

# DigivibeMX®

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Vibration Analyzer, Data Collector  
& Dynamic Balancer

The most complete, reliable and productive solution for **Vibration Analysis, Route Based Data Collection and Dynamic Balancing**

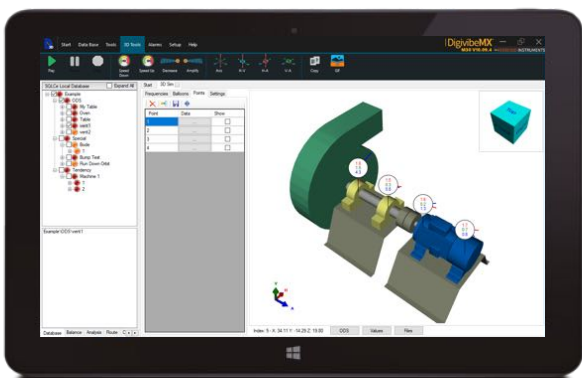


## Overview

**DigivibeMX** is the most complete, reliable and productive vibration analyzer, route based data collector & dynamic balancer.

Do simple and complex analysis in both on and off route modes.

The Balancing functions can be used in situ and on balancing machines. The intuitive interface is perfect for novice and expert users alike.



### FUNCTIONS

	M30	M20	M10
3D ODS Analysis	●	●	
FFT Spectra 3D Waterfall	●	●	
Dual Channel Functions	●	●	
FFT Spectra with 2 million lines of resolution	●	●	
Tendency and octave bands (lines & columns)	●	●	
Statistical machinery condition	●	●	
For easy - Launch routes	●	●	
Easy-to-use ISO color alarm coding	●	●	
Intelligent Analysis	●	●	
Large Bearing Frequency Database	●	●	
Synchronize with other users easily	●	●	
Export to ASCII, WAV, UFF-58	●	●	
Gear Frequency Calculator	●	●	
4 Channel, Triaxial Capable Option	●	●	●
Analysis and Balancing Reports ( CSS, Word, Excel)	●	●	●
Balancing in situ in 1 and 2 planes	●	●	●
Balancing calculator with 12 functions	●	●	●
Balancing without trial weights	●	●	●



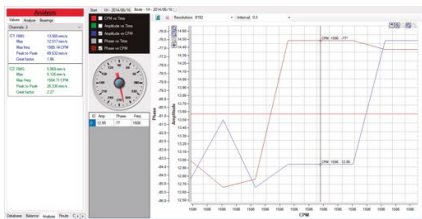
# Take a Shot Get results

No special hardware needed...  
Use your existing tablet or laptop

## Advanced Analysis M30 M20

Advanced features allow you to diagnose complex problems in machinery and structures avoiding high costs of downtime, collateral damage, and unplanned repairs.

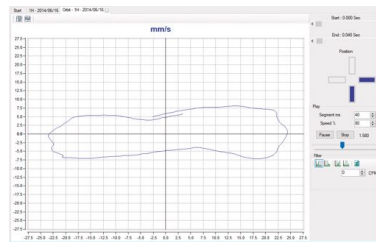
The most common tools are:



- > Time domain
- > FFT Pointers
- > CPM, Hz, Orders
- > FRF & Bump Test
- > Waveform
- > Analysis Transient Capture
- > Acceleration Enveloping

## Dual Channels M30 M20

The dual channel option saves time and allows for complex 2-channel analysis functions like cross-channel phase.



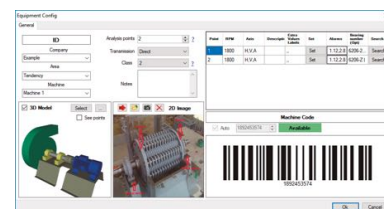
- > Orbits
- > Cross Power Spectrum
- > Transference function
- > Coherence function
- > Bode
- > Nyquist
- > Phase Analysis

## Bearings and Gears M30 M20

DigivibeMX Series has an expandable data base with failure frequency of more than 34,000 bearings, including functions for bearing fault frequency and gear mesh calculation.

Designation	Type	Internal diameter	External diameter	Width	Dynamic load rating (N)	Static load rating (N)	Fatigue load limit (N)	Reference speed	Landing speed
62	1 HB	3	10	4	0.54	0.18	0.007	130000	60000
623-2RS1	1 HB	3	10	4	0.54	0.18	0.007	130000	40000
623-2Z	1 HB	3	10	4	0.54	0.18	0.007	130000	63000
623-RS1	1 HB	3	10	4	0.54	0.18	0.007	130000	40000
623-Z	1 HB	3	10	4	0.54	0.18	0.007	130000	80000
618-4	1 HB	4	9	2.5	0.54	0.18	0.007	140000	80000
6204-2Z	1 HB	4	9	3.5	0.54	0.18	0.007	140000	70000
6304-2Z	1 HB	4	9	4	0.54	0.18	0.007	140000	70000
618-4	1 HB	4	11	4	0.715	0.232	0.0098	130000	80000
618-4-2Z	1 HB	4	11	4	0.715	0.232	0.0098	130000	63000
604	1 HB	4	12	4	0.806	0.25	0.012	120000	75000
604-2Z	1 HB	4	12	4	0.806	0.25	0.012	120000	60000
604-Z	1 HB	4	12	4	0.806	0.25	0.012	120000	60000
624	1 HB	4	13	5	0.936	0.29	0.012	110000	67000
624-2Z	1 HB	4	13	5	0.936	0.29	0.012	110000	53000
624-Z	1 HB	4	13	5	0.936	0.29	0.012	110000	67000
624	1 HB	4	16	5	1.11	0.38	0.016	90000	60000
624-2RS1	1 HB	4	16	5	1.11	0.38	0.016	90000	28000
624-2RZ	1 HB	4	16	5	1.11	0.38	0.016	90000	48000
624-2Z	1 HB	4	16	5	1.11	0.38	0.016	90000	48000
624-RS1	1 HB	4	16	5	1.11	0.38	0.016	90000	28000
624-RZ	1 HB	4	16	5	1.11	0.38	0.016	90000	60000
624-Z	1 HB	4	16	5	1.11	0.38	0.016	90000	60000
618-5	1 HB	5	11	3	0.637	0.205	0.011	120000	75000
625-5-2Z	1 HB	5	11	4	0.637	0.205	0.011	120000	60000

## Machine Database M30 M20



- > Company, Area, Machine
- > Measurement points
- > Type of coupling
- > ISO Machine Class
- > Export/Import DB
- > Easily Defined Fault Frequencies

## Compatibility

- > ASCII Format
- > UFF58 Files
- > ANL BAL
- > WAV (digital stethoscope)



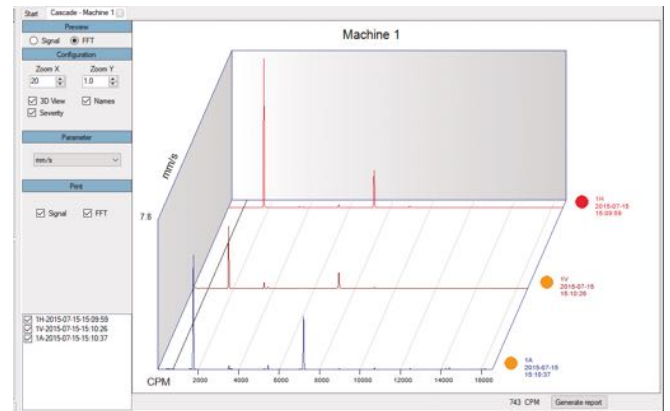
# Functions and Tools

that allow you to diagnose the real status of your machines

## Predictive Analysis Tools M30 M20

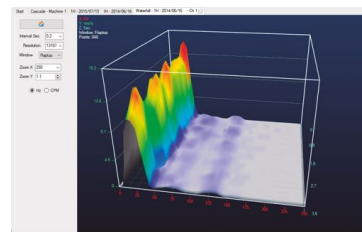
DigivibeMX allows users to complete analysis on all types of rotating machinery with tools like:

- > Machinery database and routes
- > Database with more than 34,000 bearings & gear calculator
- > Diagnosis Interpretation tool
- > Cascade Spectra
- > 3D ODS
- > SmartAlert Alarms & Trending



## FFT Spectra M30 M20 M10

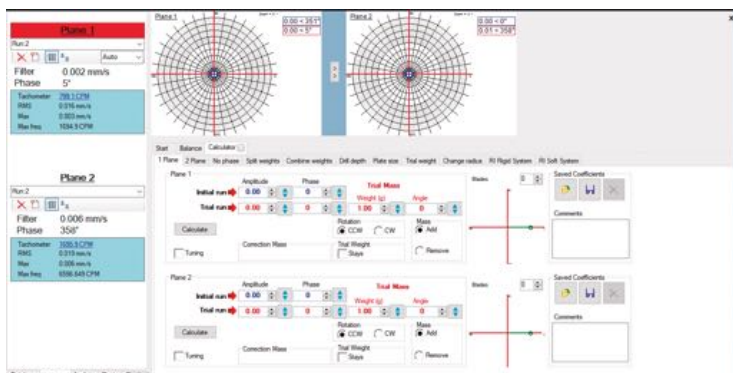
The spectral analysis tools in DigivibeMX are based on the FFT Algorithm. DigivibeMX is able to measure very low frequencies 0.4 hz up to 40 kHz depending on the DigivibeMX hardware interface selected. DigivibeMX is able to achieve a maximum of 2 million lines of resolution.



- > Spectra with 2 million resolution lines
- > Spectrogram
- > 3D Spectra
- > Pointers & cursors
- > Zoom In - Zoom Out
- > Markers
- > FFT Averaging

## Dynamic balancing in 1 and 2 planes

M30 M10



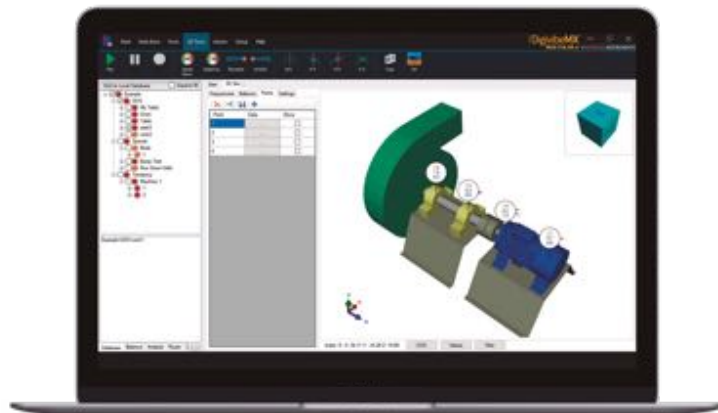
- > Add or remove weight
- > Separate or combine weights
- > Trial weights
- > Serial Balancings (without trial weights)
- > Drill calculation
- > Residual Imbalance
- > Degree of quality
- > Intelligent Machine Wizard
- > Balancing Report
- > Balancing Wizard for Soft Bearing Suspension balancing without trial weight.

## ODS Function M30 M20

ODS analysis is now an easy task. Create your 3D model in 3D design software (3DS Max, Blender, Solid Works, Windows 3D Builder that comes free with Windows 10 etc.) all without having to purchase special add on software like MEScope or STAR Modal.

With phase analysis **DigivibeMX** also calculates the coherence between signals, the cross power and the transference to ensure that all of the recorded signals are consistent.

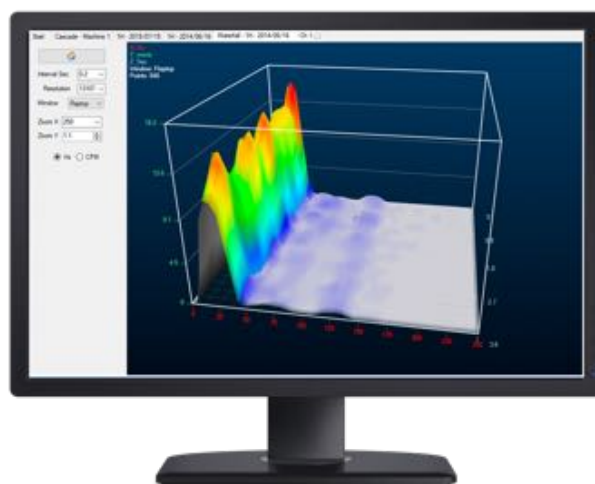
All the 3D simulations can be exported to AVI video or to an animated graphic GIF.



## 3D Waterfall M30 M20

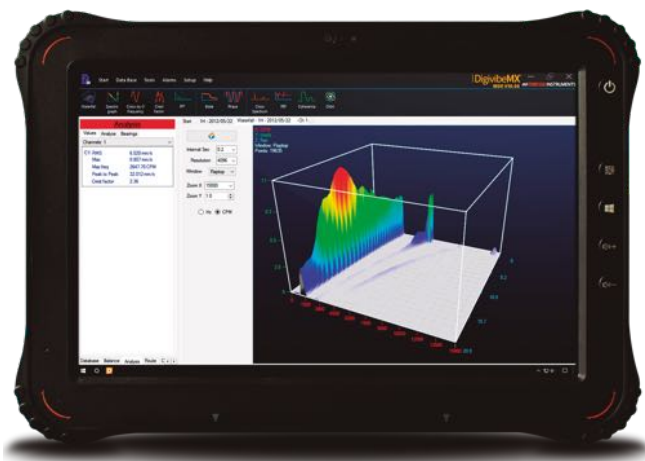
The FFT graphic in cascade (waterfall) is a spectral representation variable in time (creating a 3D representation) showing how the density of a signal varies as time passes.

**DigivibeMX** includes a tool that generates this graph easily with the ability to rotate and zoom in with the mouse or your fingers like in any other 3D software.



## System requirements

Requirements to install **DigivibeMX**:



- > Processor Quad-Core or superior
- > 4GB RAM
- > Windows 10 (supports Windows 8.1 Windows 7\*)
- > SVGA Monitor or superior
- > "Touch" mode for touch screen
- > 4GB free disk space
- > 1 USB 2.0 port

# DigivibeMX includes: One of our 3 Interfaces

## EI-WiSER



Wireless accelerometer: 2.4 GHz  
Sensitivity: 100 mV/g  
Frequency Range: (+/-3dB): 0.32 - 10 kHz  
Operation distance: 30 m

Sample rate: 48 kHz - 24 bits

Standard LEMO 5 Pin for additional sensors

Protection grade IP 67

Rechargeable battery (CR-123)  
14 hours of continuous use

Charger and USB receiver

## 4 Channel Interface



4 Input 24V 5-pin connectors:  
Up to 4 single axial accelerometers or 1 tri-axial accelerometer and 1 single axis accelerometer.

Of the 4 connectors, 3 are for 5V sensors:  
For optical sensor and non powered accelerometers/proximity probes.

Sample rate: 11k Hz - 22kHz - 44kHz

Power supply: USB 5V - 250mA  
5-Pin LEMO Output: 24V - 5mA cc / 5V

Frequency Range: 0.5-40kHz

Weight 300 g  
Dimensions: 89 x 129 x 19.5 mm

## 2 Channel Interface



3 LEMO 5 - pin Connectors  
(Ch 1-A, Ch 1-B, Ch 2/Op)

Active Plane Indicator  
(LED 1-A & LED 1-B)

Channel Auto Switching  
\*Only with DigivibeMX® V10+

IP 67 Protection grade  
4-pin LEMO to USB cable (1m/3ft)

Frequency Range: 0.5-20kHz

Dimensions: 79 x 70 x 24 mm /  
Weight: 153g

Download **Free WiSER applications** for **iPAD & iPHONE**



## Accelerometer AC500



Dinamyc impact shock: 80 G Peak  
(Max shock 5000g)

Freq. response (+/-3dB): 0.32 - 13kHz

Sensitivity: 100 mV/g +/- 10%  
Transverse sensitivity: < 5%

Power supply: 2.5/5V or 24 Volt  
Short-circuit protection

Operation temperature: -10 - 50 °C

Protection grade: IP 67,III  
Impact resistance: IEC 60028-27  
Standard 2 or 3 Pin MIL connector  
Weight: 50g  
Made of: Stainless steel body  
Includes: Magnetic Base w/neodymium

## Laser Tachometer



Analogic output

Frequency Range: 1 - 5,000 Hz

Power supply: 5V  
Current supply: 10mA

Operation distance: 20cm to 15m

Operating temperature: -10 -50 °C  
Storing temperature: -40 - 85 °C

Protection grade: IP 60, III  
Impact Resistance: IEC 60028-27  
Weight: 60g  
Nylamid body

# Software Highlights

Displacement: 0.5 mm to 30 mm (0.02 a 1200 mils)

Velocity: 0.002 to 3000 mm/s (0.0001 a 120 in/s)

Acceleration: 0.0001 to 100 G's peak-peak  
Lines of resolution: > 2,000,000

FFT Models: Rectangular, Hanning, Hamming, Flaptop, Blackman, CosSum, Bartlett, Kaiser  
Measurements peak: 0 - peak / peak - peak / RMS



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