Contents

Device Key:

TH	TH+	Temperature and Humidity Sensor Device
T	T+	Temperature Only Sensor Device
TP	TP+	Temperature Thermistor Probe Sensor Device
TC		Temperature Thermocouple Probe Sensor Device
AL		Audible and Visual Alert Device
DTP+		Dual Channel Temperature Thermistor Probe Sensor Device
DTC		Dual Channel Temperature Thermocouple Probe Sensor Device

Ensure that you have the following:

WiFi Device	Micro USB Cable	Router or Access Point	PC or Laptop *(running XP, Vista, Windows 7 or Windows 8)*

System Set-Up

1 You will need the SSID and password for the wireless network. The password is sometimes referred to as the passphrase or passkey and often found on the rear of the wireless router.

Router

SSID: Router123456
PASSWORD: 123456789
CHANNEL: 11

2 Download and install the free WiFi Sensor software from www.filesthrutheair.com.

3 Make sure you 'allow' any security access highlighted by your Firewall or Antivirus program. Your system may automatically request this.

4 When you have installed the software an icon will be placed on your desktop.

WiFi

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2
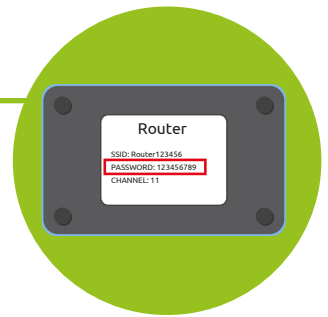
Data Storage Choices

There are two data storage choices for your WiFi monitoring system; on the PC or on the Cloud.

PC Data Storage

With PC data storage all your data is stored locally on your PC. All data is kept within your local network and no internet connection is required.
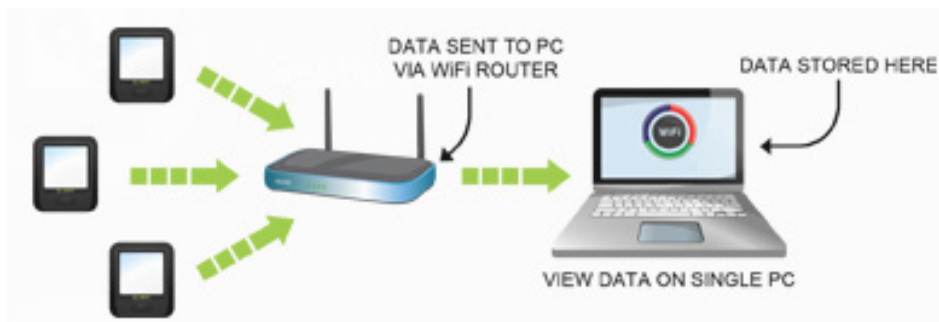
Important! The PC running the software needs to be connected to the router either wirelessly or by ethernet cable.

To store data from your device(s) on your PC please click 'On This PC' during the set-up process. Please turn to Section 2.2 for detailed instructions for setting up your device(s) for PC storage.
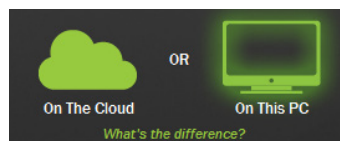
Cloud Data Storage

With Cloud data storage all your data is stored remotely on our secure servers . Data is transfered to our servers through the internet and is then accessible from anywhere via a web browser on any internet enabled device.

To store data from your device(s) on the Cloud please click 'On The Cloud' during the set-up process. Please turn to Section 2.1 for detailed instructions for setting up your device(s) on the Cloud.

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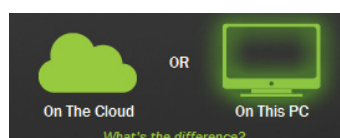
This Section Is For Cloud Users go to 2.2 for PC Set-up

1 Start the WiFi software by double clicking the desktop icon.

2 If you don't have a FilesThruTheAir™ Cloud Account click the orange 'Sign Up' button. If you do, go to Step 4.
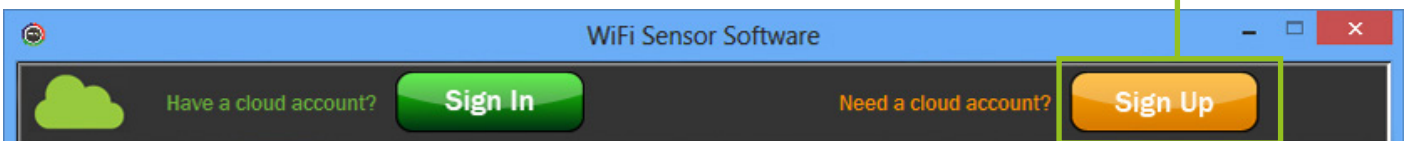
3 Upon clicking the Sign Up button you will be taken to the Cloud sign-up web page, at which point you will be lead through the sign up process. Once completed please continue to Step 4.

4 To sign into your FilesThruTheAir™ Cloud Account on the WiFi Sensor Software click the green 'Sign In' button and then enter your account details into the fields that appear. Finally click 'Sign In' to log into your account.

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4
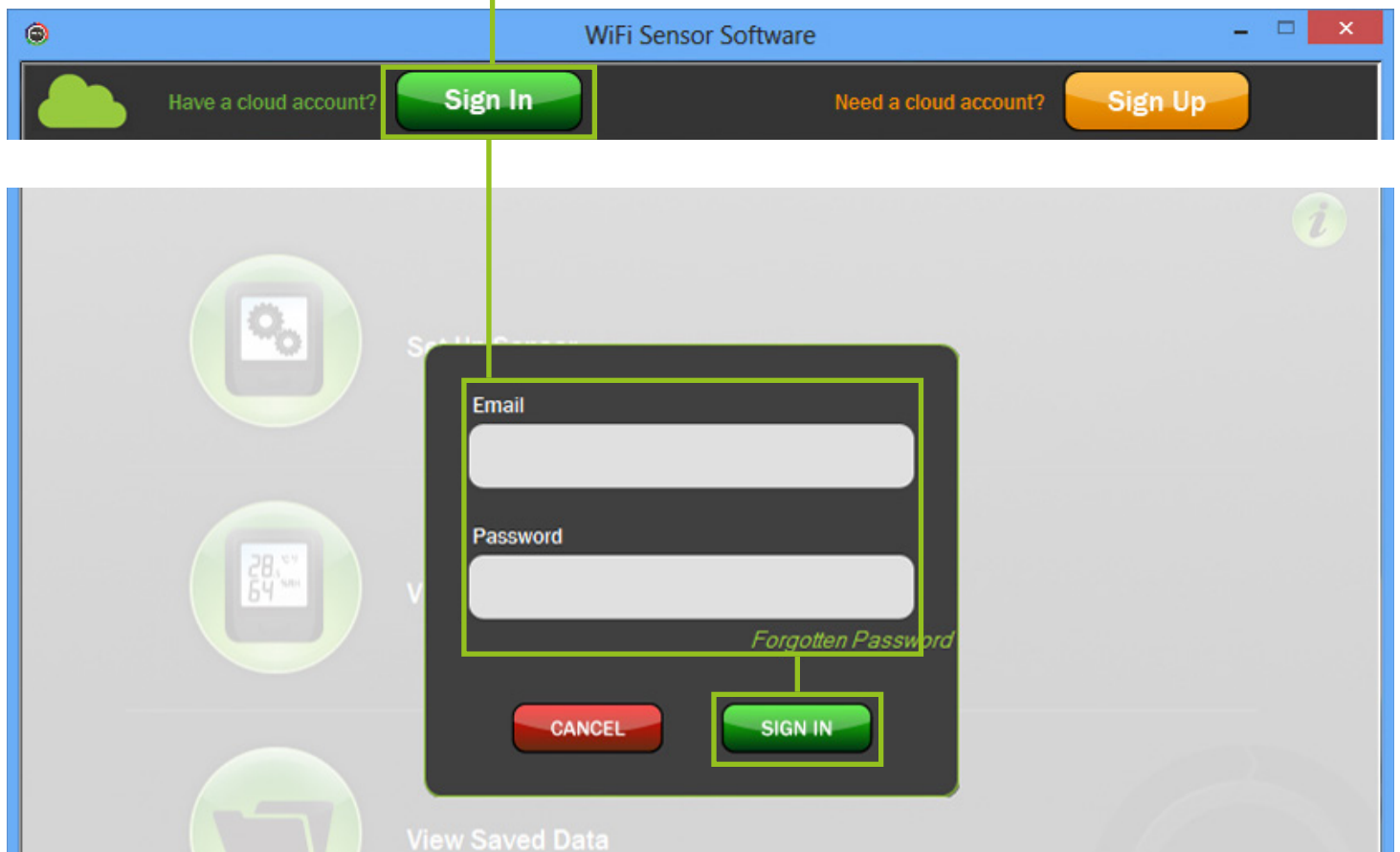
Device Set-Up

1 Start the WiFi software by double clicking the desktop icon.

WiFi

2 Click 'Set-Up Device' button and choose 'On This PC' or 'On The Cloud'.

3 Connect the Device to your PC using the USB cable provided. The USB socket on the Device is protected by a rubber bung, remove this to gain access to the socket.

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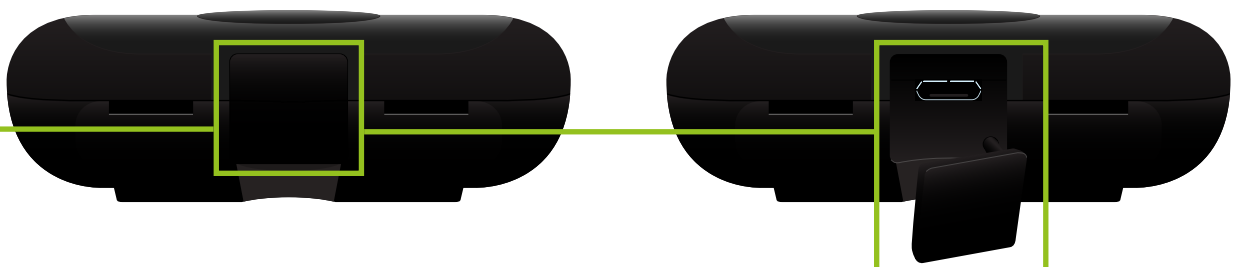
Note: If the Device connects successfully you will see the following screen. If it fails, check the cable is fully connected to the Device and PC. The software will automatically try again.
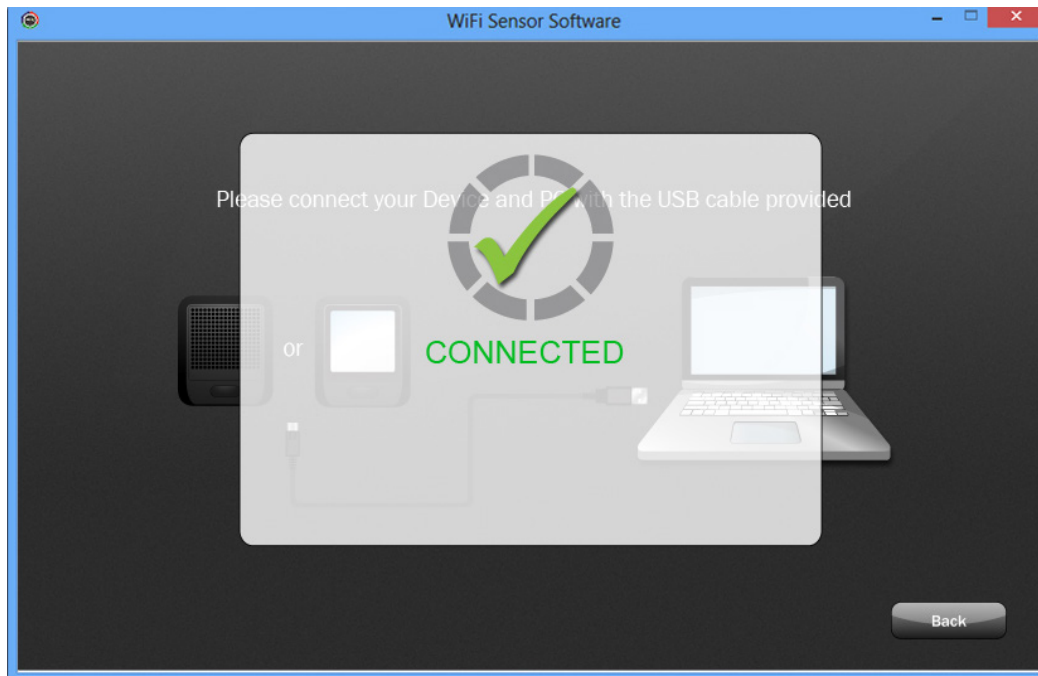
4 **Scanning**

When the message 'scanning' appears the Device is listening for wireless networks that are currently in range. Once scanning has completed a list of available networks will be displayed. If the list is blank press the 'refresh connections' button on the top right.

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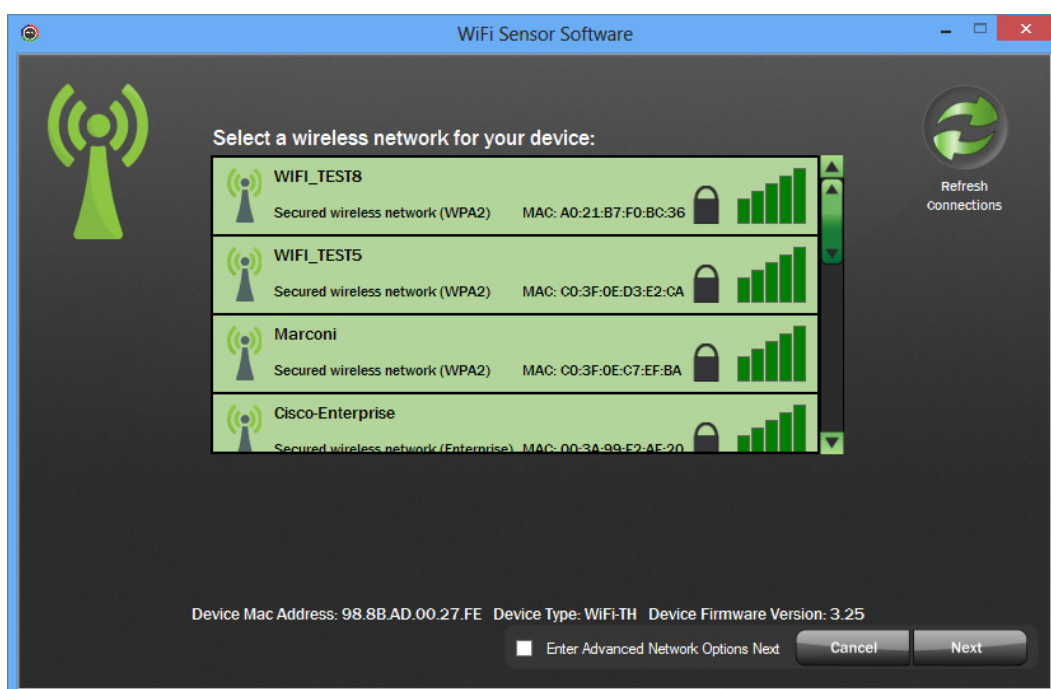
5 Select the network you wish to connect to.

6 If you use a hidden network simply scroll to the bottom of the list and select 'Join Other Network' and then fill in your network details.

7 Enter the password. Press 'Connect'. After the router has successfully connected press 'Next'.

Note: If the Device fails to connect to your wireless router the following screen will appear. Follow the on screen instructions and check the four points below.

1) Check your password

2) Click on the software refresh button

3) Re-orientate the position of your Device

4) Ensure your WiFi router is turned on and within range of the Device

Go to Section 2.3 for Cloud set-up and 2.4 for PC set-up.

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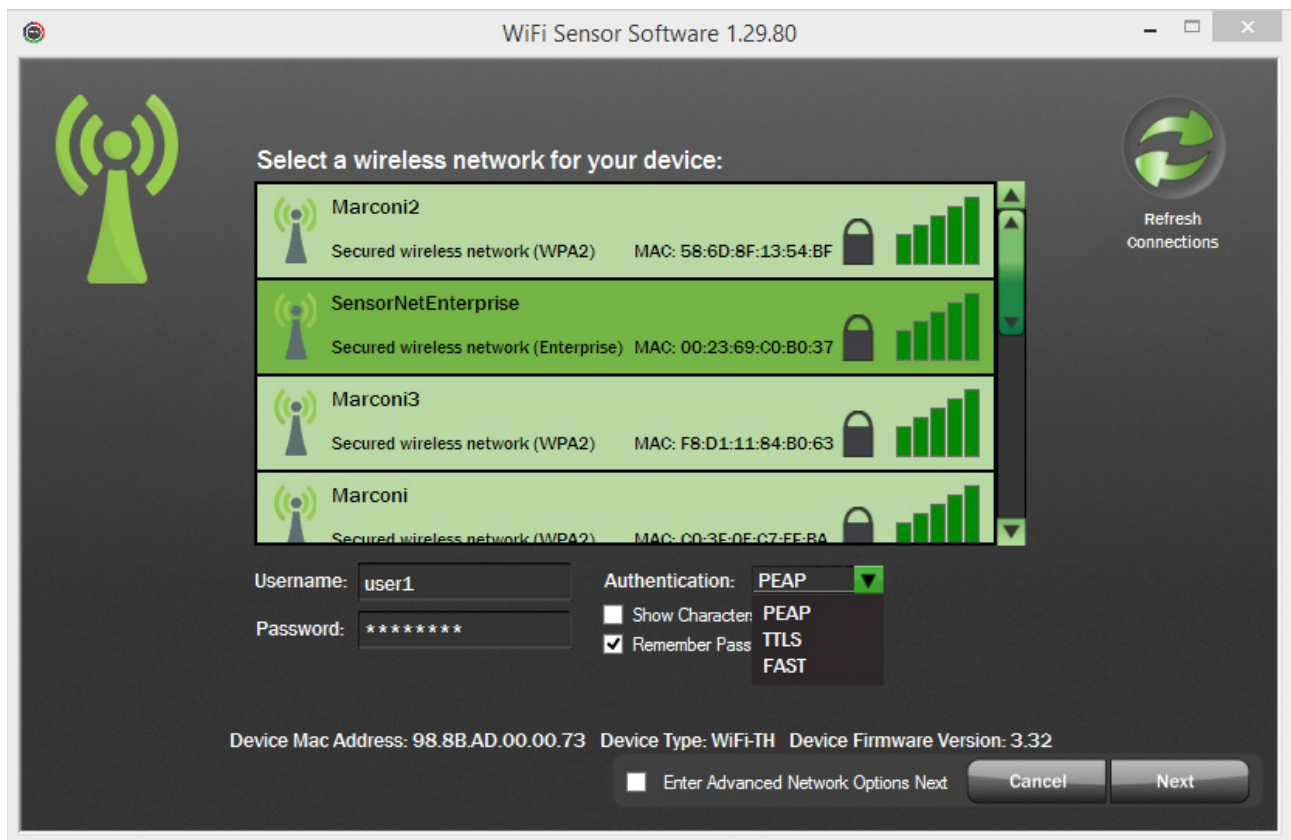
To configure an Enterprise network, enter your username and password. You will also need to select the Authentication type. If you do not know which one to use, please consult your IT administrator.

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If you need to configure additional network settings such as a static IP address, tick the Enter Advanced Network Options box before clicking 'Next'.
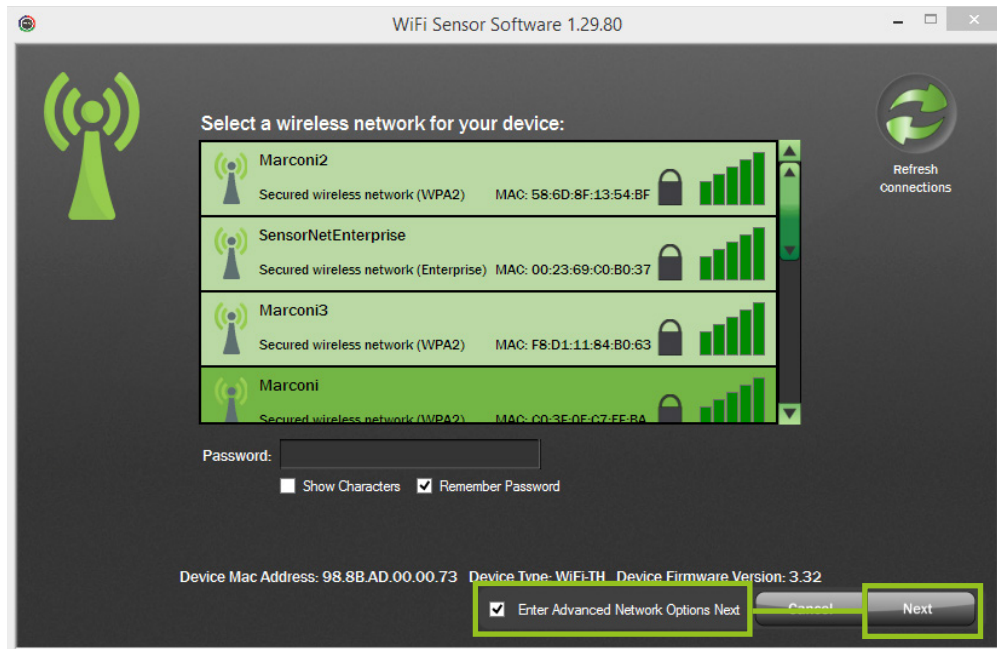
Enter the IP address to configure the device along with the Subnet Mask and Default Gateway.

It is also possible to lock the Device so that it will only connect to one Wireless Access Point. This may be necessary if you have multiple Access Points with the same SSID. Enter the MAC Address of the Access Point.

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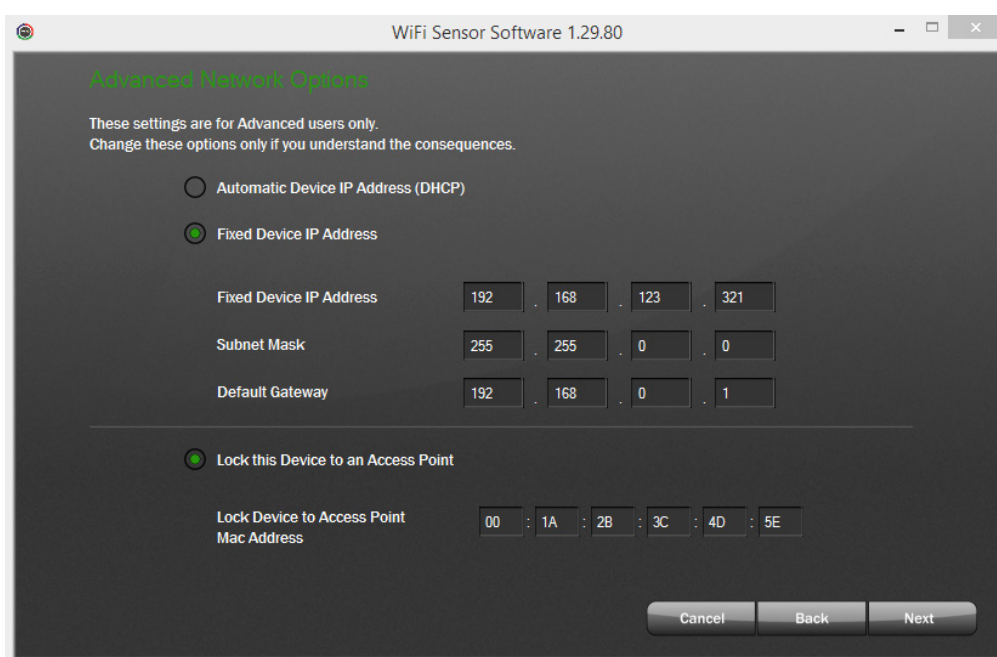
8 Enter your device name. This page also shows the default settings for your device, any changes you wish to make can be done through your FilesThruTheAir™ Cloud Account. Once you have entered your device name click 'Next'.

Note: For the TP and TP+ WiFi Sensor Devices this page will offer you a choice of probe type. Please select the one you wish to use with your device before continuing.
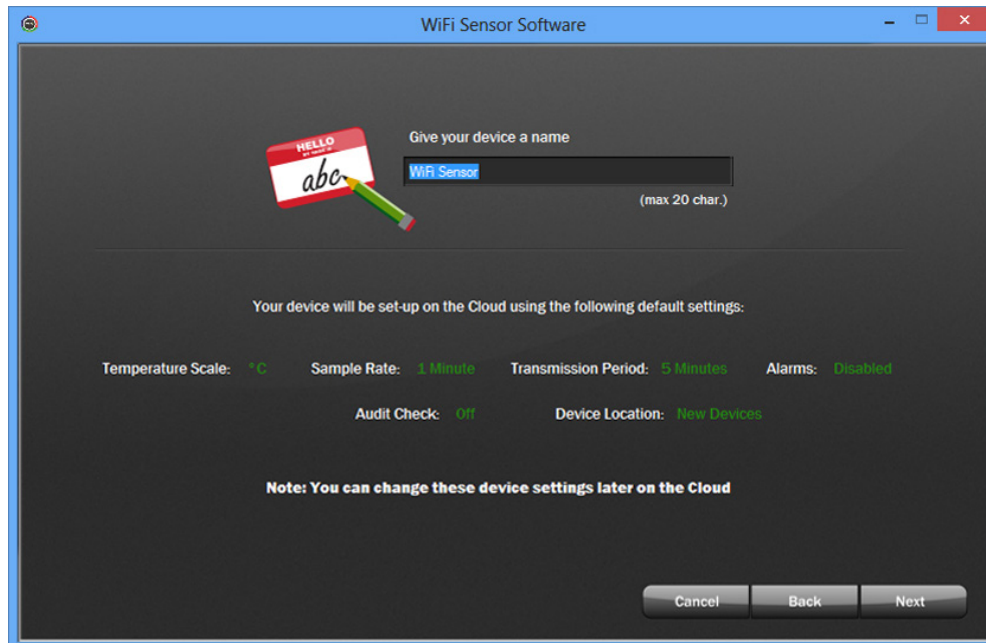
9 Once your device is set-up on your FilesThruTheAir™ Cloud Account you will get this confirmation screen.

Click 'Finish' to return to the start screen.

Go to www.wifisensorcloud.com and Sign In to your account to view your devices.

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General Settings   *Applies to:* TH TH+ T T+ TP TP+ TC DTP+ DTC

1 Enter a name for the Device, the temperature scale, sample rate and transmission rate.

Sample rate
This sets how often the Device takes a reading.
Note: This is not how quickly the Device transmits the data.

Frequency of sample transmission
This sets how often the Device transmits the information back to the PC.

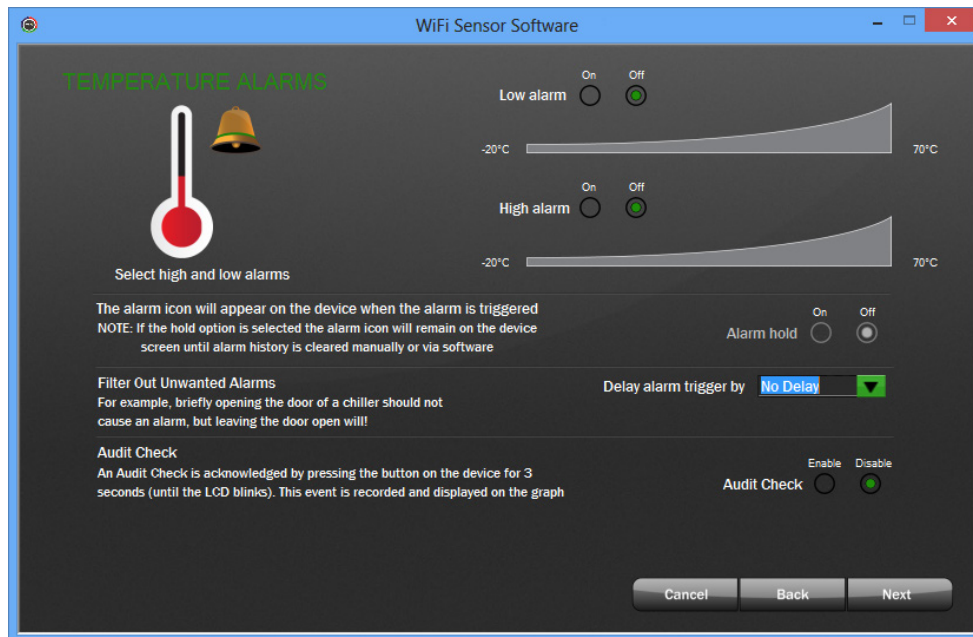In the example above the Device takes a reading every 1 minute and logs this information on-board the Device. Every five minutes the Device will transmit the readings to the PC.

2 Temperature Alarm set-up.   *Applies to:* TH TH+ T T+ TP TP+ TC DTP+ DTC

Low / High Alarms
You can set an alarm to be triggered once a Device exceeds a high or low temperature.

Note: If you try to set the low alarm higher than the high alarm (and vice versa) you will get an error message.

Alarm Delay
Use this to filter out unwanted alarms by delaying the alarm trigger. Select the desired delay from the dropdown box.

Alarm Hold
This will hold the Device in its alarm state even when the temperature has returned to an acceptable range.

For example if the 'High Alarm' is set to 42°C and the temperature measured rises to 46°C it will trigger an alarm. If the reading then drops down to 41°C and 'Alarm Hold' is switched on, the Device will remain in an alarmed state. If 'Alarm Hold' is switched off then the Device would revert back to its normal state. In this situation you can check missed alarms by reviewing the graph.

Audit Check
This function will allow a user to record on the graph when a Device is physically checked. This is acknowledged by pressing and holding the Device button for three seconds.

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3 Humidity Alarm set-up.   *Applies to:* TH TH+

Low / High Alarms
You can set an alarm to be triggered once a Device exceeds a high or low humidity level.

Note: If you try to set the low alarm higher than the high alarm (and vice versa) you will get an error message.

Alarm Hold
This will hold the Device in its alarm state even when the humidity has returned to an acceptable range.

For example if the 'High Alarm' is set to 42%RH and the humidity rises to 46%RH it will trigger an alarm. If the reading then drops down to 41%RH and 'Alarm Hold' is switched on, the Device will remain in an alarmed state. If 'Alarm Hold' is switched off then the Device would revert back to its normal state. In this situation you can check missed alarms by reviewing the graph.

Select Probe Type

You can set the type of probe you will be using by selecting the probe number or letter from the dropdown box.

4a **TC Probe Selection**   *Applies to:* (TC) (DTC)

You can set the type of thermocouple probe you will be using by selecting the probe type from the dropdown box: K, J, N and T.

TEMPERATURE ALARMS   Probe Type: K ▼

4b **TP Probe Selection**   *Applies to:* (TP) (TP+) (DTP+)

Please select the probe type you will be using   A ▼
NOTE: The probe type is identified by the numbered label on the plug end of the probe

Cancel   Back   Next
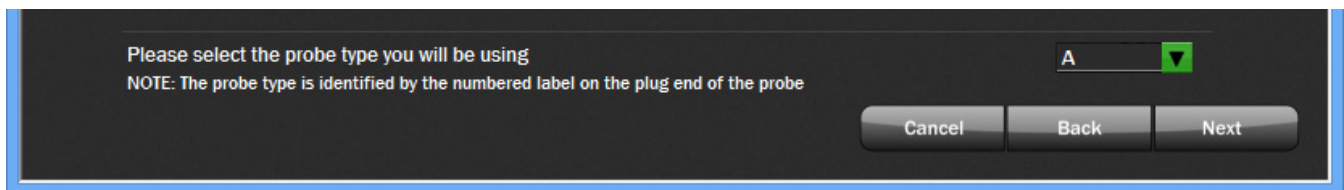
Note: i) The probe number can be located on the label attached to the probe cable.
ii) Selecting an incorrect probe type will cause measurement inaccuracies.

A

Once set-up has completed successfully you will see the following screen.
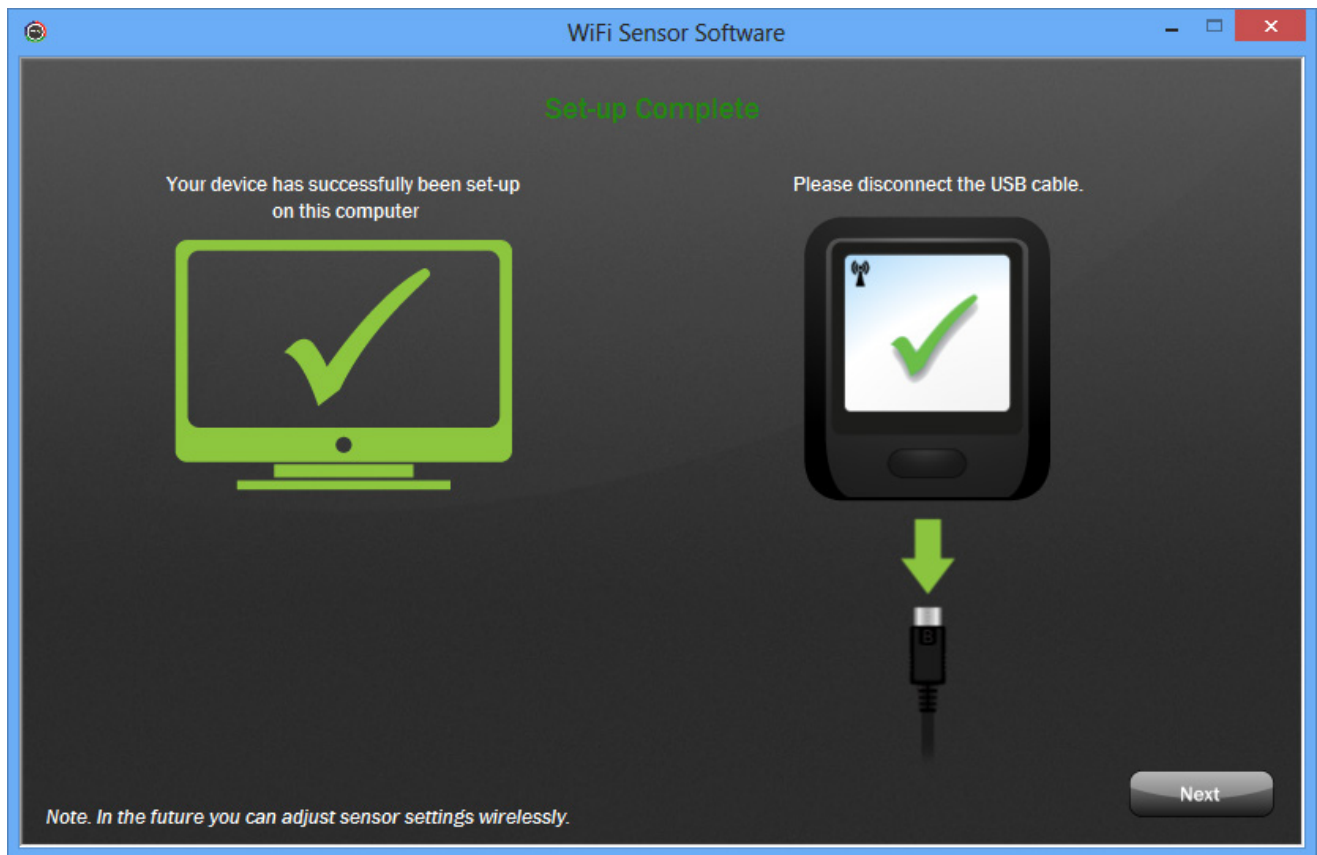
Click 'Next' to return to the homescreen.

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1 Click on the second button to view the Devices.

2 Notice the icons in the top right hand corner. Click on these to change the way the information is presented.

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3 In some screens, clicking on a Device icon will display an enlarged view.

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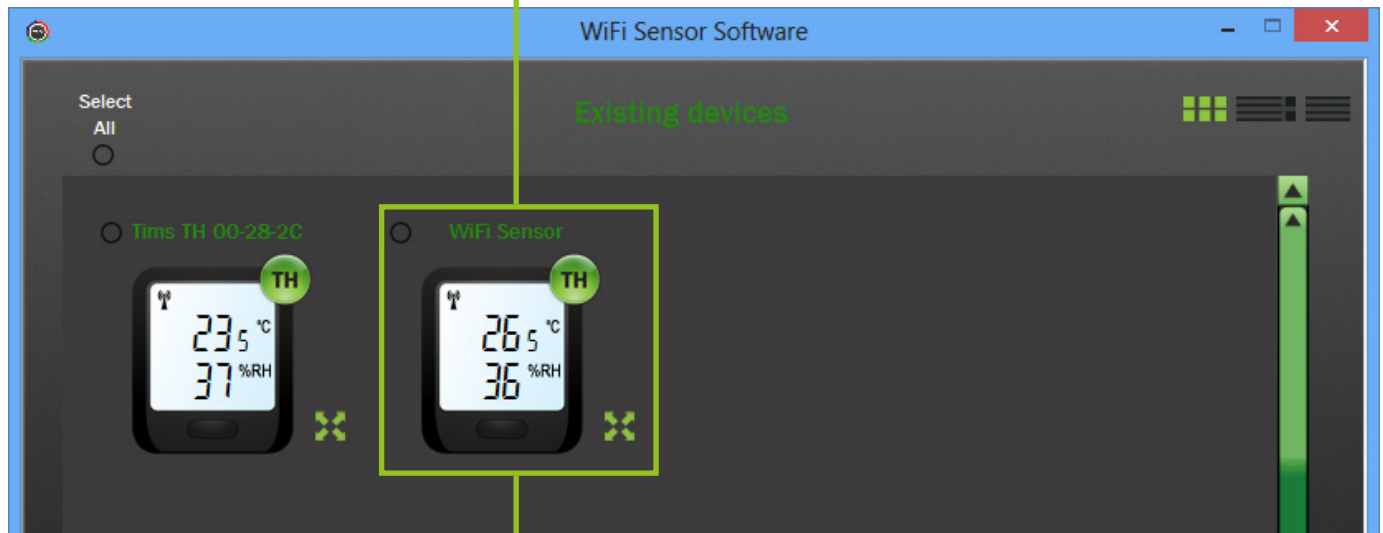
Data Storage System (Automatic)

The PC gathers data into sessions.

1 **Sessions** *(in more detail)*

The data is split into what are called 'sessions'.

New sessions are started by:

a   change in sample rate

b   change of device name

c   change in alarm settings

For example a new session will begin when you change the name of the Device. You may wish to move the Device from 'Storage One' to 'Chiller One'. The data splits into two separate sessions. The resulting graphs will now be titled correctly.

2 To view a session, select the Device that you wish to see in greater detail.

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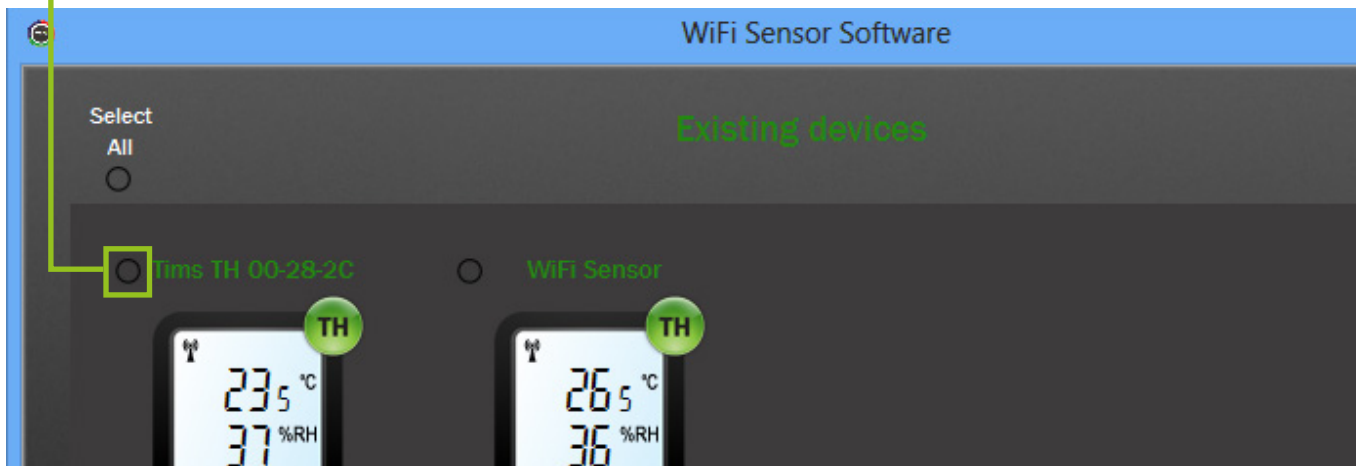
3 Click on the 'View Data' icon located at the bottom of the screen and this will display the 'Graphing Sessions' screen.
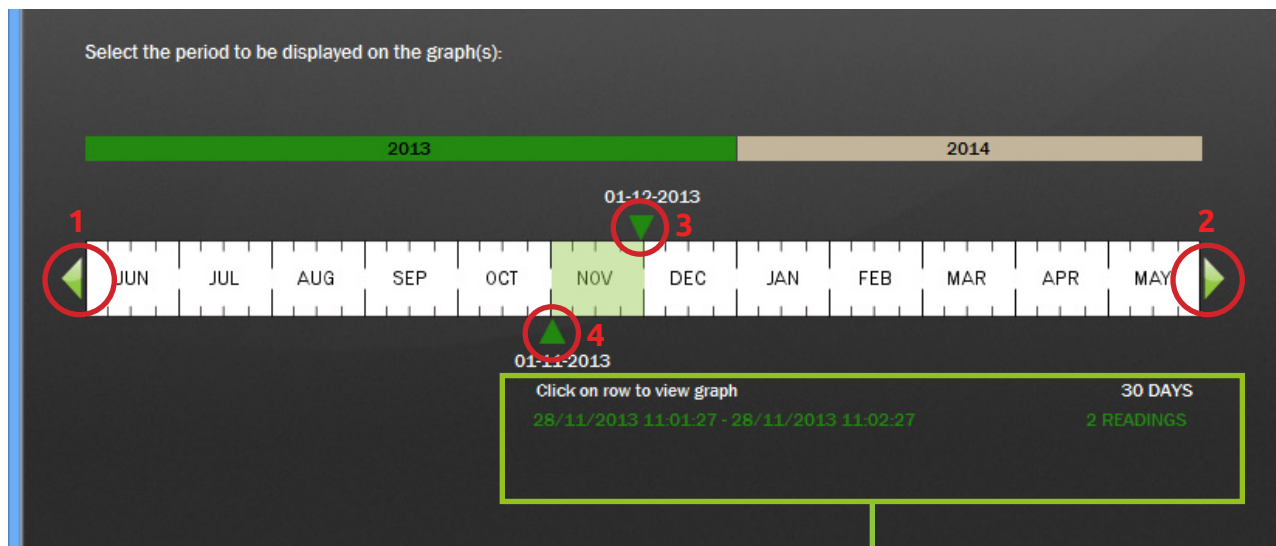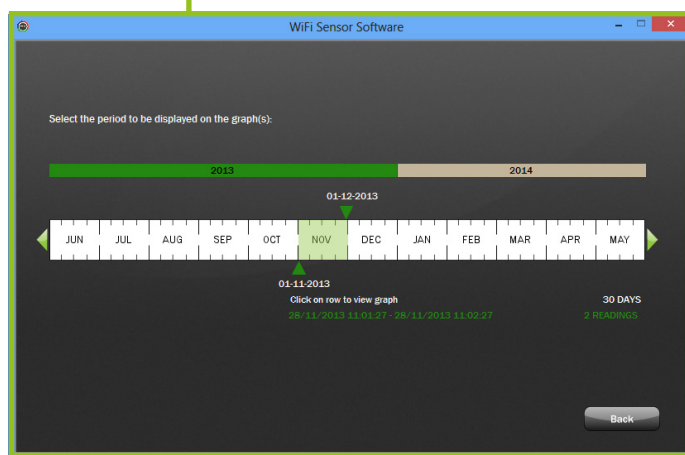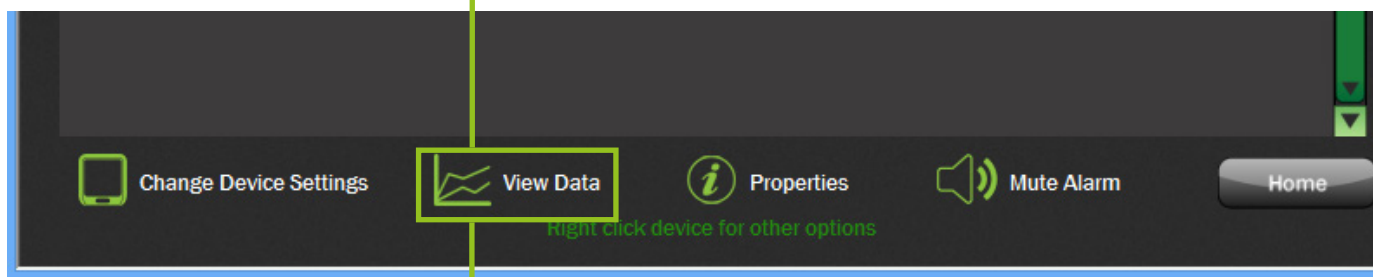
4 List of recorded 'sessions'. Click on a row to view the graph.

5 If necessary, drag the date sliders to view sessions within a date range.
Note: Arrows 1 and 2 allow you to scroll through the years. Arrows 3 and 4 allow you to select a time period of which to view sessions from.

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1 To view a graph, select the session by clicking on the relevent row.
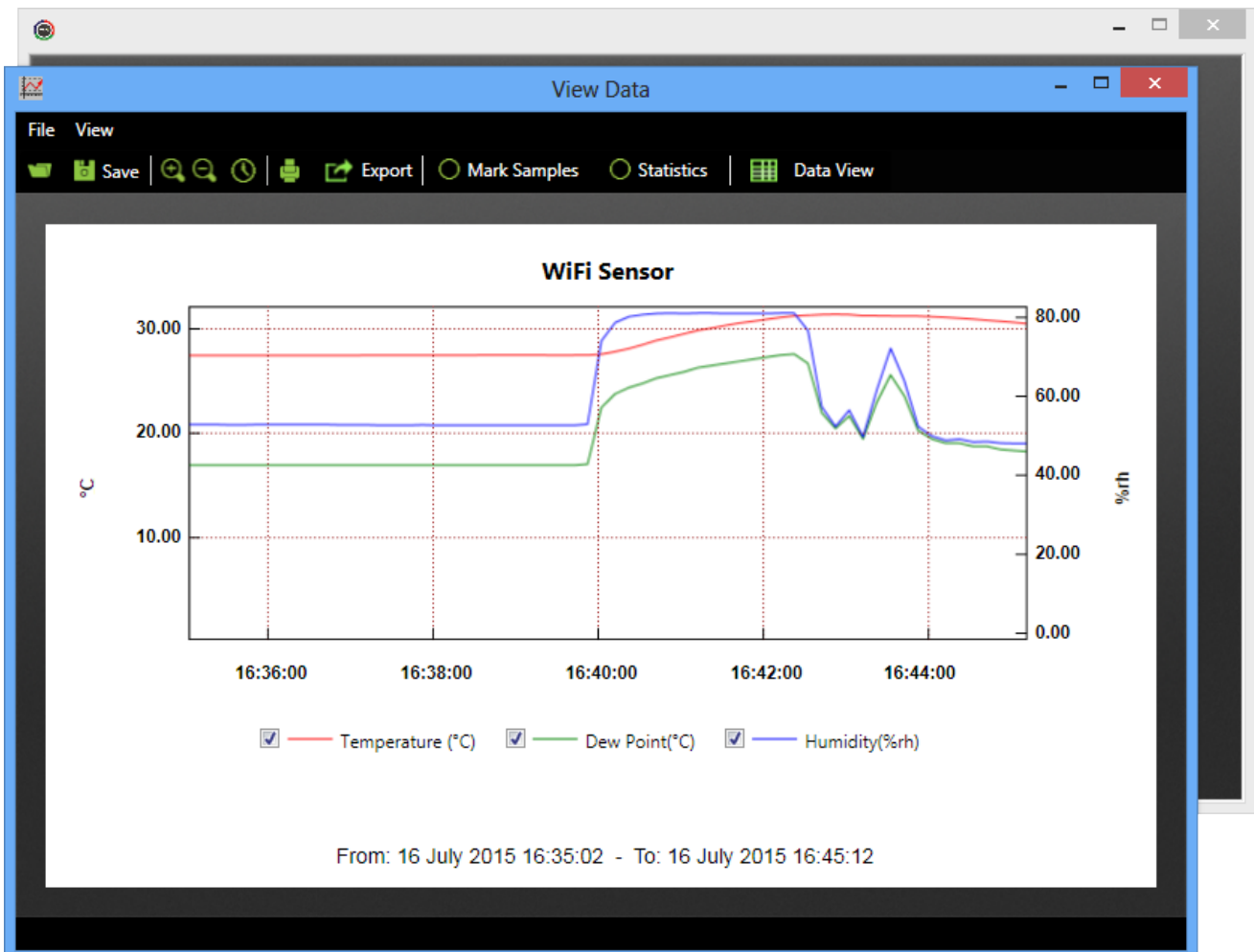
2 You can alter the information you wish to view by clicking on the tick boxes below the graph.

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1 Additional Saving Method (Manual)

If you wish to capture a particular event and save this information as a separate file you can do this by opening the graph and selecting 'Save'.

Note: The system will ask you for a file name. Give the file a unique name.
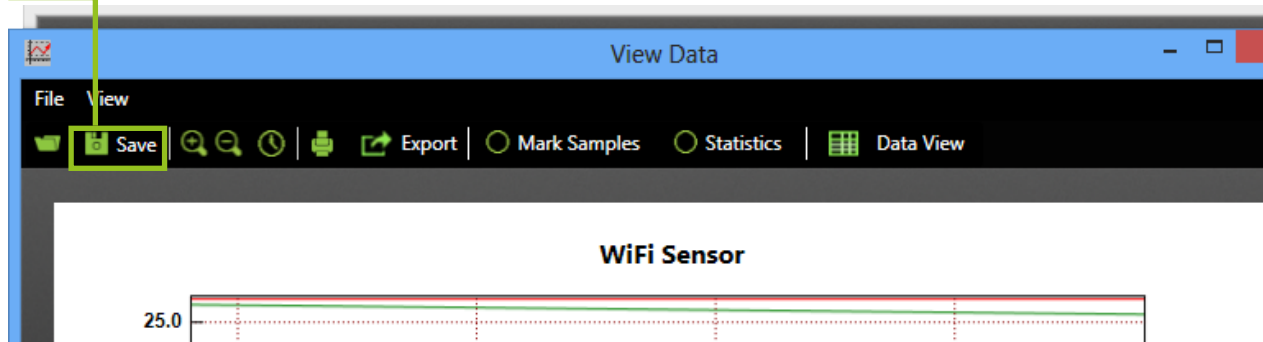
Saving and Zoom

Using zoom within a graph, you can zoom in on an event and save this as a separate file. Be aware the graphing program always optimises the view for you, data is not affected, only the way the data set is displayed.

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1 In a graph screen press the 'Export' button and select the required format.
Note: Bottom option will only work if you have Excel installed
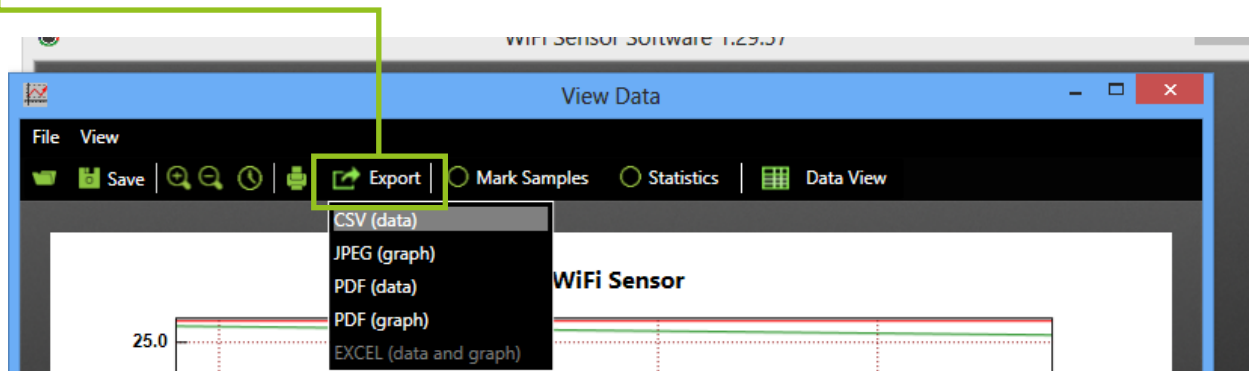
2 If selecting Excel it will automatically run and import data.
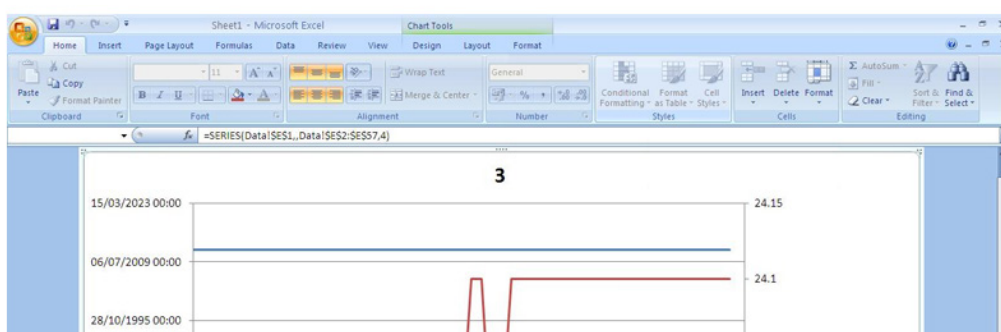
3 You can access the raw data through the second tab in the Excel spread sheets.

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Device properties gives you a summary of all your Device settings.

1 Select a Device.

2 Click on the 'Properties' icon at the bottom of the screen.

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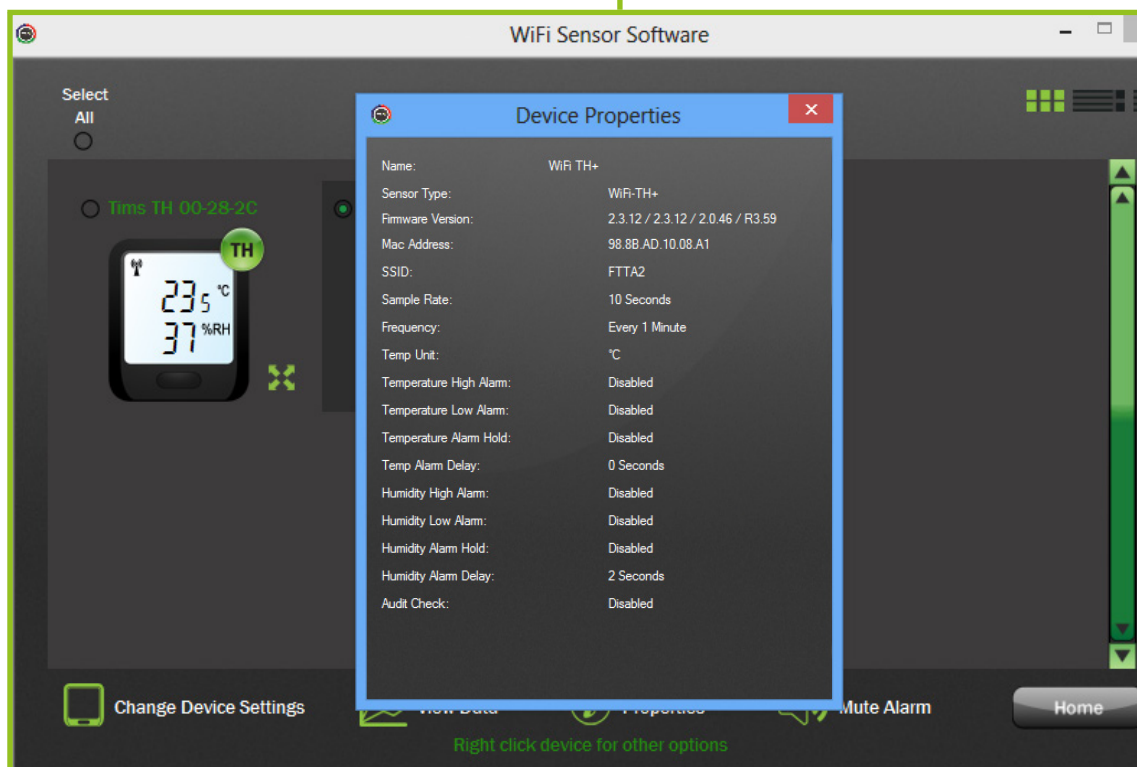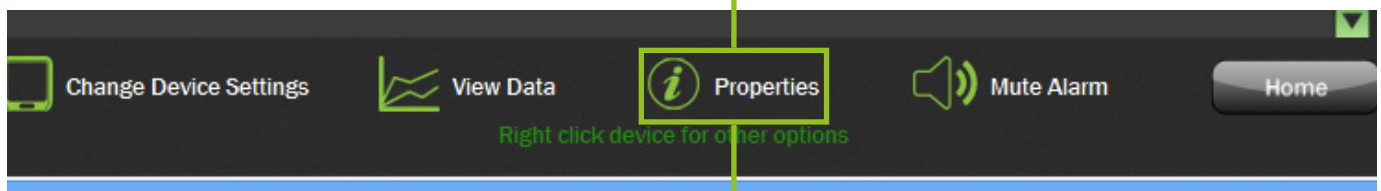
1 To adjust Device settings over the air, select the Device that you wish to change.
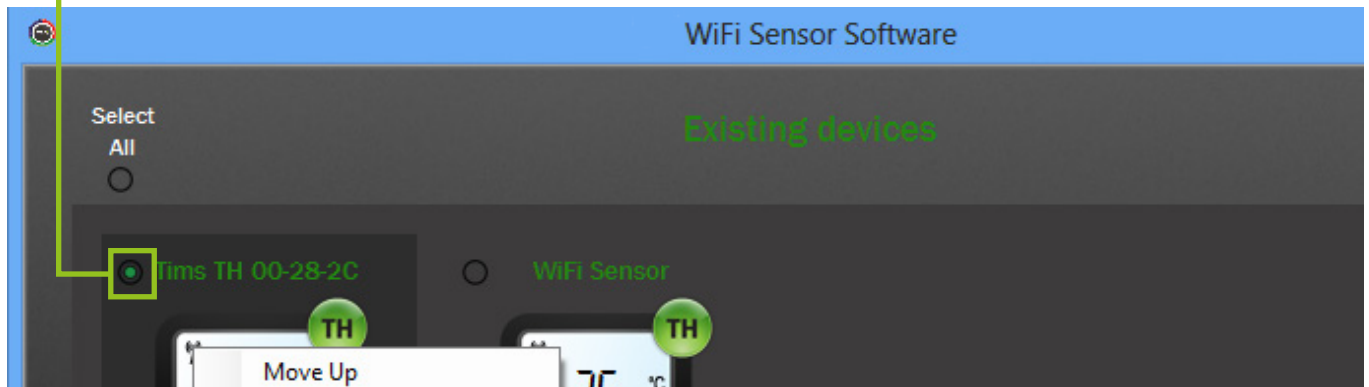
2 Click on the 'Change Device Settings' icon located at the bottom of the screen and this will take you to the General Settings screen.
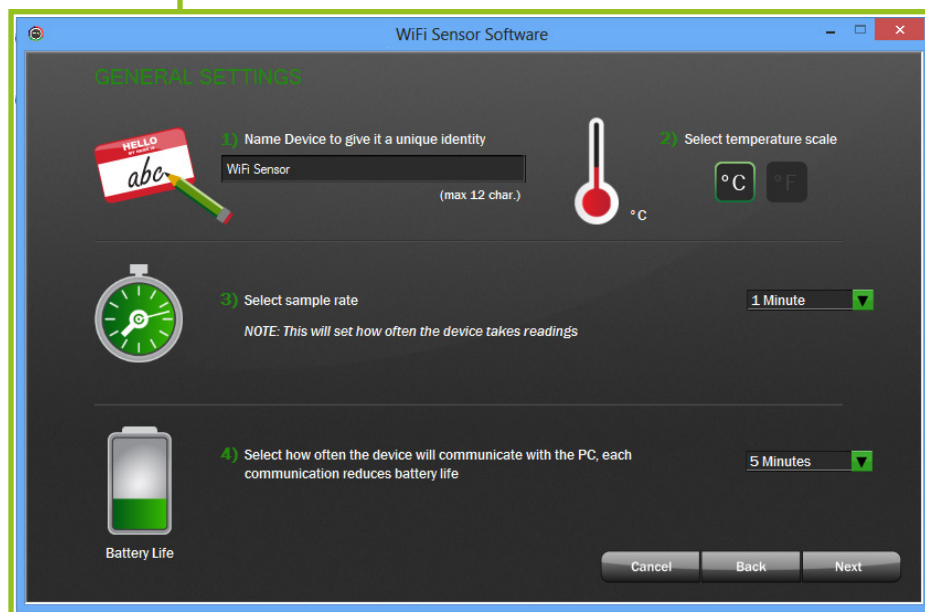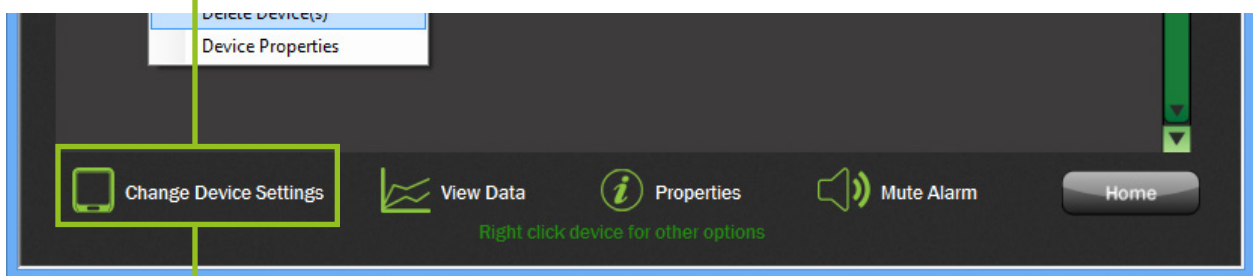
3 Follow steps as before in section 2.4 Device Set-Up (Configuring Settings).

Note: The updates will take effect only when the Device next transmits.

For example In the above example the Device will communicate every minute so it could take a minute for the Device to update.

To save power a user may decide to transmit readings once every 30 minutes. In this case it will take at least 30 minutes for the Device to update settings. If the sensor settings need updating earlier i.e; before the next regular transmission, there is the ability to 'force a transmission'.

Force Transmission

To force transmissions press the Device button three times until the RSSI (Received Signal Strength Indication) screen is displayed. The device will transmit every few seconds while this screen is displayed and will finish after a minute or when the button is pressed.

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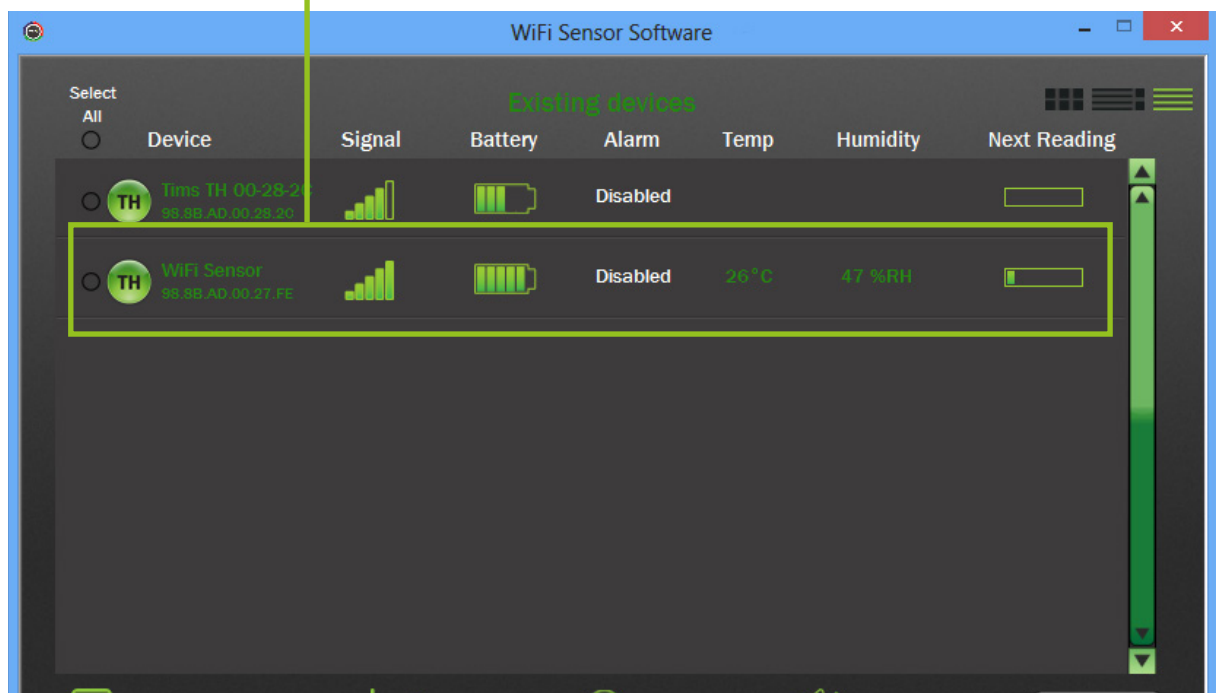
1 To mute alarms generated by the PC software, click on the 'Mute Alarm' icon located at the bottom of the screen.

Note: This will mute all sounding alarms on your PC. There is no need to individually select them.

Change Device Settings   View Data   (*i*) Properties   Mute Alarm   Home

Right click device for other options
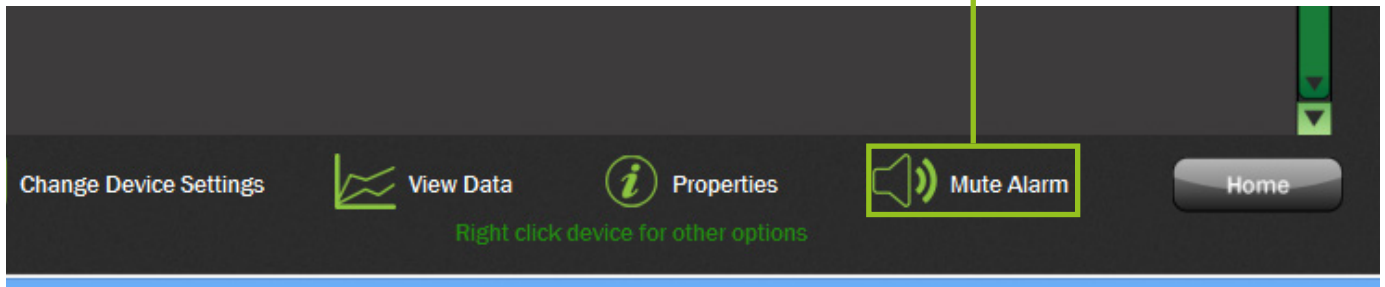
The Alarm can be reset at any time, this can be done in one of two ways:

1 At the Device, by briefly pressing the button.

2 In the software, by selecting the 'Reset Alarm' option from the drop-down list. The alarm will be reset when the Device next transmits.

| Move Up |
| Move Down |
| Move Top |
| Move Bottom |
| Sort By Name |
| Sort By MAC Address |
| Delete Readings |
| **Reset Alarm** |
| Delete Device(s) |
| Device Properties |

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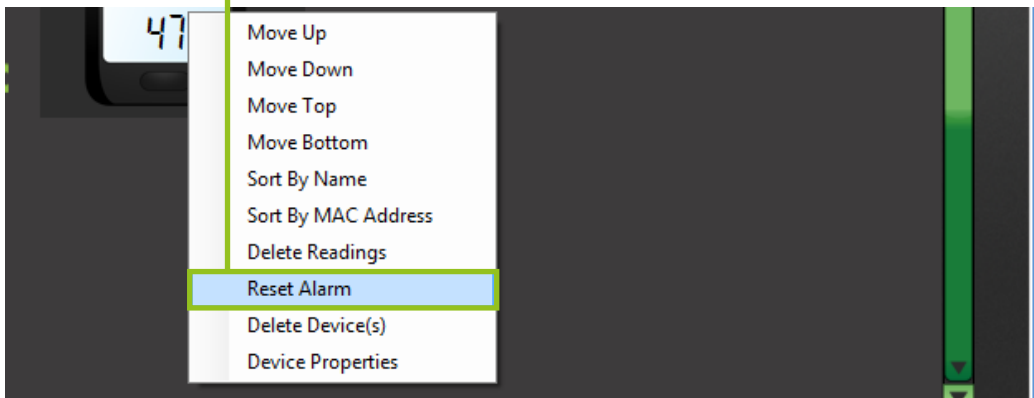
You can delete Devices. This will delete the Device from the PC program including all 'sessions'. *('sessions' are detailed more in section 4.0, Saving Data.)* It will not delete any files you have specifically 'saved' from the graph.

1 Select a Device from a view and right click.

2 From the options select 'Delete Device(s)'.
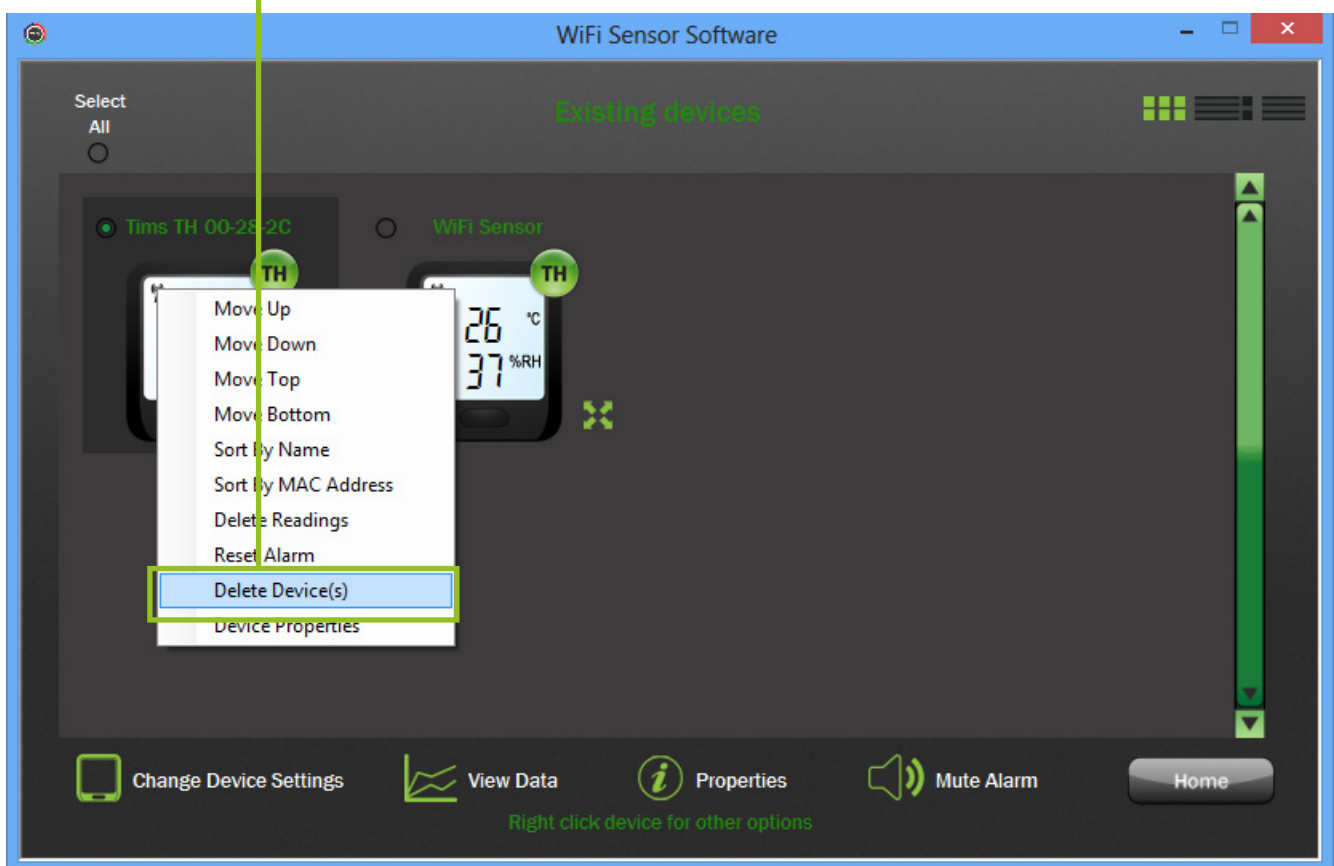
Note: If you have multiple Devices selected, then all those selected will be deleted.

You will then be given the option to archive the Device data. This will save all the Device sessions as .txt files locally to your PC which can be viewed at a later date.

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1 Click on "Advanced Tools" and then "View Saved Data" to view your saved data.

This allows you to view any files you have saved on this PC, either exported from the graph, or downloaded over usb.

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Device Firmware Updater

To ensure the best possible performance and to support the latest features, we recommend that your devices run the latest firmware versions. Click on the Firmware Updater icon   in Advanced Tools, to get started.
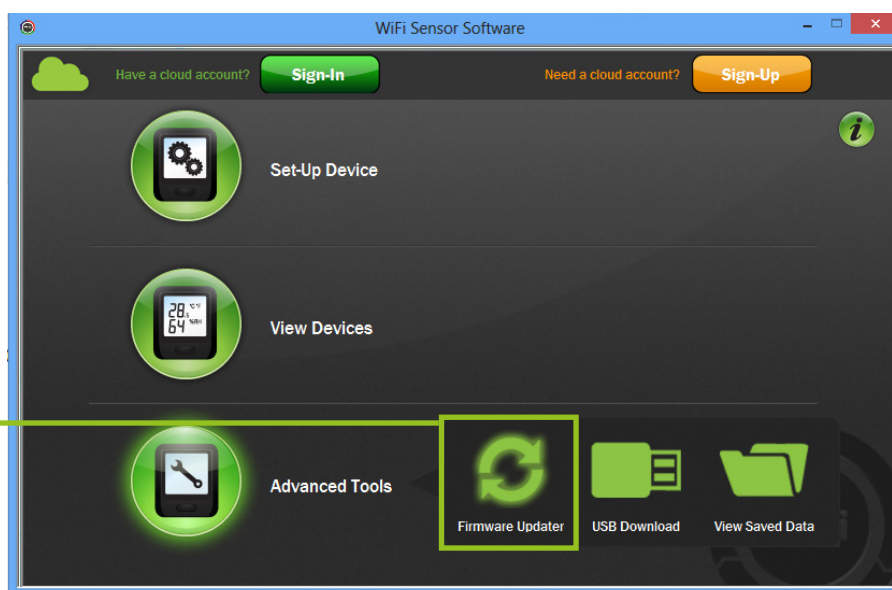
If you require assistance please use the Firmware Hints and Tips accessible from the button on the Firmware Updater homescreen.

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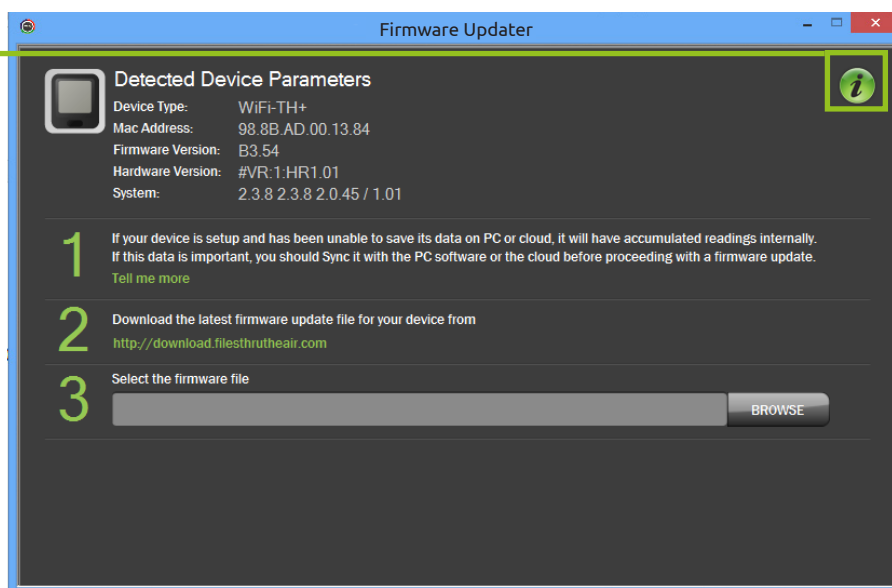
1 Your data will normally be stored automatically either on the PC, or on the FilesThruTheAir™ Cloud. However, if your network fails or if for any other reason you need to recover valuable data from your device, you can use the USB Download function in Advanced Tools.

You can choose to download data to this PC or to sync it with the FilesThruTheAir™ Cloud. If your device is connected to a Cloud account, and you need to sync the recovered data to your account, please ensure you are Signed-In, by clicking the Sign-In button, before starting the USB Download.

2 Connect your device to the PC using the USB cable supplied.

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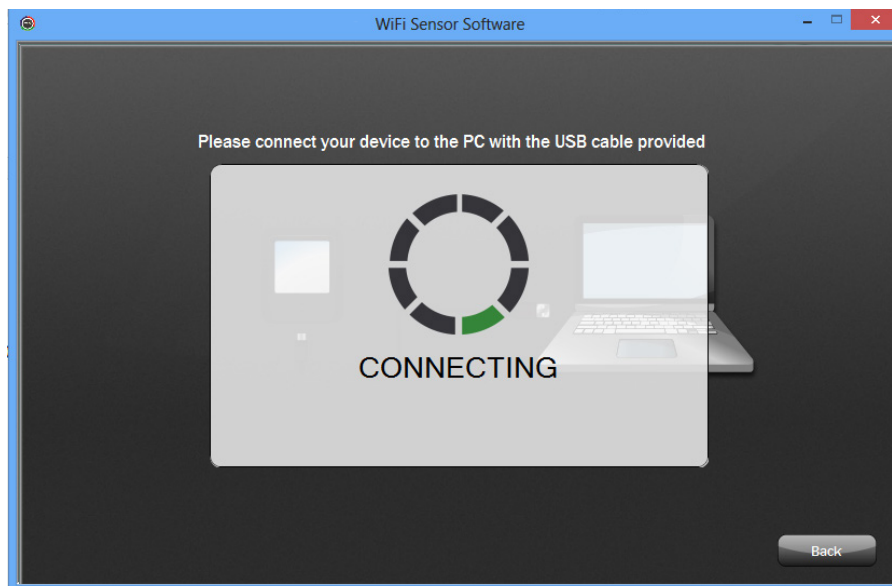
3 If your device is connected to a FilesThruTheAir™ Cloud account, and you need to sync the recovered data to your account, select this option. If you are not Signed-In, or the device is not connected to the selected account, this option is disabled.
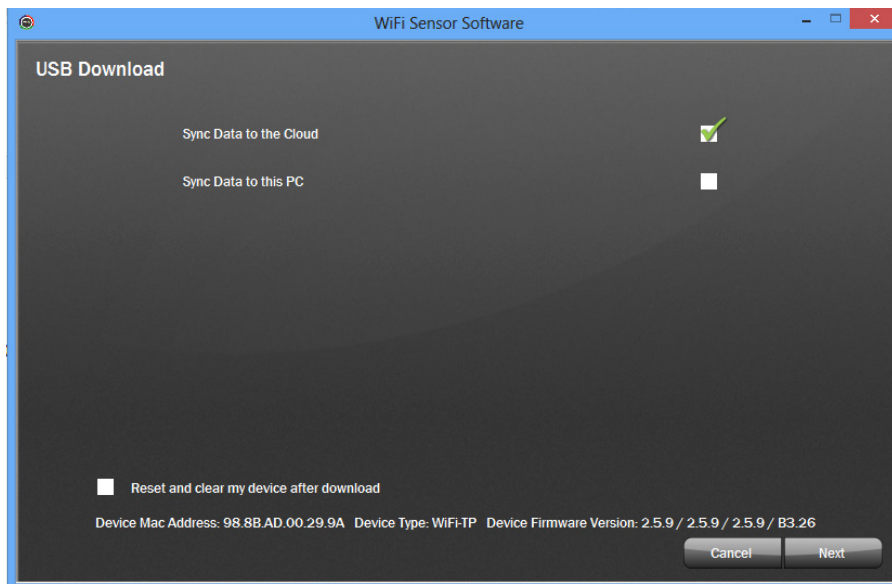
Selecting Reset and clear my device after download, will cause your device to be factory reset erasing all data and configuration information when download is complete. Click on Next to start the USB Download.

Go to step 6.

4 Select Download the data to this PC, if you need your data stored locally. You are able to additionally specify the temperature scale (°C/°F), and time zone to use for the recovered data.
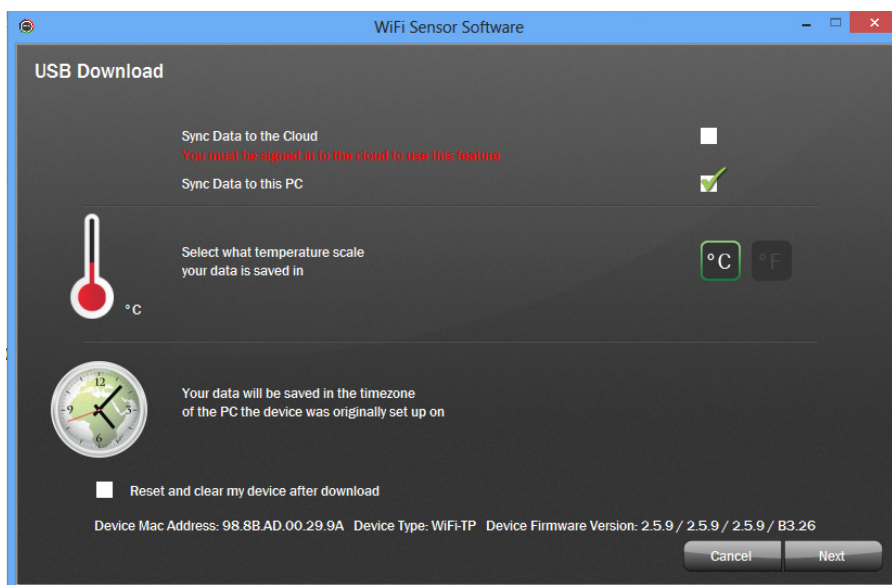
Selecting Reset and clear my device after download, will cause your device to be factory reset erasing all data and configuration information when download is complete.

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5 Specify a destination folder for your recovered data. Clicking on Download will start the USB Download.

6 Please wait while data is downloaded. **This process make take several minutes.**

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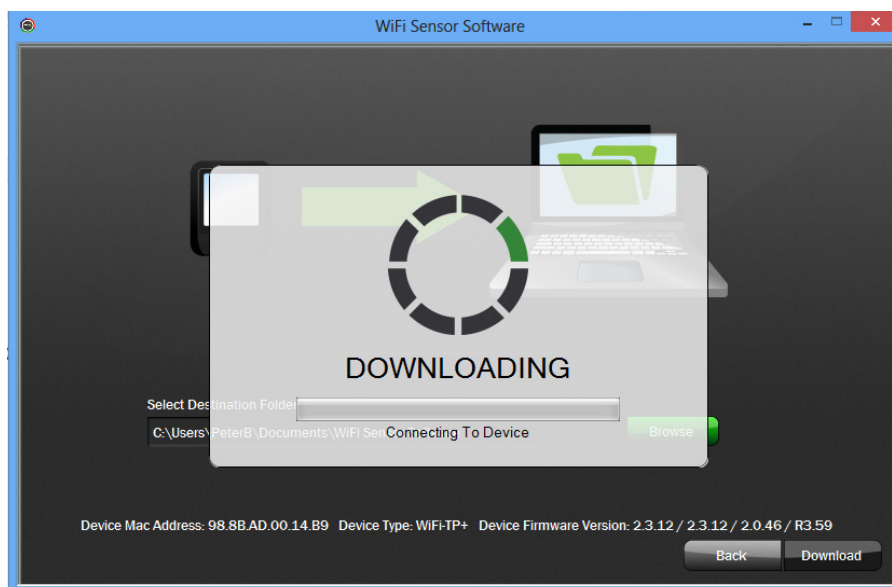
7 Once the download is complete click "Finish" to return to the software homescreen. For more information on viewing your downloaded data please see Section 5 of this document.

WiFi Hints and Tips

Issue 3

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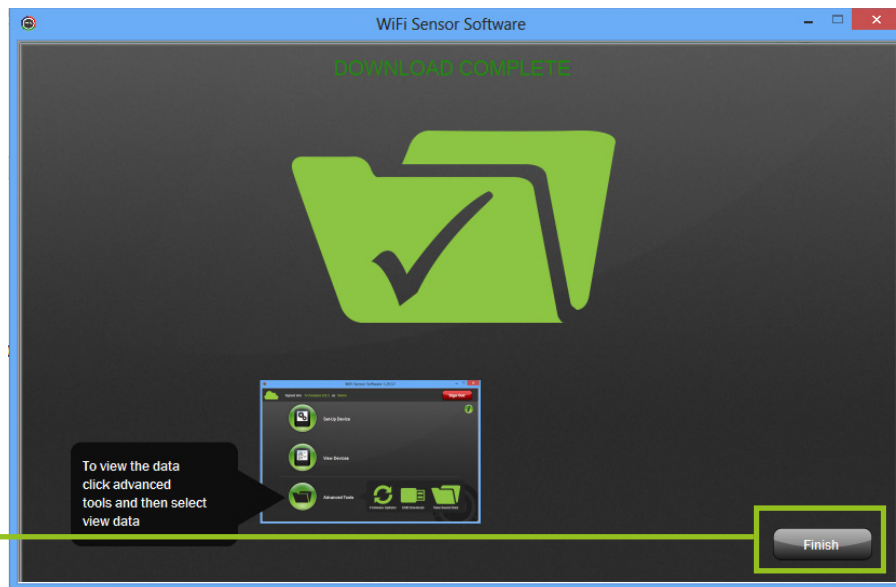
LCD Icons

Signal Icon

(Not Displayed)
Not connected to a network

(Solid)
Communications with PC/
Cloud OK

(Flashing)
Lost communications with PC/
Cloud

Battery Icon

Battery OK

Not Displayed | Solid with bars

Charging

Solid | Bars cycling

Battery Low - Recharge

Flashing | One bar flashes

Alarm Icon

(Not Displayed)
No Alarms

(Flashing)
Alarm threshold triggered

Max Icon

The Maximum recorded value is being displayed.

Min Icon

The Minimum recorded value is being displayed.

Probe has been disconnected from the device and it can no longer record data.

WiFi Hints and Tips

Issue 3

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Device LCD Screens

Use the button on the Device to cycle through the display screens.

Home Screen

Home Screen displays current readings

Max Screen

Max Screen displays Maximum recorded value(s) since last reset.

To reset the Max values, press and hold the button for three seconds while Max is displayed.

Min Screen

Min Screen displays Minimum recorded value(s) since last reset.

To reset the Min values, press and hold the button for three seconds while Min is displayed.

RSSI Screen

RSSI (Received Signal Strength Indication) Screen displays current Signal Strength.

TH *TH+* *Temperature and Humidity Device Shown*

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Optimising battery performance:

The Devices can be powered in one of two ways:

1 Internal Battery Power

2 USB/Mains Power

Battery Power

These Devices contain rechargeable batteries. It is good practice to optimise your system to avoid excessive recharging cycles.

To do this be aware of the following;

1 Transmitting uses a lot of battery power. By increasing the time between transmissions the battery will last longer.
For example; for a short battery life transmit every minute, for a medium battery life transmit every 10 minutes and for a long battery life transmit once every hour.

2 The Device detects when your PC is turned off or the software is closed and enters a power-saving mode. In this mode the Device wakes-up every 15 minutes to test communications but continues to gather data ensuring that no information is lost.

3 When you turn your PC back on, it can take up to 30 minutes for the Device to synchronize. This saves a lot of power. Under normal circumstances the Device will synchronize within 15 minutes. If the Device is mains powered, synchronization will complete within five minutes. Once communication is re-established the Device returns to its normal transmission rate.

Battery Life and Power Supply

The product will arrive partly charged but ideally you should charge it for 24 hours before use for optimum performance. The battery can be recharged (unit must be between 0 - 40 °C) via a PC, a USB +5V wall adapter, or a portable USB battery pack using the USB lead provided. It can also be permanently powered by a USB wall adapter or USB battery pack.

Battery life is dependent on: transmission period, WiFi encryption method, WiFi encryption key rotation frequency (determined by the router/access point), signal strength between router/access point and WiFi device, presence volume and type of WiFi traffic from other devices, sample rate and operating temperature.

USB/Mains Power

If you have a critical process or do not wish to recharge Devices, you can opt to have the USB charger plugged in continuously.
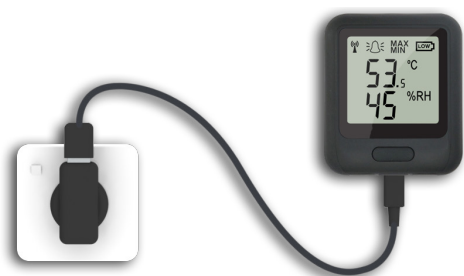
Reset / Restore Sensor Device

1   **Reset Device**

Warning: The Device will retain all settings but may lose data that has not been transferred to the PC.

For the WiFi-TH and WiFi-TH+ From the Sensor Home screen Press and hold the button for 10 seconds. Release when the LOW symbol starts to flash.

For the WiFi-Alert Press and hold the button for 10 seconds. Release when the LEDs start to cycle.

For all other sensors from the Sensor Home screen Press and hold the button for 10 seconds. Release when the LCD shows rSt

2   **Restore Factory Settings**

Warning: Only use restore when all other methods have failed.

A factory reset can also be performed, hold the button for 20 seconds until FArS appears on screen. Doing this will return the Device to the factory state deleting all settings and clearing all previously recorded data.