

# **CSM PAK AddOn**





# **Key features**

- ► Transmission of CSM measurement data in PAK live.hub from Müller-BBM
- Synchronous acquisition of CSM and Müller-BBM measurement data in the PAK software
- Configuration of measurement modules directly via CSM PAK AddOn
- ▶ TEDS-Support

# **Product description**

**CSM PAK AddOn** has been developed for an easy integration of our measurement modules into a Müller-BBM measurement setup.

This software extension allows data from CSM measurement modules to be synchronously transmitted to the PAK live.hub from Müller-BBM. Further synchronization with Müller-BBM hardware can be done with the PTP/IEEE 1588 option for CSM's XCP modules.

This means, for example, that vibroacoustic analyses, also known as NVH measurements, can be combined with data from the electric powertrain and then simultaneously evaluated.

By using our measurement modules which are particularly suited for distributed measurement applications, an installation is possible both in the test bench and in test vehicles for rough driving tests.

The modules are configured using the new **CSM PAK AddOn**. Once the configuration for the entire measurement chain of CSM modules has been created, the transmission of the measurement data to the PAK software from Müller-BBM can be started and the joint measurement setup with components from CSM and Müller-BBM goes into operation.

All CSM high-voltage and low-voltage measurement modules are compatible with **CSM PAK AddOn**.

Our quickstart guide includes a detailed application description (available for download from our website).

## Requirements

- ► CSM XCP module including CSM PAK AddOn option
- Licensed version of CSM PAK AddOn

## Supported devices

### **XCP** modules

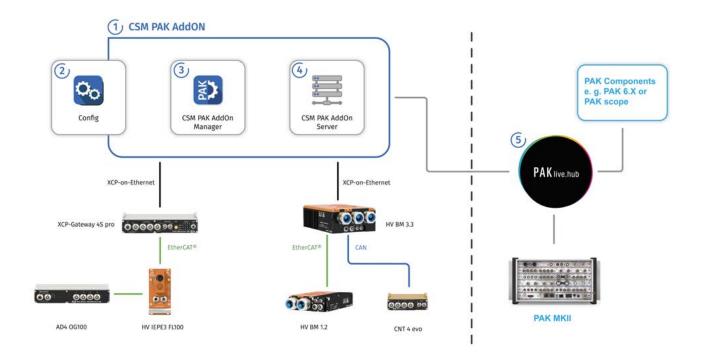
- ▶ XCP-Gateway Basic/pro: as of FW-Rev. 3.33
- XCP-Gateway 4S pro: as of FW-Rev. 4.08
- HV BM 3.3: as of FW-Rev. 1.09
- ► HV BM 3.1 OBC
- ► HV AD

### CAN and EtherCAT® measurement modules1

- HV BM
- HV SAM
- HV AD/AD
- ► HV TH/TH
- ► HV PT/PT
- ► HV IEPE
- HV STG/STG
- ► CNT<sup>2</sup>

<sup>1</sup>CAN measurement data rate min. 10 Hz, max. 1,000 Hz

<sup>2</sup>In an A2L configuration, the functions "Events (saturation)"; "Events (overflow)"; "Counter auto reset 1,2" are not available.



- 1. With the CSM PAK AddOn, measurement data from CSM measurement modules can be synchronously transferred to the PAK software from Müller-BBM and analyzed there together with other measurement values. The robust CSM measurement modules allow decentralized use even in demanding road tests.
- 2. All connected measurement modules are configured with the CSM configuration software. The configuration files are then automatically transferred to the CSM PAK AddOn Manager.
- 3. The CSM PAK AddOn Manager manages the entire project and prepares the data for later transfer by the CSM PAK AddOn Server. All settings can be made easily via the graphical user control and the data transfer to the PAK live.hub can be started.
- 4. The CSM PAK AddOn Server continuously transmits the measurement data to the PAK live.hub.
- 5. Measurement data from other measurement systems, e.g. from the PAK MKII from Müller-BBM, can be entered in the PAK live.hub. All measurement data is made available for joint analysis in the PAK 6.X software suite. Complex analyses of NVH and electrical performance data, for example, can be performed here.

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