STANLEY Healthcare

Empowering Caregivers

T15e Tag

Deployment & User Guide

0981-587-000 REV A

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WARNING!

To comply with FCC and IC RF exposure compliance requirements, the device should be located at a distance of at least 20 cm from all persons during normal operation. The antennas used for this product must not be co-located or operated in conjunction with any other antenna or transmitter.

Le dispositif doit être placé à une distance d'au moins 20 cm à partir de toutes les personnes au cours de son fonctionnement normal. Les antennes utilisées pour ce produit ne doivent pas être situés ou exploités conjointement avec une autre antenne ou transmetteur.

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Introduction

The T15e Tag adds advanced temperature monitoring capabilities to STANLEY Healthcare's market-leading family of Wi-Fi tags, making it ideal for use in all hospital departments.

Temperature and Vaccines for Children (VFC) Monitoring:

The tag uses a single probe to provide continuous measurement and data logging of refrigerators or freezers across the organization.

The T15e Tag can be supplied with a NIST traceable Certificate of Calibration compliant to ISO 17025:2005, and meets all the Centers for Disease Control and Prevention's (CDC) requirements for VFC Data Loggers.

The T15e Tag provides local audible and visual alerts, and works with STANLEY Healthcare's MobileView platform to provide real-time alerting and reporting for temperature monitoring solutions.

What's in the Box?

The T15e Tag is supplied with the following components:

- T15e Tag
- 2 AA Batteries
- 3 Meter USB-C Temperature Probe
- 3 Meter USB-C Contact Sensor Cable and Contacts
- Tag Mounting Bracket
- Plastic Glycol Vial
- 2 Alcohol Prep Pads
- Various Mounting Accessories

Pre-Requisites

Minimum Requirements

Components	Version
MobileView	5.4 and above
Engine	5.4 and above
Deployment Manager (DM)	3.2

Reference Documentation

The following articles can be accessed by logging into the STANLEY Healthcare Support Community site at the following URL: *www.stanleyhealthcare.com/support*.

KB	Document Name
11755	T15e Tag Data Sheet
11756	T15e Tag Release Notes
11754	T15e Tag Deployment & User Guide (This doc)
See KB	Refer to any MobileView Administrator Guide from 5.4 and above
9758	Deployment Manager Setup & User Guide

T15e Features

T15e Tag Key Features

Large Display and Push Button Functionality

The tag's display shows the current temperature, the minimum and maximum temperatures measured since the last audit, battery and power status, and alarm indications. The buttons are used to navigate and select the tag's menu options, activate the tag, and perform manual audits with a single-press.

Audio and Visual Indications

T15e Tags include a buzzer with 4 different distinct sounds and 3 LEDs for status indications, such as tag activation, alerts and low battery.

Wi-Fi & Cyber Security

The tag supports 802.1x Enterprise security networks with a PEAP-MSCHAPv2 protocol. Additionally they support a HTTPs connection with MobileView Servers using the TLS1.2 protocol. This allows a MobileView Server authentication using pre-installed X.509 certificates.

Bluetooth Low Energy (BLE) Communication

T15e Tags use BLE technology to communicate with the Deployment Manager (DM) app for device configuration and setup.

Beaconing and Bdirectional (BD) Communication

The tags utilize lightweight beaconing communication (for standard messages) and Bidirectional Wi-Fi communication with full network association and authentication. This unique combination provides a flexible and scalable solution for advanced applications. The tags can operate with one network SSID in a secure or non-secure mode and is able to store up to two application server connections. The T15e Tags also support both static IP configuration and DHCP.

Battery and External Power Options

The tags are powered by 2 AA batteries, which is the recommended power source, and an optional power adaptor which can be used to save battery life. Battery levels are constantly monitored by the device and MobileView. The tag will use external power whenever available (batteries are recommended as a backup if external power is used).

Multi-Purpose USB-C Connector Interface

The T15e Tag has 3 multi-purpose USB-C connector ports. Power, temperature probe and contact sensor inputs, can be attached to any of the 3 ports, and are automatically recognized by the tag.

Detachable Temperature Probe and Contact Sensor

T15e Tags are supplied with a 3 meter USB-C temperature probe cable for temperature monitoring, and a USB-C Contact Sensor cable for refrigerator and freezer door monitoring.

Programmable Logging Interval

Logging intervals can be programmed to 5, 15, 30 or 60 minute intervals using pre-configured static configurations.

Manual Audit with a Single Button Press

The CDC requires healthcare facilities to inspect physically (also called "audit") each VFC enabled device at least twice a day (once during the morning and once during the afternoon shift). A physical inspection is logged when the main button on the front of the tag is pressed.

Stores up to 64,000 Records

The T15e Tag's on-board memory can store up to 64,000 sampled temperature records. Additionally, temperature data is also sent to MobileView (if the tag is configured to sync with MobileView).

Easy Battery Replacement

The tag uses 2x 1.5V Alkaline AA batteries. Battery levels are constantly monitored and easily replaced by opening the battery cover on the back of the tag. The tag's memory is retained during battery replacement.

Off-Line Temperature Monitoring

The T15e Tag is able to store data during times of network connectivity failures. Recorded data is then automatically synchronized with MobileView within 24 hours after normal network connectivity has resumed, or immediately by performing a manual sync from the tag. Off-line data is viewed via MobileView Reports.

Flexible Mounting Options

The tag's external sensors, and convenient form factor, allows for secure mounting on variety of assets using its supplied cradle. Other industry-specific mounting accessories can be supplied by STANLEY Healthcare.

Tag Descriptions

The following describes the parts of the T15e Tag:

Front View:

Back View:

Bottom View:

No.	Description
1	3 indication LEDs – See *LED and Buzzer Indications*
2	LCD Screen
3	Buzzer – See *LED and Buzzer Indications*
4	Navigation Arrow Buttons and Select Button See *Using the T15e Tag*
5	Mute Alarm/Audit button
6	Battery Cover
7	USB-C Screw Tightening Hole (for securing the cable plug to the tag)
8	Multi-Purpose USB-C Connectors (Power, Temperature Probe and Contact Sensor plugs can be plugged into any of the USB-C connectors).

Screen Values

The following explains the tag's screen values:

No.	Description
1	Current temperature
2	The tag's configured temperature range.
3	Recorded temperature values since the last audit.

Status Icons

The tag's status icons are displayed across the top of the LCD screen. The following table explains the Status Icons:

Icon	Description
	Full Battery
	Battery Level Medium
	Battery Low
	Depleted Battery. Change battery immediately
	Power cable plugged in and supplying power to the tag
	Power cable disconnected
	Temperature out-of-range Alert / Local Alarm
	Bidirectional (BD) Session in progress
	BLE Session in progress
	Contact Sensor Closed
	Contact Sensor Open

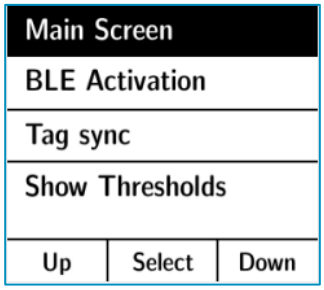
Tag Functions

The navigation buttons are used to navigate and select a menu option, change the temperature scale and enable or disable the button sound. The tag's main button is used for tag activation, muting alarms and performing temperature audits.

Accessing and Using the Tag's Menu Options

The tag's menu options are indicated by the menu icon.

1. Press the **Select** button to access the menu.
2. Use the **left arrow** button for up, and the **right arrow** button for down, to navigate through the menu.
3. To select an option, navigate to the required option and press the **Select** button.



Tag Menu Options

Option	Description
Main Screen	Displays the tag's main screen.
BLE Activation	Select this option to activate a BLE session with the Deployment Manager (DM) app. The BLE will be active for 30 min.
Tag Sync	Select this option to activate a BD session with MobileView.
Show Thresholds	Shows or Hides temperature out-of-range threshold values on the main screen.

Activating and Configuring the Tag

T15e Tags arrive deactivated and must be activated and configured before use.

Tag Activation

The tag is automatically activated once power is supplied to the tag (battery or external power). The tag will beep when it turns on and is activated, and a blue LED will flash. The tag will also automatically activate its BLE and will be ready for configuration via the DM app. The tag's BLE will be activated for 30 min.

Additionally, if the tag was deactivated using the DM app, the tag can be activated again by pressing the main button on the front of the tag for 3 seconds.

Tag Configuration

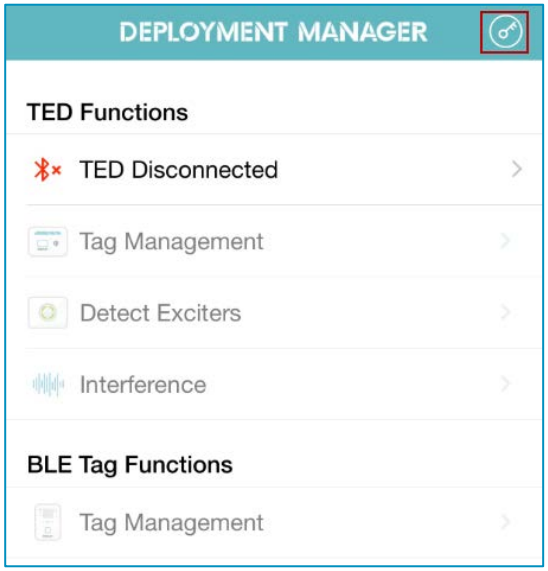
It is recommended to use the Deployment Manager (DM) Setup & User Guide together with the procedures below.

T15e Tag parameters must be initially configured using the DM app's BLE Tag Functions feature. The feature needs to be enabled using a product key. See below:

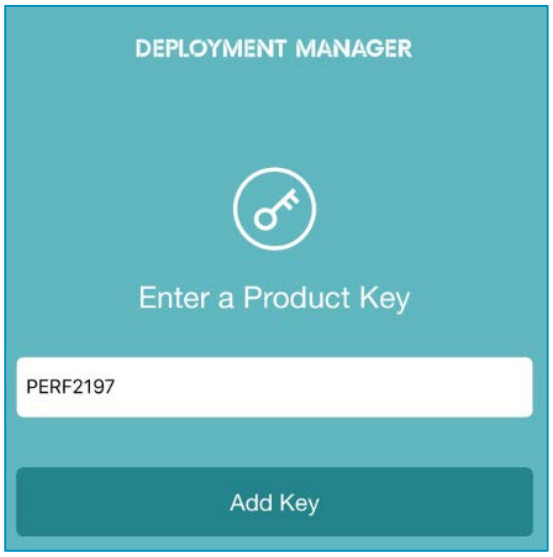
Enabling BLE Tag Functions

BLE Tag Functions is enabled (disabled by default) using the product key PERF2197. The key only needs to be entered in once. If you delete the DM app, the key will need to be re-entered. **Note:** This key opens Wi-Fi channels 1-11. Opening channels 12 and 13 is country-dependent and requires a specific key from STANLEY Support.

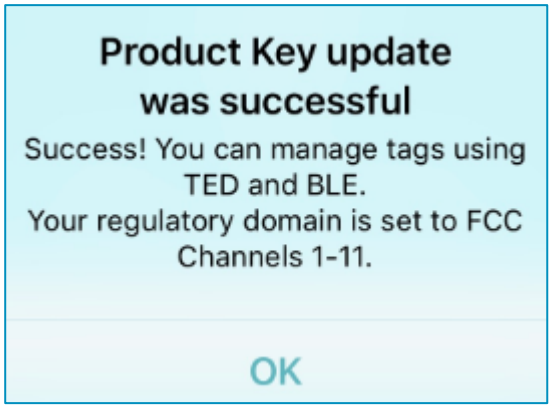
1. Open the DM app.
2. Tap the **Product Key** icon.



3. Enter the Product Key **PERF2197**.

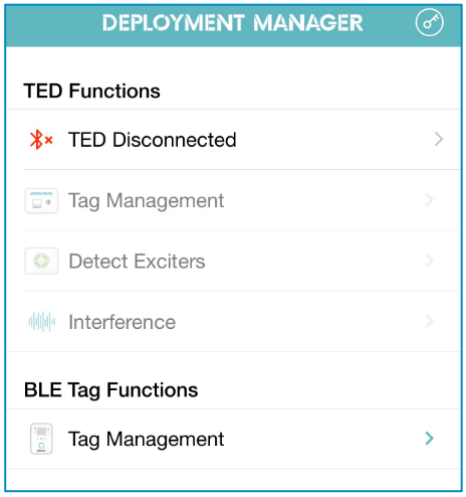


4. Tap **Add Key**.



5. Tap **OK**.

6. **BLE Tag Functions** > **Tag Management** is now enabled.



Enabling Secured Tag Communication with MobileView

Note: *This section is for sites that are using MobileView in a secured mode and require secure BD (Bidirectional) tag sessions. For more information on using MobileView in a secured mode, refer the latest MobileView Deployment Guide.*

Skip this section if the site is not using MobileView in a secured Mode or if you will be deploying the tag in a UD (Unidirectional) environment. See Configuring Tags.

T15e Tags support a HTTPs connection with MobileView Servers using the TLS1.2 protocol. This allows a MobileView Server authentication using pre-installed X.509 certificates.

The STANLEY T15e Tag Certificate

To allow a MobileView Server authentication using the Server's SSL certificate, the T15e Tag must be pre-loaded with a Root CA certificate that authenticates the MobileView Server's SSL certificate. This can be done either directly, or through an Intermediate Certificate using a Chain of Trust (see *Certificate Definitions*).

The T15e Tag must be pre-loaded with only a **Root CA** certificate. Any other certificate that is pre-loaded to the tag will fail the Server's SSL certificate verification.

Certificate Format

T15e Tags can be pre-loaded with a Root CA certificate in X.509v3 PEM format (also known as Base64 encoded certificates that starts with "-----BEGIN CERTIFICATE-----" and ends with "-----END CERTIFICATE-----").

MobileView Server Certificates

The following certificates must be pre-installed on the MobileView Server to allow the certificate validation to be performed by T15e Tags:

- SSL Certificate issued for this specific server
- All Intermediate Certificates
- Root CA Certificate

If one of the above certificates from the Chain of Trust is not installed on the MobileView Server, the T15e Tag will fail the Server's SSL certificate verification.

MobileView Server Host Name

The MobileView Server's host name must always include its domain (i.e. mv-srv-1.corp.aeroscout.com). The domain must correspond to the CN set in 'subject' field of the MobileView Server's SSL certificate.

Certificate Definitions

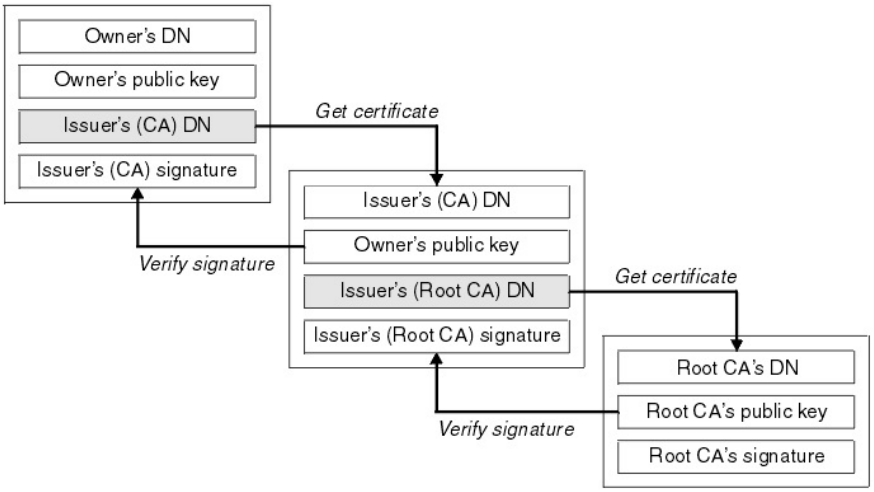
T15e Tag certificate-based authentication of the MobileView Server is based on the following definitions:

Chain of Trust

A certificate chain is an ordered list of certificates, containing an SSL Certificate, Intermediate Certificates and a Root CA Certificate, that enable the receiver to verify that the sender and all CA's are trustworthy.

The chain must begin with the MobileView Server's SSL certificate, and each certificate in the chain must be signed by the entity identified by the next certificate in the chain.

The below figure illustrates a certification path from the Server's SSL Certificate to the Root CA Certificate, where the Chain of Trust begins:



The Root CA certificate

The chain ends with a Root CA Certificate. The Root CA Certificate is always signed by the CA itself. Using this certificate T15e Tags are able to verify the signatures of all certificates in the chain.

The Intermediate Certificate

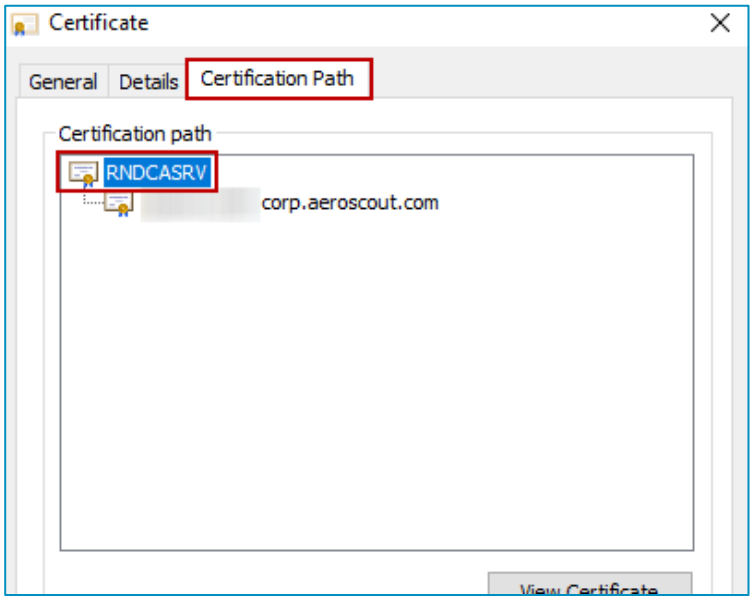
Any certificate that sits between the SSL Certificate and the Root CA Certificate is called a chain or Intermediate Certificate. The Intermediate Certificate is the signer/issuer of the SSL Certificate. The Root CA Certificate is the signer/issuer of the Intermediate Certificate. If the Intermediate Certificate is not installed on the MobileView Server (where the SSL certificate is installed) it will prevent T15e Tags from completing the server's SSL certificate verification.

Exporting a Secured Certificate from MobileView

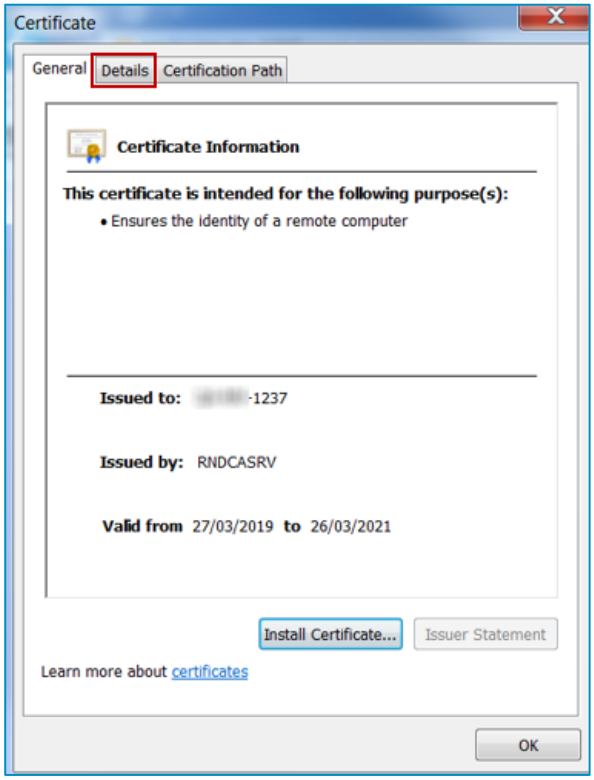
A secured server Certificate is exported from MobileView by doing the following:

1. Open the secured MobileView in a browser (use the full DNS name).
2. Click on the **Lock** icon in the browser- IE or Chome.

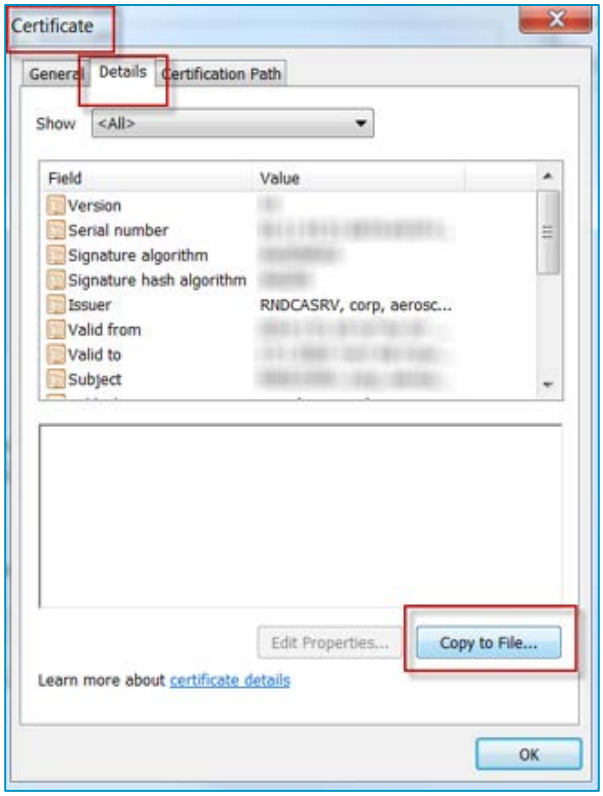
3. Click on **View certificates** (IE) or **Certificate** (Chrome).
4. Click on the **Certification Path** tab.



5. Double click on certification name.

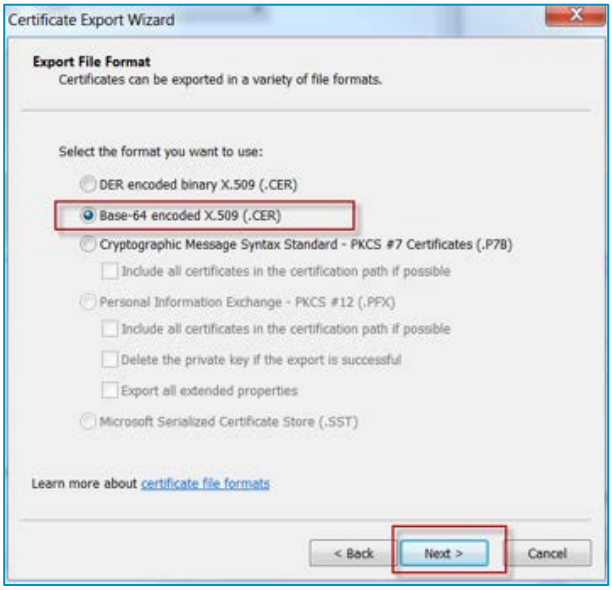


6. Select the **Details** tab and then click on **Copy to file...**



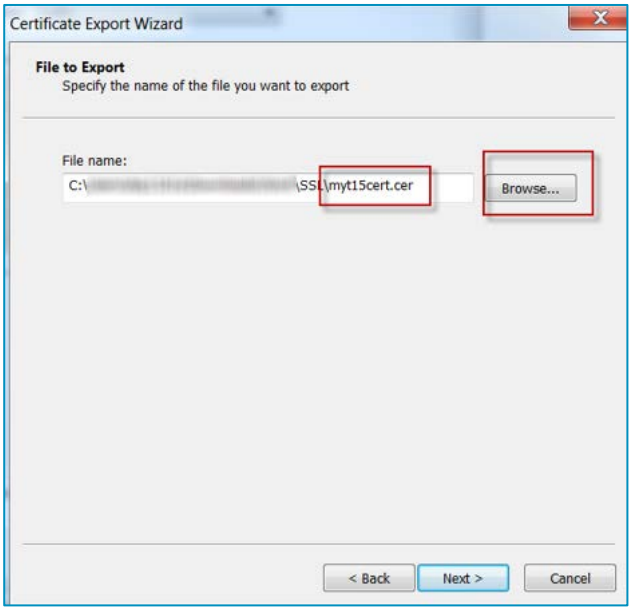
7. Click **Next** on the Welcome Page

8. Select **Base-64 encoded X.509 (.CER)**.



9. Click **Next** to Export the File.

10. Enter the file's name and select a location to save the file (the extension will be *.cer).



11. Click **Next** and then **Finish**.

    The Certificate is saved.

12. Navigate to the location of the saved Certificate. Locate the Certificate and rename its extension from ***.cer*** to ***.certificate***. Example; *mycert.certificate*.

13. Send the secured Certificate to your mobile device, either by email or any other file sharing app.

Loading a Secured Certificate to the Tags

Ensure you have the secured MobileView Certificate available on your mobile device (either as an email attachment or in a file sharing application). Refer to *Enabling Secured Tag Communication with MobileView* and *Exporting a Secured Certificate from MobileView.*

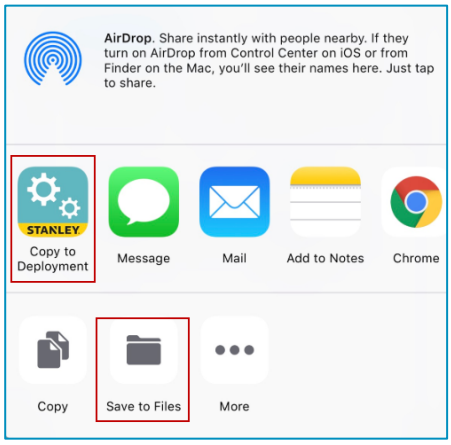
Note: Previously installed Certificates will be deleted.

From your mobile device, perform either of the following:

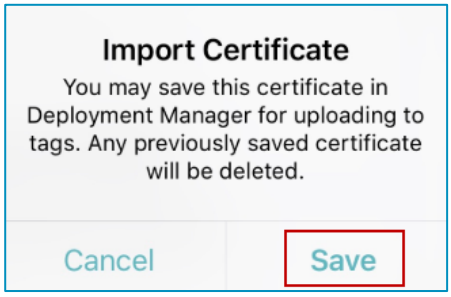
Loading from Email:

1. Tap the required Certificate in your email.

2. The default file operation list will open. Select '**Copy to Deployment Manager'**. If you don't have '**Copy to Deployment Manager**' in your list, tap **Save to Files** and save the file to either your **iCloud Drive** or any other file sharing application (see *Loading from a File Sharing Application below*).



3. Deployment Manager opens. Tap **Save**.

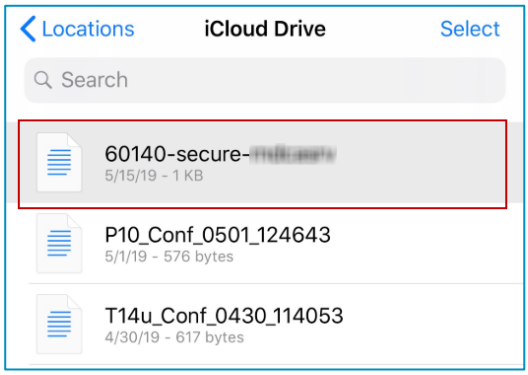


4. Tap **OK**.

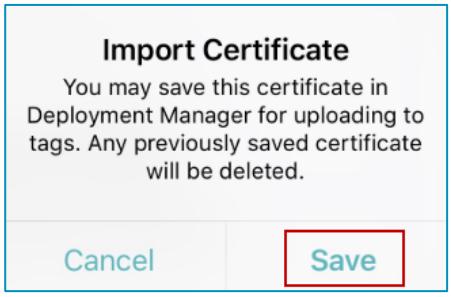
5. Configure the tag accordingly. See *Configuring Tags*.

Loading from a File Sharing Application:

1. Tap the required Certificate in your file sharing application, for example iCloud Drive.



2. Deployment Manager opens. Tap **Save**.



3. Tap **OK**.

4. Configure the tag accordingly. See *Configuring Tags*.

Configuring Tags

Tag configurations can be saved, loaded or exported. See *Saving, Loading or Exporting Tag Configurations*.

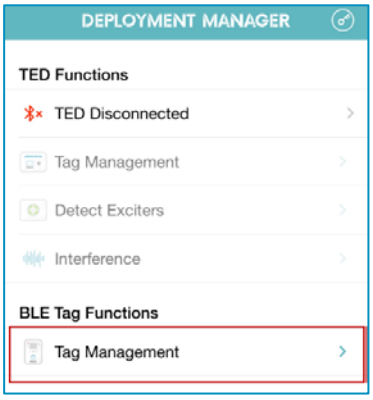
Note: Up to 50 tags can be configured at once.

1. Ensure the tag's BLE is activated, which is indicated by the BLE icon. BLE is activated when the tag is powered on for the first time.

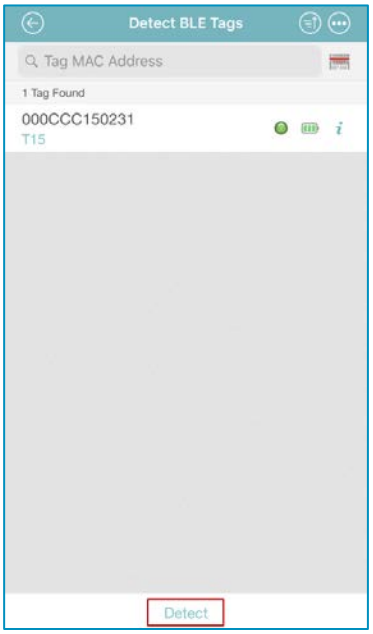
   If the tag's BLE is not activated, press the **Select** button on the tag to access the menu options. Use the arrow buttons to navigate, and then select **BLE Activation**.

   Ensure the BLE icon is displayed on the main screen.

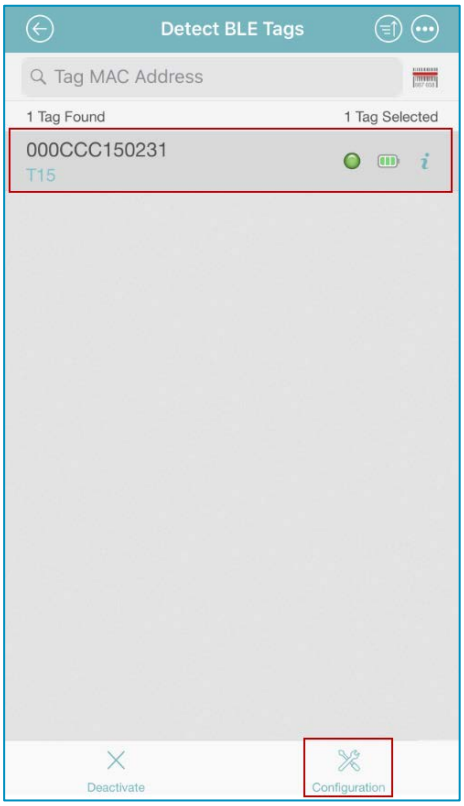
2. Open the DM app.
3. Under **BLE Tag Functions**, tap **Tag Management**.

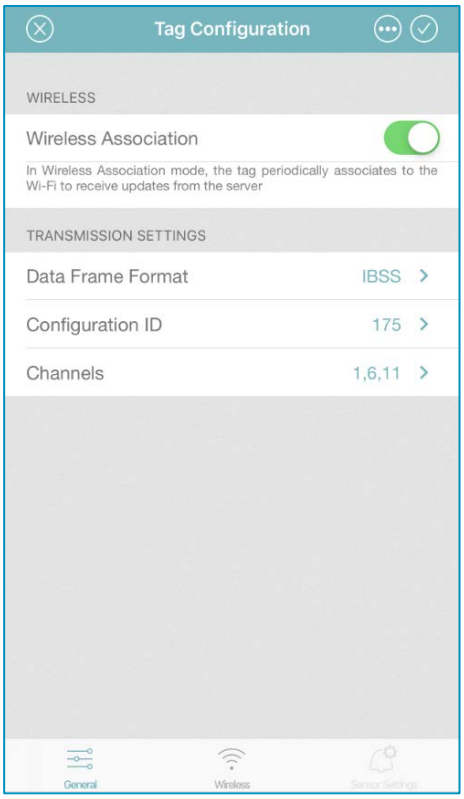


4. Tap **Detect** or swipe down on the screen to detect the tags.



5. Tap to select the required T15e Tag(s) and then tap **Configuration**. Up to 50 tags can be configured at once.





6. Configure the tag accordingly (See *About UD and BD Deployments*). **Note**: **VFC sites must use the BD Deployment only.**

About UD and BD Deployments

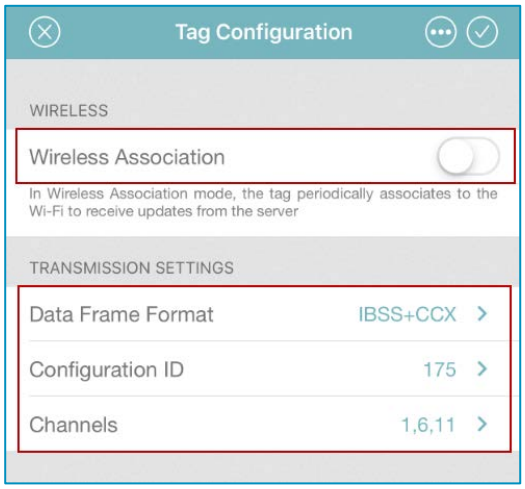
The following table shows the differences between a UD (Unidirectional) and BD (Bidirectional) deployment:

UD Deployment	BD Deployment
Does not support CDC requirements for VFC deployments.	Supports CDC requirements for VFC deployments.
Tags only transmit real-time temperature data to MobileView.	Tags transmit and receive values and configuration data from MobileView via a Bidirectional session automatically every 24 hours (providing there are no network issues).
Does not support Offline data uploads.	Supports Offline upload of temperature values and audit checks.
Does not support remote firmware upgrade.	Supports firmware upgrades via a BD session from MobileView.
Local Alarm is set only by using the DM app.	Local Alarm is configured in MobileView.

UD (Unidirectional) Deployment Configuration

Configure the following in the DM app:

1. Turn **Wireless Association Off** (enabled by default).



2. Set the site's **Data Frame Format** (default is IBSS).

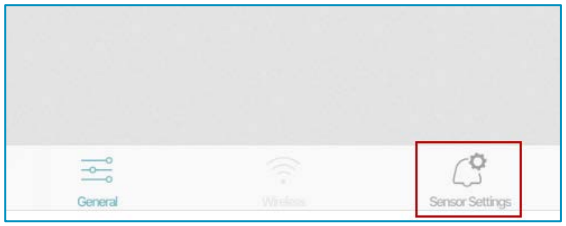
3. Select a **Configuration ID** and then tap Apply.

   These are pre-defined configurations. One ID must be selected. You can view more details about each ID by tapping on the information icon.

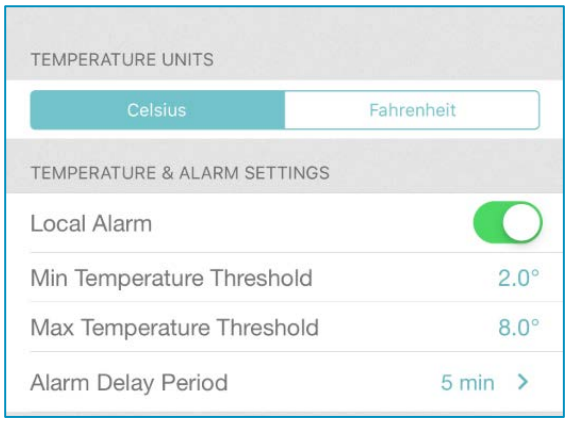
ID	Description
ID 175	5min Beacon (sets the tag's transmission and logging interval to 5min).
ID 176	15min Beacon (sets the tag's transmission and logging interval to 15min).
ID 177	30min Beacon (sets the tag's transmission and logging interval to 30min).
ID 178	60min Beacon (sets the tag's transmission and logging interval to 60min).

4. Set the Wi-Fi **Channels** accordingly (default is 1, 6, 11) and then tap Apply.

5. Tap **Sensor Settings** (this option is only available if **Wireless Association** is turned Off).



6. Configure the **Sensor Settings**:



   a. <u>**Temperature Units:**</u>

      Select the temperature unit (Celsius/Fahrenheit).

b. <u>Temperature & Alarm Settings</u>:

Local Alarm: The Local Alarm includes 3 components; Buzzer, Alert LED and the on-screen Bell icon. These are all triggered if the configured temperature values are out of range. By default the (in UD mode) Local Alarm is 'On', and can be turned 'Off' by toggling the button.

<u>Note:</u> *The buzzer will continue to sound unless muted on the tag itself.*

Min & Max Temperature Thresholds: Set the minimum and maximum temperature threshold values. The tag's Local Alarm will be triggered when a value is out of its configured range.

Alarm Delay Period: Select the time period that a tag's value must be out of a configured range before an alarm is triggered. For example; if the alarm delay period is set to 5 minutes and the tag's value is out of its configured range, the alarm will only be triggered if its value does not normalize within the set time of 5 minutes.

<u>Note:</u> *The tag will immediately move out of alarm mode when the temperature is back within the configured limits.*

7. Apply the tag configuration by tapping the check icon.

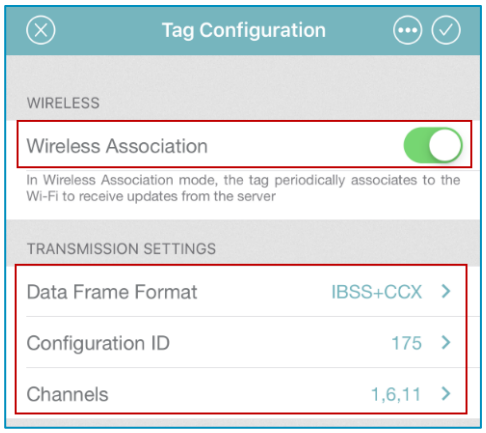
8. Tap **Apply** to apply the settings to the tag(s).

9. Ensure all tag configurations are successful and then tap **Done**.

BD (Bidirectional) Deployment Configuration

Configure the following in the DM app:

1. Ensure **Wireless Association** is enabled (default). **Note:** When **Wireless Association** is enabled, the **Sensor Settings** tab is disabled. The tag will now receive sensor settings from MobileView.



2. Set the site's **Data Frame Format** (default is CCX).

3. Select a **Configuration ID** and the tap Apply.

   These are pre-defined configurations. One ID must be selected. You can view more details about each ID by tapping on the information icon

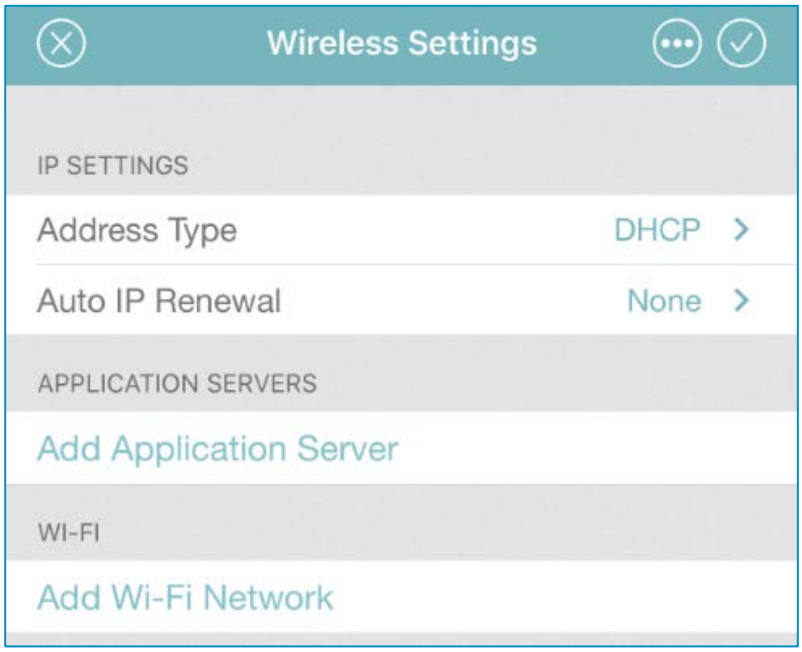
   The following table explains each Configuration ID:

ID	Description
ID 175	5min Beacon, 2 days BD (sets the tag's transmission and logging interval to 5min and sets a BD session for every 2 days).
ID 176	15min Beacon, 2 days BD (sets the tag's transmission and logging interval to 15min and sets a BD session for every 2 days).
ID 177	30min Beacon, 2 days BD (sets the tag's transmission and logging interval to 30min and sets a BD session for every 2 days).
ID 178	60min Beacon, 2 days BD (sets the tag's transmission and logging interval to 60min and sets a BD session for every 2 days).

4. Set the Wi-Fi **Channels** accordingly (default is 1, 6, 11) and then tap Apply.

5. Tap **Wireless** (this option is only available if **Wireless Association** is enabled).

6. Enter the required **Wireless Settings**:



IP SETTINGS:

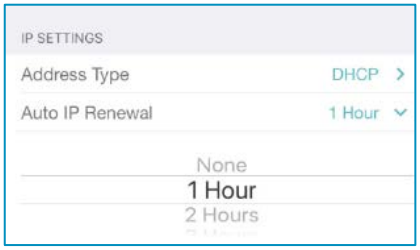
a. Tap on **Address Type** and select either **DHCP** (The DHCP server automatically assigns the tag an IP address every time the tag is associated with the network),

   -OR-

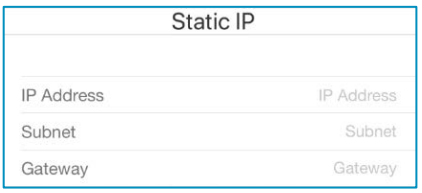
   Static IP (the IP address and connection settings are specified manually).

   Note: The **Static IP** setting is not available if more than one tag is selected.

b. If **DHCP** is selected, tap on **Auto IP Renewal** and select the renewal time in hours (this automatically renews the IP address according to the selected time period). If 'None' is selected, the tag will be issued an IP address from the DHCP server during each BD session.



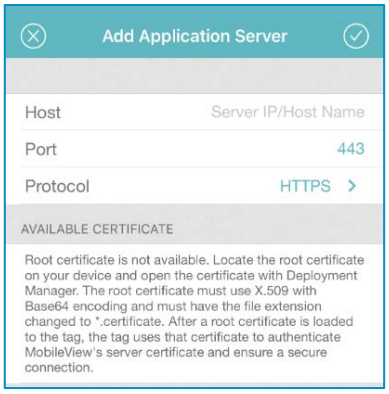
c. If **Static IP** is selected, enter the **IP Address, Subnet** and **Gateway**.



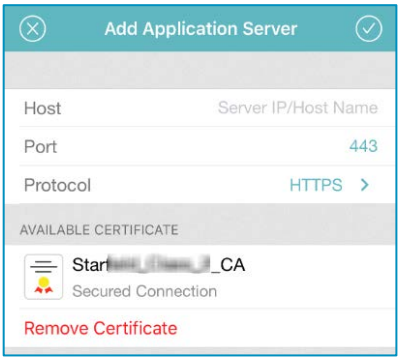
APPLICATION SERVERS (a minimum of 1 must be added, with a maximum of 2):

a. Tap **Add Application Server.**

The following screen is displayed if you have not loaded a secure Certificate from MobileView. To load a secured Certificate, refer to the *Enabling Secured Tag Communication with MobileView* section.



Any loaded secured Certificate from MobileView is displayed:

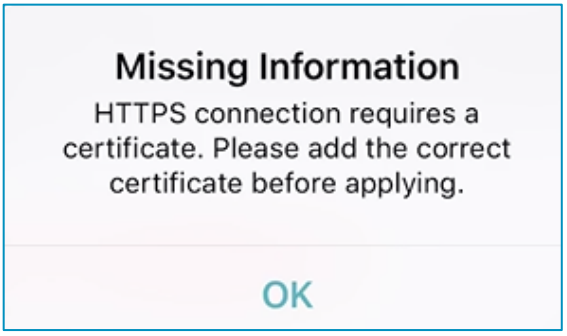


Enter the MobileView Server details:

- IP or Host name of the Server.
- The Server's **Port** (default is 443).
- **Protocol**: **HTTPS** (default setting) uses a loaded root certificate to authenticate MobileView's server certificate to ensure a secured connection. Use **HTTP** if you are not using a secured connection.

b. Tap the **Apply** icon to apply the settings.

<u>Note:</u> An HTTPS configuration can only be applied if a certificate is loaded. A **Missing Information** message appears if no HTTPS certificate is loaded.



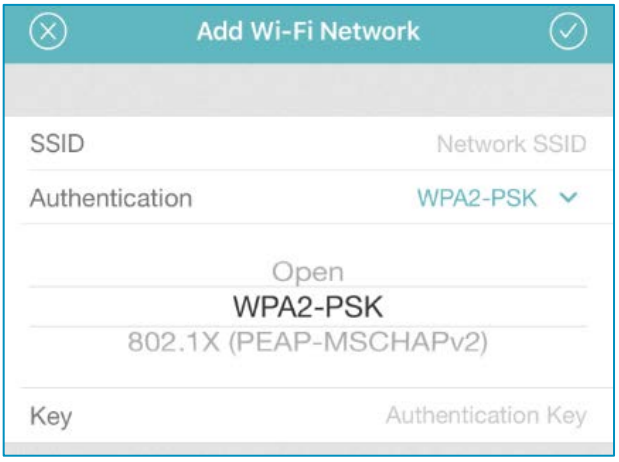
WI-FI (1 must be added):

a. Tap **Add Wi-Fi Network**.

b. Enter the Network's **SSID**.

c. Select the **Authentication** method; **Open / WPA2-PSK / 802.1X (PEAP-MSCHAPv2).**

d. For **WPA2-PSK** enter in the **Authentication Key**.



e. For **802.1x (PEAP-MSCHAPv2)**, enter in the appropriate **Domain Name \ Username** (separated with a backslash\) and **Password**.

f. Tap the Apply icon.

7. Apply the tag configuration by tapping the check icon.

8. Tap **Apply** to apply the settings to the tag(s).

9. Ensure all tag configurations are successful and then tap **Done**.

Saving, Exporting, Importing and Loading Tag Configurations

Tag configurations, tag settings and wireless settings can be saved, exported or loaded. Saved files are stored to the DM app. Additionally, .tfg3 files that have been sent to you can be imported. Saved or exported configurations can be loaded to single or multiple tags. *Refer to the Deployment Manager Setup & User Guide for more information*.

Saving Configurations

Configurations are saved to your DM app.

1. From either the **Tag Configuration**, **Tag Settings** or **Wireless Settings** screens, tap .
2. Select **Save Configuration**.
3. Enter a **name** for the file.
4. Tap **Save File.**

   The configuration is saved.
5. Tap **OK**.

Exporting a Configuration

1. From either the **Tag Configuration**, **Tag Settings** or **Wireless Settings** screens, tap .
2. Select **Export Configuration**.
3. Enter a **name** for the file.
4. Tap **Export File.**
5. Select where to export the file.

   The file will be exported in a .tfg3 format. The file can then be sent from your mobile device to other recipients. The file can also be used for troubleshooting by STANLEY Healthcare Support.

Importing and Loading a Tag's Configuration

Tag configurations that have been saved to your app can be loaded to single or multiple tags. Saved configurations could either be files that you saved or files that have been sent to you by a STANLEY Support representative.

When receiving configuration files from STANLEY, the file must be imported and saved to the DM app first.

Importing .tfg3 Files:

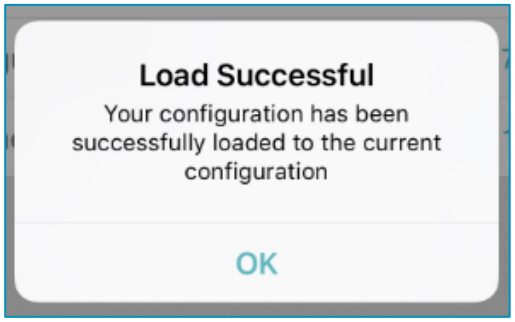
- **iOS Mail** -Tapping the file will open the default file operation list. Select 'Copy to Deployment Manager'. The application will open allowing you to save the file.
- **Google Drive App** - Tap the 3 dots menu (in the file row) and select 'Export'. The default file operation list will open. Select 'Copy to Deployment Manager'. The application will open allowing you to save the file.
- **Dropbox App**- Tap the 3 dots menu (in the file row) and select "Export". The default file operation list will open. Select 'Copy to Deployment Manager'. The application will open allowing you to save the file.
- **Gmail App**- Tap the file attachment in the email and then tap the share icon in the top right corner. The default file operation list will open. Select 'Copy to Deployment Manager'. The application will open allowing you to save the file.

Additionally when using the above the methods, the file can also be saved to your **iCloud Drive** by tapping on '**Save to File**'.

Loading a Saved Configuration to a Single Tag

1. From either the **Tag Configuration**, **Tag Settings** or **Wireless Settings** screens, tap .
2. Select **Load Configuration**.
3. Select the required file.
4. Tap **Load File.**

   The configuration will be loaded.



5. Tap **OK**.

Loading a Saved Configuration to a Multiple Tags

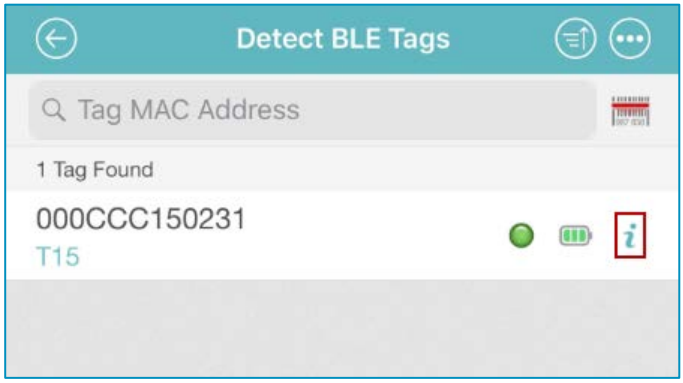
1. From the **Detected BLE Tags** list, select the required tags.
2. Tap on **Configuration**.
3. Tap the **Options** icon.
4. Select **Load Configuration**.
5. Select the required file.
6. Tap **Load File.**

   The configuration will be loaded.
7. Tap **OK**.

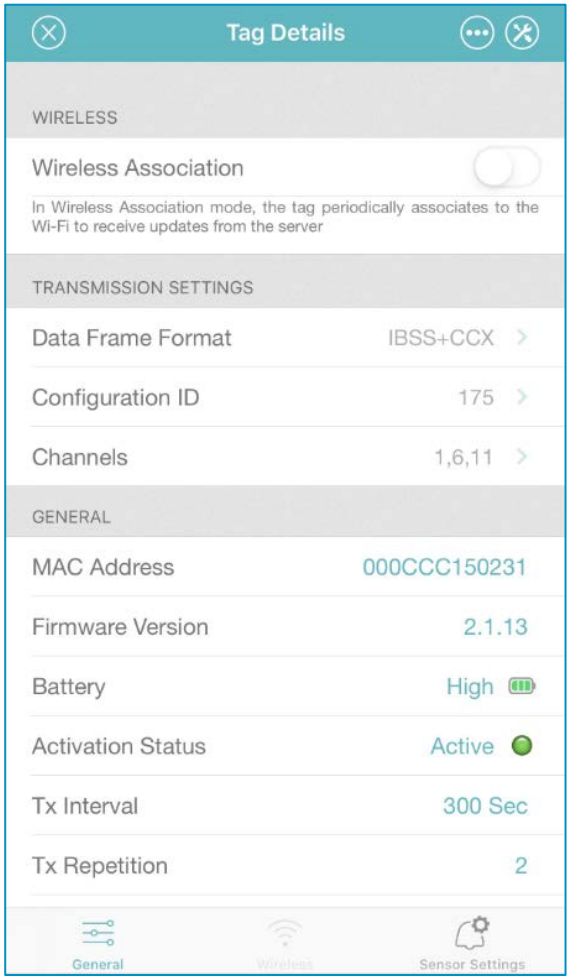
Viewing a Tag's Current Configuration

You can view a tag's current configuration by doing the following:

1. Enable the tag's BLE.
2. Detect the tag.
3. Tap the information icon of the tag to view.



4. The tags details will be displayed in read-only mode.



5. You can view the tag's sensor settings (UD deployments) by tapping the **Sensor Settings** tab.

6. If the tag is configured for BD deployments, then tap the **Wireless** tab to view the settings.

7. To Save, Load or Export configurations, tap .

Editing Transmission and Sensor Settings (UD Deployments)

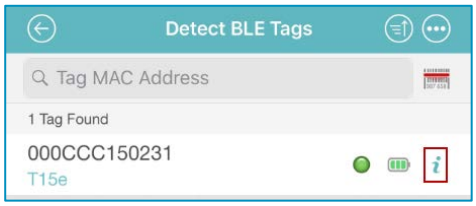
Note: Only one tag can be edited at a time. If you need to edit multiple tags, edit one tag, save the configuration and then load the new configuration to the other tags. See *Saving, Exporting, Importing and Loading Tag Configurations*.

Tag Transmission and/or Sensor Settings of UD deployed tags are edited by doing the following:

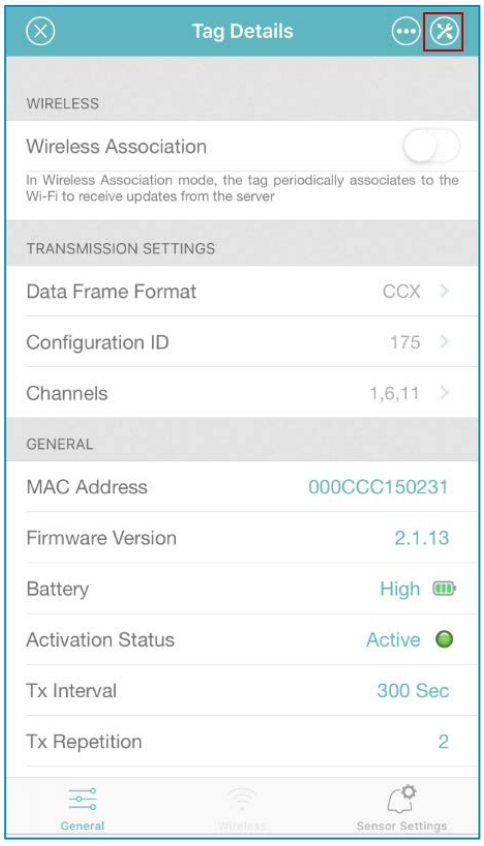
1. Enable the tag's BLE.

2. Open the DM app and **Detect** the tag.

3. Tap the information icon of the tag to edit.

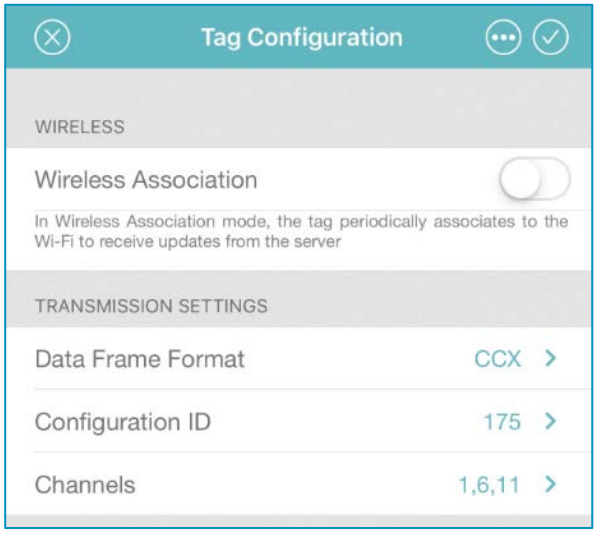


4. The tags details will be displayed in read-only mode.



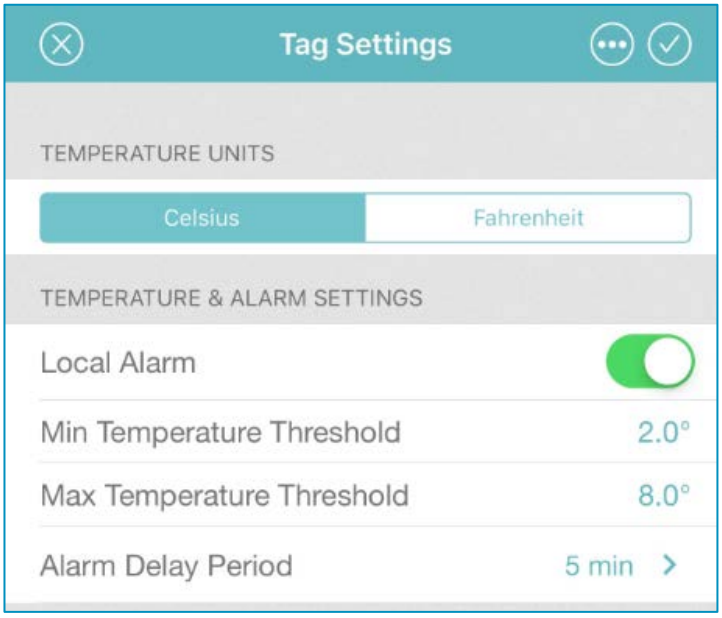
5. To Edit the tag's **TRANSMISSION SETTINGS**, tap the **Edit Configuration** icon on the **Tag Details** screen.

6. Edit the tag's configuration accordingly. See *UD (Unidirectional) Deployment Configuration*. If you are changing the tag's deployment from UD to BD, then see *BD (Bidirectional) Deployment Configuration*.



7. To Edit the tag's **Sensor Settings**, tap the **Sensor Settings** tab.

8. If needed, tap the **Edit Configuration** icon.



9. Edit the tag's sensor settings accordingly.

   a. **Temperature Units:**

      Select the temperature unit (Celsius/Fahrenheit).

b. <u>Temperature & Alarm Settings</u>:

Local Alarm: The Local Alarm includes 3 components; Buzzer, Alert LED and the on-screen Bell icon. These are all triggered if the configured temperature values are out of range. By default the (in UD mode) Local Alarm is 'On', and can be turned 'Off' by toggling the button.

<u>Note:</u> *The buzzer will continue to sound unless muted on the tag itself.*

Min & Max Temperature Thresholds: Set the minimum and maximum temperature threshold values. The tag's Local Alarm will be triggered when a value is out of its configured range.

Alarm Delay Period: Select the time period that a tag's value must be out of a configured range before an alarm is triggered. For example; if the alarm delay period is set to 5 minutes and the tag's value is out of its configured range, the alarm will only be triggered if its value does not normalize within the set time of 5 minutes.

<u>Note:</u> *The tag will immediately move out of alarm mode when the temperature is back within the configured limits.*

10. To Save, Load or Export a configuration, tap the **Options** icon.

11. Tap the **Apply** icon to apply the new configuration.

12. Ensure all tag configurations are successful and then tap **Done**.

Editing Transmission and Wireless Settings (BD Deployments)

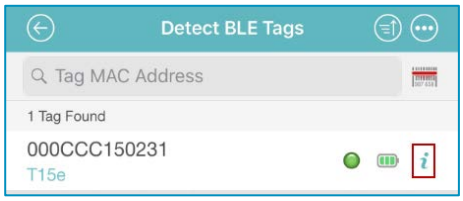
Note: Only one tag can be edited at a time. If you need to edit multiple tags, edit one tag, save the configuration and then load the new configuration to the other tags. See *Saving, Exporting, Importing and Loading Tag Configurations.*

Tag Transmission and/or Wireless Settings of BD deployed tags are edited by doing the following:

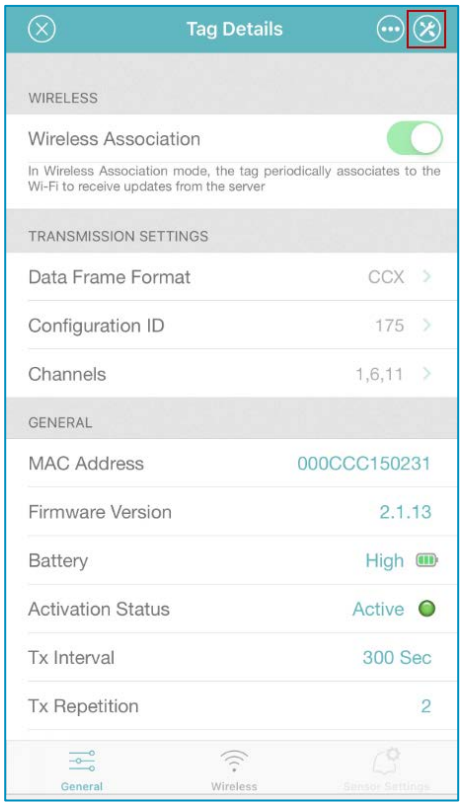
1. Enable the tag's BLE.

2. Open the DM app and **Detect** the tag.

3. Tap the information icon of the tag to edit.

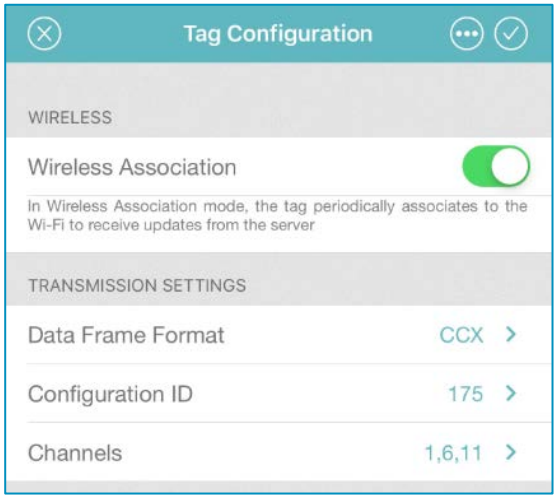


4. The tags details will be displayed in read-only mode.



5. To Edit the tag's **TRANSMISSION SETTINGS**, tap the **Edit Configuration** icon on the **Tag Details** screen.

6. Edit the **Tag Configuration** accordingly. See *BD (Bidirectional) Deployment Configuration*. If you are changing the tag's deployment from BD to UD, see *UD (Unidirectional) Deployment Configuration*.



7. To Edit the tag's **Wireless Settings**, tap the **Wireless** tab.

8. If needed, tap the **Edit Configuration** icon.

9. Edit the tag's wireless settings accordingly. See the *BD (Bidirectional) Deployment Configuration* section.

10. To Save, Load or Export a configuration, tap the **Options** icon.

11. Tap the **Apply** icon to apply the new configuration.

12. Ensure all tag configurations are successful and then tap **Done**.

Temperature Sensor & VFC Deployments

This section explains how to configure the T15e Tag for use as a Temperature Sensor and assumes familiarity with MobileView.

Configuring MobileView

Please refer to the latest MobileView Administrators Guide on the STANLEY Healthcare Knowledge base and perform the following. Ensure the tag is available in MobileView under the 'Tags' tab.

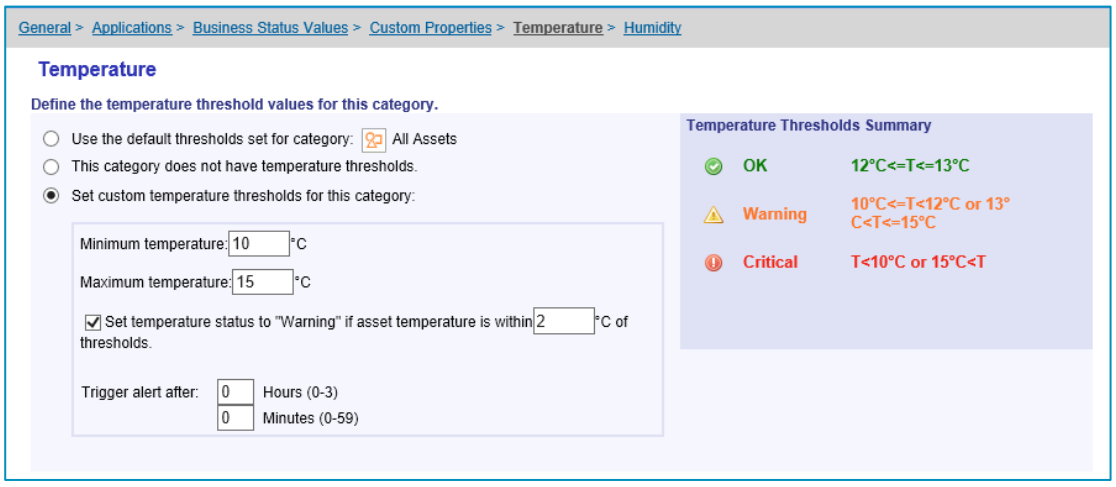
If the tag is setup for UD, MobileView will only receive data from the tag and trigger alerts according to configured events.

If the tag is setup for BD, MobileView will transmit data, such as temperature threshold values to the tag, and receive data from the tag. Alerts will be triggered according to configured events.

Creating / Editing a Category

1. Create or edit a **Category** and give it a meaningful name.

2. Define the temperature thresholds (this can be done on an Asset or Category level):



Setting Thresholds on a Category Level:

Setting these values automatically enables the T15e Tag's Local Alarm. The entered values will be sent to the tag via a BD session which may require a few hours to update. You can perform an immediate sync action from the tag itself. See *Performing a Manual Sync with MobileView.*

Select **Set custom temperature thresholds for this category**, and enter the thresholds for all assets that will be placed in this category. Assets in this category can either inherit these thresholds, or be configured individually – see *Setting Thresholds on an Asset Level below*.

- Set the **Minimum** and/or **Maximum temperature** thresholds. Both or one temperature threshold can be entered. If a single threshold is entered, for example just the **Maximum Temperature**, the tag will only monitor and alert when the **Maximum Temperature** value is reached.

- **Set temperature status to**…. This option will change the temperature status to 'Warning' if the temperature is within a specified value of the set thresholds. For example: If the min threshold is 10 and the 'Warning' status is set to 2, the temperature status will change to 'Warning' if the min temperature reaches 13 (2 below the max threshold of 15).

- **Trigger alert after:** Define the time period that a tag's value must be out of a configured range before an Alert is sent. For example; if the time threshold is set to 15 min and the tag's value is out of its configured range, an alert will be triggered if its value does not normalize within the set time of 15 min.

Setting Thresholds on an Asset Level:

If configuring temperature thresholds on individual assets, select **Set custom temperature thresholds for this asset** and enter the appropriate values. See above for descriptions.

Configuring Events

Events are configured in MobileView to trigger alerts according to specified parameters.

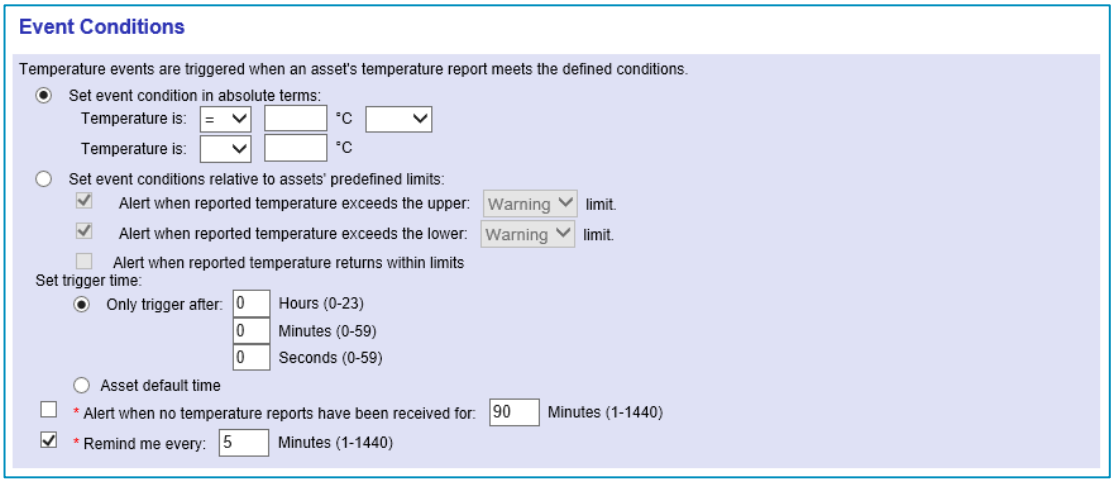
The following Events should be used for the T15e Tag:

Event Name	Description
Temperature	Triggers alerts when the temperature values are out of a configured range.
Battery Level	Monitors the tag's battery level and triggers alerts accordingly. Additionally, an alert can be triggered if the tag has no batteries or they are removed.
Out of Sight	Triggers alerts if the tag fails to report for a specified time.
External Power (Optional)	Triggers an alert if the tag's external power supply is disconnected for a period of time.
Sensor Tag Error	Triggers alerts when a sensor error occurs which prevents data from being received. Such as, a probe disconnection or probe malfunction etc.

Temperature Event

This event issues an alert based on temperature readings transmitted by active tags equipped with a temperature sensor. You can set specific conditions for the alert or inherit the asset / category thresholds and set the delay time before an alert is triggered.

Best Practice Note: It is recommended to inherit the configuration from the Asset / Category. Only set local conditions when required.



Event Conditions

Configure the Event Conditions according to the following:

Set event condition in absolute terms: If you want to set a specific (not inherited from the asset / category level) temperature range that triggers an alert, enter it here.

Set event conditions relative to the assets' predefined limits: Select this option to use thresholds defined on the asset / category level.

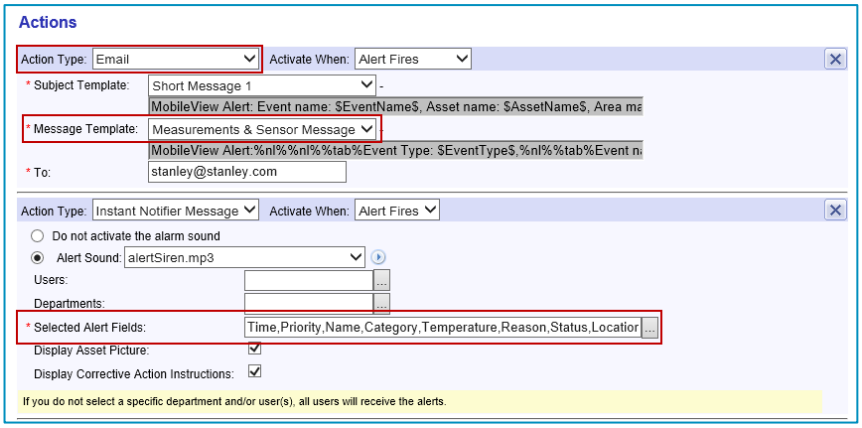
Set trigger time:

- **Only Trigger after**: Define the time period that a tag's value must be out of a configured range before an Alert is sent. For example; if the time threshold is set to 15 min and the tag's value is out of its configured range, an alert will be triggered if its value does not normalize within the set time of 15 min.
- **Asset default time**: Select this option to use the value defined on the Asset / Category level.
- **Alert when no temperature reports have been received for**: **NOTE:** This option must not be used as it will be removed in a future version. It is recommended to create a **Sensor Tag Error Event** instead. See *Sensor Tag Error Event.*

Best Practice Note: It is recommended to inherit the configuration from the Asset / Category. Only set local conditions when required.

Actions

Set the actions accordingly.

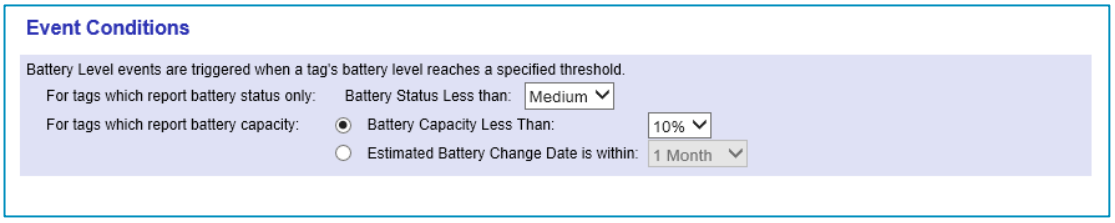


When using the Email **Action Type**, select the **Message Template** as **Measurements Message**. This email template contains details about the contact sensor value.

Additionally when using INF, you can choose to display the Sensor Type and Value in the **Selected Alert Fields**.

Battery Level Event

This Event issues an alert if a tag's battery power reaches a certain level or if the tag has no battery.



Event Conditions

Configure the Event Conditions according to the following:

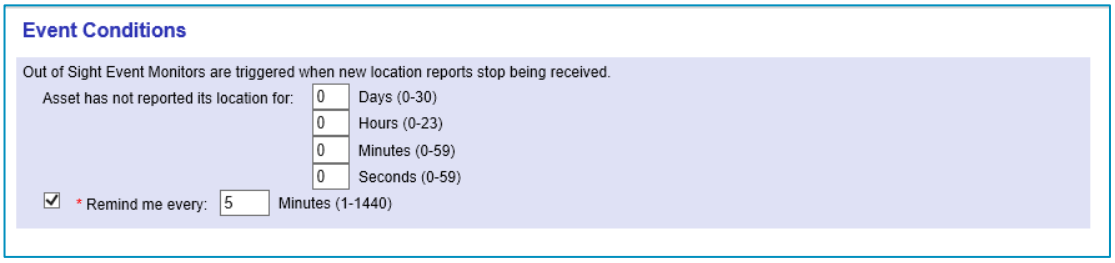
For tags which report battery status only (Recommended setting): Select a level under which an alert will be generated. For example if you select Medium, the alert will be issued when the battery power level falls below Medium.

Actions

Set the actions accordingly.

Out of Sight Event

This event will trigger an alert if the tag fails to report for specified period.



Event Conditions

Configure the Event Conditions according to the following:

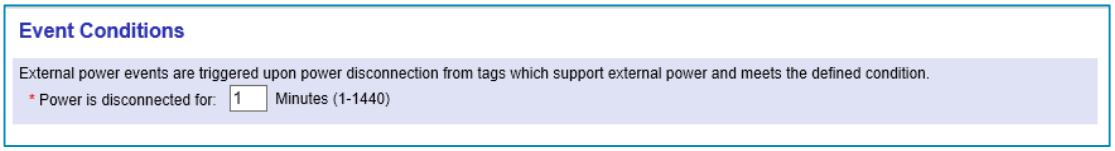
Asset has not reported its location for: Specify the time that should elapse without receiving a report for the asset to be considered out of sight.

Actions

Set the actions accordingly.

External Power Event (Optional)

This event will trigger an alert if the tag's external power is disconnected for a period of time. This event does not need to be configured if you are running the tags with batteries only.



Event Conditions

Configure the Event Conditions according to the following:

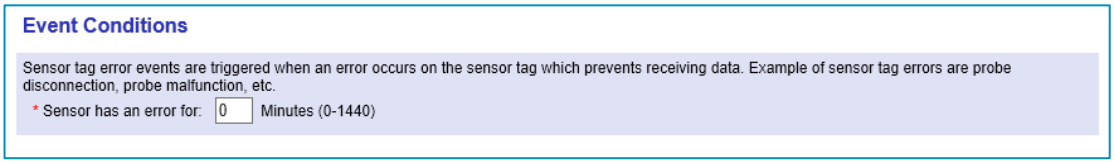
Power is disconnected for: Specify the time that should elapse after the tag's external power is disconnected, before an alert is triggered.

Actions

Set the actions accordingly.

Sensor Tag Error Event

This event will trigger an alert if an error occurs with the tag's sensor preventing data from being transmitted, such as a probe or contact disconnection or malfunction.



Event Conditions

Configure the Event Conditions according to the following:

Sensor has an error for: Specify the time that should elapse after a sensor error occurs, before an alert is triggered.

Actions

Set the actions accordingly.

Configuring the Contact Sensor

This section explains how to configure the T15e Tag's Contact Sensor and assumes familiarity with MobileView.

The Contact Sensor can be used to monitor the door of the fridge or freezer that the temperature is being monitored. An alert will be triggered if the door has been left open for a configured amount of time.

Best Practices

- The Door Open Event (how long the door can remain open) should be triggered according to the fridge's contents.
- An Event can be created to automatically dismiss the Door Open Event. This event can be created to avoid users from manually dismissing the event from the system. It is recommended if it an action audit is not required.

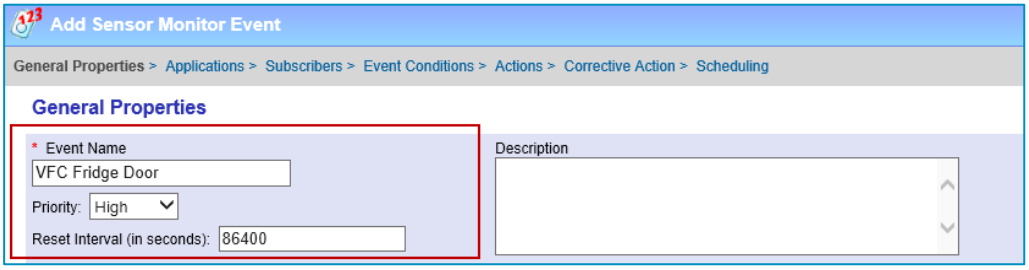
Configuring the Sensor Monitoring Event

The Contact Sensor Monitoring Event is configured in MobileView to trigger alerts when a fridge's or freezer's door is left open for a configured period of time.

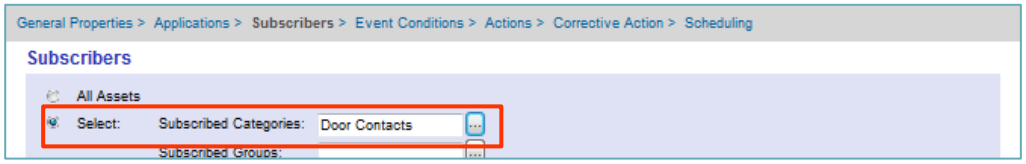
Configuring a Door Open Event

The following section explains how to create a door open event using the **Sensor Monitor Event**.

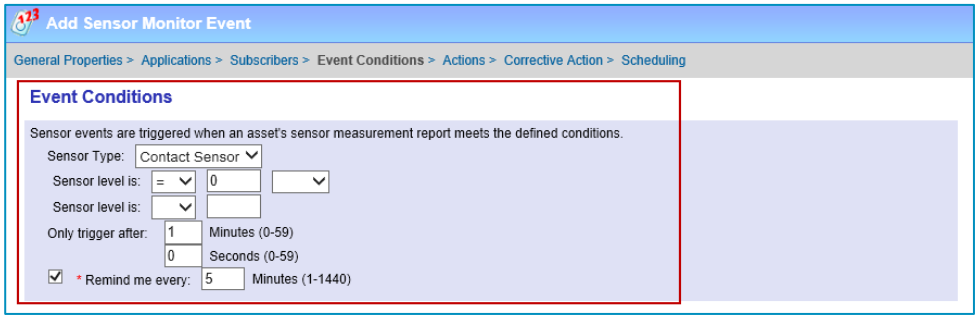
1. Create a **Sensor Monitor Event** according to the following:
   - Select **Sensor Monitor Event**.
   - **Add** a new **Sensor Monitor Event** and name the event accordingly, such as VFC Fridge Door.
   - Set **Priority** to **High**.
   - Set the **Reset Interval** to 86400. (This prevents triggering additional alerts, for this Asset, if the alert is triggered again before the reset interval time – wait time)



2. Under **Subscribers**, subscribe to the correct category.



3. Under **Event Conditions**, select the **Sensor Type** as **Contact Sensor**.



- Set **'Sensor Level is** = '0' -. This value will trigger an alert when the door is opened.
- **Only trigger after**: This setting triggers the alert when a door has been open for a configured period. For example, when a door has been left open for 30 seconds an alert is triggered.
- Optional: **Remind me every**: Once an alert has been dismissed, this setting can be used to check if the condition still persists and trigger an alarm every X minutes. The alert is generated during the next tx Interval. This setting should be used if a long tx interval has been set for the tag and where responding to alerts is time sensitive.

4. Under **Actions**, select the required action to be taken when an alert is triggered, such as sending an Instant Notifier or email alert.

   When using the Email **Action Type**, select the **Message Template** as **Measurements Message**. This email template contains details about the contact sensor value.

   Additionally when using INF, you can choose to display the Sensor Type and Value in the **Selected Alert Fields**.

5. Under **Scheduling**, select the scheduling time when the alert must be active. For example, monitor the door during night hours only.

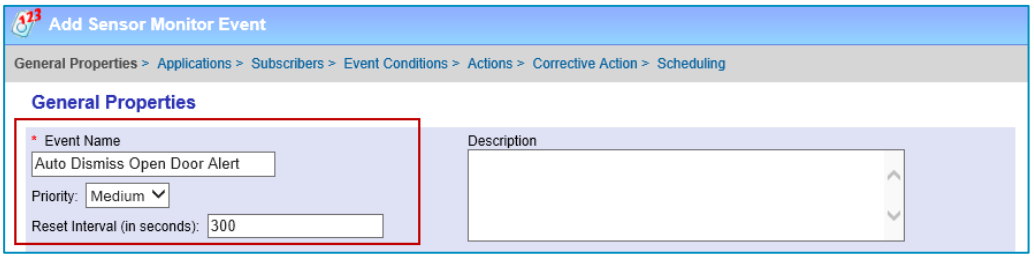
6. Click **Finish**.

Configuring an Automatic Dismiss Door Open Event

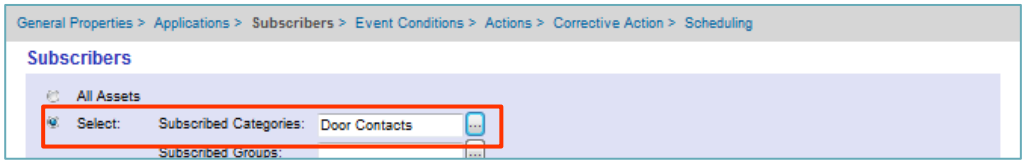
This event will automatically dismiss the Door Open Event once the door is closed.

1. Create a **Sensor Monitor Event** according to the following:

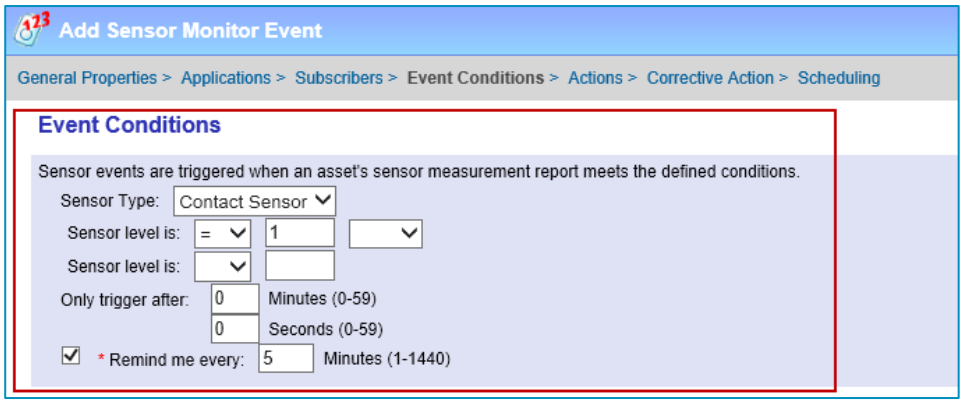
   - Select **Sensor Monitor Event**.
   - **Add** a new **Sensor Monitor Event** and name the event accordingly, such as Auto Dismiss Open Door Alert.
   - Set **Priority** to **Medium.**
   - Set the **Reset Interval** to 300.



2. Under **Subscribers**, subscribe to the correct category.

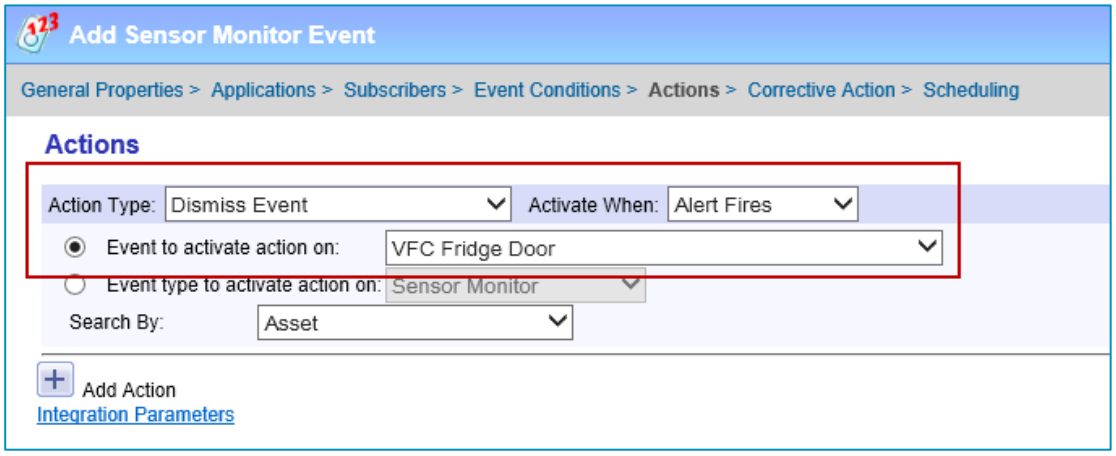


3. Under **Event Conditions**, select the **Sensor Type** as **Contact Sensor**.



   - Set **'Sensor Level is** = '1' -. This value triggers an event when the door is closed.
   - **Only trigger after**: Set this to '0'. This means the event will be triggered immediately once the door is closed.
   - Optional: **Remind me every**: Once an alert has been dismissed, this setting can be used to check if the condition still persists and trigger an alarm every X minutes. The alert is generated during the next tx Interval. This setting should be used if a long tx interval has been set for the tag and where responding to alerts is time sensitive.

4. Under **Actions**, create a new action according to the following:
   - **Action Type:** Dismiss Event
   - **Activate When:** Alerts Fires
   - **Event to activate action on:** Select the name of the event created above (configuring a Door Open Event)



5. Click **Next** and then click **Finish**.

Mounting and Connecting

Connecting the Power Adapter and Sensors

IMPORTANT!

- Batteries are recommended as a backup if external power is used.
- Do not connect two USB-C power adapters to the tag at the same time.
- It is highly recommended to use an approved STANLEY power supply with the TAG (*SKU: ADP-1500-U, ADP-1500-E*). If a different power supply is used, ensure to connect the power cable to the power outlet first and then to the T15e Tag's USB-C port.

  NOTE: The AC/DC adaptor must be safety approved according to IEC/EN/UL 60950-1 with a rated voltage of 5Vdc and rated current up to 3A maximum.
- The T15e Tag is not designed to be powered using a PC's USB outlet. If a PC's USB outlet is used, the Contact Sensor icon on the tag will always show as "closed", regardless of the actual state of the Contact Sensor.
- T15e Tags are compatible with USB 2.0 cables. Using USB 3.0 cables may result in inconsistent behavior of the tag.
- Do not connect two USB-C temperature probes to the tag at the same time. This will cause incorrect temperature values.
- Do not connect two USB-C contact sensors to the tag at the same time. This will cause incorrect alert triggering.
- The T15e Tag is only able to monitor Normally Open (NO) contacts.
- Make sure the plugs are tightened to the tag.

The T15e Tag has 3 USB-C ports and each cable has a USB-C connector with a tightening screw:

There is no specific port for each connector. The Power, Temperature probe and Contact Sensor cables can be plugged into any port.

Plug a connector into any port and tighten the tightening screw. The tag will automatically pick up the source that is connected.

Mounting the Tag

The tag comes with a mounting cradle and double-sided tape for easy mounting. Additionally, Velcro and screws can be used (not supplied).

Mounting with Double-Sided Tape

Place double-sided tape in each square on the mounting cradle and mount the cradle accordingly. See *Mounting the Tag and Temperature Probe.*

Placing the Tag in the Cradle

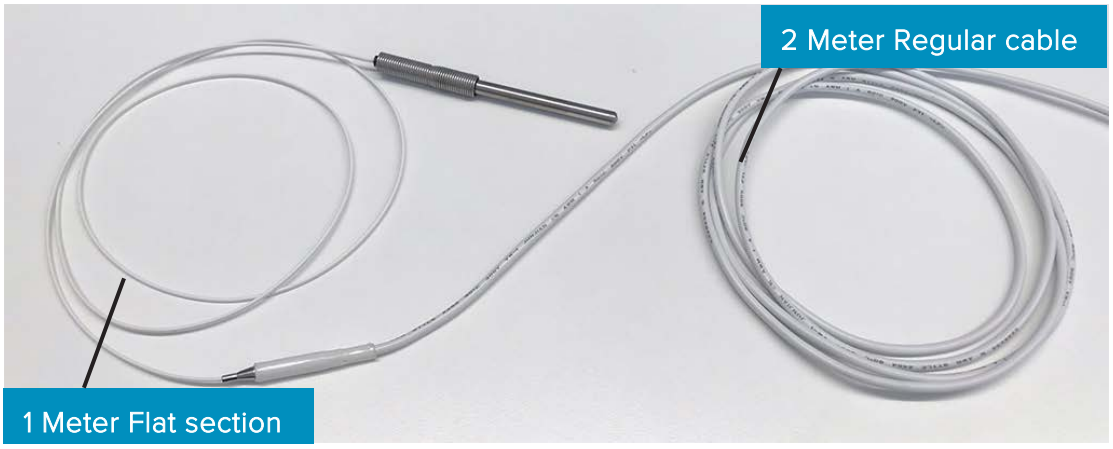
Place the tag at an angle into the mounting cradle and make sure it clicks in place:

Removing the Tag from the Cradle

Push the mounting cradle's clip up and remove the tag:

Mounting the Tag and Temperature Probe

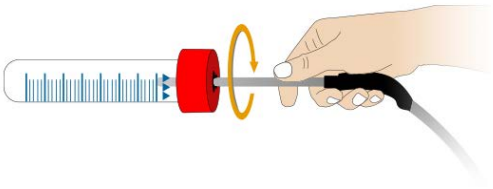
The 3 meter Temperature Probe cable has been designed with a 1 meter Teflon flat section. The flat section enables the cable to be easily fed through a fridge's or freezer's door seal, and helps prevent wear and tear to the cable.



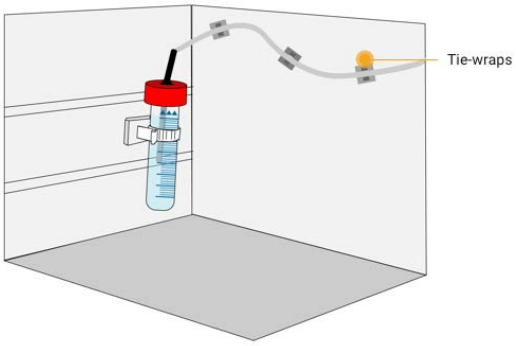
1. Mount the tag on the outside of the unit or in another location close to the unit.

2. Feed the Probe part of the cable (flat section) through the fridge or freezer door seal.

3. Immerse the Probe slowly into the plastic glycol vial's cap, by turning it until the Probe's spring makes contact with the vial's cap. Fill the vial with Propylene Glycol after the probe is inserted.



4. Mount the vial in the fridge or freezer accordingly. The vial can be mounted with Velcro, tie-wraps, double-sided tap or the supplied tube holder.



5. Use the supplied cable tie mounts to attach the cable to the surface, to prevent it from becoming loose or being moved.

Installing the Contact Sensor

The supplied 3m Contact Sensor can be used to monitor the opening and closing of the monitored fridge or freezer door.

Install the Contact Sensor accordingly. **Note:** The placement of the Contact Sensor will vary.

Using the T15e Tag

Muting/Unmuting the Tag Button Sound

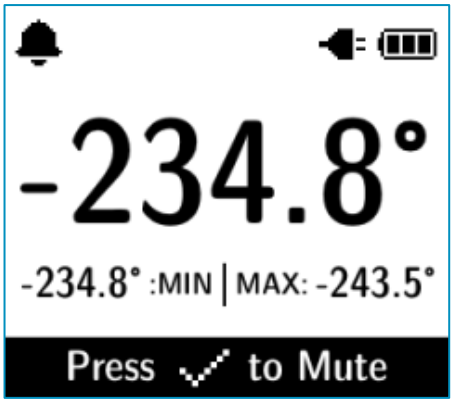
The tag button sound can be muted or unmuted by pressing the button under the speaker icon.

Changing the Temperature Conversion

The tag can display the temperature in either Celsius or Fahrenheit. To change the temperature conversion, press the button under the conversion icon.

Muting an Alarm

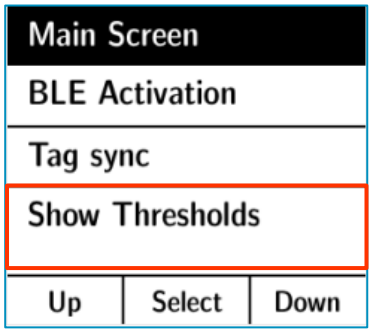
The tag has a local alarm which will sound if the configured temperature values are out of range. The alarm can be muted by pressing the main button.



Show/Hide Thresholds

You can choose to either show or hide the temperature thresholds on the main screen by doing the following:

1. Press the **Select** button to access the menu.
2. Navigate to the '**Show/Hide Thresholds**' option using the arrow buttons .



3. Press the **Select** button.

Performing an Audit – Manual Inspection

For VFC deployments, the CDC requirements include performing a manual inspection of the device twice a day (12 hours apart) to verify that it is operating normally. This activity is called an "Audit."

Pressing and holding the main button for three to five seconds displays '**Audit report has been recorded successfully**'. This validates the inspection in accordance with CDC requirements. The operation is also logged by the tag and is sent to MobileView along with the current temperature, and the Minimum and Maximum Temperature values recorded since the last Audit. The Min and Max measurement values of the last audit are also renewed.

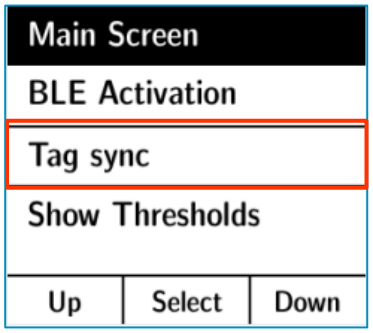
Performing a Manual Sync with MobileView

If the tag has been setup to associate with MobileView via Bidirectional communication, a manual sync can be performed from the tag itself at any time. Typically a sync with MobileView is automatically performed every 24 hours.

If changes to the tags configuration have been made in MobileView, you can you perform an immediate sync from the tag by doing the following:

1. From the tag itself, press the **Select** button to access the menu.

2. Navigate to the '**Tag Sync**' option using the arrow buttons.



3. Press the **Select** button.

4. A Bidirectional sync session will be initiated with MobileView. This will be indicated by the 'BD in Process' icon .

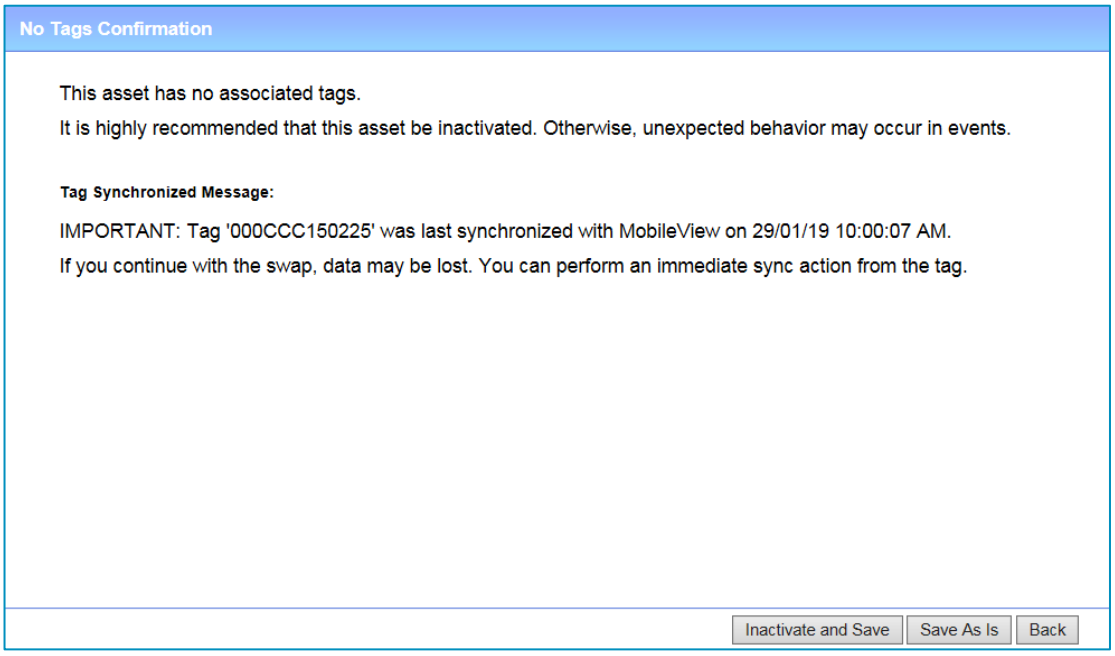
Updating Tag Firmware

Tags that are setup to associate with MobileView can have their Firmware updated via a Bidirectional session by doing the following:

1. From **Tags** tab in MobileView, click on the **Tag Configuration** icon .
2. From the **Repository** tab, upload the new Firmware and then click **Save**.
3. Select the **Firmware Selection** tab.
4. Select the required firmware for the T15e Tag.
5. Click **Save**.
6. Tag firmware will be updated during the next BD session. You can initiate an immediate sync by following the steps in the *Performing a Manual Sync with MobileView* section.

Swapping or Removing Inactive Tags in MobileView

When swapping or removing inactive tags in MobileView, data may be lost. Additionally, the tag's Local Alarm will be deactivated and the tag's configured threshold vales will be deleted. It is therefore recommended to perform a manual sync from the tag before swapping or removing. See *Performing a Manual Sync with MobileView*.



LED and Buzzer Indications

The tag has 3 LEDs and a buzzer for indications:

The following table explains the tag's LED and buzzer indications:

Action	Buzzer	LED #	LED	LED Color
Activation	Long beep	LED 3	3 blinks	Blue
Local Temperature Alert	Alarm tone	LED 2	Blinks	Red
Alert Dismiss	Long beep	LED 2	LED stops blinking	-
External Power Connection	Short beep	LED 1	LED turns on	Blue
External Power Disconnection	Long beep	LED 1	LED turns off	
Muting Buzzer	Short beep	LED 3	1 Blink	Blue
Un-Muting Buzzer	Short beep	LED 3	1 Blink	Blue
Changing Temperature Unit	Short beep	LED 3	1 Blink	Blue
Menu Option Selection	Long beep	LED 3	1 Blink	Blue
Audit	Audit tone	LED 3	3 Blinks	Blue
Low Battery	-	LED 2	Blinks	Yellow
Make Tag Blink	-	LED 3	Blinks	Blue

MobileView Battery & Power Indications

MobileView provides the following power indications the T15e Tag:

External Power	Battery Powered	Icon	Description
Plugged in	Yes		**Battery + Power** Tag battery full.
			Battery + Power Tag battery medium.
			Battery + Power Tag battery low.
Plugged in	No		**Power - No Batteries**
Disconnected	Yes		**Battery Only** Tag battery full.
			Battery Only Tag battery medium.
			Battery Only Tag battery low.

Replacing the Batteries

The tag is supplied with 2x 1.5V Alkaline AA batteries. Replace the batteries by opening the battery cover. The tag retains its memory during battery replacements.

Recommended replacement batteries: 2x 1.5V Alkaline AA batteries

WARNING: Risk of explosion if battery is replaced by incorrect type. Used batteries should be disposed of according to facility procedures in your jurisdiction.

Reports

The following section explains the T15e Tag MobileView Reports.

The following reports are located in the **Environmental Monitoring** > **Reports** tab.

Battery Level Report

This report shows the history of the tag's battery level. Additionally the **Battery / PWR** column shows if the tag is being powered by an external power source.

Not PWRD indicates that the tag is running on battery power only.

PWRD indicates that the tag is using an external power source and battery.

Tag ID	Tag Model	Asset Name	Category	Battery / PWR	Last Report Date	Last Battery Replacement Date	Estimated Remaining Battery Capacity (%)	Estimated Remaining Battery Life	Estimated Replacement Date
000CCC11E9DB	T2s	Unattached tag		High	23/01/19 5:29:04 PM		97.0		
000CCC11EB88	T2s	Unattached tag		High					
000CCC11F501	T2s	Unattached tag		High					
000CCC11F570	T2s	Unattached tag		High					
000CCC150202	T15	Unattached tag		High / Not PWRD	23/01/19 5:23:26 PM				
000CCC150221	T15	Unattached tag		High / Not PWRD	23/01/19 5:31:19 PM				
000CCC150225	T15	000CCC150225	0_T15	High / Not PWRD	23/01/19 5:30:57 PM				
000CCC150228	T15	000CCC150228	0_T15	High / Not PWRD	23/01/19 5:30:49 PM				
000CCC150235	T15	Unattached tag		High / Not PWRD	23/01/19 5:30:46 PM				
000CCC15023E	T15	Unattached tag		High / Not PWRD	23/01/19 5:30:42 PM				
000CCC150240	T15	000CCC150240	0_T15	High / Not PWRD	23/01/19 5:31:25 PM				
000CCC150244	T15	000CCC150244	0_T15	High / Not PWRD	23/01/19 5:29:48 PM				
000CCC150248	T15	Unattached tag		High / Not PWRD	23/01/19 5:13:51 PM				
000CCC3002A8		Unattached tag		High					
000CCC3002B4		Unattached tag		High					
000CCC3002C5		Unattached tag		High					
000CCC3002D0		Unattached tag		High					

23/01/19 5:31:33 PM Page 20 of 31

VFC Audit Report (and offline data)

This report is used to show the VFC Audit history (BD and UD deployments) and offline data. Offline data (BD deployments only) is data that was not uploaded to MobileView in real-time (due to network failures) and was uploaded during a BD session or a manual sync.

Offline data is indicated with an asterisk (*).

VFC Audit Report

STANLEY Healthcare

Report run by: MobileView Admin, 23/01/19 5:44:23 PM

Signed By:

Period: 16/01/19 5:45:00 PM - 23/01/19 5:44:22 PM

Category: 0_T15, T15 Tag

* This report contains offline data, The reports which are marked with an asterisk were logged and processed offline.

Audit Time	Asset Name	Last Reported Temperature (°C)	Min Reported Temperature (°C)	Max Reported Temperature (°C)	Current Location
*17/01/19 4:13:40 PM	000CCC150225	136.9	136.88	137.16	AS Building/Floor 6/Floor6 - MV Side1
17/01/19 4:16:53 PM	000CCC150225	136.9	136.9	136.9	AS Building/Floor 6/Floor6 - MV Side1
17/01/19 4:21:08 PM	000CCC150225	-200.24	-200.24	138.95	AS Building/Floor 6/Floor6 - MV Side1
17/01/19 4:22:43 PM	000CCC150225	-200.21	-200.24	-200.21	AS Building/Floor 6/Floor6 - MV Side1
17/01/19 4:23:16 PM	000CCC150225	-200.24	-200.24	-200.21	AS Building/Floor 6/Floor6 - MV Side1
17/01/19 4:25:39 PM	000CCC150225	-200.24	-200.24	-200.22	AS Building/Floor 6/Floor6 - MV Side1
17/01/19 4:29:24 PM	000CCC150225	-200.24	-200.24	-200.24	AS Building/Floor 6/Floor6 - MV Side1

Temperature History Report

This report retrieves historical data, showing the temperature read from an asset during a given period.

Date	Temperature (°C)	Location	Tag ID
10/12/18 4:30:18 PM	22.64	AS Building/Floor 6/Floor6 - MV Side1	000CCC150231
10/12/18 2:56:38 PM	25.48	AS Building/Floor 6/Floor6 - MV Side1	000CCC150231

Total number of results: 2

Condition Monitoring Audit (and offline data)

This report provides a history of temperature readings, and contact sensor values, over time for a group of assets. The report shows detailed data for each asset separately. Additionally, the report supports Offline data.

Offline data (BD deployments only) is data that was not uploaded to MobileView in real-time (due to network failures) and was uploaded during a BD session or a manual sync.

Offline data is indicated with an asterisk (*).

Condition Monitoring Audit

STANLEY Healthcare

Report run by: MobileView Admin, 12/12/18 10:33:10 AM

Signed By:

Period: 09/12/18 12:05:00 AM - 12/12/18 10:33:09 AM

Asset: Kevin T15 Tag

Condition Type: Temperature

Assets located in: Any Location

* This report contains offline data, The reports which are marked with an asterisk were logged and processed offline.

Date	Tag ID	Temperature (°C)	Location
Asset Name:	Kevin T15 Tag		
Range:	11.5 °C to 19.0 °C		
Asset ID:	Kevin T15 Tag		
Category:	Blood Fridge		
10/12/18 5:47:57 PM *	000CCC150231	23.53	Not available
10/12/18 5:42:56 PM *	000CCC150231	23.72	Not available
10/12/18 5:37:54 PM *	000CCC150231	23.74	Not available
10/12/18 5:32:29 PM *	000CCC150231	23.89	Not available
10/12/18 5:27:27 PM *	000CCC150231	24.26	Not available
10/12/18 5:22:25 PM *	000CCC150231	24.35	Not available
10/12/18 5:17:23 PM *	000CCC150231	24.34	Not available

Tag Models & Accessories

Models & Accessories	SKU
T15e Tag	TAG-1500-E
T15e Tag with NIST Certification	TAG-1500-E-NIST
External Power for T15e Tag, NA Outlet	ADP-1500-U
External Power for T15e Tag, Europe Outlet	ADP-1500-E
External Power for T15e Tag, United Kingdom Outlet	ADP-1500-UK

Tag Specifications

Environmental Specifications

- **Operating Temperature Range:** 0°C to 50°C (32°F to 122°F)
- **Tag Storage Temperature Range: -**20°C to 60°C (-4°F to 140°F)
- **Humidity:** 0% to 95% RH non-condensing
- **Ingress Protection Rating:** IP-54

Temperature Probe & Monitored Temperature Range

- **Cable Length**: Total 3m (2m ~4mm diameter PVC cable with 1m thin Teflon section 2x1.2mm)
- **Probe Type:** 2 wire waterproof RTD
- **Connector:** USB-C
- **Probe Length:** ~6mm diameter, 70mm length
- **Probe Temperature Measurement Range:** -200°C to +140°C (-328°F to +284°F)
- **Accuracy:** +/-0.5° C (+/-1° F)

Tag Memory

- 64 Mbit Flash memory
- Able to store up to 64.000 temperature readings

Physical and Mechanical

- **Dimensions LWH**: 114 x 77 x 20.3mm (4.4 x 3 X 0.8inch)
- **Weight**: 150g (5.3oz) with batteres

Connectors

- 3 x USB-C Multi-purpose connectors

Electrical

- **Battery**: 2 x 1.5V Alkaline AA replaceable batteries
- **External Power (USB-C Interface):** 5V/1A Adapter (Optional)
  ATTENTION: *The AC/DC adaptor must be safety approved according to IEC/EN/UL 60950-1 with a rated voltage of 5Vdc and rated current up to 3A maximum.*

Display

- E-ink

Audio and Visual Indications

- **Audio:** Buzzer- 85dBA@10cm
- **LEDS**: 3 dual-color LEDS

Radio

- **Transmission power**: up to +19dBm (~81mW)
- Patented clear channel sensing avoids interference with wireless networks

Range

- **Outdoor range:** Up to 200m (650 feet)
- **Indoor range:** Up to 80m (260 feet)

Communication

- **BLE (Bluetooth Low Energy):** BLE 5.0 [2.402 GHz — 2.480 GHz (2.4GHz bands)]
- **Wi-Fi:** 802.11 radio (2.4 GHz); b/g/n compliant

Wi-Fi Security Modes

- Open, non-encrypted
- WPA2-PSK(AES)
- 802.1x Enterprise security (PEAP-MSCHAPv2)

Logging Rates

- 5 minutes, 15 minutes, 30 minutes and 60 minutes

Contact Sensor Cable

- **Cable Length:** 3m ~4mm diameter PCV
- **Connector:** USB-C
- **Inputs**: Single normally open (NO)

Certification

- **Radio, EMC:**

  FCC Part 15 Subpart C, Subpart B, RSS-247, ICES-003 Issue 6
  EN 300-328 V2.1.1:16, EN 301-489-17 V3.2.0, EN 301 489-1 V2.2.0
- **Safety:**

  CE, cTUVus

  IEC 62368-1:2014 (Second Edition)
  IEC 60950-1:2005 (Second Edition) + A1:2009 + A2:2013
  IEC 60950-1:2005/AMD1:2009
  IEC 60950-1:2005/AMD2:2013

Regulatory Compliance and Warranty

FCC

Suppliers Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Unique Identifier:	T15e
Responsible Party:	Stanley Security Solutions Inc STANLEY Healthcare Div. 4600 Vine Street Lincoln NE 68503
Telephone:	(888) 622-6992
FCC Compliance Statement:	47 CFR Part 15, Class A Digital Device

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including any interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada—Innovation, Science, and Economic Development Canada

This device contains licence-exempt transmitter(s)/receiver(s) that comply with the Innovation, Science, and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

RoHS

RoHS Directive – 2011/65/EU

CE Conformance

IEC 60950-1:2005, IEC 60950-1:2005/AMD1:2009, IEC 60950-1:2005/AMD2:2013, IEC 62368-1:2014

EN 301 489-1:V2.2.0

EN 301 498-17:V3.2.0

EN 300 328 V2.1.16

Warranty

STANLEY Healthcare ("STANLEY") Standard Warranty and Disclaimer
For STANLEY Healthcare AeroScout® Products ("Products")

Limited Warranty and Disclaimer. STANLEY warrants that commencing from the date of delivery to Customer and continuing for a period of one (1) year thereafter (the "Warranty Period"), the hardware components of STANLEY Healthcare AeroScout® Products (the "Hardware") will be free from defects in material and workmanship under normal use subject to the terms hereof. The date of shipment of the Hardware by STANLEY is set forth on the packaging material in which the Hardware is shipped. This limited warranty extends only to the original user of the Hardware. Customer's sole and exclusive remedy and the entire liability of STANLEY and its suppliers under this limited warranty will be, at STANLEY's or its service center's option, shipment of replacement Hardware components within the Warranty Period or a refund of the purchase price if the Hardware is returned to the party supplying it to Customer, if different than STANLEY, freight and insurance prepaid. STANLEY replacement parts used in Hardware repair may be new or equivalent to new, and STANLEY reserves the right to provide replacement Hardware components of similar form and function, as long as the functionality is equal or better than Customer's original Hardware components. STANLEY's obligations hereunder are conditioned upon the return of affected Hardware in accordance with STANLEY's then-current Return Material Authorization (RMA) procedures. Notwithstanding the foregoing, the warranty for TAG Hardware specifically designated for sterilization via autoclave or other sterilization methods shall have a warranty period of 350 sterilization cycles from the date of delivery; provided, however, that sterilization outside of environmental specifications approved in any applicable user documentation voids all warranties.

Extended Warranty: STANLEY offers an extended warranty, for a fee, on AeroScout products. Within the one (1) year of the standard warranty, additional warranty of two (2) years may be purchased. Additional warranty years may only be purchased once within the first one (1) year, or prior to warranty expiration. A maximum of three (3) total warranty years are available for Hardware.

Exclusions: The warranty set forth above will not apply if the Hardware or the Product (i) has been altered, except by STANLEY, (ii) has not been installed, operated, repaired, or maintained in accordance with instructions supplied by STANLEY, (iii) has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident; or (iv) is provided for beta, evaluation, testing, or demonstration purposes for which STANLEY does not receive a payment of purchase price or license fee.

In addition, this warranty shall not cover the following:

- Batteries (other than DOA -Dead On Arrival).

- Plastics (including defects in appearance, cosmetics, decorative or structural items including framing and non-operative parts).
- Tag Calibration.
- Expenses related to removing or reinstalling the Products.
- Defects or damage that result from the use of Non-STANLEY certified Products, Accessories, Software or other peripheral equipment.
- Defects or damages resulting from service, testing, adjustment, installation, maintenance, alteration, or modification in any way by any party other than STANLEY, or its authorized service partners.
- All software contained in or otherwise part of STANLEY Healthcare AeroScout® Products, which is covered by STANLEY's separate software warranty contained in the separate software license agreement with respect to such Products.

The warranty set forth above shall not be enlarged and no obligation or liability shall arise out of STANLEY's rendering of technical advice, facilities or service in connection with Customer's purchase of the STANLEY Healthcare AeroScout® Products.

Except for the foregoing warranties, which shall be the exclusive warranties with respect to any Products, STANLEY MAKES NO WARRANTY OR REPRESENTATION OF ANY KIND, EXPRESS OR IMPLIED, WRITTEN OR ORAL, REGARDING INFORMATION GIVEN OR THE PRODUCTS OR SERVICES SUPPLIED AND EXPRESSLY DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES, REPRESENTATIONS AND CONDITIONS, INCLUDING WITHOUT LIMITATION ALL WARRANTIES AND CONDITIONS OF QUALITY, NON-INFRINGEMENT, MERCHANTABILITY AND SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE TO THE EXTENT PERMITTED BY LAW. STANLEY WILL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT OR PUNITIVE DAMAGES FOR ANY CAUSE OF ACTION, WHETHER IN CONTRACT, TORT OR OTHERWISE. Consequential, incidental and indirect damages include, but are not limited to, lost profits, lost revenue and loss of business opportunity, whether or not STANLEY was aware or should have been aware of the possibility of these damages.

About STANLEY Healthcare

Over 15,000 hospitals and senior living communities rely on STANLEY Healthcare solutions to empower caregivers to deliver better care. STANLEY Healthcare is a part of Stanley Black & Decker and a proud supporter of the Alzheimer's Association®. Learn more at stanleyhealthcare.com.

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