MÜLLER-BBM VIBROAKUSTIK SYSTEME is proud to establish and cultivate customer relationships through strategic dialog.

At Müller-BBM VibroAkustik Systeme, we are committed to helping our customers make their ideas a reality. By continuously focusing on our quality and keeping our customers’ feedback in mind, we aim to supply the highest level of quality and deepest level of technology.

Our hardware and software products support our customers in their workflows by shortening product development cycles. By working closely with our customers we have been able to bring many great ideas to life. Our desire to be a partner motivates us to develop our products through continual innovation.

understand. interpret. design.
Müller-BBM VibroAkustik Systeme develops, markets and supports pathbreaking measurement solutions for vibration, acoustics and strength for every stage of the product life-cycle.

**SINCE OUR FOUNDING IN 1962,** we are proud to have cultivated a highly technical and entrepreneurial environment.

Müller-BBN was formed by Mr. Helmut A. Müller as a “vibration-technological consulting firm” out of the University of Munich’s “Sound Technology Laboratory” led by Dr Lothar Cremer. The company was a joint venture between the principles Müller, Cremer, Heckl and Schreiber as well as Bolt, Beranek and Newman Inc. (BBN). In 1972, Bolt, Beranek and Newman Inc. divested shares to pursue other technological interests. The name of the company was changed to Müller-BBM. Today, Müller-BBM remains 100% employee owned, benefiting from the combined responsibility and fulfillment of its employee owned shareholding.

50 years later, our innovation, expertise and integrity is evident in our growing team of over 700 employees worldwide.

**COMPACT. SCALABLE. RUGGED.**
High-speed multi-channel data acquisition, analysis, assessment and management.

**PAK SYSTEM:** a leading measurement platform.
PAK SYSTEM

ACQUIRE
- Rugged, conduction cooled and compact with an extremely high channel density
- Modular configuration
- Measures analog parameters such as vibration, pulse-period, sound, strain, displacement and temperature
- High quality audio grade output capability
- Interfaces with GPS, IRIG, CAN, FlexRay™, EtherCAT®
- Integrated signal conditioning
- 204.8 kSa/s with 24-bit resolution
- High dynamic range with optimized low noise performance and distortion
- Local storage on an internal Solid-State Disk (SSD)
- Gigabit Ethernet on all Controllers
- Integrated WLAN (IEEE 802.11n) for faster data transfer and robust connection
- Synchronizes multiple distributed Mainframes via SyncLink, GPS or IRIG
- Able to operate standalone
- Readily expandable

RECORD
The PAK recorder captures and stores dynamic data using PAK live software embedded on the PAK MKII. This intelligent operation allows the PAK MKII to run standalone as well as communicate with smart devices. Users are able to control and interact with the measurement running on the PAK MKII using a smart device. In this way, users are able to check the test status of signal overloads and sensor connections. The data recorded is extremely secure and of the highest quality. Data can either be stored on an integrated SSD or streamed live over Ethernet to a storage solution. The data is stored in the open ASAM ODS NVH ATF/XML format.

ANALYZE
PAK MKII hardware is tightly integrated with PAK software and forms a formidable hardware/software partnership. The resulting system environment combines highly modular, multi-channel data acquisition hardware with high performance analysis and graphical processing for various applications. Integrated data management is also available.

PAK software supports:
- High-performance real-time analysis with different data types and multiple sampling groups in parallel
- A wide range of applications addressing standard measurements, signatures and highly specialized applications
- PAK Easy Measurement interface provides an easy workflow from setup to measurement
- Storage of raw time domain data as well as analyzed data
- Close monitoring of test candidate behavior while post-processing results quickly
- Native support of ASAM ODS NVH ATF/XML as well as standard data formats for importing and exporting measurement data e.g. Universal, SDF
- To be used in both mobile and laboratory environments

MANAGE
A reliable and accessible data portal is available for storing, browsing, filtering and viewing ASAM ODS compatible data. As time domain data is stored, it is possible to access the acquired data for online analysis or for post processing.

Analysis tools include:
- FFT
- Digital nth Octave
- Detector
- Virtual Channels
- Filtering
- Psychoacoustics
- Sine Reduction
- Sound Power
- Sound Localization
- Acoustic Control
- Transfer Path Analysis
- Order Separation
- Function Generator
- Hydropulse
- Impact Measurement
- MIMO
- Acoustic Intensity
- Torsional Vibration
- Crank Angle Analysis
- Passby Measurement
- Simulated Passby
- Hearing Comparison
- Jury Testing
- Acoustic Design
- Shock Response Spectra
- Panel Contribution Analysis
- Response Modification Analysis
- Dynamic Balancing
- Online Monitoring

Please ask us for more details or a detailed product demonstration.