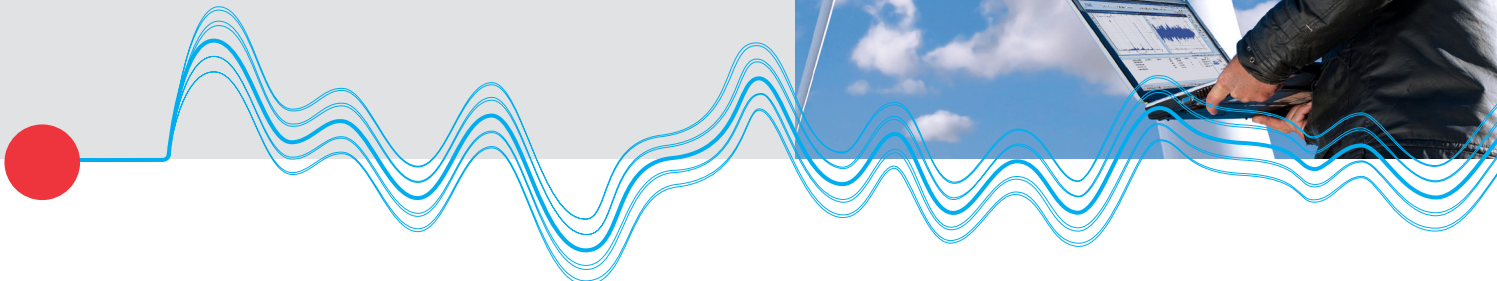


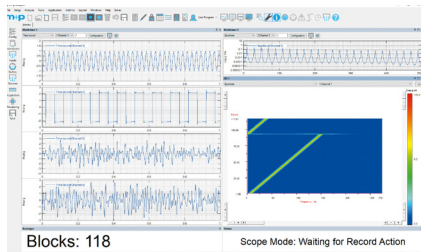
# m+p Analyzer

## Dynamic Noise and Vibration Measurement, Analysis and Reporting

**m+p Analyzer** is a fully integrated solution for dynamic signal measurement, analysis and advanced reporting of all noise and vibration, acoustics and general dynamic signal applications. Comprehensive time and frequency analysis is available with both online and offline data processing. Complete with advanced application wizards the m+p dynamic signal analyzer makes light work of gathering data, displaying results, performing specialized analysis and generating customer ready reports – all within one user interface. m+p Analyzer is designed for noise and vibration applications in the field and in the lab.

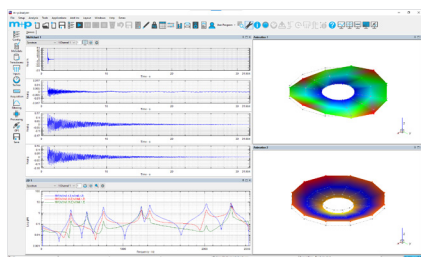


### m+p Analyzer Workflow



#### 1. Measurement Data Acquisition

The versatile **m+p Analyzer** software can be used across a variety of industries for capturing measurement data. It specifically emphasizes vibration data, including accelerometers and strain gauges, while also offering support for other sensor types such as temperature and voltage. With its systematic test set-up, the software provides clear instructions to ensure a correct test setup up and high quality data. It offers a wide range of test parameters, allowing users to tailor the data acquisition settings to their specific measurement tasks.



#### 2. Measurement Data Analysis

The **m+p Analyzer** software offers an extensive range of analysis functions. One key advantage is its unified user interface, which is consistent for both data acquisition and analysis tasks. This seamless integration promotes productivity by enabling users to work within the same software environment and easily repeat measurements when necessary. The customizable 2D and 3D chart displays can be effortlessly managed to meet specific analysis requirements. With a few clicks directly in the chart, users can quickly apply common analysis methods.



#### 3. Reporting and Interfaces

Facilitate efficient sharing of analysis results and individual reports with key stakeholders within your organization using Microsoft Office programs or customer-ready PDF reports. This includes the ability to compare your measured data with simulation results by utilizing the extensive support for importing and exporting data in multiple formats. For enhanced integration into your existing workflows, the m+p Analyzer software offers API and .NET data access, allowing for deep integration and customization.

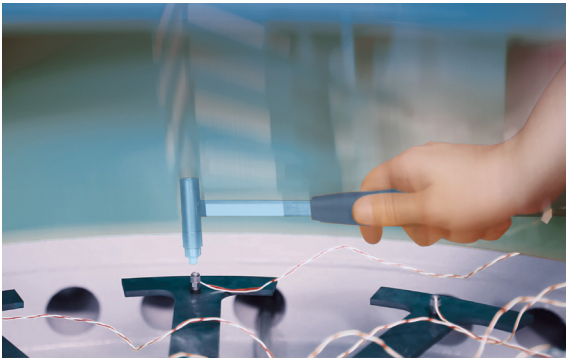
## Key Benefits

The m+p Analyzer software supports effective product development across a variety of industries by extending product life cycles, increasing robustness, lowering noise levels, and more. It is compatible with major industry standards and workflows, ensuring seamless integration and efficient data management.



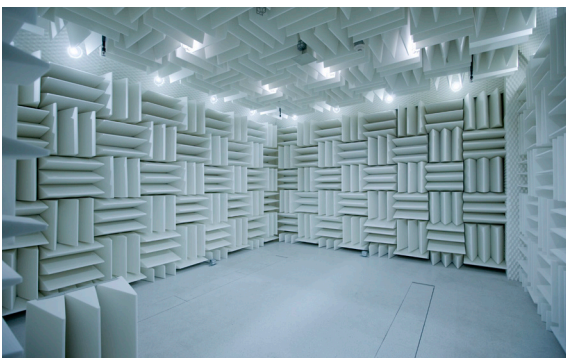
- Compatibility with wide range of sensors and signals for future-proofing
- Clearest test picture with optimal data visualization for different test types
- Customization to meet your specific requirements
- Secure, fast and efficient data access with high-speed SQL-based data storage
- Import 3rd party files for analysis and integration of all related data for common reporting
- Supports standard hardware (m+p international, NI)
- Proven performance and product evolution for long-term reduced cost of ownership

## m+p Analyzer Modules



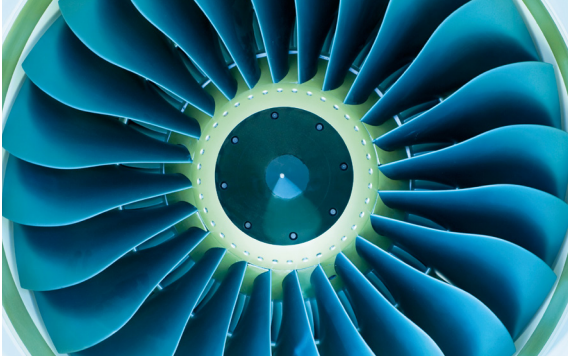
### Modal Analysis

The Modal Analysis delivers comprehensive modal analysis from impact to virtual model validation. It supports all experience levels in experimental modal analysis through a guided measurement workflow. State-of-the-Art modal analysis techniques covering Single- and Multi-Degree of Freedom algorithms enables you for efficient workflow fitting your task. Smart tools like impact window synthesis and automatic pole selection allow for perfect setup and measurement even for demanding tasks. Directly import simulated eigenfrequency and modeshape data, as well as the related geometry model, to compare to your modal analysis results.



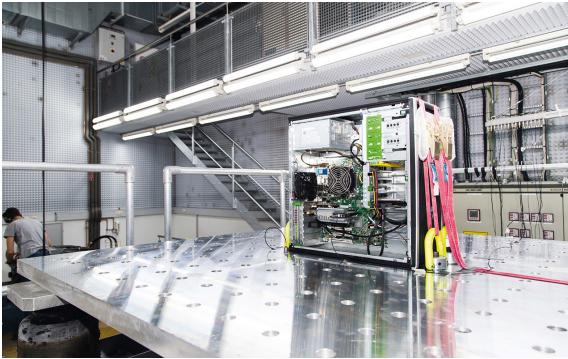
### Acoustic Analysis

The Acoustic Analysis package enables you to measure and improve the soundscape of your products, considering the impact of perceived noise on human health and safety. A comprehensive set of tools for acoustic analysis, including real-time fractional octave filters, allows taking high quality acoustics measurements. This includes simple sound pressure measurements, standard compliant sound power calculations to meet equipment legislative requirements, intensity mapping for source identification, and sound quality metrics for refining product performance. The acoustic analysis can be linked to structural measurements to allow you taking the right actions.



## Rotating Machinery Analysis

The Rotating Machinery software package offers an extensive set of tools for data acquisition and analysis, specifically tailored to capture, and comprehend the noise and vibration generated by rotating machines. Whether dealing with fixed or variable speed machines, the software effectively handles both structural vibration analysis and condition diagnostics. To ensure precise speed tracking, processing of multiple tacho inputs is supported. Benefit from a variety of analysis techniques, including spectral mapping, freely configurable order tracking, time history analysis, and orbit data analysis. Display the data using 2D and 3D displays with configurable harmonic cursors.



## Shock Measurement & Analysis

The Shock Measurement & Analysis software package interfaces with a variety of front-ends, including m+p data acquisition hardware, National Instruments, Spectrum and shock machines. The software provides powerful acquisition and data processing tools for classical shock and SRS applications. The acquired signal can be post-processed (offset, drift compensation, filtering, etc.) and compared to standard compliant limits or profiles. To optimize data processing and provide clear results, m+p Analyzer includes options to display max levels in velocity, acceleration, and shock duration and automatic SRS acceptance checks.

## m+p Analyzer DSA Licence Options

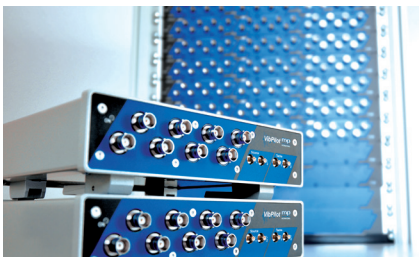
Key Features	eReporter	eReporter Pro	DSA	DSA Pro
Multi-channel data acquisition covering continuous measurements, triggered measurements and repeated measurements using sequencing feature			x	x
Online data analysis and display in time and frequency domain (FFT)			x	x
Time recording to memory or file, up to 2 million samples per channel for up to 16 channels			x	x
Post processing of recorded or imported measurement data		x <sup>1)</sup>		x
Throughput recording of acquired data to disk				x
Fast high-resolution FFT analysis using the 2D viewer	x	x	x	x
Custom analysis using calculator tool		x		x
Enhanced interfaces including API, direct data access via .NET library and BASIC user programming	x	x	x	x
Data import of m+p VibControl file format and *.STL	x	x	x	x
Data import and export of *.UFF, *.SOT, *.CSV/TXT and RPC III-file format	x	x	x	x
Data import and export of ATRX, *.WAV, *.MAT, *.SDF		x		x
Copy & paste charts to Microsoft Word and PowerPoint	x	x	x	x
Automated test reporting using the Reporting Wizard		x		x

1) requires additional AN-eTH license

## Technical Features

Licensing	Available as USB dongle and network based licensing, also w/o persisting server connection
Additional device support	GPS tracking for in-vehicle measurements, CAN support, temperature logging with National Instruments temperature input modules
Data acquisition and processing	Wide range of analysis functions with up to 128,000 spectral lines (FFT, PSD, FRF etc.). Data Throughput of 102 KSamples/second for 256 channels using standard PC hardware
Online analysis functions	Online display of time and/or spectrum while recording Real-time acceleration to velocity and displacement computations
Additional application modules	<ul style="list-style-type: none"> <li>• ODS Analysis, MIMO shaker excitation, mass properties analysis, nonlinear analysis</li> <li>• Impedance tube measurements, industry standard compliant</li> <li>• Balancing tool</li> <li>• Shaker and vibration controller verification</li> <li>• and many more</li> </ul>

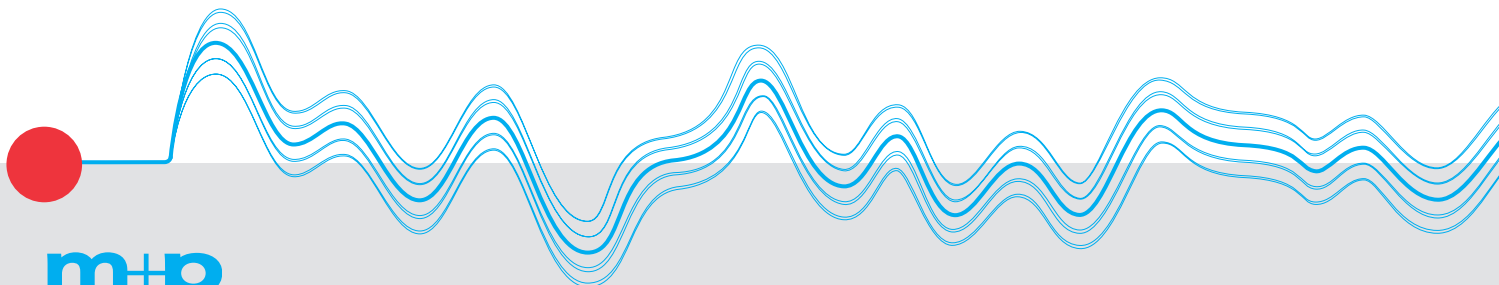
## Data Acquisition Hardware



Supports a range of hardware front-ends for maximum system flexibility

- 4/8-ch m+p VibPilot, also available with battery
- m+p VibRunner with up to hundreds of input channels with 200 kHz sample rate
- National Instruments acquisition hardware\* (USB, Ethernet, Wifi, PCI and PXI modules)
- Windows Audio devices
- PCB 485B39 Digital 2-channel ICP® USB Signal Conditioner
- Spectrum Instrumentation high-speed digitizers for shock applications and other\*

m+p Analyzer, m+p VibControl, m+p VibPilot and m+p VibRunner are products of m+p international. All trademarks and registered trademarks are the property of their respective holders. Specifications subject to change without notice.



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