Instantel®

PRODUCT CATALOG

Contents

About Instantel

For over 40 years, Instantel has been a global leader with best-in-class vibration, noise and air overpressure equipment for quarries, mining, construction, civil, geotechnical and other applications. Our products have contributed to the success of our customers' projects in over 85 countries and on countless sites. From specialized sensors and recording options, to remote data collection and a cloud-based data hosting solution, Instantel provides solutions that work.

We are proud of our position as an industry leader, boasting many industry firsts, but it does not stop there. We are committed to continuous improvement through innovation. We understand that our customers face challenging environments daily and need reliable data fast to ensure the success of their projects. We specialize in providing the tools that complete each project safely, quickly, and within compliance.

Our flexible product portfolio allows our customers to select the monitoring solution that best meets their needs - whether deep in the earth, above ground, or underwater.

Welcome to Instantel.

Instantel

The World's Most Trusted

Vibration ▪ Noise ▪ Air Overpressure ▪ Remote Monitoring ▪ Cloud-Based Data Management ▪ Calibration ▪ Repairs ▪ Software Solutions

What We Do

We design, manufacture, calibrate and service all our products. For our software systems, we take care of all the backend support and development. We thrive on creating industry firsts, and at Instantel we've created a lot of them.

Our dedicated Product Development team strives to keep us at the forefront of innovation, while working with our customers to improve our current product lines. We design software solutions that fully integrate with our units, making data collection smooth and effortless. For us, ease-of-use is a way of thinking, designed into each and every Instantel product.

At Instantel, we don't just deliver industry-leading products, we also deliver world-class service. Our knowledgeable Technical Support team is dedicated to providing our customers with practical expertise and advice. Our customers often face difficult installations and we are here to help them find the right solution.

We drive quality in every service we deliver and never take shortcuts. We calibrate at every frequency on the spectrum, not just a subset. When your units are calibrated by Instantel, you can guarantee that your event data is accurate. Our Service and Calibration team is committed to low turnaround times, keeping units where they are needed – in the field.

A History of Industry Milestones from Instantel

Compact Seismograph

Touch Screen Interface

ACH Auto Call Home

Histogram-Combo™ Mode

Web Reporting

Compliance Reporting

In-field Printer

We know our industry is complex and with it comes complex requirements. That's why we are always looking at how we can improve our product offering and our service. Being an industry leader is not enough. Innovation, reliability, and quality is the cornerstone of everything we do. From accessories, to complex monitoring units, to calibrations, to customer service, you can trust Instantel.

Our Applications

Operation of heavy equipment and activities such as construction, blasting, pile driving, and demolitions can create vibrations, air overpressure, and/or noise that can have adverse effects on the surrounding structures and environment both above and underneath the ground. With underwater and marine activities, both marine life and the ecosystem are at risk. Monitoring these activities protects people, structures and the environment.

The World's Most Trusted

Vibration · Noise · Air Overpressure · Remote Monitoring ·
Cloud-Based Data Management · Calibration · Repairs · Software Solutions

Construction Sites	**Underwater and Marine**	**Blasting**
Tunnels and Subways	**Oil and Gas Exploration**	**Demolition**
Quarries	**Pile Driving**	**Remote Access**
Underground Mines	**Dynamic Compaction**	**Research**
Civil Projects	**Vibration Dose Value (VDV)**	

Our Products

With our solid fleet of series of products, you will always have the right solution for your most demanding projects. Access post-monitoring data and reporting for the Micromate series from our cloud-based Vision *II* platform. Monitor in near real time using Live Data. For the Minimate Pro series, access your local computer using THOR software. Instantel offers complete hardware and software systems for all your monitoring needs!

Monitoring Solutions

Software Solutions

Vision II™
Powered by Instantel
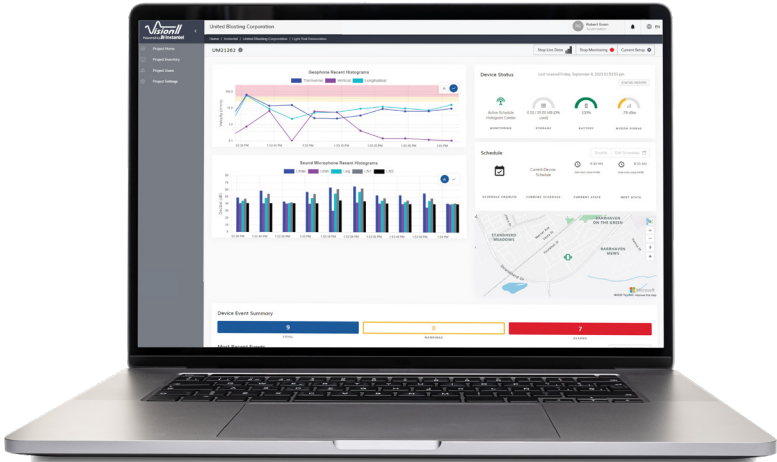
featuring **Live Data**™

THOR™
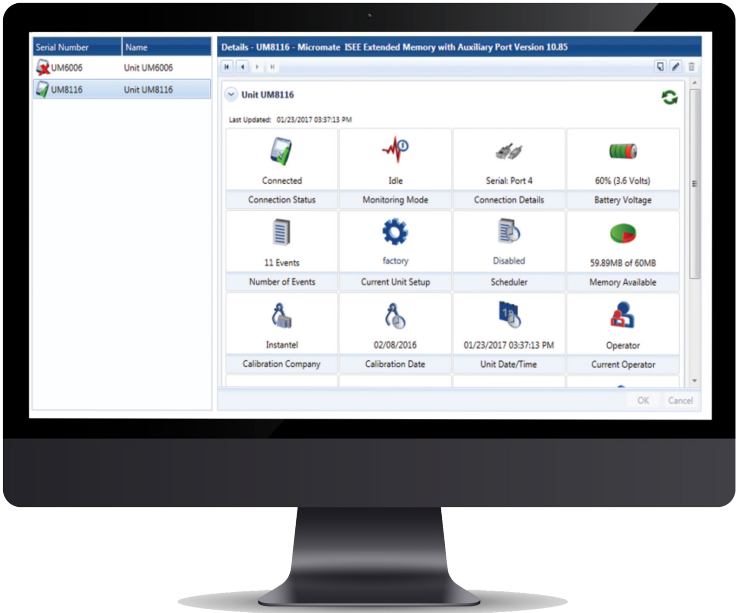
How a Micromate Plus Monitoring Unit Connects Using Vision // Software System

The Micromate Plus monitoring unit provides rugged, reliable monitoring with a built-in modem for wireless connectivity. Connect a geophone or microphones for sound and air overpressure all at the same time. Retrieve data from the unit itself using a portable USB-C, or uploaded via a wireless connection and Vision *II* cloud-based software, or by directly connecting to a PC.

System Overview

Applications
- Civil Projects
- Blasting
- Dynamic Compaction
- Pile Driving
- Demolition
- Underground Mines
- Construction
- Vibration Dose Value (VDV)
- Quarries
- Oil & Gas
- Tunnels / Subways
- Remote Access

Vibration Monitoring
- Sound Level Microphone
- Linear Microphone
- GPS
- Wi-Fi
- Cellular
- Triaxial Geophone
- Borehole Geophone (ISEE, DIN)

Instantel Micromate Plus

2025-09-18 09:22 PM

Recording Setup | Sensor Check | Start Monitor
List Events | User Preferences | Maintenance Menu

Sensor Check | Setup
Start Monitor | Cancel

Device Status
Charging Status

Record Mode Options
- Waveform
- Waveform Manual
- Histogram
- Histogram-Combo

Data Transmission Options
- Via USB-C
- Via Direct Connection

Internet

SFTP Server (Data Pass-Through)

Vision II (Cloud Software)

Data Output
- Mobile
- Tablet
- Laptop

Micromate **Plus**

Micromate Plus™

The Micromate Plus monitoring unit offers robust, reliable monitoring with built-in connectivity options, including cellular and Wi-Fi modems, GPS, and a solar charge controller. The USB-C port provides fast charging and facilitates data transfer when a cellular network is unavailable. Solar power can be connected through the Power port, and data retrieval is seamless with Vision *II* software—no monthly subscription fees are required.

One of the standout features of the Micromate Plus is its interchangeable geophones, which are independent of the base unit. Only the geophones require calibration, allowing the unit to stay deployed in the field. With an extra set of pre-calibrated geophones, you can quickly swap them out to avoid downtime. Geophones can be mounted on a horizontal or vertical surface, and you can monitor them simultaneously alongside the linear and sound microphones in real-time, fully time-synchronized. The sound microphone captures both decibel levels (dB) and audio clips. For in-field configuration, the fail-safe keypad ensures functionality, even in areas with no cellular coverage.

Designed to withstand the toughest conditions, the Micromate Plus comes with color-coded Mil-Spec connectors, an IP68 rating, and a rugged aluminum casing with a protective boot that is easily removable. The robust connectors are even usable while wearing gloves. Capable of operating in extreme temperatures ranging from -40°C to 55°C (-40°F to 131°F), the unit is built for reliability in all environments. Data retrieval is flexible too—either through automatic uploads via Wi-Fi or cellular connection to the cloud-based Vision *II* platform or through offline options using the USB-C port for a thumb drive or a direct computer connection. Whether online or offline, there is always a way to get your data—24/7/365.

The Micromate Plus is engineered for ease of use, with an intuitive interface designed for daily operations. Quick-access function keys streamline common tasks, and seamless integration with Vision *II* software transforms the unit into a complete monitoring solution. You can easily switch between international compliance standards, like ISEE and DIN, and generate user-selectable custom compliance reports to meet local requirements within Vision *II*.

The Micromate Plus includes the following Vision *II* features:

- Company Management
- User Management
- Project Management
- Device Management

- Gauges for Critical Information
- Warnings and Alerts
- Compliance Graph (downloadable, printable copy)

(See: Vision II Software for feature information)

Base unit features interchangeable geophones calibrated to meet international standards, including ISEE and DIN. For a complete list of standards, refer to the Specification Sheet 727B0001.

Base Unit . . . . .P/N: 727A4201
Base Unit with AUX Port. . . . . P/N: 727A4202

* Note: Certain features currently in development for the USB-C and AUX port.

Instruction Sheet Available Online

Geophones

Micromate Plus Monitoring Unit Triaxial Geophone

Geophone calibrated to multiple standards, including ISEE 2 - 250 Hz, DIN 1 to 80 and DIN 1 to 315 Hz. Can be mounted on vertical or horizontal surfaces. Blue color-code connector sleeve. Includes mounting spikes (P/N: 1100241)

Cable length 2m (6.6 ft) . . . . P/N: 727A0301
Cable length 8m (26.2 ft) . . . . P/N: 727A0302

Instruction Sheet Available Online

Microphones

ISEE Linear Microphone   P/N: 727A3101

2 - 250 Hz linear microphone. Measures air overpressure on a linear scale.
Calibrated to the ISEE-2022 standard.
Includes a 2m (6.6 ft) cable and Microphone Stand Assembly
(P/N: 720A6001).

Instruction Sheet Available Online

Sound Level Microphone   P/N: 727A3001

10 Hz - 20 kHz Class 1 sound/noise microphone.
Calibrated to the IEC 61672-1 standard.
Includes a 2 m (6.6 ft) cable and Microphone Stand Assembly
(P/N: 720A6001).

Instruction Sheet Available Online

Borehole Geophone
Triaxial Borehole Geophone

64 mm (2.5 in) borehole geophone. Select the Borehole's cable length:
Cable length 30 m (198.4 ft) . . . . P/N: 727A4001
Cable length 75 m (246.1 ft) . . . . P/N: 727A4003
Geophone calibrated to multiple standards, including ISEE 2 - 250 Hz, DIN 1 to 80 and DIN 1 to 315 Hz.
Note: Requires a 7.6 cm (3 in) minimum diameter borehole for installation.

Cables

Geophone Extension Cable

Includes connectors.
Cable length 10m (32.8 ft) . . . . P/N: 727A5601
Cable length 30m (98.4 ft) . . . . P/N: 727A5602
Cable length 75m (246.1 ft) . . . . P/N: 727A5603

Linear Microphone Extension Cable

Includes connectors.
Cable length 10m (32.8 ft) . . . . P/N: 727A5701
Cable length 30m (98.4 ft) . . . . P/N: 727A5702
Cable length 75m (246.1 ft) . . . . P/N: 727A5703

Sound Microphone Extension Cable

Includes connectors.
Cable length 10m (32.8 ft) . . . . P/N: 727A3701
Cable length 30m (98.4 ft) . . . . P/N: 727A3702
Cable length 75m (246.1 ft) . . . . P/N: 727A3703

External Trigger Cable   P/N: 727A5901

External trigger cable used to remotely trigger a Micromate Plus monitoring unit.
Cable length 2m (6.6 ft).

Power Supply

Power Adaptor . . . . P/N: 727A2801
3-Prong Cable (bottom images):
North America (left) . . . . P/N: 300-100160-000
International Charge Kit Assembly (right) . . . . P/N: 727A4501

Extension Cable for Antennas   P/N: 300-100161-000
Extension cable for Wi-Fi, GPS, or Cellular antennas.
Cable length: 1 m (3.3 ft)

Flying Lead Power Cable

P/N: 727A6101

Allows the Micromate Plus unit to be connected to an external power source such as a battery or solar panel.

Waterproof USB-C Cable

P/N: 727A4101

Waterproof USB-C cable for use when a Micromate Plus unit will be left exposed to the elements. Cable length 2m (6.6 ft).

Standard USB-C Cable

P/N: 300-100159-000

For use when a Micromate Plus is protected from the elements.

GPS Antenna with Cable

P/N: 340-000021-000

GPS Antenna TNC with a TNC male plug connector. Includes magnetic base and 2 m (6.5 ft) cable.

Accessories

Protective Boot Cover

P/N: 727A3401

Protective rubber boot with a clear plastic cover that can hinge on either end. Provides protection from water, dust and impact from foreign objects. Various mounting options exist for diverse installation requirements. Includes a stainless steel hardware kit (screws and washers) [not shown].

Shown with unit (not included)

Carrying Case

P/N: 72704201

Soft carrying case used to store and carry the Micromate base units and accessories. Foam insert included.

Auxiliary Port

P/N: 727A3301

For use with a remote alarm or an external trigger cable on the Micromate Plus monitoring unit.
Note: Must be configured by the manufacturer.

Remote Alarm Controller

P/N: 727A4701

Self-contained controller complete with a 2m (6.6 ft) cable and high power auxiliary drive capability for external sirens and other alarms.

Geophone Leveling Plate

P/N: 727A4301

Package includes leveling plate, feet, and integrated spirit level. For use with Micromate Plus geophones.

Replacement Parts
Micromate Plus Monitoring Unit

Triaxial Geophone Mounting Spike

P/N: 1100241

Geophone spikes (7.6 cm/3 in) for use with Instantel Triaxial Geophones or monitors with internal geophones. Set of three spikes.

Microphone Stand Assembly

P/N: 720A6001

Three-piece assembly, total height measures 80 cm (31.5 in). For use with Instantel Linear and Sound Level Microphones (P/N: 721A0201, 721A2301, 720A1801, 720A5101, 720A4801, 714A9801, 714A2001,714A5501, 727A3001, or 727A3101).

Microphone Windscreens

Sound Level Microphone Windscreen . . . . P/N: 72702901
Foam cover for use with (P/N: 720A5101,721A2301, or 727A3001).

Linear Microphone Windscreen . . . . P/N: 410-720001-000
Foam cover for use with the following Linear Microphone assemblies:
(P/N: 721A0201, 720A1801, 720A4801, 714A9801, 714A2001, 714A5501, or 727A3101).

Replacement Antenna
Sold individually. (Left to Right: Cellular, Wi-Fi, GPS)
Cellular. . . . . .P/N: 727A4901
Wi-Fi . . . . .P/N: 727A4801
GPS . . . . .P/N: 727A5001

Replacement Dust Cap Cover

Replacement dust covers for the Micromate Plus unit. Sold individually.

For Sound Level Microphone, USB-C, and AUX connectors . . . . P/N: 72701701
For Geophone connector . . . . P/N: 72701801
For Antenna connectors . . . . P/N: 72701901
For Linear Microphone and Power connectors . . . . P/N: 72702101

Replacement Cable Dust Cap Cover

Replacement dust covers for the Micromate Plus unit sensors. Sold individually.

For Linear Microphone and Power connectors . . . . P/N: 72702801
For Sound Level Microphone, USB-C, and AUX connectors . . . . P/N: 72702901
For Geophone connector . . . . P/N: 72703001

How a Micromate Monitoring Unit Connects Using Vision // and THOR Software Systems

The Micromate monitoring unit's geophone and microphone sensors capture every relevant vibration from a host of industrial applications. Using Waveform, Histogram or a combination of the two modes, the Micromate monitoring unit gathers event data and then transmits the data to a computer or mobile device via a direct connection, USB, or via a cellular modem over the internet.

System Overview

Applications

- Civil Projects
- Dynamic Compaction
- Blasting
- Pile Driving
- Demolition
- Underground Mines
- Vibration Dose Value (VDV)
- Quarries
- Remote Access
- Construction
- Oil & Gas
- Tunnels / Subways

Vibration Monitoring

- Sound Level Microphone
- Linear Microphone
- Instantel Micromate — Ready To Monitor — 09:37:58
- ISEE
- DIN
- Swedish Pile Driving
- Swedish Blasting
- Borehole Geophone (ISEE, DIN)

Record Mode Options

- Waveform
- Waveform Manual
- Histogram
- Histogram-Combo

Data Transmission Options

- Via Cellular Modem
- Via USB
- Via Direct Connection

Vision II (Cloud Software)

Internet

SFTP Server (Data Pass-Through)

Data Output

- Mobile
- Tablet
- Laptop

THOR

Micromate®

Micromate®

Seamlessly record vibration, sound/noise, or air overpressure with just one monitoring unit. The Micromate monitoring unit was custom engineered with a rugged and reliable design to withstand harsh conditions, including water-resistance. Experience zero dead-time that includes 10 to 15 days of uninterrupted monitoring with the provided internal battery. The 15 MB of memory can store up to 1,000 events, upgradeable to 4,000 events with the extended 60 MB memory option.

The Micromate monitoring unit is light and portable. It is small enough to fit in the palm of your hand and features a high-resolution color touch-screen display with a QWERTY key pad. It features a built-in USB port so you can easily connect a USB flash drive to transfer events or even update the unit's firmware – quickly, easily and all in the field without the need of a computer.

The Micromate monitoring unit comes with three channels for a triaxial geophone and one channel for an air overpressure or sound level microphone. Each base unit is coupled with a geophone and configured to meet one of the following industry standards:

Micromate shown with Protective Boot

- International Society of Explosives Engineers (ISEE-2017) . . . . .Base Unit P/N: 721A2501
- Deutsches Institut für Normung (DIN 45669-1) . . . . .Base Unit P/N: 721A2601
- Swedish Blasting (SS4604866) . . . . .Base Unit P/N: 721A3601
- Swedish Pile Driving (SS025211) . . . . .Base Unit P/N: 721A3801

Recommendation: This device connects to an external modem. While using modems, safe security measures should be undertaken, such as strong, unique passwords and the use of trusted IP addresses (IP allowlisting/whitelisting).

Micromate Specification Sheet Available Online

Geophones

Micromate Monitoring Unit ISEE Triaxial Geophone

2 - 250 Hz geophone calibrated to the ISEE-2022 standard.
Select the geophone's cable length:
Cable length 2 m (6.6 ft) . . . . P/N: 721A2901
Cable length 5 m (16.4 ft) . . . . P/N: 721A2902
Includes Triaxial Geophone Mounting Spikes (P/N: 110241)
Note: Must be calibrated to a Micromate Base Unit . . . . P/N: 721A2501

Micromate Monitoring Unit DIN Triaxial Geophone

1 - 315 Hz geophone calibrated to the DIN 45669-1 standard.
Select the geophone's cable length:
Cable length 2 m (6.6 ft) . . . . P/N: 721A3301
Cable length 5 m (16.4 ft). . . . . P/N: 721A3302
Includes Triaxial Geophone Mounting Spikes (P/N: 110241)
Note: Must be calibrated to a Micromate Base Unit . . . . P/N: 721A2601

Micromate Monitoring Unit Swedish Blasting Geophone

5 - 300 Hz geophone. Calibrated to the SS4604866:2011 standard.
Select the geophone's cable length:
Cable length 2 m (6.6 ft) . . . . P/N: 721A3501
Cable length 5 m (16.4 ft). . . . . P/N: 721A3502
Includes Triaxial Geophone Mounting Spikes (P/N: 110241)
Note: Must be calibrated to a Micromate Base Unit . . . . P/N: 721A3601

Micromate Monitoring Unit Swedish Pile Driving Geophone

2 - 150 Hz geophone. Calibrated to the SS025211 standard.
Select the geophone's cable length:
Cable length 2 m (6.6 ft) . . . . P/N: 721A3701
Cable length 5 m (16.4 ft) . . . . P/N: 721A3702
Includes Triaxial Geophone Mounting Spikes (P/N: 110241)
Note: Must be calibrated to a Micromate Base Unit . . . . P/N: 721A3801

Borehole Geophone
Micromate Monitoring Unit Triaxial Borehole Geophone

64 mm (2.5 in) borehole geophone. Select the Borehole's cable length:
Cable length 30 m (98.4 ft) . . . . P/N: 721A2401
Cable length 75 m (246.1 ft) . . . . P/N: 721A2402
Calibrated to the same standard as the Micromate Base Unit.
Note: Requires a 7.6 cm (3 in) minimum diameter borehole for installation.

Instruction Sheet Available Online

Microphones

Micromate Monitoring Unit Linear Microphone   P/N: 721A0201

2 - 250 Hz linear microphone. Measures air overpressure on a linear scale.
Calibrated to the ISEE-2022 standard. (Shown with windscreen P/N: 1712.)
Includes a 2 m (6.6 ft) cable and Microphone Stand Assembly (P/N: 720A6001).

Instruction Sheet Available Online

Micromate Monitoring Unit   P/N: 721A2301
Sound Level Microphone

10 Hz - 20 kHz Class 1 sound/noise microphone. Calibrated to the IEC 61672-1
standard. (Shown with windscreen P/N: 410-720001-000.) Includes a 2 m (6.6 ft)
cable and a Microphone Stand Assembly (P/N: 720A6001).

Instruction Sheet Available Online

Accessories

Triaxial Geophone Leveling Plate
P/N: 714A1801

Includes leveling plate, feet and an integrated spirit level.
For use with Micromate, Minimate Pro, Minimate Plus, Blastmate III, and Minimate Blaster external geophones.
Note: Geophone not included.

Power Adaptor
P/N: 370-000024-000

Mini USB power supply for use with Micromate monitoring units in North America.
Input 100 --240V AC. Output 5V DC, 1A.

Universal Charger
P/N: 721A1201

Power adaptor for use with Micromate monitoring units internationally.
Input 110-240V AC 50/60Hz, Output 5V DC, 1A.

Triaxial Geophone Wall Mounts

Used to mount a triaxial geophone to a wall or other vertical surface. Includes bolts, aluminum mounting block, and mounting instructions. (Geophone not included)
Triaxial Geophone Wall Mount Kit . . . . P/N: 718A0101

Optional Triaxial Geophone Modification for Wall Mounting . . . . . . P/N: 721A3001
Note: This optional upgrade must be performed by the manufacturer and modifies a Micromate monitoring unit Triaxial Geophone to a wall mount orientation.

Portable Field Printer
P/N: 721A4301

Battery operated printer that includes a USB cable. Lightweight and easily transported for printing hard copies of event reports in the field.
Note: This printer has custom firmware specifically for the Micromate monitoring unit and must be purchased through Instantel to ensure compatibility.
Printer Paper (contains 5 rolls) . . . . P/N: TP5000-80-25C

Instruction Sheet Available Online

Remote Alarm Controller

P/N: 721A0901

Self-contained controller complete with 2 m (6.6 ft) cable and high-power auxiliary drive capability for external sirens and other alarms.

Note: Requires the factory installed, Auxiliary Port option, see Micromate monitoring unit 'Upgrades' below.

Instruction Sheet Available Online

Protective Boot and Cover

P/N: 721A0301

Protective rubber boot with a clear plastic cover that can hinge on either end. Provides protection from water, dust and impact from foreign objects. Various mounting options exist for diverse installation requirements.

Instruction Sheet Available Online

Carrying Case

P/N: 721A3101

Soft carrying case used to store and carry the Micromate base units and accessories. Foam insert included.

Upgrades

Extended Memory

P/N: 721A1101

Increases the internal non-volatile memory in the Micromate monitoring unit from 15 MB to 60 MB. This optional upgrade increases the storage capacity from 1,000 events to 4,000 events.
Note: Must be configured by the manufacturer.

Extended Battery Life

P/N: 71A1301

Extends the battery life of the Micromate monitoring unit from 10 days to 15 days.
Note: Must be configured by the manufacturer.

Auxiliary Port

P/N: 721A0101

For use with a remote alarm or an external trigger cable on the Micromate monitoring unit.
Note: Must be configured by the manufacturer.

Cables

External Trigger Cable
P/N: 721A1401

Includes a 2 m (6.5 ft) cable used to remotely trigger a Micromate monitoring unit.
Note: Requires the factory-installed Auxiliary Port option (P/N: 721A0101).

Custom Extension Cable Kit
P/N: 721A3201

Kit for splicing custom length extension cables for Micromate monitoring unit geophones, borehole geophones and microphones in the field. Includes two 2 m (6.5 ft) over-molded cables. One cable has a male connector and the other cable has a female connector on one end. The other end of each cable has no connector.

10 m (32.8 ft) Extension Cable
P/N: 721A0803

For use with Micromate monitoring unit geophones, borehole geophones and microphones. Includes the connectors.

30 m (98.4 ft) Extension Cable
P/N: 721A0801

For use with Micromate monitoring unit geophones, borehole geophones and microphones. Includes the connectors.

75 m (246.1 ft) Extension Cable
P/N: 721A0802

For use with Micromate monitoring unit geophones, borehole geophones and microphones. Includes the connectors.

USB to RS-232 Cable
P/N: 721A1001

Includes a 1.8 m (5.9 ft) cable used for connecting a Micromate monitoring unit to a cellular modem.

How a Minimate Pro™ Monitoring Unit Connects Using THOR™ and Vision™ Software Systems

The Minimate Pro4 monitoring unit (4 channel) and Minimate Pro6 monitoring unit (6 channel) geophone and microphone sensors, along with the advanced sensors *(High Frequency Triaxial Geophone, High Frequency Triaxial Borehole Geophone, High Pressure Microphone, Hydrophone, 0.5g-50g-500g Accelerometers)* capture all relevant vibrations (up to 65,536 S/s) from a host of industrial applications. Using Waveform, Histogram or a combination of the two modes, the Minimate Pro monitoring unit captures event data and then transmits the data to a computer or mobile device via a direct connection or via a cellular modem over the internet.

System Overview

Applications

Civil Projects

Dynamic Compaction

Blasting

Pile Driving

Vibration Dose Value (VDV)

Quarries

Remote Access

Demolition

Underground Mines

Construction

Oil & Gas

Tunnels / Subways

Vibration Monitoring

Sound Level Microphone

Linear Microphone

High Pressure Microphone

Hydrophone

ISEE

DIN

High Frequency

Swedish Pile Driving

Swedish Blasting

Borehole Geophone (ISEE, DIN)

Accelerometer (0.5g, 50g, 500g)

Minimate Pro — Instantel

Ready to Monitor

Record Mode Options

Waveform

Waveform Manual

Histogram

Histogram-Combo

Data Transmission Options

Via USB

Via Direct Connection

Via Cellular Modem

Internet

Vision (Cloud Software)

THOR

Data Output

Mobile

Tablet

Laptop

Minimate Pro™

Minimate Pro™

Experience a unique set of advanced monitoring capabilities when it comes to recording vibration, sound/noise, or air overpressure. Designed to weather the most extreme conditions, the Minimate Pro monitoring unit can handle anything you can throw at it. It features a rugged cast aluminum case with a waterproof rating of IP67, making it easy to monitor in wet conditions.

For those challenging applications, such as tunneling, the Minimate Pro monitoring unit includes EMI shielding and built-in noise and anti-aliasing filters to reduce noise and electrical interference.

The Minimate Pro monitoring unit allows you to never miss an event with its zero dead-time.

Enjoy up to 10 days of uninterrupted monitoring with the provided internal battery and 64 MB of memory that can store up to 8,000 events, upgradeable to 32,000 events with the extended 240 MB memory option.

The Minimate Pro monitoring unit also boasts advanced recording and reporting features. An arsenal of advanced sensors enhance its monitoring capabilities, recording up to 65,536 samples per second on all channels.

Choose between the four channel Minimate Pro4 and the six channel Minimate Pro6 base units and configure it to one of the following industry standards: International Society of Explosives Engineers (ISEE-2017) or Deutsches Institut für Normung (DIN 45669-1).

Minimate Pro4 Base Unit with 64 MB onboard memory . . . . P/N: 720A2301
Minimate Pro6 Base Unit with 64 MB onboard memory. . . . . P/N: 720A2401

Minimate Pro4 Monitoring Unit Specification Sheet Available Online
Minimate Pro6 Monitoring Unit Specification Sheet Available Online

Geophones

Minimate Pro4/Pro6 Monitoring Units ISEE Triaxial Geophone

2 - 250 Hz geophone calibrated to the ISEE-2022 standard.
Select the geophone's cables length:
Cable length 2 m (6.6 ft) . . . . P/N: 720A2001
Cable length 8 m (26.2 ft). . . . . P/N: 720A2004
Includes mounting spikes (P/N: 1100241).

Minimate Pro4/Pro6 Monitoring Units DIN Triaxial Geophone

1 - 315 Hz geophone calibrated to the DIN 45669-1 standard.
Select the geophone's cable length:
Cable length 2 m (6.6 ft) . . . . P/N: 720A2002
Cable length 8 m (26.2 ft) . . . . P/N: 720A2005
Includes mounting spikes (P/N: 1100241).

Minimate Pro4/Pro6 Monitoring Units Vibration Dose Value (VDV) Triaxial Geophone

1 - 80 Hz geophone calibrated to the DIN 45669-1 standard.
Select the geophone's cables length:
Cable length 2 m (6.6 ft). . . . . P/N: 720A2003
Cable length 8 m (26.2 ft) . . . . P/N: 720A2006
Includes mounting spikes (P/N: 1100241).
Note: The VDV functionality requires THOR Advanced software (P/N: 72300201).

Minimate Pro4/Pro6 Monitoring Units High Frequency Triaxial Geophone

30 - 1000 Hz geophone.
For near-field monitoring with a range up to 2540 mm/s (100 in/s).
Includes a 2 m (6.6 ft) cable . . . . P/N: 720A4701
Includes mounting spikes (P/N: 1100241).
Note: Requires THOR Advanced software (P/N: 72300201).

Instruction Sheet Available Online

Borehole Geophones

Minimate Pro4/Pro6 Monitoring Units ISEE Triaxial Borehole Geophone

2 - 250 Hz geophone calibrated to the ISEE-2022 standard . . . P/N: 720 A5601
6.4 cm (2.5 in) borehole geophone with 30 m (98.4 ft) cable.
Note: Requires a 7.6 cm (3 in) minimum diameter borehole for installation.

Instruction Sheet Available Online

Minimate Pro4/Pro6 Monitoring Units DIN Triaxial Borehole Geophone

1 - 315 Hz geophone calibrated to the DIN 45669-1 standard . . P/N: 720A5701
6.4 cm (2.5 in) borehole geophone with 30 m (98.4 ft) cable.
Note: Requires a 7.6 cm (3 in) minimum diameter borehole for installation.

Instruction Sheet Available Online

Minimate Pro4/Pro6 Monitoring Units Triaxial Borehole Geophone High Frequency

30 - 1000 Hz geophone for near-field monitoring . . . . P/N: 720A5801
6.4 cm (2.5 in) borehole geophone with 30 m (98.4 ft) cable.
Note: Requires a 7.6 cm (3 in) minimum diameter borehole for installation.
Note: Requires THOR Advanced software (P/N: 72300201).

Instruction Sheet Available Online

Microphones

Linear Microphone

P/N: 720A1801

2 - 250 Hz linear microphone. Measures air overpressure on a linear scale.
Calibrated to the ISEE-2022 standard.
Includes a 2 m (6.6 ft) cable, microphone stand (P/N: 720A6001) and
windscreen (P/N: 1712).

Instruction Sheet Available Online

Sound Level Microphone

P/N: 720A5101

10 Hz - 20 kHz Class 1 sound/noise microphone.
Calibrated to the IEC 61672-1 standard.
Includes a 2 m (6.6 ft) cable, a microphone stand (P/N: 720A6001) and
windscreen (P/N: 410-720001-000).

Instruction Sheet Available Online

High Pressure Microphone

P/N: 720A4801

5 - 1000 Hz, up to 68.9 kPa (10 psi) high pressure microphone.
Measures air overpressure in close proximity or confined blasting situations.
Includes a 2 m (6.6 ft) cable, microphone stand (P/N: 720A6001) and
windscreen (P/N: 1712).
Note: Requires THOR Advanced software (P/N: 72300201).

Instruction Sheet Available Online

Hydrophone

Hydrophone

P/N: 720A5001

8 - 500 Hz hydrophone. Measures overpressure in water.
Includes a 60 m (196.9 ft) cable.

Note: Requires THOR Advanced software (P/N: 72300201).

Instruction Sheet Available Online

Accelerometers

0.5 g Accelerometer

P/N: 714A7101

0.5 - 500 Hz. Measures low frequencies and accelerations for sensitive applications.
Package includes one Cable For 0.5 g Accelerometers (P/N: R6-2-J5A-6).
Requires either:
 - Uniaxial Accelerometer Adaptor Cable . . . P/N: 720A4901
 - Triaxial Accelerometer Adaptor Cable . . . P/N: 720A5201
Note: Requires THOR Advanced software (P/N: 72300201).

Instruction Sheet Available Online

500 g Accelerometer

1– 3000 Hz. Measures accelerations of up to 500 g for near-field blasting applications. Package includes one Cable For 50 g & 500 g Accelerometers (P/N: 002C10). Requires either:
 - Uniaxial Accelerometer Adaptor Cable . . . . . P/N: 720A4901
 - Triaxial Accelerometer Adaptor Cable . . . . . . P/N: 720A5201
Note: Requires THOR Advanced software (P/N: 72300201).

Instruction Sheet Available Online

50 g Accelerometer

P/N: 720A6301

1– 3000 Hz. Measures accelerations up to 50 g for near-field blasting applications.
Package includes one Cable For 50 g & 500 g Accelerometers (P/N: 002C10). Requires either:
 - Uniaxial Accelerometer Adaptor Cable . . . . . . P/N: 720A4901
 - Triaxial Accelerometer Adaptor Cable . . . . . . P/N: 720A5201
Note: Requires THOR Advanced software (P/N: 72300201).

Instruction Sheet Available Online

Accessories

Accelerometer Triaxial Mounting Block (50 g and 500 g)

Used to mount up to three uniaxial accelerometers to measure   P/N: 080B11
in a triaxial configuration.
For use with 50 g (P/N: 72002701), or 500 g (P/N: 72002401) accelerometers.
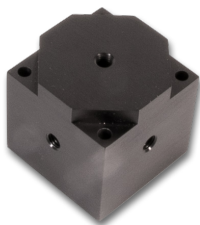
Accelerometer Triaxial Mounting Block (0.5 g)

P/N: 400-000289-000

Used to mount up to three uniaxial accelerometers to measure
in a triaxial configuration.
For use with 0.5 g (P/N: 714A7101) accelerometers.

Triaxial Geophone Leveling Plate

P/N: 714A1801

Includes leveling plate, feet and integrated spirit level.
For use with Micromate, Minimate Pro, Minimate Plus, Blastmate III and Minimate Blaster external geophones.
Note: Geophone not included.

Triaxial Geophone Wall Mounts

Used to mount a triaxial geophone to a wall or other vertical surface. Includes bolts, aluminum mounting block, and mounting instructions. (Geophone not included)
Triaxial Geophone Wall Mount Kit . . . . P/N: 718A0101
Optional Triaxial Geophone Modification for Wall Mounting . . . . . P/N: 720A6601
Note: This optional upgrade must be performed by the manufacturer and modifies a Minimate Pro monitoring unit Triaxial Geophone to a wall mount orientation.

Remote Alarm Controller

P/N: 720A3901

A self-contained controller complete with 5 m (16.4 ft) cable and a high power auxiliary drive capability used for external sirens and other alarms.

Instruction Sheet Available Online

Splitter Box

P/N: 720A5501

Used to connect up to three uniaxial sensors on a Minimate Pro monitoring unit, complete with 2 m (6.6 ft) cable.

Instruction Sheet Available Online

USB Serial Adaptor Kit

P/N: 714A7001

Converts an RS-232 to a USB 2.0 connector.
For use with a serial cable to download event data from a Minimate Pro, Minimate Plus, Blastmate III or Minimate Blaster to a PC.

Carrying Case

P/N: 720A6501

Soft carrying case used to store and carry the Minimate Pro base units and accessories. Foam insert included.

Universal Charger

P/N: 712A5301

Power adaptor for use with Minimate Pro monitoring units internationally. Input 110-240V AC 50/60Hz. Output 12V DC, 1.67A.

Power Adaptor

P/N: 370-000002-000

Power adaptor for use with Minimate Pro monitoring units in North America. Input 110V AC. Output 12V DC, 1A.

Cables

30 m (98.4 ft) Extension Cable
P/N: 720A3301

Includes a 30 m (98.4 ft) shielded cable for use with Minimate Pro monitoring unit geophones, borehole geophones and microphones. Includes connectors.

75 m (246.1 ft) Extension Cable
P/N: 720A3302

Includes a 75 m (246.1 ft) shielded cable for use with Minimate Pro monitoring unit geophones, borehole geophones and microphones. Includes connectors.

Null Modem Cable
P/N: 720A3401

Includes a DB-9M 2 m (6.6 ft) cable.
For use when connecting a cellular modem to a Minimate Pro monitoring unit.
Note: One null modem cable is required for each monitoring unit.

Serial Cable
P/N: 720A3101

Includes a 1.7 m (5.6 ft) RS-232 cable for connecting a Minimate Pro monitoring unit to a PC.
Note: Requires a PC with a 9-pin serial connector or USB Serial Adaptor Kit, (P/N: 714A7001).

Ethernet Cable
P/N: 720A4101

Includes a 1.5 m (4.9 ft) RJ-45 high-speed network download cable. Transfers events and setup files to a PC over a network connection for faster download speeds.

Custom Cable Connector Assembly
P/N: 720A3305

Base price for custom length extension cable connectors and assembly. Must be purchased with a specified Custom Length Extension Cable.

Custom Length Extension Cable
P/N: 301-000034-000

Custom length extension cable for Minimate Pro monitoring units (ordered by the m/ft).
Note: Must be purchased with Custom Cable Connector Assembly (P/N: 720A3305).

Remote Alarm/RS-232 Splitter Cable   P/N: 720A4001

45.7 cm (18 in) cable for use when both a Remote Alarm Controller and a modem must be connected to a Minimate Pro monitoring unit at the same time.

Make/Break Trigger Cable   P/N: 720A3501

Includes a 2 m (6.6 ft) cable.
Starts recording an event when either the wires make or break the contact. Can be used with an operator's button or to correspond with a blast detonation. Package includes connectors and instructions.

Instruction Sheet Available Online

Uniaxial Accelerometer Adapter Cable   P/N: 720A4901

Includes a 2 m (6.6 ft) cable that provides power from a Minimate Pro monitoring unit to operate an accelerometer.

Instruction Sheet Available Online

Triaxial Accelerometer Adapter Cable   P/N: 720A5201

Includes a 2 m (6.6 ft) cable that provides power from a Minimate Pro monitoring unit to operate up to three accelerometers in a uniaxial configuration.

Instruction Sheet Available Online

Upgrades

Extended Memory   P/N: 720A5901

Increases the internal non-volatile memory in the Minimate Pro unit from 64 MB to 240 MB. This optional upgrade increases the storage capacity from 8,000 events to 32,000 events.
Note: Must be configured by the manufacturer.

GPS Upgrade   P/N: 720A6601

Adds GPS capability to the Minimate Pro monitoring unit . Allows the unit to synchronize the recorded event data's time within 100 microseconds.
Note: Requires a factory-installed GPS port that must be configured by the manufacturer. Minimate Pro monitoring unit sold separately.

Replacement Parts
Micromate and Minimate Pro Monitoring Units

Triaxial Geophone Mounting Spike   P/N: 1100241

Geophone spikes (7.6 cm/3 in) for use with Instantel Triaxial
Geophones or monitors with internal geophones. Set of three spikes..

Microphone Stand Assembly

Microphone Stand Assembly, total height 80 cm (31.5 in). . . . . P/N: 720A6001
Microphone Stand Extension Rod . . . . P/N: 400-720020-000

Extends the Microphone Stand Assembly an additional 27.4 cm (10.8 in).
For use with Linear Microphones, Sound Level Microphones and High Pressure
Microphones. (Micromate P/N: 721A0201, 721A2301, Minimate Pro4/Pro6 P/N: 720A1801,
720A5101, 720A4801, Series III P/N: 714A9801, 714A2001 or 714A5501)

Microphone Windscreens

Sound Level Microphone Windscreen . . . . P/N: 410-720001-000
Foam cover for use with Minimate Pro units Sound Level Microphone (P/N:
720A5101) or the Micromate unit Sound Level Microphone (P/N: 721A2301).

Linear Microphone Windscreen . . . . P/N: 1712
Foam cover for use with the following Linear Microphone assemblies:
(Micromate P/N: 721A0201, Minimate Pro4/Pro6 P/N: 720A1801, 720A4801,
 Series III P/N: 714A9801, 714A2001 or 714A5501).

Vision II
Powered by Instantel

Your data 24/7/365, from anywhere.
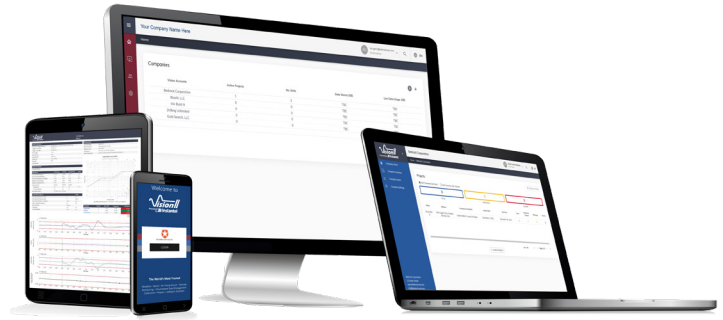
Vision *II*, our new cloud-based monitoring platform, is designed with the user in mind. Store, report, and analyze event data recorded with an Instantel Micromate Plus or Micromate monitoring unit. With instant access to your projects, and featuring Live Data™, Vision *II* gives you a powerful array of tools to simplify your everyday tasks and keep all stakeholders informed.

Live Data™
- View event data in near real-time from anywhere with an internet connection via laptop, smartphone, PC, or tablet.
- Prevent exceedances before they occur.

Project and Device Management Made Easy
- Quickly add new projects, and set the warnings, alarms, and compliance standards.
- Add people and monitoring units to projects, or move them to another project with just a few clicks.
- Review your calibration requirements on the device dashboard.
- Gage your device's critical information, like battery level, even when you are not on the job site or near the unit.

SnapShot™ - Get Answers in One Look
- Easily identifiable results by color.
- Take the burden of time consuming reviews - see alerts and exceedances with just one look.
- See the status of your device in the field with gauges for critical information.
- Hover over any data point for values.

Scalable
- Vision *II* can easily handle thousands of devices or projects.
- Manage everything, from simple to complex projects, all in one place.

Warnings and Alerts
- You determine the warnings and alerts, set the limits for 'caution' and 'exceedance, and then receive the alert yourself or send it to a team member to take action.
- Receive messages via e-mail.
- Take preventative actions before reaching exceedances to prevent fines and project shutdowns.

Please contact sales@instantel.com to schedule an online demo.

Vision // Interface

View Events in Near Real-Time, 24/7/365

Project and Device Management

Gauges for Critical Information

ShapShot™ - Answers in One Look

Compliance Graph with SnapShot™ Views for Compliance and Exceedance

Hover Over Any Data Point for Values
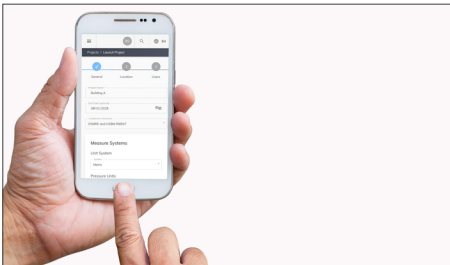

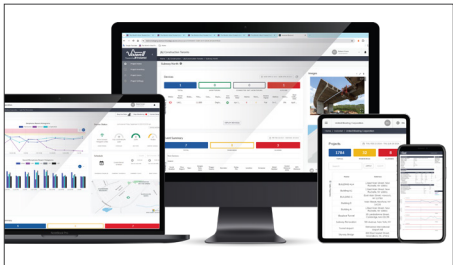Set Limits to Prevent Exceedances

Scalable - Thousands of Units

No Locked-In Monthly Fees

Real-Time Viewing from Anywhere

User-Friendly Interface

Access on a PC, laptop, tablet, or mobile phone.

Live ·)) Data™

View event data in near real-time, 24/7/365 from anywhere.

A feature of Vision *II*, our new cloud-based monitoring platform, Live Data allows you to view event data as it happens.   Whether on the job site, in an office, or the comfort of your vehicle, you have data when you need it.

Live Data™
- View event data in near real-time from anywhere with an internet connection via laptop, smartphone, PC, or tablet.

Warning Alerts and Exceedance Alarms
- Take preventative action before exceedances occur.
- Determine the alerts and notifications you need by setting the limits for 'caution' and 'exceedance'. When you exceed your custom limits, you receive a notification by e-mail or SMS.
- Receive alerts yourself or send them to a team member who can take action.

Real-Time Viewing Access
- View Live Data from anywhere - a jobsite, your office, or the comfort of your vehicle.

Vision *II* Options

Micromate Monitoring Unit

The Micromate monitoring unit with Vision *II*.
Note: The Micromate monitoring unit requires an external Sierra wireless modem (model numbers RV50, RV50X, and RV55) with Micromate firmware 11.0 or newer. Per device.
Activation Fee . . . . .P/N 72600201
Vision *II* for Micromate . . . . .P/N 72600101

Micromate Plus Monitoring Unit

The Micromate Plus monitoring unit includes the following standard features accessible through Vision *II* software:
- Company Management
- User Management
- Project Management
- Device Management
- Gauges for Critical Information
- Warnings and Alerts
- Compliance Graphs (downloadable, printable copy based on pre-set industry standards).

Vision *II* must be ordered per device unless otherwise specified.
Vision *II* (Page 40) . . . . .P/N 72600101
SFTP Data-Pass Through. . . . . .P/N 72600401
Additional 10 GB Storage . . . . .P/N 72600301
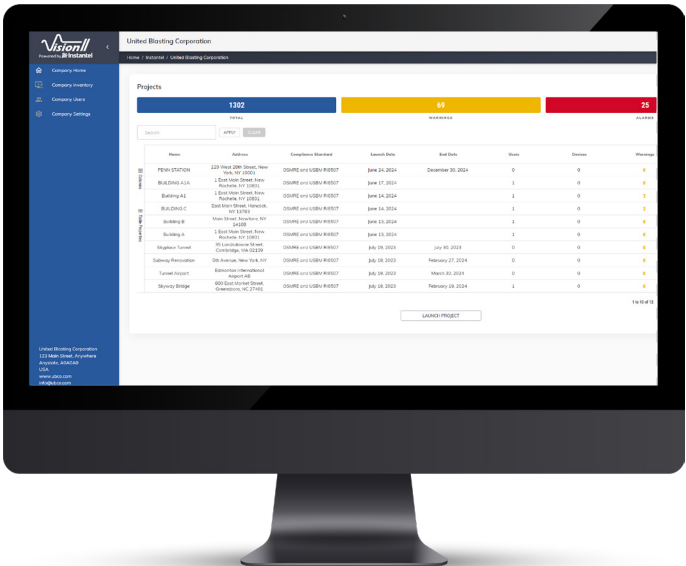
Vision *II* Feature List

Feature		Vision *II* (Per Device) P/N 72600101	Vision *II* Add-On (Individual)
Storage	5 GB of data storage per device transferable to the rest of your fleet.	●	
Company Management	Add and manage as many companies as required. Add company logos.	●	
Project Management	Add and manage as many projects as required. Add up to 50 images per project.	●	
Device Management	Add as many devices as required; list and search devices; assign/remove them from projects.	●	
User Management	Add and manage as many users as required; assign roles.	●	
Compliance Reports	Export and print a compliance report PDF based on industry standards, such as USBM RI8507 and OSMRE.	●	
Custom Compliance Reports	Custom compliance chart settings (build a graph.)	●	
Gauges for Critical Information	Dashboard view of battery, connection, and storage.	●	
Warnings and Alerts	Set limits for caution and exceedance; receive email warnings and alerts based on these limits	●	
Site Map	Visualize your entire project with an interactive map displaying the precise locations of all deployed devices.	●	
Project Images	Add up to 50 images per project to help keep track of on-site installations.	●	
Sensor Calibration Tracking	Quickly identify which sensors are due for calibration directly from the inventory screen, and use the summary donut at the top for a quick visual overview.	●	
FTP Data Pass-Through	Binary or JSON file data pass-through to a pre-determined IP address via FTP or SFTP (per company.) Pro-rated monthly, minimum one year.		●
Live Data	View events as they are happening, in near real time.		●
Data Overage	Additional 10 GB data storage (per unit) - Annual with automatic renewal		●
Custom Compliance Triggering	Create alerts and warnings on the entire spectrum of the compliance graph.		●
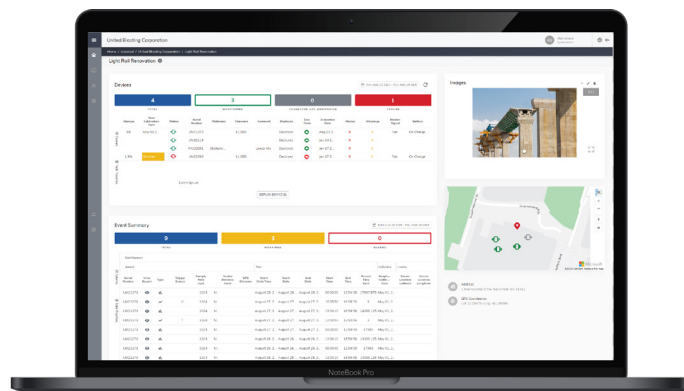
Note: Items in grey are currently in development. Refer to the specification sheet for complete details.

Vision *II* Feature List (Currently in Development)

Advanced Billing	Run reports for data usage and status for invoicing.		●
Watchdog Alerts	Low battery, geofence exceeded, unit not active, and more.		●
Third-Party Sensors	Add and monitor with third-party sensors.		●
Instantel Advanced Sensors	Add and monitor with advanced Instantel sensors, like a hydrophone.		●
Advanced Analysis	Frequency and signal analysis of data.		●
API Read	Application programming interface for direct queries to Vision *II* (per company.) Pro-rated monthly, minimum one year.		●
API Read-Write	Application programming interface for direct Vision *II* queries and control (per company.) Pro-rated monthly, minimum one year.		●
Fleet Management	Management of all devices, regardless of manufacturer.		●
Custom Dashboard	Change and design your dashboard; include widgets.		●
Custom Reports	Design the compliance report layout.		●
Standalone Server	Standalone version of Vision *II* hosted on an internal server.		●

Vision *II* Software Includes the Following Compliance Standards and Graphs

- Arrêté de 1994 (explosif)
- Australia 2187-2
- ANSI S2.71 RMS 1s
- AS 2187.2-2006
- Brazilian Standard NBR 9653
- British Standard 6472
- British Standard 7385
- Une 22-381-93 (Criterio Prevencion)
- DIN 4150
- France SNCF, Internal Procedure IN1226
- FTA (VdB)
- ICPE-Cirkulaire 86
- Indian CMRI, DGMS India (A) & (B)
- ISO Standards: 10816-2 RMS, 2631-2 and 8569
- JIS C 1510
- NCh 3577
- NF E90-020:2015
- NOM-026-SESH
- NS 8141 and NS 8141-1
- NS 8175 and 8176
- NZS/ISO 2631-2 Combined curves
- OfM 9/1997
- ÖNORM S9012 and S9020
- PN-B-02170
- SBR-A and SBR-B
- SN640 312a
- Swedish Blasting SS 4604866
- Swedish Pile Driving SS 025211
- Swedish Human Annoyance SS 4604861
- Swedish Air-Shock SS 025210 2
- Swiss SN 640 312a
- Toronto 514-1, 514-2
- Turkey Mining & Quarry
- USBM RI8507 And OSMRE

Create your own custom graph for local compliance requirements.

THOR™

THOR is our software platform to store and manage event data on a local computer. With THOR software you can view data in the form of waveform charts, histogram bar-graphs and perform various analytic calculations to better understand your event data. THOR software let's you configure custom settings to manage your fleet of monitoring units and quickly update onboard parameters to adapt to specific monitoring requirements.

Manage Connected Units Without Stepping Foot On Site

Units can be connected to THOR software remotely using wireless modems, when an event takes place, they send their data using THOR software's Auto Call Home service. This feature allows you to have a full view of your fleet's monitoring status in near real-time.

## Organize Event Data and How You See It

THOR software will automatically filter events into pre-configured projects so that you can sort events by site, contract or customer. Use customizable email groups to send automatic notifications and inform stakeholders when it counts.

Interactive and Customizable Event Reporting

THOR software lets you quickly and easily identify trends in your event data and provides easy exporting of event reports into PDF format.

THOR Software Includes the Following Compliance Standards and Graphs

- Australia 2187.2-1993
- Brazilian Standard NBR 9653-2005
- British Standard 7385
- BS 6472-1992 (Curves 8, 16, 20, 32, 60, 90, 128)
- Criterio Prevencion (Une 22.381)
- Czech and Slovak Standard
- DIN 4150
- DIN 45669-1-2010
- Function de Ponderation
- GFEE + Ministère Environnement
- Harmoniska Svangningar
- Indian CMRI, DGMS India (A) & (B)
- Indonesian SNI 7571-2010
- ISEE Seismograph Specification-2017
- New Zealand 4403-1976
- NOM-026-SESH-2007
- NZS/ISO 2631-2:1989 Combined curves
- QLD APP Standard
- Recommendation GFEE/GFEE*
- Swiss SN 640 312a (Mining/Pile Driving/Traffic)
- Toronto 514-2008
- Turkey Mining & Quarry
- USBM RI8507 And OSMRE
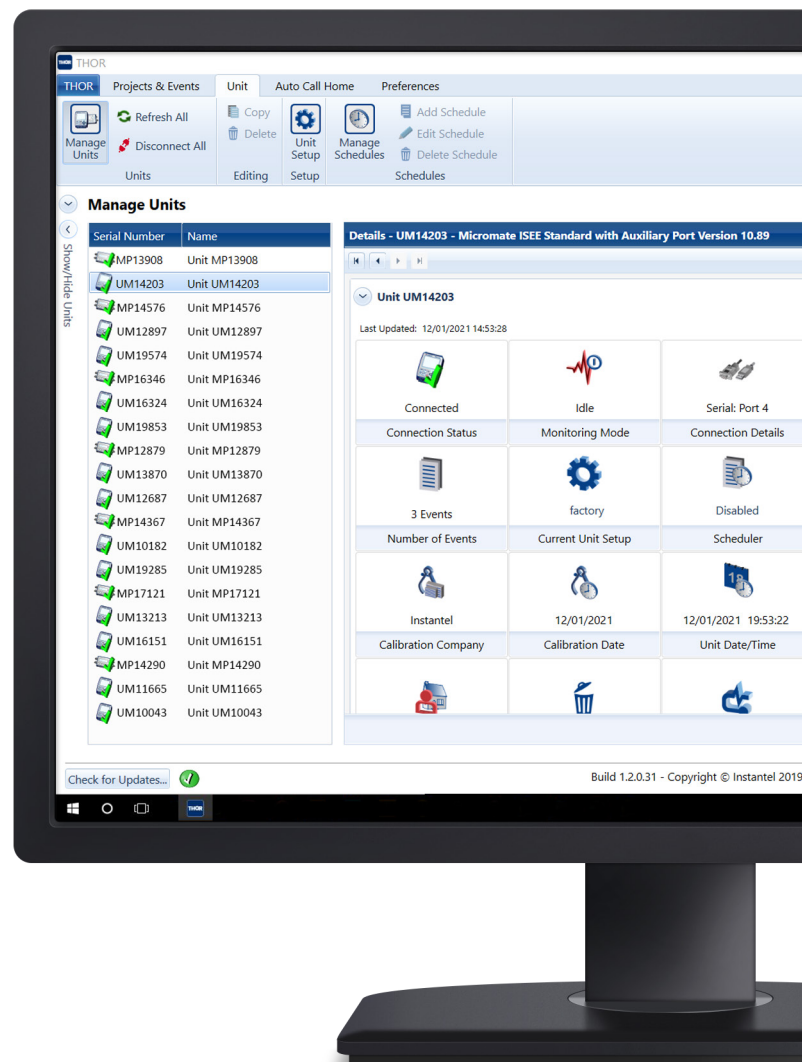
Tutorial videos available on YouTube on how to setup your devices.

THOR™
Advanced
### Event Management Software

P/N: 72300201

With THOR software's Advanced license you can transform event data without altering the original event file. Convert waveform data between velocity, acceleration and displacement. Data can be filtered, truncated, frequency weighted, displayed in third-octave bands and more. Playback sound clips or perform signature hole analysis.

Create a customized set of operations when analyzing events and benefit from THOR software's high-resolution event reports that you can customize with your company logo.
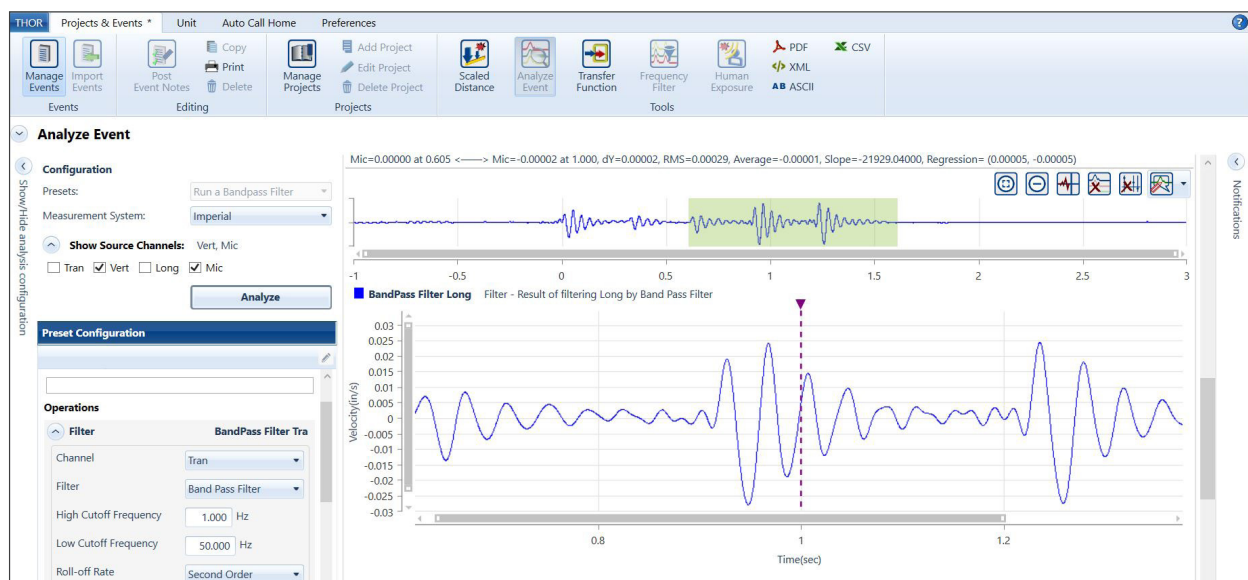
Perform Advanced Functions on Your Waveforms
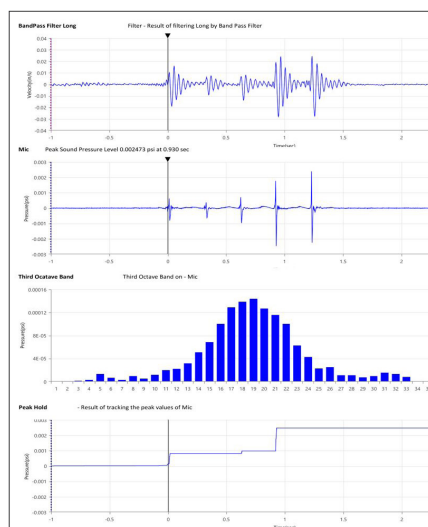
Detailed Data Analysis

Advanced Sensors

With THOR Advanced software you also benefit from specialized sensors and enhanced performance of standard sensors with sample rates up to 65,536 samples per second.

- Hydrophone (8 - 500 Hz)
- High-Frequency Geophone (30 - 1,000 Hz)
- High-Frequency Borehole (30 - 1,000 Hz)
- High-Pressure Microphone (up to 10 psi)
- Accelerometers: 0.5 g (0.5 - 500 Hz), 50 g (1 - 3,000 Hz), or 500 g (1 - 3,000 Hz)

Compliance Graphs

Waveform or Histogram compliance graphs available.
- Customize with your logo
- Export to PDF, XML, ASCII, or CSV

THOR software resources available online:
- Specifications Sheet
- Advanced Specifications Sheet

Microphone Specifications

	STANDARD OVERPRESSURE LINEAR MICROPHONE			
	MICROMATE PLUS	MICROMATE	MINIMATE PRO COMPLIANCE	MINIMATE PRO ADVANCED
PART NUMBER	727A3101	721A0201	720A1801	720A1801
RESPONSE STANDARD	ISEE - 2022	ISEE-2022	ISEE-2022	N/A
FREQUENCY WEIGHTING	Linear			
FREQUENCY RANGE	2 - 250 Hz			
AMPLITUDE RANGE	Up to 1000 Pa (0.145 psi) [154 dB]	Up to 500 Pa (0.0725 psi) [148 dB]		
TRIGGER LEVEL	100 - 154 dB (L) / 2 - 1000 Pa 0.00029 - 0.145 psi	100 - 148 dB / 2 - 500 Pa 0.00029 - 0.0725 psi		0.256 - 500 Pa 0.000036 - 0.072515 psi
SAMPLE RATES	1,024 - 4,096 S/s			512 - 65,536 S/s
RESOLUTION	0.0305 Pa / 4.4262 x 10^{-6} psi (0.05 dB)	0.0156 Pa / 2.2626 x 10^{-6} psi (0.05 dB)		
CABLE LENGTH	2 m (6.6 ft)			
MAXIMUM CABLE LENGTH	75 m (246.1 ft)			
SENSITIVITY	N/A	N/A	N/A	0.0064452 V/Pa 44.4404804 V/psi
TEMPERATURE RANGE	-40° to 50°C (-40° to 122°F)	-40° to 50°C (-40° to 122°F)	−40 to 50°C (-40 to 122°F)	−40 to 50°C (-40 to 122°F)
REQUIRED SOFTWARE	VISION *II*	VISION *II* or THOR	THOR Compliance	THOR Advanced

	SOUND LEVEL MICROPHONE				HIGH PRESSURE MICROPHONE
	MICROMATE PLUS	MICROMATE	MINIMATE PRO COMPLIANCE	MINIMATE PRO ADVANCED	MINIMATE PRO ADVANCED SENSOR
PART NUMBER	727A3001	721A2301	720A5101	720A5101	720A4801
RESPONSE STANDARD	IEC 61672 CLASS 1			N/A	N/A
FREQUENCY WEIGHTING	A-Weight or C-Weight Response: Fast (125 ms) or Slow (1 s)			Unfiltered	Linear
FREQUENCY RANGE	10 Hz - 20 kHz				5 - 1,000 Hz
AMPLITUDE RANGE	30 - 140 dB (max 160 dB)				Up to 69 kPa (10 psi) Max Pressure 1,724 kPa (250 psi)
TRIGGER LEVEL	33 - 140 dB			0.448 -100 Pa (normal) 0.01424 - 25 Pa (sensitive)	0.03425 - 69 kPa (0.005 - 10 psi)
SAMPLE RATES	1,024 - 4,096 S/s	512 - 4,096 S/s		512 - 65,536 S/s	512 - 65,536 S/s
RESOLUTION	0.05 dB (Display Limit 0.1 dB)			0.03 Pa (normal) 0.89 mPa (sensitive)	0.00214 kPa (0.00031 Psi)
CABLE LENGTH	2 m (6.6 ft)				2 m (6.6 ft)
MAXIMUM CABLE LENGTH	75 m (246.1 ft)				75 m (246.1 ft)
SENSITIVITY	N/A			0.0038 V/Pa (normal) (5.511 X 10^{-7} V/psi) 0.1200 V/Pa (sensitive) (0.0000174 V/psi)	0.3222605 V/psi (0.0467044 V/kPa)[1]
TEMPERATURE RANGE	-20° to 55°C (-4° to 131°F)	-10° to 50°C (14° to 122°F)			N/A
REQUIRED SOFTWARE	VISION *II*	VISION *II* or THOR	THOR Compliance	THOR Advanced	THOR Advanced

1. See calibration certificate for nominal values.

Sensor Specifications

	MICROMATE PLUS		MICROMATE MONITORING UNIT								
	2M GEOPHONE	7M GEOPHONE	ISEE GEOPHONE		DIN GEOPHONE		SWB GEOPHONE		SWP GEOPHONE		BOREHOLE GEOPHONES (COUPLED WITH BASE UNITS)	
PART NUMBER	7270301	7270302	721A2901	721A2902	721A3301	721A3302	721A3501	721A3502	721A3701	721A3702	721A2401	721A2402
RESPONSE STANDARD	UP TO 254 mm/s (10 in/s) ISEE - 2022, DIN 45669-1, Flat (Programmable) Mode		ISEE - 2022		DIN 45669-1 CLASS 1		SS4604866 2011 (SWB)		SS025211 (SWP)		• ISEE - 2022 • DIN 45669-1 CLASS 1 • SS4604866 2011 (SWB) • SS025211 (SWP)	
FREQUENCY RANGE	ISEE: 2 - 250 Hz DIN: 1 - 315 Hz Flat: 1 - 1 kHz		2 - 250 Hz		1 - 315 Hz		5 - 300 Hz		2 - 150 Hz		2 - 250 Hz (ISEE - 2022) 1 - 315 Hz (DIN 45669-1 CLASS 1) 5 - 300 Hz (SS4604866 2011, SWB) 2 - 150 Hz (SS025211, SWP)	
VELOCITY RANGE			Up to 254 mm/s (10 in/s)		Up to 254 mm/s (10 in/s)		1 - 250 mm/s (0.039 - 9.84 in/s)		0.1 - 25 mm/s (0.0039 - 0.98 in/s)		Up to 254 mm/s (10 in/s) (All Standards)	
RESOLUTION	0.00788 mm/s (0.00031 in/s)		0.00788 mm/s (0.00031 in/s)		0.00788 mm/s (0.00031 in/s)		0.00788 mm/s (0.00031 in/s)		0.000788 mm/s (0.000031 in/s)		0.00788 mm/s (All Standards) (0.00031 in/s)	
SENSOR DENSITY	2.2 g/cc (131 lbs/ft³)		2.1 g/cc (131 lbs/ft³)		2.1 g/cc (131 lbs/ft³)		2.1 g/cc (131 lbs/ft³)		2.1 g/cc (131 lbs/ft³)		1.73 g/cc (All Standards) (108 lbs/ft³)	
CABLE LENGTH	2 m (6.6 ft)	7 m (23 ft)	2 m (6.6 ft)	5 m (16.4 ft)	2 m (6.6 ft)	5 m (16.4 ft)	2 m (6.6 ft)	5 m (16.4 ft)	2 m (6.6 ft)	5 m (16.4 ft)	30 m (98.4 ft) (All Standards)	75 m (246.1 ft) (All Standards)
EXTENDED CABLE LENGTHS	10 m (32.8 ft) 30 m (98.4 ft) 75 m (246.1 ft)		10 m (32.8 ft) 30 m (98.4 ft) 75 m (246.1 ft)		10 m (32.8 ft) 30 m (98.4 ft) 75 m (246.1 ft)		10 m (32.8 ft) 30 m (98.4 ft) 75 m (246.1 ft)		10 m (32.8 ft) 30 m (98.4 ft) 75 m (246.1 ft)		10 m (32.8 ft) 30 m (98.4 ft) 75 m (246.1 ft)	
MAXIMUM CABLE LENGTH	1,000 m (3,280 ft)		1,000 m (3,280 ft)		1,000 m (3,280 ft)		1,000 m (3,280 ft)		1,000 m (3,280 ft)		1,000 m (3,280 ft) (All Standards)	
TEMPERATURE RANGE	-40 to 55 °C (-40 to 131 °F)		-40 to 50 °C (-40 to 122 °F)		-40 to 50 °C (-40 to 122 °F)		-40 to 50 °C (-40 to 122 °F)		-40 to 50 °C (-40 to 122 °F)		-40 to 50 °C (-40 to 122 °F)	
REQUIRED SOFTWARE	Vision II		VISION II or THOR Compliance								THOR Compliance (All Standards)	

Minimate Pro Monitoring Unit Specifications - Standard Sensors

	ISEE GEOPHONE		DIN GEOPHONE		DIN/VDV		BOREHOLE ISEE	BOREHOLE DIN
PART NUMBER	720A2001	720A2004	720A2002	720A2005	720A2003	720A2006	720A5601	720A5701
RESPONSE STANDARD	ISEE - 2022		DIN 45669-1 CLASS 1		DIN 45669-1 CLASS 1		ISEE - 2022	DIN 45669-1 CLASS 1
FREQUENCY RANGE	2 - 250 Hz		1 - 315 Hz		1 - 80 Hz		2 - 250 Hz	1 - 315 Hz
VELOCITY RANGE	Up to 254 mm/s (10 in/s)		Up to 254 mm/s (10 in/s)		Up to 254 mm/s (10 in/s)		Up to 254 mm/s (10 in/s)	Up to 254 mm/s (10 in/s)
RESOLUTION	0.00788 mm/s (0.00031 in/s)		0.00788 mm/s (0.00031 in/s)		0.00788 mm/s (0.00031 in/s)		0.00788 mm/s (0.00031 in/s)	0.00788 mm/s (0.00031 in/s)
SENSOR DENSITY	2.3 g/cc (144 lbs/ft^3)		2.3 g/cc (144 lbs/ft^3)		2.3 g/cc (144 lbs/ft^3)		1.73 g/cc (108 lbs/ft^3)	1.73 g/cc (108 lbs/ft^3)
CABLE LENGTH	2 m (6.6 ft)	8 m (26.2ft)	2 m (6.6 ft)	8 m (26.2 ft)	2 m (6.6 ft)	8 m (26.2 ft)	30 m (98.4 ft)	30 m (98.4 ft)
EXTENDED CABLE LENGTH	30 m (98.4 ft) 75 m (246.1 ft)		30 m (98.4 ft) 75 m (246.1 ft)		30 m (98.4 ft) 75 m (246.1 ft)		30 m (98.4 ft) 75 m (246.1 ft)	30 m (98.4 ft) 75 m (246.1 ft)
MAXIMUM CABLE LENGTH	1,000 m (3,280 ft)		1,000 m (3,280 ft)		1,000 m (3,280 ft)		75 m (246.1 ft)	1,000 m (3,280 ft)
SENSITIVITY	0.0126874 V/mm/s (0.32226 V/in/s)		0.0126874 V/mm/s (0.32226 V/in/s)		0.0126874 V/mm/s (0.32226 V/in/s)		0.0126874 V/mm/s (0.32226 V/in/s)	0.0126874 V/mm/s (0.32226 V/in/s)
TEMPERATURE RANGE	−40 to 50°C (−40 to 122°F)		−40 to 50°C (−40 to 122°F)		−40 to 50°C (−40 to 122°F)		−40 to 50°C (−40 to 122°F)	−40 to 50°C (−40 to 122°F)
REQUIRED SOFTWARE	THOR Compliance		THOR Compliance		THOR Compliance/ THOR Advanced (VDV)		THOR Compliance	THOR Compliance

Note: All Minimate Pro4/Pro6 Standard Sensors can operate in Advanced mode and benefit from high sample rates (up to 65,536 S/s) when configured with a THOR Advanced license.

Minimate Pro Monitoring Unit Specifications - Advanced Sensors

	HIGH FREQUENCY GEOPHONE	HIGH FREQUENCY BOREHOLE	HYDROPHONE	0.5 G ACCELEROMETER	50 G ACCELEROMETER	500 G ACCELEROMETER
PART NUMBER	720A4701	720A5801	720A5001	714A7101	720A6301	720A6401
RESPONSE STANDARD	N/A	N/A	N/A	N/A	N/A	N/A
AMPLITUDE RANGE	2540 mm/s (100 in/s)	2540 mm/s (100 in/s)	324 kPa (47 psi)	0.5 g max < 10 g pk	50 g max +/- 10,000 g pk	500 g max +/- 10,000 g pk
FREQUENCY RANGE	30 - 1,000 Hz	30 - 1,000 Hz	8 - 500 Hz	0.5 Hz - 500 Hz (±3dB)	1 Hz - 3 kHz	1 Hz - 3 kHz
RESOLUTION	0.0788 mm/s (0.00310 in/s)	0.0788 mm/s (0.0031in/s)	0.0101 kPa (0.00146 psi)	0.0000155 g	0.00155 g	0.0155 g
TRIGGER LEVELS	1.27 - 2540 mm/s (0.05 - 100 in/s)	1.27 - 2540 mm/s (0.05 - 100 in/s)	0.162 - 324 kPa (0.0234 - 47 psi)	0.00032 g	0.032 g	0.256 g
RECOMMENDED SAMPLE RATE	4,096 S/s	4,096 S/s	65,536 S/s	2,048 S/s	16,384 S/s or greater	16,384 S/s or greater
NATURAL FREQUENCY	30 Hz	30 Hz	14.7 Hz	815 Hz	≥ 22 kHz	≥ 38 kHz
SENSOR DENSITY	2.3 g/cc (144 lbs/ft³)	1.73 g/cc (108 lbs/ft³)	N/A	N/A	N/A	N/A
CABLE LENGTH	2 m (6.6 ft)	30 m (98.4 ft)	60 m (196.9 ft)	1.8 m (5.9 ft) Cable (Part No. R6-2-J5A-6)	3 m (9.8 ft) Cable (Part No. 002C10)	3 m (9.8 ft) Cable (Part No. 002C10)
MAXIMUM CABLE LENGTH	1,000 m (3,280 ft)	1000 m (3,280 ft)	Max Operating Depth 46 m (150 ft)	1.8 m (5.9 ft)	3 m (9.8 ft)	3 m (9.8 ft)
MOUNTING THREAD	Connector	Connector	Connector	3/8 - 16 tapped hole	10-32 UNF-2B	10-32 UNF-2B
SENSITIVITY	0.00126874 V/mm/s (0.032226 V/in/s)	0.00126874 V/mm/s (0.032226 V/in/s)	0.0099463 V/kPa (0.068566 V/psi)	6.4451998 V/g	0.064452 V/g	0.0064452 V/g
TEMPERATURE RANGE	N/A	N/A	N/A	N/A	N/A	N/A
REQUIRED SOFTWARE	THOR Advanced	THOR Advanced	THOR Advanced	THOR Advanced	THOR Advanced	THOR Advanced

Note: All Minimate Pro4/Pro6 Standard Sensors can operate in Advanced mode and benefit from high sample rates (up to 65,536 S/s) when configured with a THOR Advanced license.

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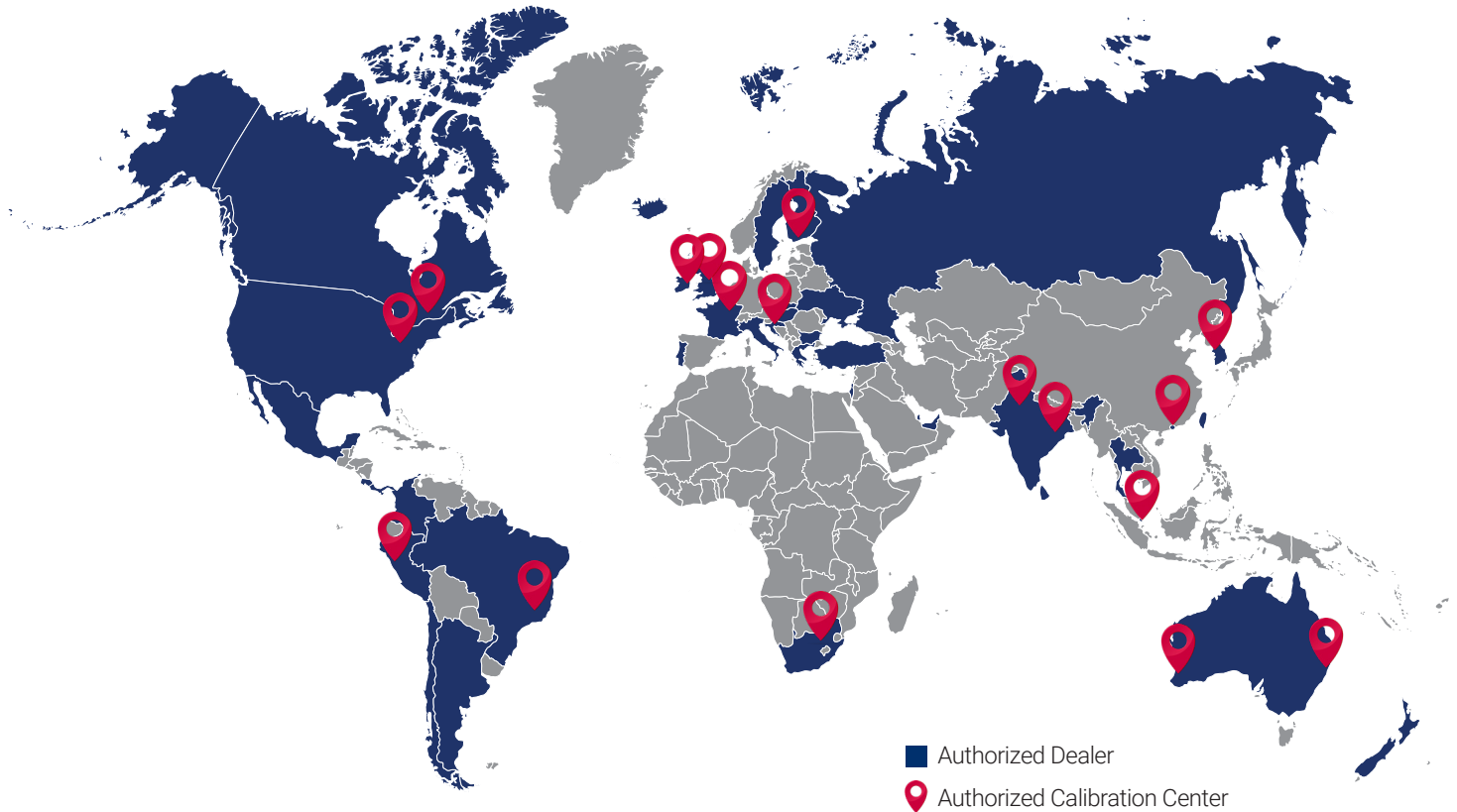
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Our Services

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We recommend that your equipment returns to Instantel annually for calibration.
We calibrate at every frequency on the spectrum, not just a subset, so you can be sure it is working in accordance with industry guidelines and specifications. Once completed, a calibration certificate is issued specifying conformity to international standards such as the ISEE and DIN.

Service@instantel.com
1-800-267-9111

Service

Whether your unit is sent for repairs, upgrades or calibration, we pride ourselves in our quality workmanship and never take shortcuts.
With Instantel, you can guarantee that your event data is accurate. Our Service, Repairs and Calibration team is committed to low turnaround times, keeping units where they are needed – in the field.

Service@instantel.com
1-800-267-9111

Support

Instantel is dedicated to providing the highest quality of service through knowledgeable and responsive technical support. Get support by phone, email or Skype. Browse our website's frequently asked questions (FAQs) section or open a ticket to have your unit repaired.

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