

# PM-200

# The Power to Log

The all-in-one data logger for the entire vehicle networking

The PM-200 sets the bar considerably higher on the topic of safeguarding and troubleshooting vehicles. Bus systems such as CAN, CAN-FD, FlexRay™, LIN and Automotive Ethernet are logged at a data speed up to 120 MB/s. SSD removable media allow for quick evaluation and distribution of the data. Various upgrade options enable configuration for any application. Flexibility, programmability and support from debugging protocols make it possible. PM-200 is offering a software option of collecting and analyzing debug messages and valuable information from infotainment ECUs via Diagnostic Log and Trace (DLT) protocol. This standardized logging and tracing software component, based on the AUTOSAR 4.0 standard, helps to consolidate the existing variety of logging and tracing protocols on one format.

## KEY BENEFITS

- Comprehensive data logging with central timestamp 1 µs) and 120 MB/s data speed
- Replaceable SSD
- Extensive interfaces & extension modules via Ethernet
- Flexible upgrades
- Efficient power management (sleep mode up to 100 µA) and logging of wakeup process
- Freely programmable using C/C++
- Support from debugging/ multimedia protocols (CCP/ XCP, ESOTraces, GNLogs)
- Open data format for evaluation purposes on numerous applications
- Diagnostic Log and Trace protocol specified by AUTOSAR 4.0 available as a software option



## HIGHLIGHTS

- SSDs in durable clip-on frames make handling large amounts of data a breeze, especially for fleets
- Flexible upgrades via modular design: direct connection of 2 or up to 7 TAPs via a switch
  - PT-15B: 12 × 100Base-T1 (BroadR-Reach) up to 6 Ethernet lines
  - PT-20MG: 6 × 1000Base-T1 (BroadR-Reach) up to 3 Ethernet lines
- Fast data interfaces (Ethernet PC and USB 3.0) to exchange data, device coupling and external storage media
  - Implement individual functions using Eclipse IDE (C/C++) and extensive API
- Open data format for evaluation purposes on numerous applications

## DIAGNOSTIC LOG AND TRACE PROTOCOL SPECIFIED BY AUTOSAR 4.0

- Collected data typically stored in TTTech Auto trace log (.TTL) but real-time extraction in standard DLT format and plain text file format (ASCII) available
- Both Internet protocols IPv4 and IPv6 supported
- Default gateway address can be configured, as well as VLAN tag
- PM-200 allows to configure and run multiple DLT clients at the same time
- Auto-reconnect mechanism available to ensure reconnection to DLT daemon in case of any interruptions in communication, where user is able to define auto reconnect timeout

## DATA VISUALIZATION VIA WLAN

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- Freely configurable, real-time presentation of signals while logging
- Support for Windows, iOS & Android
- Data transfer over optional WiFi module

## FILTER, TRIGGER, CLASSING FUNCTIONS

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- Parallel to optional "get-it-all" logging, based on signal or bus
- Logging and analysis for CAN, FlexRay, LIN, and Ethernet interfaces as well as for analog and digital inputs
- Trip recorder functions for periodic and results-based data logging
- Automatic and conditional data logging via defined trigger conditions
- Statistical data analysis with global (persistent) and measurement-related data in 3 dimensions available

## DEVICE SPECIFICATIONS

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PC INTERFACES	1 x USB 2.0 High Speed / Master 1 x USB 3.0 Super Speed / Master (can be used as logging medium) Ethernet (10/100/1000 MBit/s) for quick data transmission to PC 1 x 1 x Remote Control Interface	
VEHICLE INTERFACES	12 x CAN (high speed) Optional upgrade with 12 x CAN /CAN-FD 3 x FlexRay (channels A/B synchronous and asynchronous respectively) 12 x LIN 15 x analog inputs (12 Bit) 15 x digital inputs (interruptible) 6 x RS232 6 x digital output s + 3 x analog outputs 2 x Ethernet 1000 MBit/ s with hardware time stamp of 1µs	
OPERATING TEMPERATURE	-40°C to +70°C	
POWER USE	1.7A (operating) up to 100 µA (sleep modus) (tentative)	
OPERATING VOLTAGE	6 V to 32 V (protects against outage due to strain)	
DIMENSIONS	200 x 280 x 80 mm (L x B x H, height tentative)	
WEIGHT	224 x 175 x 72 mm (L x W x H)	
ORDER NUMBERS	PM-200 Enhanced	13164
	PS-0S Enhanced	13165
	PS-1000SC Enhanced	13169
	PS-128SI Enhanced	13467
	PS-512SI Enhanced	13166
	PT-20MG	13239
	PT-15B	12761
	Option +12 CAN/CAN-FD incl. acknowledgment	12811
	Option Visualization incl. WLAN	12810
	Option Extended Protocols	12814
	Option Filter, Trigger,Classing	12815
	Option GPS	12833
	Option Video	12832
	Option Audio	12834
	Option Remote Control	12531