

Imagine you could
see vibration.
Now you can with
RDI's IRIS M.

RDI's patented technology measures deflection, displacement, movement and vibration not visible to the human eye.

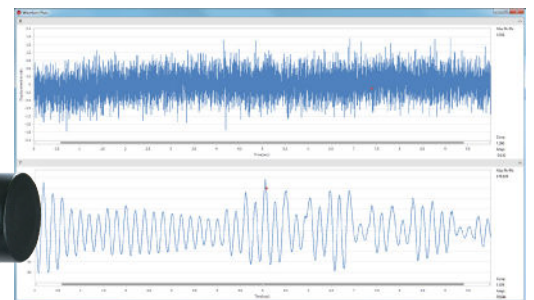
Get FFT's, time waveforms and phase information by simply pointing one of RDI's cameras at the machine.

The Iris M platform monitors critical manufacturing machinery, operations, process lines, structural components, quality control, and other factors that affect plant reliability and productivity.

By turning every pixel in the camera into a sensor, Iris M takes millions of measurements in a fraction of a second. It does this with no physical connection or disruption to your operations, machinery, or plant assets.

IRIS M
Enhancing Vision

Revolutionary technology
that allows you to get this



and then see it as a vibration video



What is Motion Amplification?

Iris M is completely non contact and provides a comprehensive analysis while the machinery is operating.



Our total industrial solution utilizes video camera technology in conjunction with our one-of-a-kind software and processing algorithms to extract meaningful data that solves problems. This technology turns every pixel in the camera's view into a sensor capable of measuring vibration or motion with unparalleled levels of accuracy.

It delivers real-time video to users, enabling them to make instant decisions about manufacturing operations based on real data. The ability to visualize the entire process while retaining component-level analysis makes Iris M the perfect tool for screening, fault finding, baseline or commissioning and pre/post repairs or retrofits. Every step of the way, Iris M provides specific information about the process or issues at the root of a quality problem.

What differentiates Iris M from traditional tools is that it simultaneously monitors all points of your process and machinery, and it does this with no impact to your flow of business. Iris M is completely non contact and provides a comprehensive analysis while the machinery is operating. With Iris M, you move well beyond data collection to problem-solving.



IRIS MX
Enhancing Vision

The Iris MX from RDI Technologies expands upon its revolutionary Iris M product to open up the world of Motion Amplification to high speed applications.

Visualize

Iris M enables a dramatic visualization of the motion. Motion Amplification is a proprietary video processing technique that detects subtle motion and then amplifies that motion to a level visible with the naked eye.

Communicate

Iris M enhances the understanding of the components and interrelationships creating the motion and provides a communication tool between technical and non technical resources.

Measure

Iris M measures and quantifies mechanical or structural assets that a camera can see with the same accuracy as a contacting displacement sensor.

Troubleshoot

Iris M allows you to filter your data and visualize motion at specific frequencies to find the real source of a problem and position your team to fix it.



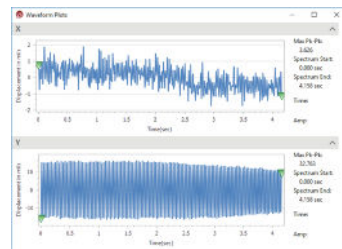


Motion Amplification™ Software

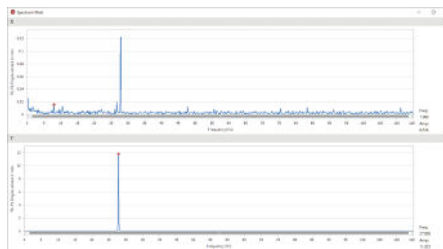
RDI's Motion Amplification software produces an easy to understand amplified video of motion across your equipment or machinery which enables far more effective communication between technical and non-technical personnel – which enhances decision- making. Videos from the Iris M platform are produced within seconds of data collection, saving you time and money.

Frequency and Displacement

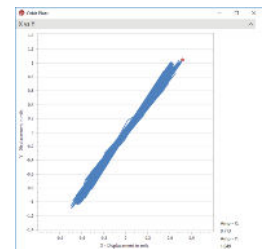
Generate spectrum and waveform plots from displacement data calculated from the recording. Draw a Region of Interest in the playback window to perform calculations.



Time Waveform



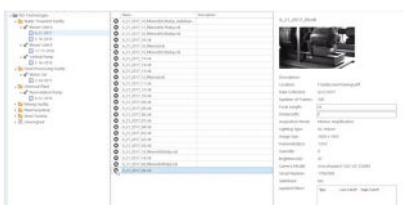
Frequency Spectrum Plots



Orbit Plot

Motion Explorer

Manage all your Motion Amplification data from one place. Preview your recordings before opening them, and organize your data in a hierarchical structure with associated files such as PDFs and MP4s.



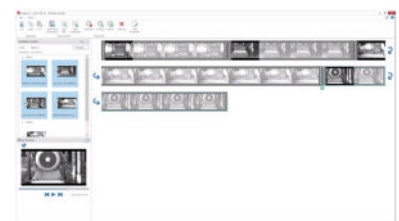
Frequency-based Filtering

Graphically identify frequencies of interest from the displacement data present in the recording so that only the desired frequency content is amplified.



Motion Studio

Create powerful videos by adding spectra and waveforms, show multiple views from a single screen, and edit your videos straight from video editor screen. Motion studio gives you all the tools for your reports.



Specifications

| | | |
|-----------------------------|---|---|
| Available Lenses* | 6mm, 12mm, 25mm, 50mm, 100mm | 6mm, 12mm, 25mm, 50mm, 100mm |
| Acquisition System | i7 processor, 16GB RAM, 500GB SSD, dual batteries, lightweight, MIL-STD-810G standard drop protection, 3 yr accidental damage protection* | i7 processor, 16 GB RAM, 500 GB SSD, dual batteries, lightweight, MIL-STD-810G standard drop protection, 3 yr accidental damage protection* |
| Sample Rate | 120/100 fps default, up to 1,300 fps at reduced resolution | 1,400 fps default, up to 29,000 fps at reduced resolution |
| Frequency Range | Up to 3,600 cpm @ 120 fps default Maximum 39,000 cpm @ 1,300 fps with reduced resolution | 42,000 cpm @ 1,400 fps default Maximum 870,000 cpm @ 29,000 fps with reduced resolution |
| Minimum Displacement | 0.1 mil (2.5 µm) at 3.3 ft (1m) with 50mm lens at max brightness | 0.1 mil (2.5µm) at 3.3 ft (1m) with 50 mm lens at max brightness |
| Motion Amplification Factor | 1-50x | 1-50x |
| Vibration Pads | 95% impulse absorption | 95% impulse absorption |
| Tripod | Professional Grade with pistol grip | Professional Grade with pistol grip |
| Case | Watertight, dust-proof, crushproof | Watertight, dust-proof, crushproof |
| USB3 Cable Length | 9.84 ft. (3 m) | 9.84 ft (3m) |
| Optional Accessory Kit | LED light: 14,000 Lux @ 1 m, Li-ion light battery, light stand, extra vibration pads, computer stand | LED light: 14,000 Lux @ 1m, Li-ion light battery, light stand, extra vibration pads, computer stand |

*Each kit contains 4 lenses. A 5th lens is available at additional charge.

Features

| | |
|-------------------------------------|--|
| Export Format | HD MP4 at 1920x1080 resolution |
| Video Annotations | Text, shape and annotations overlays with export to video |
| Playback/Export Video Speeds | 4x full speed to 1 fps |
| Grid Overlay | Configurable grid overlay (size, colour) |
| Export Options | Side-by-side playback of original and amplified video or amplified video only |
| Logo Export | Ability to overlay custom logo onto exported videos |
| Image Zoom | Exported video shows only zoomed region |
| Frequency Filtering | Bandpass, Bandstop, Lowpass and Highpass Filtering of Time Waveform and video |
| Stabilization | Entire frame and region based image stabilization |
| Time Waveforms, Spectra, and Orbits | Unlimited number of regions can be drawn in the video to measure displacement. All measurements are simultaneous |
| Waveform Export | Export waveforms to .csv file |



About Yellotec

Yellotec is a reliability solutions specialists that provide complete solutions for the implementation and management of Condition Based Maintenance. We stand proud in the belief that all failures are preventable.

We provide service, product and training solutions through the application of the following technologies:

- Vibration Analysis
- Oil Analysis
- Infrared Thermography
- Laser Alignment & Balancing
- Structural and Air borne Ultrasound

- Failure Analysis
- Fluid Management
- Conveyor Monitoring
- Electric Motor Testing