink (e.g. data logger or PC).

Standardized logging protocol

The Capture Module encapsulates logged frames into an ethernet frame adding valuable information such as the HW timestamp, Interface ID, Counter and more in a standardized logging protocol header.

Scalable setups

Several Capture Modules can be combined and used together in the same measurement network. The built-in time synchronization feature allows to synchronize the whole measurement network with the same time base. This makes the Capture

Capture Module Sense

Application Areas

Capture Modules are designed to be used in different environments such as in the car, on a development desk or in testbenches. To cover these areas as best as possible, the devices allow continuous operation and a wide temperature range.

Optimized logging

Startup time is crucial in an in-vehicle-network. Therefore, the Capture Modules are developed to provide an optimized startup time to be ready to log before the ECUs are up and send data. In addition to that, the Capture Module is equipped with an internal buffer to store the first frames (sent from the ECUs), even if the data sink is not yet ready. As soon as the data sink is up and ready to receive data, all the stored data will be sent out. The combination of these features ensures that no frames are lost.

Configuration

The CM offers a flexible and user-friendly configuration through its built-in web server. The device webpage can be easily accessed via a standard web browser. In addition, the possibility to import/export a configuration makes it even more convenient.

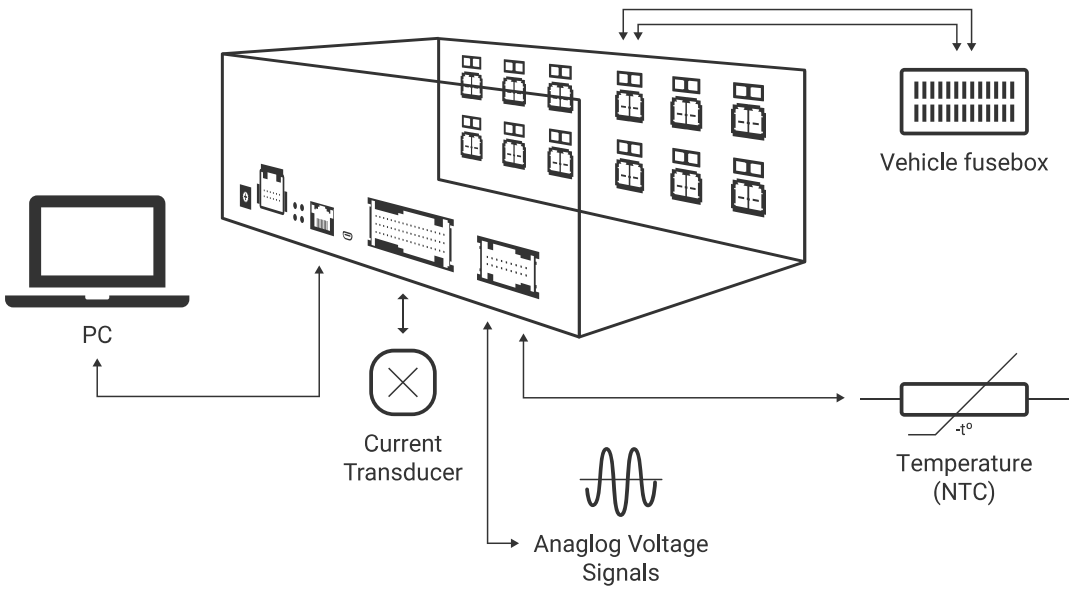
Technical Data

Operating temperature	-40 °C to +80 °C
Supply Voltage	6.5 V to 32 V DC (typ. 12 V)
Power consumption	8 Watt
IP Protection Class	IP 20
Housing Dimensions	240 x 130 x 78 mm
Weight	2kg (approx.)
Interfaces	12x Low/Mid current measurement channels, up to 30A using internal hall effect sensors 12x configurable High current measurement channels, using external transducers 8x configurable Voltage/Temperature measurement channels 1x 1000BASE-T (RJ-45) for Config, Logging, Sync 1x 100BASE-T1 (MQS) for Config, Logging, Sync 1x 100BASE-T1 (MQS) for Config 2x Wake in/out (MQS)

Features of Capture Module Sense

Device Features	Configuration Webpage
	Wake-/Sleep
	Import-/Export of Configurations
	Status LEDs
	TECMP
	Status Messages
	Manual IP Configuration via Rotary Switch
	Optimized Startup
	Hardware Timestamping with nanoseconds of resolution
	Time Synchronization (gPTP/802.1AS-2011 AVnu profile or PTPv2 subset)
	Packetization
	Sensitivity configuration (High current channel)
	Voltage/Temperature channel configuration
Core Feature Package	Zero-offset calibration (High current channel)

Use case



Order Information

Name	Article Number	Cable set number*
Capture Module Sense	TE-1165	KS-1165_S

*Cable set needs to be ordered separately