# OmniTrak™ Solution+ Report Creator

User Manual

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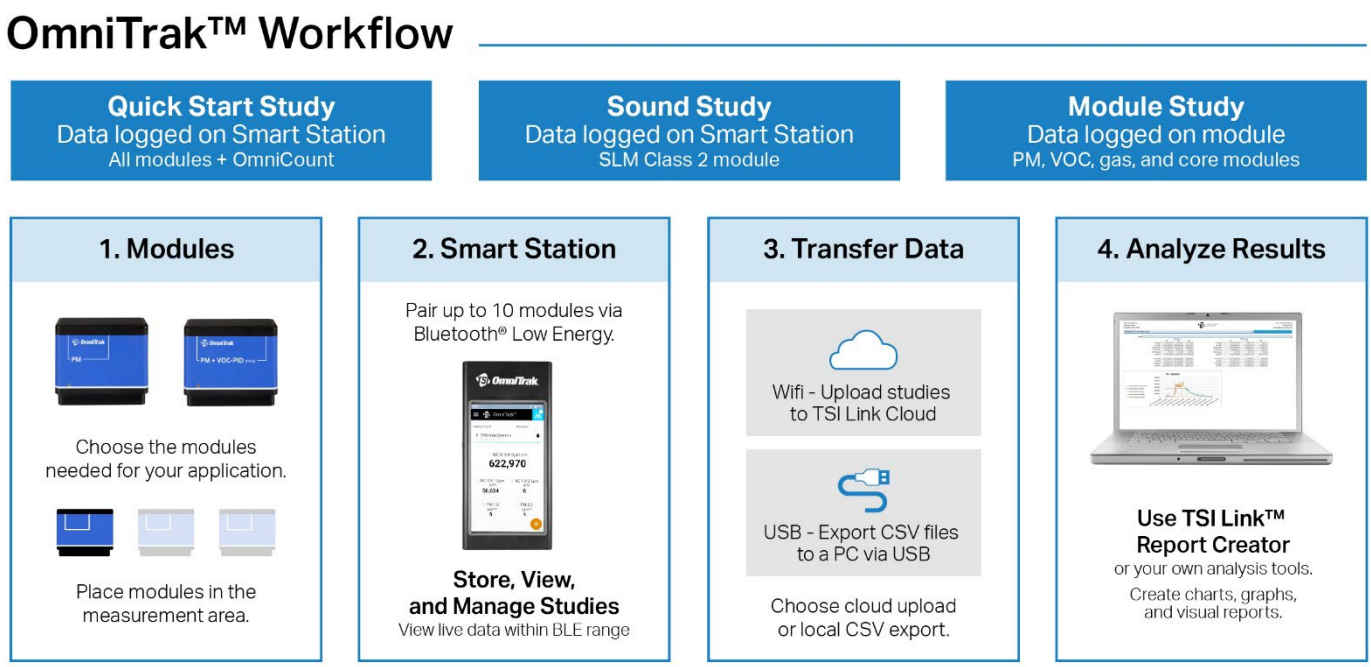
## Overview

The TSI **OmniTrak™** Solution is a modular monitoring ecosystem designed to simplify time-synced measurement studies across multiple locations and parameters, from spot checks and troubleshooting to multi-day studies. **OmniTrak™** modules pair seamlessly with the Smart Station to collect, visualize, and report time-stamped measurement data for on-site or unattended studies. Automated Microsoft Excel reports and data visualizations help make analysis quick and easy. The **OmniTrak™** ecosystem also includes ultrafine particle counting with TSI OmniCount Portable Water-based Condensation Particle Counter (PWCPC) Models 3001 and 3002, providing a more complete view of air quality, particle, and noise data within a single system.

This document is a guide to get started with the **OmniTrak™** Solution + Report Creator. More information can be found on the OmniTrak Solution | TSI page.

There is a separate guide for field calibration of sensors, the **OmniTrak™** Solution Calibration Guide (6018700).




| Additional Information |
| --- |
| ▪ Data can be uploaded to **TSI Link™** via Wi-Fi or exported locally as CSV files via USB. |

## Setup and Subscription

### Account Setup

Registering on TSI.com/Register. This website has a full guide and video instructions.

### TSI Link™ Report Creator Standard Connected Subscription

**OmniTrak™** purchase includes a **TSI Link™** Report Creator Standard Connected Subscription. You will receive a welcome email with your subscription activation ID and instructions for activating and managing your subscription.

If the activation code is not used, the subscription will automatically activate 120 days after shipment.

# Powering Smart Station and Modules

## Charging

An ideal power source for the Smart Station and modules is a 5 VDC, 2 Amp, 10 Watt wall charger using the provided USB cable. They can both be charged in either on or off states. On the modules, there are LEDs next to the charging port indicating module status – see table below.

Battery charging indicators

## Smart Station Power

- To turn the Smart Station **on**, hold the power button on the right side for 2–3 seconds.
- To turn the Smart Station **off**, hold the power button on the right side for 2–3 seconds and touch **Power Off** in the -upper left corner of the screen.

## Module Power

- To **power on**, hold the power button located on the left side for ~1 second.
- To **power off**, hold the power button for ~5 seconds. See table below for LED signals.

## Sensor Signals

| Signal | Meaning |
|---|---|
| **LED on Outside of Module** | |
| Blue 1x/sec or Solid Red | Module error |
| Green → Yellow → Red → Off | Module powering off |
| Blue 1x/5 sec | Waiting for Bluetooth connection |
| Green 1x/5 sec | Bluetooth connected; Battery > 25% |
| Yellow 1x/5 sec | Bluetooth connected; Battery 10-25% |
| Red 1x/5 sec | Bluetooth connected; Battery < 10% |
| Blue ↔ White Alternating 1x/5 sec | Module study active; no Bluetooth connection |
| Green ↔ White Alternating 1x/5 sec | Module study active; Bluetooth connected; Battery > 25% |
| Yellow ↔ White Alternating 1x/5 sec | Module study active; Bluetooth connected; Battery 10–25% |
| Red ↔ White Alternating 1x/5 sec | Module study active; BLE connected; Battery < 10% |
| **LED on Bottom of Module** | |
| LED 1 Green Flashing | Module charging |
| LED 1 Green Solid | Module is fully charged |
| LED 2 Orange Solid | Power is connected |
| Off | No charging power detected |

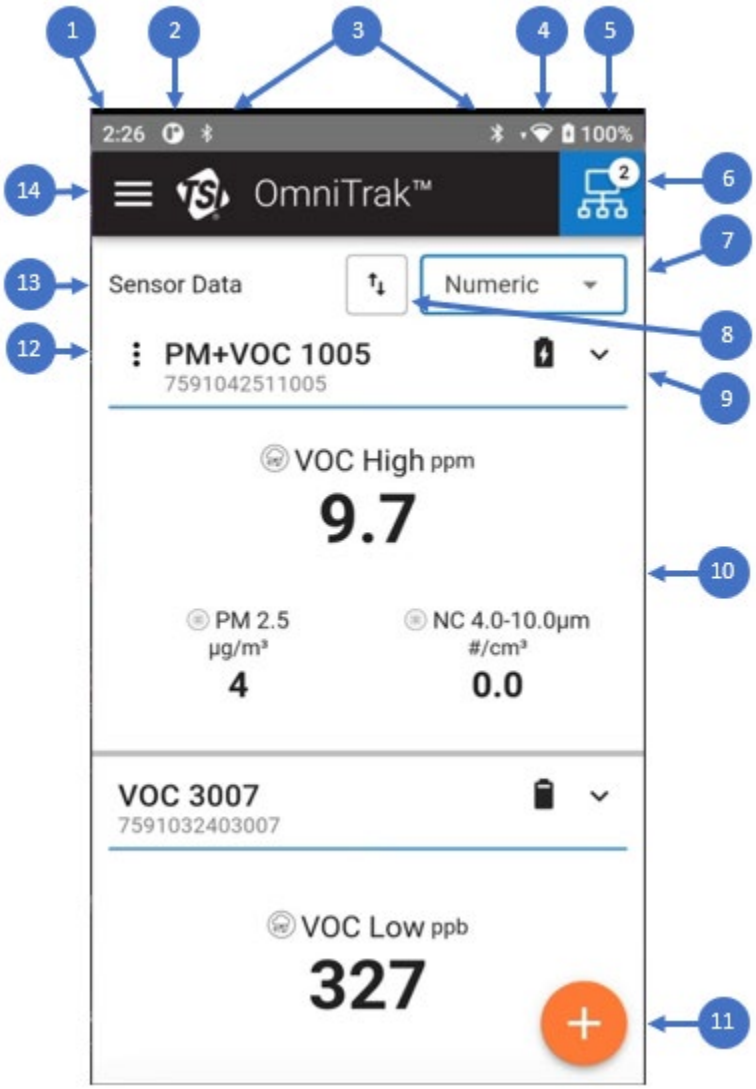
### Additional Information

- All modules are shipped in “Sleep Mode” to protect the battery during shipment and storage. It will not be possible to power on the module using the side button until Sleep Mode is disabled. To disable, plug the module into a power source and charge it for a few minutes. This process is only required the first time the module is powered on.
- The Smart Station can enter Hibernation Mode by pressing the power button. Hibernation Mode conserves battery power by turning off the screen while the Smart Station remains on. Live data streaming and active studies continue while the Smart Station is in Hibernation Mode. Press the power button again to exit Hibernation Mode.
- The button on the left side of the Smart Station is disabled. Be sure you are using the power button on the right side of the Smart Station.

## Smart Station Display and Navigation Controls

The **OmniTrak™** Smart Station user interface uses touch screen technology. You need to tap the display options to select them. The only physical button is the power on/off button.

Press the power button on the right side of the Smart Station to turn on the device. When the instrument has completed the boot up process, the **OmniTrak™** Sensor Data screen is displayed.



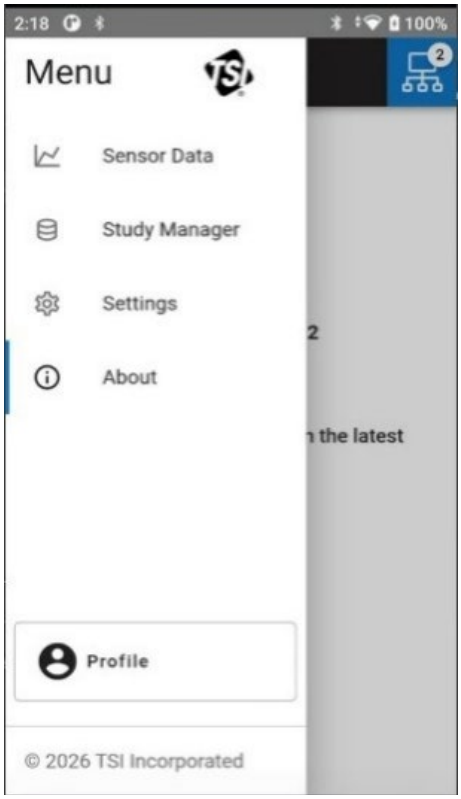
| Item | Type | Description |
|---|---|---|
| **1** | Indicator | Time provided by the network or set by the operator. |
| **2** | Indicator | A USB-C connection to a computer is present. This is not displayed if the USB-C port is not connected to the USB-C port of your computer. |
| **3** | Indicator | Bluetooth® icon . This is the connection method used between the Smart Station and the modules. |
| **4** | Indicator | Wi-Fi® is enabled . This is not displayed if a Wi-Fi® network is not present or disabled.<br>**NOTICE**<br>This is replaced by the standard airplane mode icon if airplane mode is enabled. |
| **5** | Indicator | Battery level of the Smart Station, shown graphically and as a percentage. |
| **6** | Indicator/ Button | Computer network icon indicating if a module(s) is paired to the Smart Station and providing access to further functions for those sensors. |
| **7** | Drop-down | Menu to toggle between displaying data numerically or as a graph. |
| **8** | Button | Press to reorder module display, when multiple modules are connected |
| **9** | Indicator | Battery level indicators for the module paired to the Smart Station. Carrot to expand/collapse module data |
| **10** | Indicator | Data display window. All selected measurement parameters for the module paired to the Smart Station are displayed here. |
| **11** | Button | Study start button used to begin recording a study. |
| **12** | Indicator/ Button | Name of the sensor paired with the Smart Station. Modules with multiple sensors have the kebab menu ⋮, which can be used to select which parameters are displayed (up to 6). All sensor parameters are recorded in studies regardless of display selection. |
| **13** | Indicator | Title of the current window. |
| **14** | Menu | Navigation hamburger menu used to display top-level menu items. |

## Navigation Menu Items

The navigation hamburger menu icon ☰ is used to access the following items:

**Navigation Menu Items**

| Item | Description |
|---|---|
| **Sensor Data** | Used to display live data being directly sent from the module in the data display window. |
| **Study Manager** | Used to access previously recorded study files. You can search for a study by name or display files by ascending or descending study name or age. The kebab menu, ⋮ to the right of each study name provides access to a number of functions you can perform on the study file.<br>*For more information, see Study Manager Window.* |
| **Settings** | Allows you to configure your **OmniTrak™** setup.<br>*For more information, see Settings Window.* |
| **About** | Reveals the following list of instrument parameters:<br>▪ Name<br>▪ Model Number<br>▪ Serial Number<br>▪ Software Version<br>▪ Boot Control Version<br>This icon indicates a software update is available. Tap to follow the update process<br>You can also choose to view the TSI® Terms and Conditions and software release notes. |
| **Profile** | Displays the following profile parameters which you can edit:<br>▪ Name<br>▪ Email address<br>▪ Telephone number<br>▪ Address<br>If you are not logged into your **TSI Link™** account, you will see a prompt to enter your **TSI Link™** credentials to access these details. |




### Study Manager Window

Use the **Study Manager** window to access previously recorded study files. The dropdown in the upper-right corner lets you choose whether to view studies saved on **This Smart Station** or studies stored on a **Connected Module**.

Module Studies log data directly on the module. These studies can only be viewed when the module is paired with the Smart Station over BLE. To export a Module Study, first transfer the study from the module to the Smart Station. Once the study is saved on the Smart Station, it can be exported.

The following attributes are displayed:

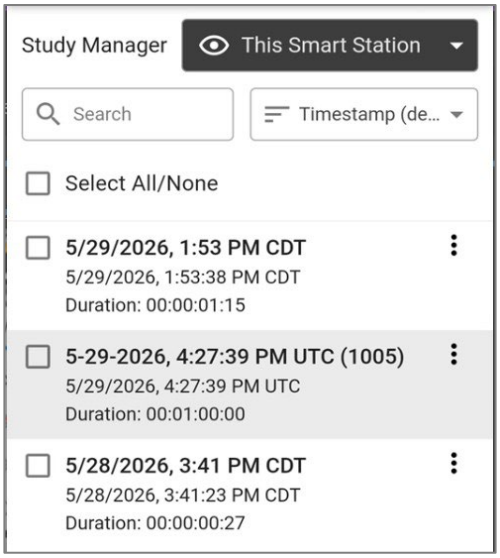
- The name of the study
- The date and time the study was recorded
- The duration of the study

Use the Search bar to find specific studies

Use the dropdown to reorder studies by name or timestamp.

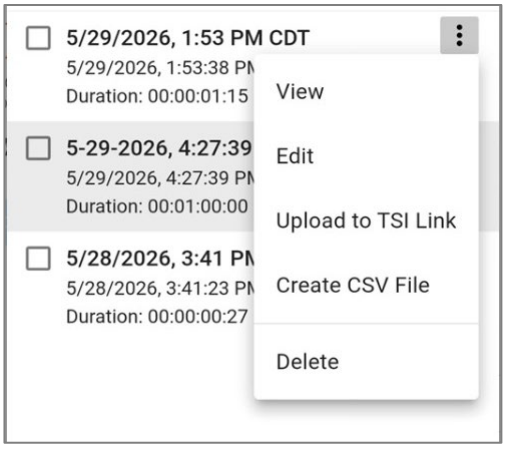
Select multiple studies at a time for deletion, save to CSV, or upload to TSI Link.

Connected Module studies can be expended/collapsed with the carrot for easier viewing when multiple modules are connected.




The kebab menu ⋮ to the right of each study name provides access to a number of functions you can perform on the study file. These are:

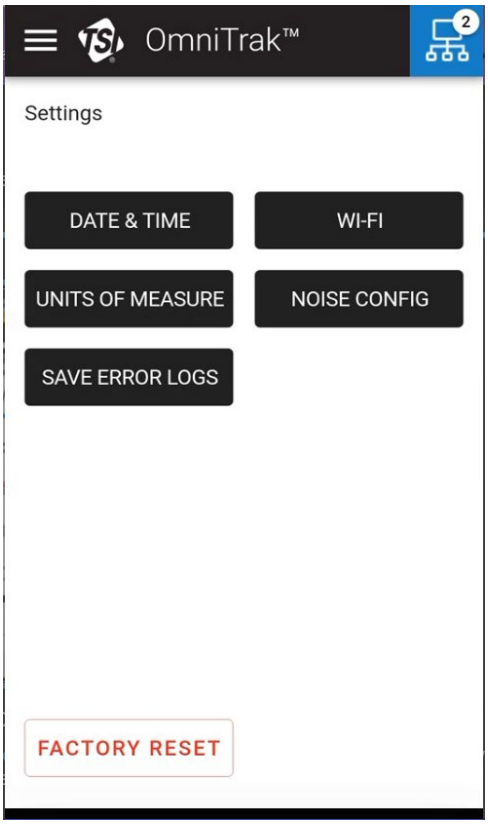
| Item | Description |
|---|---|
| **View** | View study data as a graph or review the numeric details. |
| **Edit** | Change the name and/or location of the study and add notes if needed. |
| **Upload to TSI Link** | Upload a study to your **TSI Link™** account. |
| **Create CSV File** | Creates a CSV file to be transferred via USB cable |
| **Delete** | Remove the study file from the database.<br><br>Connected Modules offer the options to Download and Delete only. |



### Settings Window

Use the **Settings** window to customize your **OmniTrak™** Solution settings.

You can configure the following parameters:




**Settings Window Configurable Items**

| Item | Description |
|---|---|
| **Date and time** | Set the following:<br>▪ Network provided time, GPS-provided time, or custom time.<br>▪ Time zone.<br>▪ Time format (12- or 24-hour). |
| **Wi-Fi® connectivity** | Use this menu to:<br>▪ Select an available Wi-Fi® network to connect the Smart Station<br>▪ Enable Airplane mode. |
| **Units of Measurement** | Select the units used to display measurements. Available unit options vary depending on the connected module and sensors. |
| **Noise Config** | Choose a noise configuration, or customize your own. SLM modules only |
| **Save Error Logs** | Send the Diagnostics Log to the Smart Station. The log can then be retrieved by connecting the Smart Station to a PC. |
| **Factory Reset** | Reset settings to the factory default values by selecting Factory Reset. |

## Sensors Window Options

The blue network icon opens the **Sensors** window, where you can view paired modules, pair new modules, or unpair modules from the Smart Station. A module can only be paired to one Smart Station at a time. Displayed next to each module name are icons and links that provide module status and access to module-specific information:

- Battery Level : indicates the battery level for the module.
- Module Studies : for modules with onboard data logging, provides a link to Study Manager to view studies stored on that module
- Connection Status: indicates whether the Smart Station is connected to the module.

  Connected: the module is connected to the Smart Station.

  Not Connected: the module is out of range or powered off.

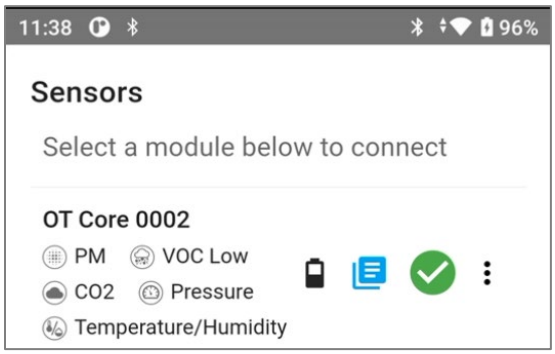
  Update Available: the module has a firmware update available.

- The kebab menu ⋮ allows access to additional module options:

| | |
|---|---|
| **Calibrate** | Opens the calibration process, if available. Refer to the OmniTrak™ Solution Calibration Guide (6018700) for additional information. |
| **Module Error Log** | Displays a historical list of errors logged for the module. |
| **Information** | Displays module-specific information, including model, serial number, firmware version, battery level, calibration date, and more.<br>**NOTICE**<br>The module name can be edited by selecting the pencil icon ✎. |
| **Disconnect** | Disconnects the module from the Smart Station. |

# Connecting Smart Station to Modules

## Pairing Modules to the Smart Station




To pair a module with the Smart Station:

- Ensure both the Smart Station and the module are powered on and within 2 meters (6 feet) of each other. Tap the blue network icon in the upper-right corner of the screen. The Smart Station will display all modules within Bluetooth® range.
- Tap the module to connect.
  - If you see 'No sensor modules detected,' tap **Refresh.**
- Confirm successful connection:
  - A green check mark will appear next to the module name.
  - The LED on the front of the module will blink green.
- Repeat these steps to connect additional modules. Tap **DONE** when finished.

## Unpairing Modules from the Smart Station

To disconnect a module:

- Tap the kebab menu (three vertical dots) ⋮ next to the green check mark for the connected module.
- Select **Disconnect**.
- When the confirmation message appears, tap **Disconnect** again to finalize.

**Additional Information**

- The Smart Station requires a 2.4 GHz Wi-Fi network. 5 GHz networks are not supported.
- Wi-Fi networks that require a captive portal, browser-based login, terms acceptance page, or two-factor authentication are not supported.
- It is not possible to connect the same module to two or more Smart Stations at the same time.
- If a module is out of Bluetooth® range for ~15 minutes, it will power itself off to save the battery (unless running a module study).

# Data and Recording Studies

## Studies

**OmniTrak™** records data in the form of studies. There are three study types – Quick Start, Sound, and Module Studies. Sound Studies use the SLM Class 2 module and are covered separately in the OmniTrak Sound Level Meter Module User Manual.

## Recording a Quick Start Study

A Quick Start Study is the fastest way to start collecting data across multiple modules at once. As the study runs, you can view measurements on the Smart Station screen in real time. The modules must remain paired with the Smart Station and within BLE range for the entire study.

To record a Quick Start Study:

- Tap the . icon located in the lower-right corner of the Sensors window
- Select **Quick Start Study** from the available options.
- Select the desired logging interval.
- Tap **Start** to begin recording.
- To temporarily pause the study, tap the blue **Pause** icon.
    - Tap the green **Play** icon to resume recording.
- When the study is complete, tap the red **Stop** icon.
- Confirm by tapping **Stop** to end the recording session.
- Choose whether to **Save** or **Delete** the study.
    - Study name, Location, and Notes can be added now or later.

| NOTE |
| --- |
| The following sections do not apply to Quick Start Studies – continue to the **Exporting Data from the Smart Station** section. |

## Recording a Module Study

Module Studies let you deploy IAQ modules independently for unattended or longer-duration monitoring. The modules must be paired with the Smart Station to start a Module Study and to transfer study data after the study is complete.

When starting a study, you can select a study duration. If a duration is selected, the study will stop automatically at the end of the selected time, allowing the module to complete the study without reconnecting to the Smart Station. If **Manual Stop** is selected, the module must be paired with the Smart Station to stop the study manually.

During a Module Study, measurements can only be viewed on the Smart Station screen when the module is paired with the Smart Station and within BLE range.

To record a Module Study:

- Tap the icon located in the lower-right corner of the Sensors window and select **Module Study**.
- Select the desired logging interval.
- Select the desired Study Duration or Manual Stop

All connected modules are included in the study by default; disconnect modules not desired for the study.

- Tap **Start** to begin recording.
  - A green 'Module Logging Active' status bar will appear, indicating that a Module Study is active.
  - All selected modules begin the study at the same time.
  - If an additional module is connected while a study is already in progress, a new Module Study can be started by following these steps again.
- To temporarily pause the study, tap the **Pause** icon on the status bar.
  - Tap the **Play** icon to resume recording.
- If Manual Stop was selected
  - Tap the **Stop** icon on the status bar to end recording.
  - Confirm by tapping **Stop**. The study will be saved on the module with a default name

| Additional Information |
|---|
| ▪ Logging Intervals Options: 1, 5, 10, 15, 30 seconds or 1, 5, 15, 30 minutes<br>▪ Study Duration Options: 1 minute minimum, up to 72 hours.<br>▪ Module Studies can run for up to 72 hours. If the study has not been stopped before the maximum duration is reached, the module will automatically stop the study.<br>▪ **Active Timer for Module Study:** When a Module Study is in progress, the Active Timer shows the elapsed time since the study began. This timer continues to count even if the study is paused.<br>▪ **Display During Quick Start Studies:** If a Quick Start Study is started while a Module Study is still running, the Active Timer for the Module Study will be temporarily hidden. Once the Quick Start Study ends, the Module Study Active Timer will reappear – provided the module is back within BLE range to the Smart Station. |

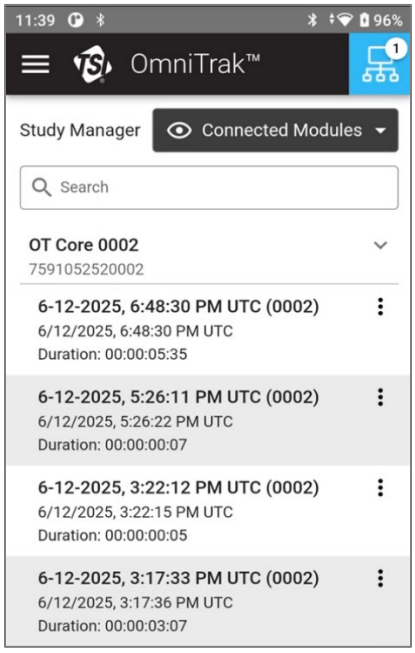
## Downloading Module Study Data

Module Studies are stored directly on the module. To view or export these studies, they must first be downloaded to the Smart Station.

Follow these steps to complete the download.

- Tap the hamburger menu and select **Study Manager.**
  - Tap the dropdown menu at the top of the screen to select **Connected Modules.**
  - Use the search bar to enter the module name or scroll through the list until you find the desired module. Tap the dropdown arrow to expand and view all studies saved on that module.
  - Tap the kebab menu next to the desired study and select **Download** to save the study on the Smart Station.

Once the download is complete, tap the dropdown menu at the top of the screen and select **This Smart Station.**



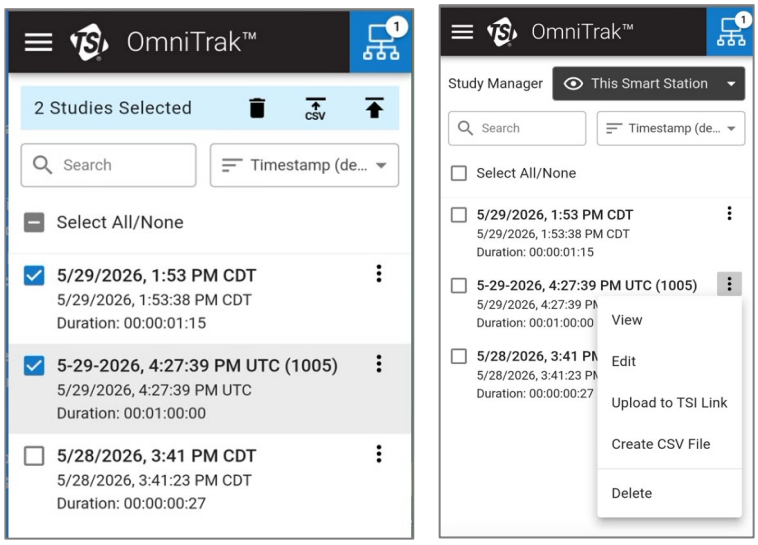
| Additional Information |
| --- |
| ▪ **Module Study Naming:** Studies saved on the module use a default naming format that includes the date, time, and the last four digits of the module's serial number. This name, along with the date and time format, cannot be customized while the study is stored on the module. However, you can rename the study and adjust formatting after it has been downloaded to the Smart Station.<br>▪ **Deleting a Module Study from the Module**: To delete a study stored on the module, select the **Delete** option from the kebab menu next to the module name. This will permanently erase the study and its data from the module. **This action is irreversible**. Delete studies if more storage is needed.<br>▪ **Module Storage**: A module can store 20 studies, regardless of study duration.<br>▪ **Download Speed and Bluetooth Range:** When downloading studies from the module to the Smart Station, a stronger Bluetooth signal – moving the Smart Station and module(s) close to each other – will result in faster download times. |

## Exporting Data from the Smart Station

You can export data in two ways:

**OPTION 1: Export via Study Manager to TSI Link™ Cloud**
The easiest method is exporting through the Study Manager.

- Tap the hamburger menu and select **Study Manager**. You should see a list of recorded Studies.
  - Tap the kebab menu next to the Study you want to export.
  - Alternatively, you may select some or all studies using the boxes on the left.
    - A notification bar appears near the top of the screen, and selected studies can be deleted, saved as CSVs, or uploaded to **TSI Link™**.

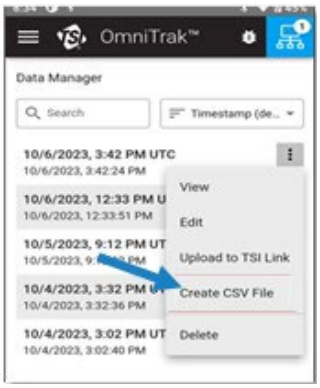



  - Tap **Upload to TSI Link**, and confirm again by tapping **Upload**

| NOTE |
| --- |
| Studies already uploaded to TSI Link will have a cloud icon in their name |

**OPTION 2: Export via CSV File to PC**

To manually export a study as a CSV file:




- Tap the hamburger menu in the upper-left corner of the display and select **Study Manager**.
  - Tap the kebab menu next to the study to be exported.
  - Tap **Create CSV File**. A message will confirm the file will be saved to the **Documents/TSI OmniTrak** folder on the Smart Station.
  - Tap **Save** to complete the process. The Smart Station will notify you when the files are ready.
  - Connect the Smart Station to your PC using the provided USB cable. Studies are accessible through a drive labeled **TSI-5**.
  - Double click on **Internal Shared Storage**.
  - Double click on the **Documents** folder.
  - Double click on the **TSI OmniTrak** folder.

| Additional Information |
|---|
| ▪ Deleting the CSV file will not delete the study that is saved on the **OmniTrak™** Smart Station.<br>▪ If the study contains data from multiple modules, the export features will separate the data and generate CSV files for each individual module. |

# Analyzing and Reporting on Studies using Report Creator

## Excel Version Requirements

**For Microsoft Excel software running on your computer**, the **TSI Link™** Report Creator add-in will work with the following configurations:

- Windows operating system – Excel 2021 or newer desktop
- Macintosh – Excel 2021 or newer desktop
- Microsoft 365 operating system

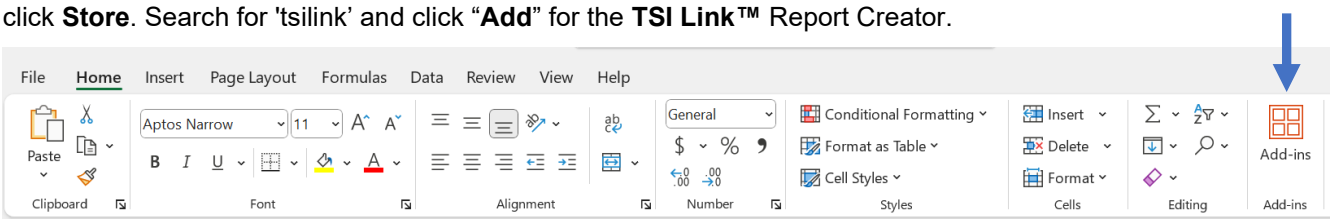
**For Microsoft Excel software for the web** (ie via a browser), the following environments are recommended:

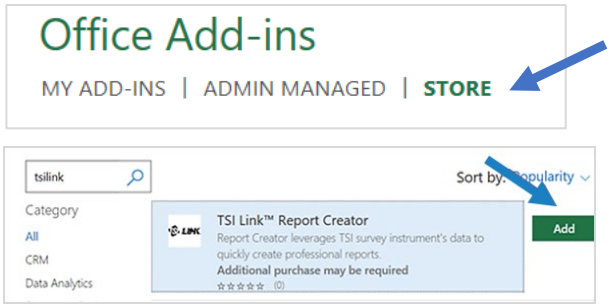
- Excel 2021 or newer using Internet Explorer (IE) 11 via a Google Chrome or Microsoft Edge browser
  - Can be used on a tablet running Android 10 and accessed via a Google Chrome browser
  - Operating system must be either Windows 10, 11, or Mac OS Ventura

## Report Creator Set Up

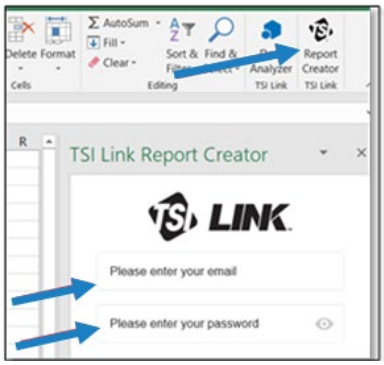
Install **TSI Link™** Report Creator Add-in from within Microsoft® Excel program.

1. Go to Microsoft Store for Excel Add-ins. Under “Insert” tab, “Get Add-ins” section, choose **My Add-ins**, and then click **Store**. Search for 'tsilink’ and click “**Add**” for the **TSI Link™** Report Creator.






2. Once the Add-in is installed, a **TSI Link™ Report Creator** icon will appear in the upper-right of the Home tab in Excel program.
3. Click the icon to open the Add-in; then enter your TSI Link email address and password.

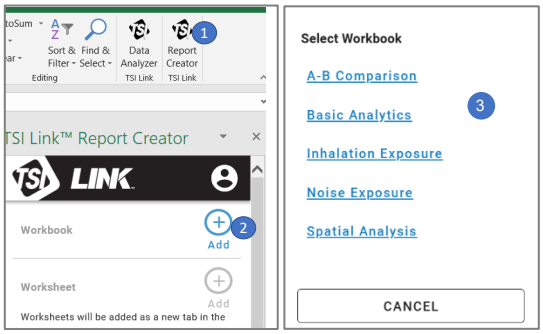



For Detailed Steps see [TSI Link Report Creator - Complete Setup Guide.]

## Start a New Report

To start a new report:

1. Open Microsoft Excel.
2. Click the TSI Link **Report Creator** icon **in the toolbar.**




If desired, customize the cover sheet information for your company.

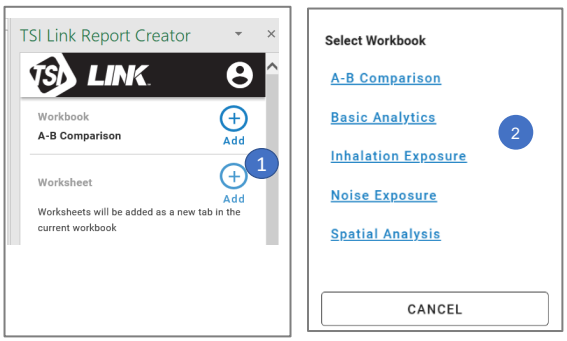
## Adding Workbooks and Worksheets

The IAQ modulesare compatible with all workbooks except for the Noise Exposure workbook and the DustTrak-specific worksheets within the Inhalation Exposure workbook.
Select the Workbook you are interested in:

- Click on the **+** icon next to 'Workbook.'
- Select the desired workbook.

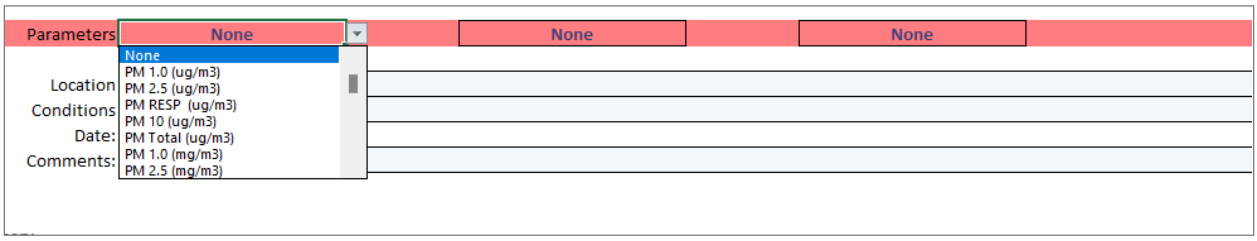
Select a Worksheet.

- Click on the **+** icon next to 'Worksheet.'
- Select the desired worksheet.



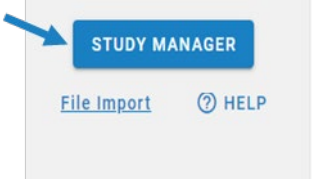

## Parameters

Some reports require you to identify parameters before you can import data. If this is the case, cells will be highlighted red at the top of the worksheet and you will need to select from the drop-down menus before moving forward. If there are not any cells highlighted red for the report you selected, you can go right to loading data.




## Loading Data

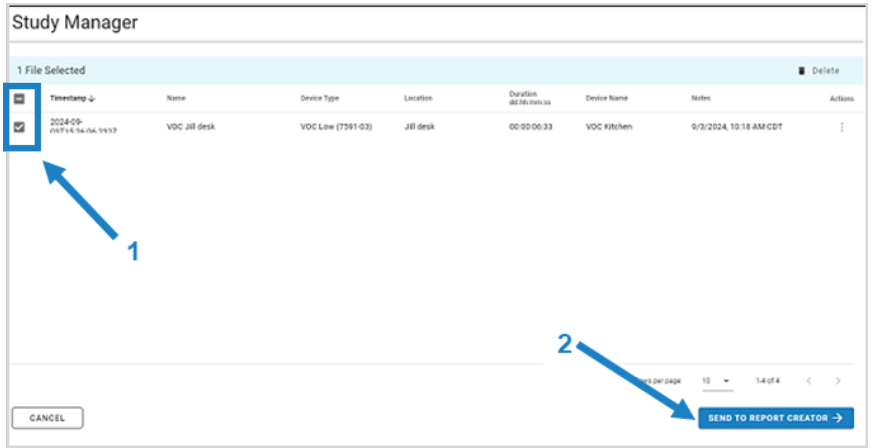
How you import the data depends on how you exported it.




**OPTION 1: Import from TSI Link™**

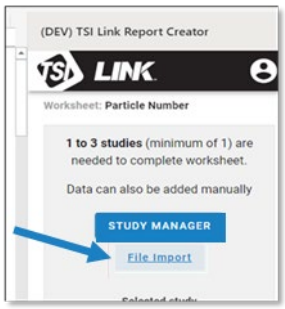
If you exported using the Study Manager to **TSI Link™** then you will import the study from **TSI Link™.**

- In the Excel **TSI Link™** Add-on, click **Study Manager.**
- Select the file(s) for the report.
- Click **Send to Report Creator**.
- After they load, click on the **Study Manager**.

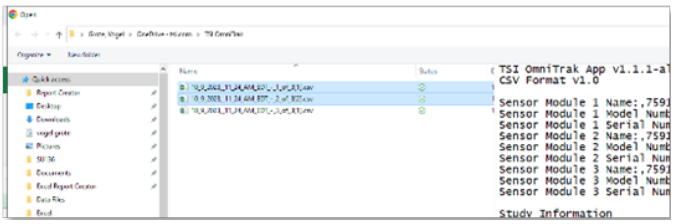


**OPTION 2: Import a CSV file from a PC**

If you created a CSV file and transferred it to a PC, then you will import the study from that PC.

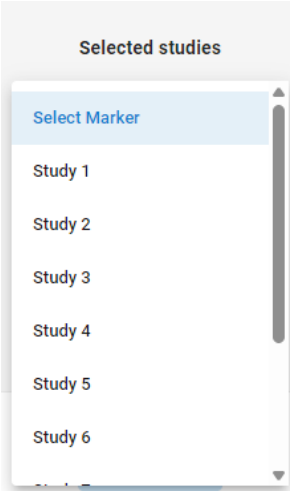



- In the Excel **TSI Link™** Add-on, click **File Import.** This will open a new window.
- Navigate to your saved CSV file. A single study or multiple studies can be selected.




## Marking

If you have selected more than 1 study to add to the worksheet, Report Creator will ask you to match the data being imported with the corresponding label in the worksheet. Once all the studies are marked, use the **ADD DATA** button to pull them into Report Creator.




## Report

In Excel, click **File** and then **Print** to preview the report.

## Accessories

| Accessory | Description |
|---|---|
| Smart Station Accessories | Kickstand / Wrist Strap / Hand Strap |
| SLM Accessories | SLM Class 2 microphone |
| | SLM Class 2 windscreen |
| Calibration Shrouds | CO2 and VOC-EC (ppb) calibration shroud for Core module |
| | VOC-PID (ppm) and VOC-PID (ppb) calibration shroud |
| | CO calibration shroud |
| | Cl2 and NH3 calibration shroud |
| | O3 and HCHO calibration shroud |
| Carrying Cases | OmniTrak SLM Small Carrying Case<br>*Accommodates 1 Smart Station and 1 SLM module OR 2 standard modules* |
| | OmniTrak SLM Large Carrying Case<br>*Accommodates 1 Smart Station and 3 SLM modules OR 6 standard modules* |
| | OmniTrak Core Small Carrying Case<br>*Accommodates 1 Smart Station and 2 Core or standard modules* |
| | OmniTrak Large Carrying Case<br>*Accommodates 1 Smart Station and 5 Core or standard modules* |

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