See the invisible

For the first time ever, RDI Technologies enables you to quickly and easily see what is invisible to the naked eye and transition to analysis and root cause problem solving. RDI’s comprehensive industrial solution is driven by proprietary software that turns the millions of pixels in today’s modern cameras into million of sensors that can be analyzed and visualized in a simple video format.

RDI’s revolutionary Iris M product is changing the way companies monitor the condition of billions of dollars worth of plant machinery, process lines, structures, and other plant assets. RDI’s Iris M will change the way you monitor your highest producing assets, failure critical machines, and daily route based monitoring.
“One of the most disruptive problem solving tools I have ever seen!”

John Schultz,
Executive Vice President,
TF Hudgins, Allied Reliability Group
What is Motion Amplification?

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

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.

Prioritize

Today’s companies have “analysis paralysis” because they have too much data and information to process. Iris M helps you prioritize by quickly and easily visualizing what is happening with your assets.

Complement

Iris M complements your current PDM toolkit. IRIS M can be used to identify, validate, or specify the source of reliability problems. It will enhance your root cause analysis program and allow you to see problems that other tools can’t detect.

Root-Cause

With Iris M, you will not only see a problem, you will see the solution. By visualizing the root cause, Iris M allows you to move beyond data collection to true problem-solving.
The world’s first non-contact motion amplification platform

*Iris M* from RDI Technologies is the first device of its kind that allows users to instantly see motion that is invisible to the human eye. The Motion Amplification technique quickly identifies the root-cause of your problem. *Iris M* is used in a wide range of industrial markets and plant applications.

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.

The *Iris M* technology platform delivers near real-time video to users, enabling them to make instant decisions about manufacturing operations based on real data. It also gives you the ability to visualize the entire process while retaining component-level analysis. All of this makes *Iris M* the perfect tool for screening assets, fault finding, commissioning new assets, 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.

*Iris M*’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 nontechnical personnel – enhancing decision-making. Videos from the *Iris M* platform are produced within seconds of data collection. In other words, *Iris M* saves you time and money.
OUR TEAM

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Total Solution

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.

“For the last six months we have been using RDI Technologies’ award winning IRIS M Motion Amplification Cameras across a wide range of Industries and applications. It’s not often you can use the term “Game changing technology”, but in this case it certainly applies!”

Stuart Walker, RMS
Motion Amplification

Available Lenses* 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*

Sample Rate
120/100 fps default, up to 1,300 fps at reduced resolution

Frequency Range
US: Up to 3,600 rpm @ 120 fps default
Int: Up to 3,000 rpm @ 100 fps default
Maximum: 39,000 rpm @1,300 fps with reduced resolution

Minimum Displacement
0.1 mil (2.5 µm) at 3.3 ft (1m) with 50mm lens at max brightness

Motion Amplification Factor 1-50x

Vibration Pads 95% impulse absorption

Tripod Professional Grade with pistol grip

Case Watertight, dustproof, crushproof

USB3 Cable Length 9.84 ft. (3 m)

Optional Accessory Kit
LED light: 14,000 Lux @ 1 m, Li-ion light battery, light stand, extra vibration pads, computer stand

Specification

Motion Amplification

Export Format HD MP4 at 1920x1080 resolution

Video Annotations Text, shape and annotations overlays with export to video

Playback/Export Video Speeds 4x to 1/20th full speed

Grid Overlay Configurable grid overlay (size, color)

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

Features

Motion Amplification

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*Each kit contains 4 lenses. A 5th lens is available at additional charge.
SEE IT.
SHOW IT.
FIX IT.
“For 15 years I gave vibration analysis reports to clients and am not sure what they have been doing with them all those years. Now, I give them a video and the look on their face is priceless, and actions get taken right away.”

Frederick Robinette,
Owner, Machinery Reliability Solutions

“This has proven to be of great assistance in rectifying a long term plant issue. After only a short set up time it confirmed our vibration and phase measurements without physically touching the plant.”

Peter Fanning,
Condition Monitoring Team Leader, AGL Loy Yang
“This video amplification technology has limitless applications. RDI has helped MillenniTEK identify motion and vibration issues that have resulted in improved yields and predictive maintenance planning. This is a must see technology that is cutting edge.”

Steve Getley,
President, MillenniTEK LLC

“Our RDI Technologies IRIS M motion camera has quickly become the most used piece of advanced technology in our rotating equipment department. The IRIS M is extremely exciting for us as it is the first genuinely new form of vibration analysis equipment since we stopped recording with audio tape 30 years ago. Finally clients who can’t read a spectrum or waveform truly understand the gravity of their vibration issues.”

Bryant Sutton,
Operations Manager, Southern Services Inc.