WELCOME TO THOR™

THOR, powered by Instantel, is a Windows-based software program that interfaces between your computer and your Instantel monitoring unit(s).

THOR offers powerful, easy-to-use features for event management and compliance reporting. By using THOR, you can program all your Micromate® and Minimate Pro™ devices, manage all the recorded events, and remotely control each unit's monitoring preferences. On top of the mentioned features, you can customize your report content, select your required frequency standards and much more, all right from you Windows computer or laptop.

KEY FEATURES

- View the intuitive dashboard of all your unit's current status.
- Perform tasks remotely: run sensor checks, schedule monitoring, configure compliance settings and update unit firmware.
- Monitor the status of units remotely: check battery levels, available memory space, Auto Call Home™ setup and the next calibration date.
- Transfer events using Auto Call Home, a modem or via a direct connection to your computer.
- Set up mailing lists for easy distribution of event data to stakeholders.
- Customize event reports with over twenty selectable National Frequency Standards.
- Perform Fast Fourier Transforms (FFTs).
- Analyze your events with easy to use tools – add, subtract, integrate and differentiate waveforms, truncate signals and perform frequency filtering.
- Generate reports for third octave analysis, human exposure and Signature Hole Analysis (Additional license required).
- Run Auto Call Home and transfer events to THOR, even when THOR is closed. Auto Call Home is integrated with THOR for support of event transfers from Micromate, Minimate Pro, Minimate Plus™ and Blastmate III™.
- Save configuration files and monitoring schedules and apply them to multiple units at once.
- Automatically send data to Vision™, Instantel's cloud-based monitoring solution, for safe, secure storage of event data.

RELEASE NOTES – THOR™ 1.0.0.37 NEW *Released Dec. 28,2018*

WHAT'S NEW?

- Added a notifications sidebar on the homepage of THOR. Users can now receive three types of notifications (information, warnings and errors) that will keep users informed about their monitoring units as soon as they open THOR.
- Added a multi-unit dashboard to allow firmware updates to several units simultaneously.
- Added a *disconnect all* function to quickly disconnect any unit that is connected to THOR throughout all projects.
- Added a *refresh all* function to quickly refresh the status of any unit connect to THOR throughout all projects.
- Added a new email configuration option. THOR can now send emails using either CC or BCC.

- Added a Vision WatchDog connection feature. By enabling the send units schedule to Vision feature within THOR, users can now have their monitoring units (that are connected to THOR) push their data to Vision. Users can now send their monitoring units schedule to Vision and allow them to access Vision's WatchDog alerts.
- Added a setting to allow the user to enable modem power control and define the modem warm up time for the Micromate.

WHAT'S IMPROVED?

- **Auto Call Home**
    - Resolved an issue where the Auto Call Home service did not start correctly after a system reboot.
    - Resolved an issue where monitoring logs were not downloading from the Minimate Plus units during the Auto Call Home process when no events were recorded.
    - Resolved an issue where invalid information was being added to Auto Call Home logging after the connection to a unit was unexpectedly terminated. I.e. Modem signal lost.
    - Resolved an issue where invalid information was being included to the Auto Call Home logs for all Minimate Plus units when they were configured to the *monitor while call home* feature.

- **Functional Issues**
    - Resolved an issue where THOR was not showing the true trigger value of an event. It was rounding the Peak Particle Velocity (PPV) values to three decimal places instead of four in the Imperial system, which created an impression that events should have been recorded when it was not necessary.
    - Resolved an issue where THOR displayed an inaccurate Auto Call Home status on the unit dashboard page for Minimate Pro units, while in monitoring mode.
    - Improved the file browsing capabilities when importing event files. When importing or saving events, THOR now remembers previous saved file locations for ease of access to the user.
    - Resolved an issue where THOR would not retain the proper microphone settings (I.e. LN1 as 10 and LN2 as 90) regardless of the settings inputted in THOR.

- **Reporting and Formatting Issues**
    - Resolved an issue with an incorrect scaled distance calculation.
    - Resolved an issue in PDF reports where the legend did not correspond to the exported geophone channels.
    - Resolved an issue where post event notes were appended to the wrong reports.
    - Resolved an issue where the *transfer* function showed the ground channel in metric regardless of the settings.

- **Compliance Graphs Updates**
    - Updated compliance graph standard for Harmoniska Svangningar.
    - Included the Mexican compliance graph, NOM-026-SESH-2007.
    - Improved the rendering of the compliance graph NZS/ISO 2631-2:1989.

- **Stability Issues**
  - Resolved an issue where THOR could stop converting event files to reports as well as stop sending emails. Users now receive timely updates on events.
  - Resolved an issue where THOR would crash when trying to delete many events at once from the projects and events page.
  - Resolved an issue where THOR would crash after a few days of it running through the remote desktop application.
  - Resolved an issue where THOR could crash intermittently when clicking on the *monitor scheduler*, *open scheduler* or *unit setup* features.
  - Added additional optimization improvements for a faster and more reliable launch of THOR on a user's laptop or computer.

PAST REVISIONS – HISTORY

THOR 1.0.0.36 – *Released September 26, 2018*

WHAT'S NEW?

- Corrected an issue where THOR would send multiple emails to recipients when an event was received. This occurred only when an SMS email address, such as 6135924642@txt.att.net, was included in the recipient email group. In this instance, THOR would not receive an acknowledgement that the message was successfully delivered and as such, would resend the original email multiple times to each contact in the email group.

THOR 1.0.0.35 – *Released June 23, 2018*

WHAT'S - NEW?

- Improved performance and responsiveness of THOR when running the Scheduler, Event Management view, Event Reports and Auto Call Home.
- Corrected an intermittent issue where THOR would not display the Auto Call Home (ACH) activity logs.
- Improved the efficiency of communication between THOR and Micromate monitoring units to decrease the amount of time it takes to transfer events to THOR.
- Improved the Scaled Distance Calculator to support Minimate Pro compliance events with two geophones.
- Corrected an issue where the Unit Dashboard would incorrectly display options that were not available for disconnected monitoring units.

THOR 1.0.0.34 – *Released March 14, 2018*

WHAT'S NEW?

- Corrected an issue where THOR would crash due to high memory usage. This was due to a compatibility issue with the Microsoft .Net framework.

THOR 1.0.0.33 – *Released March 8, 2018*

WHAT'S NEW?

- Corrected an issue where data loss could occur if the event file was deleted before it was transferred to THOR. Data loss only occurred if the file was in use by another program, such as a third-party application, while THOR was attempting to transfer it and the *Auto Call Home* settings were configured to *Delete Events and Logs from Unit*.

In this case, the secondary program competes with THOR to access the event file. If this occurs while THOR is attempting to move the file to its final destination, the Auto Call Home session does not see any errors. The file is then deleted from the unit according to the Auto Call Home settings, even though the file was not successfully transferred. This release of THOR ensures that if this situation arises that THOR raises an error in the Auto Call Home session log and that the events are not deleted from the unit until they are successfully transferred to THOR.

- Fixed an intermittent issue where THOR incorrectly rolled the time back by one hour on Micromate monitoring units after the Daylight Savings Time (DST) switchover. This only occurs if the Daylight Savings Time function was enabled on the monitoring unit.
- Corrected an issue where the *Check for Updates* function would not alert users to an available new version, if THOR had not been restarted since the new version was released.
- Corrected an issue where THOR would intermittently crash if you were trying to connect to it remotely using a virtual machine.
- Corrected an issue where the histogram text on an event report would overlap after the zoom feature was used.
- Fixed an issue where after a new time is set on a remote unit using the *Unit Dashboard* in THOR, that THOR will not show the updated time. The time on the unit was updated immediately, however the unit information shown on the *Unit Dashboard* was only updated based on the configured settings on the *Preferences* tab. Now when you update the time on the unit through THOR, the updated time will immediately be shown on the *Unit Dashboard.*
- Corrected an issue where THOR would crash if the incorrect *SMTP Host* address was entered the *Email Server* settings on the *Preferences* tab or if the connection between THOR and the SMTP Host was lost.

THOR 1.0.0.32 – *Released October 12, 2017*

WHAT'S NEW?
- Corrected an intermittent issue where the connection to a unit was frozen during an Auto Call Home session. This resulted in email notifications not being sent even though the Auto Call Home logs may have shown that the Auto Call Home session occurred.
- Corrected an intermittent issue where the Auto Call Home session was not created in THOR. This resulted in event data not being transferred from the unit to THOR and email notifications not being sent out.
- Corrected an issue where *Series III Events* was not available as an option in the Auto Call Home log filter.

THOR 1.0.0.31 – *Released September 29, 2017*

WHAT'S NEW?
- This release of THOR corrects an issue where data loss could occur if communication between the unit and THOR was lost before the unit transferred its event data to THOR. If data loss occurred, email notifications were not delivered, and events were not sent to Vision. Data loss only occurred if the Auto Call Home settings were configured to Deleted Events and Logs from Unit and the modem timed out before the event data was transferred to THOR. The modem can time-out due to inactivity when the Auto Call Home Server becomes overloaded.

The Auto Call Home server can become overloaded when the amount of data being transferred or the number of units calling home at the same time is high. When this occurs, the Auto Call Home Server puts the units into a queue. In extreme cases, when the unit waits too long to transfer its data, the modem connected to that unit could time out due to inactivity, resulting in a loss of communication between the unit and THOR. With this release, THOR will constantly communicate with any units in the queue during the Auto Call Home session so that the modem cannot time out due to inactivity.

- Enhanced database operations in THOR to decrease the length of Auto Call Home sessions. Event data received by THOR through an Auto Call Home session is now processed more efficiently by the database.
- Corrected an issue where a .txt format of the event report was not generated if "*Send Events to Instantel Vision*" was set to *No* on the *Auto Call Home* tab.
- Corrected an issue where THOR would crash if *"Combine Geophone Channels"* was selected in the event report view.
- Corrected an issue where an IPv4 address would display as an IPv6 address.
- Corrected an issue where the *Units* were shown in metric and could not be changed to imperial. This occurred when you added a preconfigured sensor, such as the *ISEE Triaxial Geophone*, to a Minimate Pro Advanced Unit Setup File. Now, the units of measure will automatically be selected based on your settings in the *Preferences* tab. Your settings can be viewed on the *Preferences* tab, under *General* and then *Measurement Units.*
- Corrected an issue where the month in the timeline (x-axis) on histogram reports was displayed as minutes.
- Corrected an issue where histogram event data recorded with an advanced unit setup file could not be exported as an XML, CSV or ASCII file.

THOR 1.0.0.30 – *Released June 30, 2017*

WHAT'S NEW?
- This release of THOR includes new firmware for Minimate Pro monitoring units, version FW10.74. The Minimate Pro firmware is bundled with THOR so that you can update your unit using THOR.
    o You can update Minimate Pro units connected to THOR on the *Unit* tab – just click on the *Firmware* icon and follow the instructions.
    o For more information on the features and enhancements in the new Minimate Pro firmware, please read the Release Notes. They are available for download at www.Instantel.com/Downloads.
- This release of THOR includes new features to support GPS event synchronization on Minimate Pro monitoring units. These features include:
    o The ability to view, download and export events with time accurate to the microsecond. Now instead of time being represented as 10:00:00 AM it will now be 10:00:00:000:000 AM when GPS is configured on the unit used to record the event.
    o Time of channel peaks, PPV, and PVS will now be accurate to the microsecond when GPS is enabled on the Minimate Pro used to record the event.

- o For added reliability, event reports will indicate whether the GPS was locked on a signal during the entire event recording or not. Now at the top of your event report there is the field *GPS Event Synchronization*.
  - o Exported events and event reports will now show an effective sampling rate. When the GPS is enabled on the Minimate Pro unit it consumes some of the processing power. Since the processor only has so much bandwidth available, the Minimate Pro could be configured to monitor at 65 kHz (or samples per second) but it is actually monitoring at 48 kHz. The sample rate that the Minimate Pro is actually monitoring at is called the effective sample rate. This only affects sample rates greater than 8 kHz. For a table of actual versus effective sample rates, please refer to the Minimate Pro Operator's Manual. It can be downloaded at www.Instantel.com/Downloads.
- THOR now supports IPv6 addresses. Recently, Verizon Wireless announced that it will no longer provide static IPv4 addresses. The format of an IPv6 address is significantly different than that of an IPv4. THOR uses these IP addresses to communicate through Auto Call Home to monitoring units connected to a modem.
- For more flexibility, you can now add a custom subject line to your email notifications. This can be configured from the Auto Call Home tab, in the Email section.
- Added real-time validation in the advanced channel configuration of the unit setup file. Now as you type in values, THOR will tell you whether they are valid as you type them in.
- THOR now supports using a Dynamic Name (DN) rather than a static IP address to communicate with monitoring units. For countries where static IP addresses are not available or the cost is too high, communications can now be configured in THOR using a Dynamic Name (DN). This Dynamic Name must be configured on your modem.

WHAT'S NEW?

- Corrected an issue where after a marker was placed on a waveform, the time of the marker did not match on the printed or saved event report.
- Corrected an issue so that THOR will no longer try to test email credentials when a SMTP host has not been specified.
- Corrected an intermittent issue where Series III events received through Auto Call Home in THOR were corrupted.
- Corrected an intermittent issue where an Auto Call Home session fails and blocks subsequent Auto Call Home sessions.
- Corrected an issue where THOR was not exporting dB(L) values in XML files.
- Corrected an issue where THOR would show multiple log entries for the same email.
- Corrected an issue where THOR would send test emails when the SMTP security was set to none and the username or password was not provided but would not send the email notification during Auto Call Home.
- Corrected an issue where Auto Call Home would not work due to a long delay in how the event was processed.
- Auto Call Home unit settings are now context sensitive. Now you will only see options that are applicable to the unit type you've selected, either Micromate or Minimate Pro.
- Corrected an intermittent issue where the correct advanced unit setup file was not being sent with the selected schedule.

- Cellular providers like Verizon, each process the transmission of emails to text differently. How these messages are processed can change or add characters in the subject line and body of the message. The format of the text notification was changed to reduce changes that can occur.

THOR 1.0.0.29 – *Released April 27, 2017*

WHAT'S NEW?

- This release of THOR included new Micromate firmware, version MM10.87. The Micromate firmware is bundled with THOR so that you can update your unit using THOR.
    - You can update Micromate units connected to THOR on the *Unit* tab – just click on the *Firmware* icon and follow the instructions.
    - For more information on the features and enhancements in the new Micromate firmware, please read the Release Notes. They are available for download at www.Instantel.com/Downloads.

THOR 1.0.0.28 – *Released March 31, 2017*

WHAT'S NEW?

- This release of THOR included new Micromate firmware, version MM10.86. The Micromate firmware is bundled with THOR so that you can update your unit using THOR.

WHAT'S NEW?

- Corrected an issue where THOR would crash if you deleted an email group which was used in a project's Auto Call Home set up. Now, when you delete an email group that is assigned to a project, THOR will tell you that it is assigned to a project and ask you to confirm that you want to delete it.

THOR 1.0.0.27 – *Released March 3, 2017*

WHAT'S NEW?

- For more flexibility, you can now set email notifications by project. For each project you can choose to enable or disable email notifications or to use the general email settings from the Auto Call Home tab.
    - ***Please note*** *that this feature changed the available options for email notifications in each Project. We have automatically transitioned as many projects as possible to the new settings. For example if your Auto Call Home setting was previously disabled, each of your project email settings will be set to disabled. We recommend that you review your email settings in your projects to ensure they are configured correctly.*
- To make event reports easier to understand, sensor check graphs will now include a simple pass or fail in addition to the graph. Text stating whether the sensor check passed or failed will be displayed with a green check mark or a red x.
- You now have the option to display or hide the sensor check data (frequency and overswing ratio) on SmartGeo™ event reports.
- On event reports, the Serial Number/Model Number line has now been split into two fields. This is to accommodate including SmartGeo in the model number for events recorded with Instantel's newest geophone.
- Monitor logs will now include the unit name and location.
- Auto Call Home in THOR now supports Blastmate III events.

- Added real-time validation in the unit setup file. Now as you type in values, THOR will tell you whether they are valid as you type them in.

WHAT'S NEW?

- Improved performance when generating reports so that your event reports will open faster.
- Now if there is an issue with the email settings and emails are not sent because of it, those emails will automatically be sent out when the email server is corrected. This history can be viewed in the Auto Call Home monitor logs. Any emails that were not transmitted previously will be sent the next time there is a successful transfer.
- Now if there is an issue with the Vision settings in THOR and events are not transferred because of it, those events will automatically be transferred when the settings are corrected. This history can be viewed in the Auto Call Home monitor logs. Any events that were not transmitted previously will be sent the next time there is a successful transfer.
- Corrected an issue where users could not put a marker on graphs when in the advanced analysis view.
- Corrected an issue where Minimate Pro monitor logs could not be read when there were no event files on the unit.
- Corrected an issue where the first entry in the monitor log was not displayed.
- Corrected an issue where THOR would crash when the *Logging Type* was set to *Auto Update* in the Auto Call Home view.
- Corrected an issue where the user was not able to save changes to a unit setup.
- Fixed an issue where Anti-Virus programs were detecting a malicious file in THOR.
- Fixed an issue where the correct interval peak vector sum (PVS) values were not written in CSV and ASCII files.
- Corrected an issue where THOR would crash if you opened an event, disabled the Fast Fourier Transform (FFT) graphs and then closed and reopened the event.
- Corrected an issue in the setup file when the Minimate Pro series is monitoring in scheduler recording mode with DIN geophones.
- Added support to remove the THOR license key from your computer when THOR is uninstalled.

THOR 1.0.0.26 – *Released January 12, 2017*

WHAT'S NEW?

The release of version 1.0.0.25 introduced an error where event reports were not generated after an Auto Call Home session ended. This meant that email notifications were not being sent and event reports in Vision™ were not being created. The release of THOR 1.0.0.26 has corrected this issue.

- If you were using THOR 1.0.0.25 the integrity of the event data was not affected. Events can be accessed under Manage Events.
  - o Once THOR has been upgraded to version 1.0.0.26, the email notifications that did not get sent due to this issue will be sent.

THOR 1.0.0.25 – *Released January 10, 2017*

WHAT'S NEW?

- Use THOR in Spanish – choose your preferred language in the preference tab.

- Send email notifications to your mailing lists based on geophone peak values or based on event type (waveform or histogram).
- Send monitor log reports via email notifications.
- Send/load setup files on/from multiple monitoring units simultaneously.
- Send/load monitoring schedules to/from multiple monitoring units simultaneously.
- Analyze event files without altering the original event files including performing Fast Fourier Transforms (FFT), Signature Hole Analysis and convert from velocity to acceleration or displacement. (Additional License Required)
- Play-back sound clips recorded with a Minimate Pro Sound Level Microphone. (Additional License Required)
- Import advanced events into the event manager, create and store advanced setup configurations and create advanced event reports. (Additional License Required)
- Apply frequency filters on multiple waveform events. (Additional License Required)
- Create Human Exposure reports using multiple waveform events. (Additional License Required)
- Create transfer function reports with multiple waveform events. (Additional License Required)

WHAT'S NEW?
- The presentation, workflow and performance for schedules, including notifications of missing monitoring unit setups.
- The presentation of report options – only show relevant options based on the report you're creating.
- Now extend markers between multiple events simultaneously.
- See the percentage of battery life remaining in a monitoring unit.
- Delete a setup configuration directly on a monitoring unit.
- Download and copy all events and logs from a monitoring unit using a shortcut in the Event Manager.
- Include the monitoring unit's location on email notifications.
- Improved general user interfaces and performance.
- Corrected issues with formatting input fields and standard deviation calculations in the Scaled Distance view.
- Corrected an issue where the monitoring unit status is not updated after a start monitor command was given using the THOR dashboard.
- Corrected an issue where the time zone was not correctly applied to a Micromate unit when setting the time from THOR.
- Corrected an issue where THOR displays extra intervals in the event reports for short histogram events.
- Corrected an issue where monitoring units were removed from a project after editing the project.
- Corrected an issue where THOR would not read the setup configuration correctly for a Micromate monitoring unit resulting in an event being recorded with empty channel names.
- Corrected an issue where THOR crashes during the startup process.
- Corrected an issue where waveform data points are shifted one sample to the right when viewing the report graphs.

THOR 1.0.0.24 – *Released December 8, 2016*

WHAT'S NEW?

- Corrected an issue where the scroll bar behavior prevented the selection of a unit in the unit management page.
- Corrected an issue where THOR presents incorrect peak and PVS values in an event report. This only occurs on Minimate Plus monitoring units when using channels with high gain values.

THOR 1.0.0.23 – *Released November 23, 2016*

WHAT'S NEW?
- Corrected an issue with Minimate Pro compliance setup configuration where the Geophone DIN-315Hz was being set to Geophone ISEE.

THOR 1.0.0.22 – *Released November 1, 2016*

WHAT'S NEW?
- Introduced support for the Micromate monitoring unit firmware release MM10.84.

THOR 1.0.0.21 – *Released October 27, 2016*

WHAT'S NEW?
- Introduced support for the Micromate monitoring unit firmware release MM10.83.

THOR 1.0.0.20 – *Released September 30, 2016*

WHAT'S NEW?
- Introduced support for the Micromate monitoring unit firmware release MM10.82.
- Introduced support for the Swedish language – select your preferred language in the Preferences tab.
- Introduced support for the Swedish blasting and pile driving standards when creating monitoring unit setup configurations. Corrected an issue where THOR may not create reports for events containing Linear or Sound Level Microphone data.
- Corrected an issue where THOR may not show the source of the trigger.

THOR 1.0.0.19 – *Released August 24, 2016*

WHAT'S NEW?
- Corrected an issue where Sound Level Microphone values are not exported properly to ASCII, CSV or XML reports.

THOR 1.0.0.18 – *Released August 8, 2016*

WHAT'S NEW?
Introduced support for the Micromate monitoring unit firmware release MM10.81.

THOR 1.0.0.17 – *Released July 13, 2016*

WHAT'S NEW?
- Updated the THOR French help document to reflect the latest features of THOR.
- Corrected an issue which could cause THOR to become unresponsive when refreshing the current license.
- Corrected an issue where the monitoring unit may not have been able to call home when connected via Ethernet.

- Corrected an issue which caused a successful response when sending a compliance setup configuration to a monitoring unit when the result should have failed.

THOR 1.0.0.16 – *Released July 4, 2016*

WHAT'S NEW?
- Corrected an issue which prevented the creation of event reports in PDF format.

THOR 1.0.0.15 (First Release) – *Released June 30, 2016*

WHAT'S NEW?
- Introduced the ability to select multiple events to generate a PDF with multiple event reports ordered chronologically.
- Introduced a monitoring unit state icon which is displayed when a unit is in a monitoring state.
- Introduced the ability to sort more columns in the Event Manager view and remember the settings when THOR is restarted.
- Introduced the License page under the THOR tab, for THOR license management.
- Added stability and robustness improvements for the THOR application and Auto Call Home Service.
- Introduced support to automatically detect and correct a monitoring unit's Auto Call Home configuration for proper initialization of the Auto Call Home communication.
- Improved the USB, serial and TCP/IP communication mechanisms when communicating to the monitoring units.
- Improved the connection management for remotely (modem) connected monitoring units.
- Corrected an issue where the Auto Call Home Service may not start after installing THOR.
- Enhanced Auto Call Home to detect when a call home session is cancelled on the monitoring unit.
- Improved handling when editing a Project based on the monitoring unit state.
- Corrected an issue with the y-axis label precision in event report graphs.
- Corrected an issue where Post Event Notes were not being displayed when added in the report view.