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 software that detects subtle movement and then converts that movement 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.

SEEING IS
BELIEVING™

▶ The world's first non-contact Motion Amplification™ software platform

Iris M™ from RDI Technologies is the first device of its kind that allows users to instantly see movement that is invisible to the human eye. The **Motion Amplification™** software 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 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 video of actual movement 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.

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

IRIS ◎ M™

Enhancing Vision

Specification

Motion Amplification™

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

Features

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 Motion Amplification™ video
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

IRIS ◆ MX ™

E n h a n c i n g   V i s i o n

▶ ## Visualize and measure a full spectrum of faults

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. Like the Iris M, the Iris MX utilizes the millions of pixels in today's modern cameras to measure deflection, displacement, movement, and vibration not visible to the human eye. The Iris M covers a wide range of faults in machine condition monitoring but with the addition of the Iris MX, we have you covered no matter what the speed of your machine.

SEE IT.
SHOW IT.
FIX IT.

IRIS ◈ MX™
Enhancing Vision

- ▶ 1,400 frames per second in HD resolution

- ▶ Available as an add-on with plug and play compatibility for current Iris M users

- ▶ For new customers the Iris MX includes all Iris M hardware and software to cover the full frequency range with ease

- ▶ Visualize the entire process while retaining component level analysis

- ▶ Near real-time processing enables users to make instant decisions about manufacturing operations

- ▶ Quickly determine the root cause and communicate it in an easy to understand video

BETTER

"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."
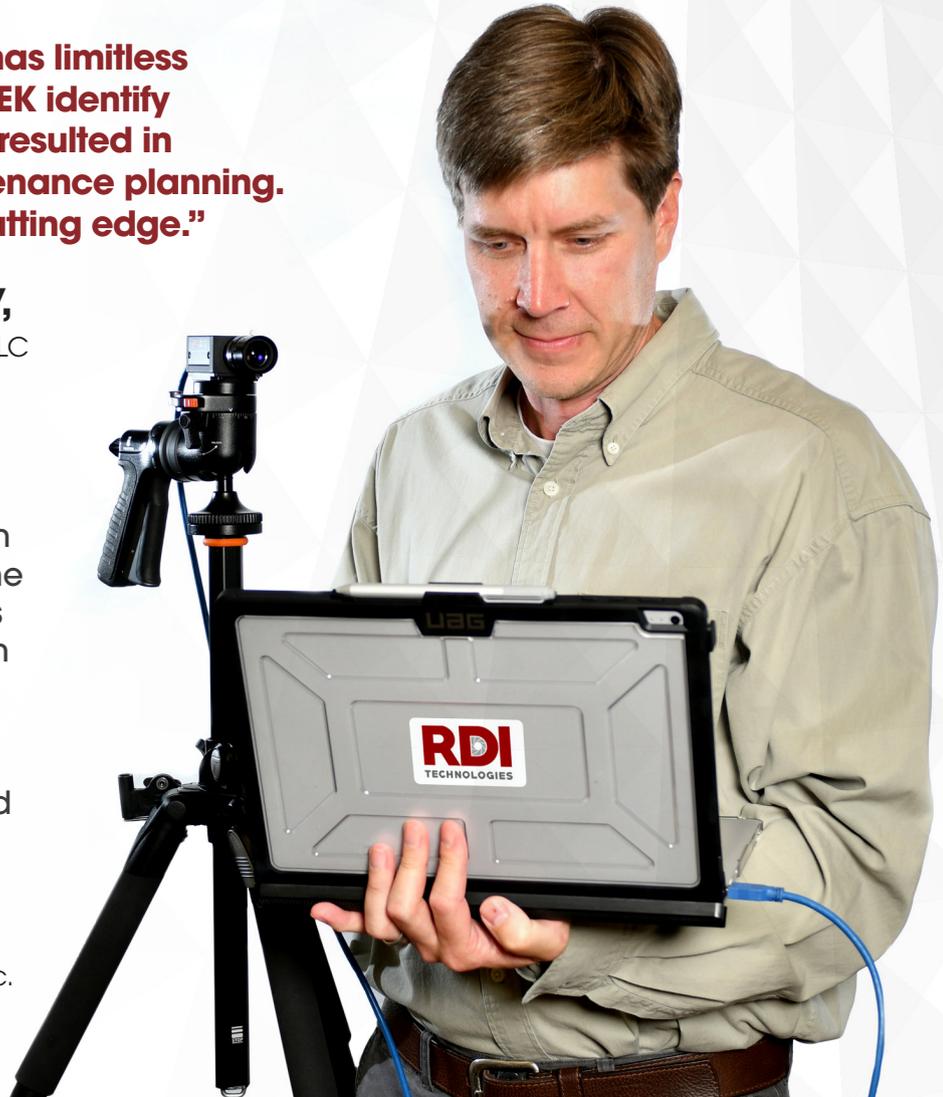
▶ **Peter Fanning,**
Condition Monitoring Team Leader, AGL Loy Yang

"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.

RDI

TECHNOLOGIES

www.rditechnologies.com I info@rditechnolgies.com

10024 Investment Drive #150, Knoxville, TN 37932