



# IRIS EXPLORER

## THE POWER OF TECHNOLOGY

Combining the mobility of Boston Dynamics' Spot® with the exceptional visibility of RDI Technologies' Motion Amplification®, the Iris Explorer™ Spot Payload allows industrial customers to take next-generation vibration analysis right to the asset in even the most remote or hazardous environments.



Enterprise asset management programs now have a high volume, highly repeatable route-based vibration analysis solution with dynamic mobility and teleoperation capabilities. Measuring deflection, displacement, movement, and vibration not visible to the human eye autonomously, Iris Explorer minimizes risk, helps maintain compliance and increases asset ROI for improved asset reliability and performance.



## FEATURES

### ON DEMAND MODE

Allows critical asset assessment or one-time data collection without having to create an auto walk mission for Spot®.

### FREQUENCY FILTERING

Bandpass, bandstop, lowpass, and highpass filtering of time waveform and video.

### STABILIZATION

Entire frame and region based image stabilization.

### MOTION MAPS

Show colorized image overlays of individual frequencies or overall motion.

### TRIGGERED EVENTS

Virtual camera-based sensors, ROI triggers (waveform pk-pk, spectrum digital overall, spectrum frequency band), Manual Triggers.

### AUTONOMOUS MODE

Users can recall previously programmed routes. Scheduling feature available through Boston Dynamics software features. Data measurements can be automatically trended.

### VIDEO ANNOTATIONS

Add text, shape, annotations, and company logo overlays with export to video.

### DATA EXPORT

Export waveform, spectra, orbits, and object paths to .csv file.

### TOP FREQUENCY FILTERING

Automatically determine frequencies of interest and create multiple filtered data sets with a single click.

### VIDEO SIDE-BY-SIDE

Side-by-side playback of original and Motion Amplification® video.

### INTERACTIVE MODE

Once a route is created, the interactive mode will allow the user to make adjustments (add, delete, modify) to actions, triggers, camera views, and even control where the robot navigates.

### TIME WAVEFORMS, SPECTRA, AND ORBITS

Unlimited number of regions can be drawn in the video to measure displacement. All measurements are simultaneous.

### AUTOMATED CAMERA CONTROL

Mission Explorer supports new hardware that will allow for remote operation and automation of several camera settings, such as focus and brightness.

### AUTONOMOUS LIGHTING MODE

Lighting can be automatically set to come on or stay off every single time or the user can let the software make the determination using a set point value to determine whether lighting should turn on or not.

## SPECIFICATIONS

### INDUSTRIAL GRADE CAMERA

USB 3.1, high-resolution CMOS sensor, high definition.

### MOTION AMPLIFICATION® FACTOR

1-500x.

### ACQUISITION SYSTEM

Server with Intel i7, 16GB Ram, 500GB storage, environmentally sealed design, wide temperature operating range, shock and vibration resistant, 3-Year warranty.

### FREQUENCY RANGE

0 CPM (0 Hz) to 5,400 CPM (90 Hz) at 180 fps.

### MINIMUM DISPLACEMENT

<0.01 mils (0.25  $\mu$ m) at 3.3 ft (1m) with 50mm lens, 0.005 mils (0.125  $\mu$ m) at close focus.

### ANALYSIS DEVICE

Ruggedized Tablet with Acquisition Software (Intel Core i7, 14" FHD outdoor viewable touch screen, 16GB RAM, 1TB SSD, stylus pen, chest, and hand straps, 3 YR Warranty).

### SAMPLE RATE

180 fps in HD, up to 1,300 fps at reduced resolution.

### LENSES

16mm Varioptic Lens.