HID® Reader Manager™ App

User Guide (iOS)

PLT-03683, B.7
February 2023

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Contacts

For technical support, please visit: **https://support.hidglobal.com**.

What's new

Date	Description	Revision
February 2023	Section A.1.3 HID Signo readers. Updated supported reader firmware information for 10.0.4.2.	B.7

A complete list of revisions is available in **Revision history**.

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Section 01

Introduction

1.1 Document purpose

This document provides an overview of the HID® Reader Manager™ solution and provides information for Technicians to manage supported HID Mobile Access readers using the HID Reader Manager app on iOS compatible devices.

1.2 Intended audience

This document is intended for Reader Manager Technicians performing the following tasks:

- Create and manage reader configuration templates.
- Locate, inspect, configure, and upgrade supported HID Mobile Access readers.
- Upgrade supported Mobile-Capable HID iCLASS SE/multiCLASS SE readers with Bluetooth Low Energy modules.

1.3 HID Reader Manager solution overview

The HID Reader Manager solution streamlines management of readers in the field. Reader Manager Technicians can easily adjust certain configuration settings, upgrade firmware, inspect connected reader status, and extend functionality on supported HID Mobile Access readers.

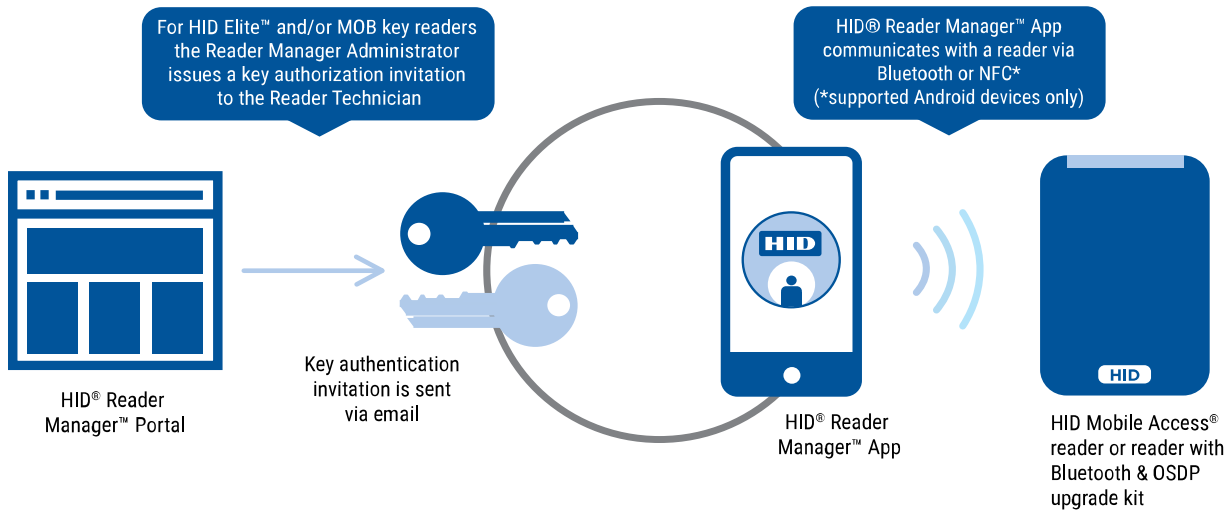
The main components of the HID Reader Manager solution are:

- **HID Reader Manager service:** All organizational accounts setup on the HID® Origo™ Management Portal have access to the Reader Manager service by default. The service facilitates Reader Technicians to use the HID Reader Manager App with readers that have HID Elite™ and/or MOB keys. The Reader Manger service is used by HID Elite and/or MOB key administrators to issue Key Authorization to authorized Reader Technicians.

  > **Note:** The HID Reader Manager App can be used to configure Standard Key readers, however authorization within the Reader Manager service is not required for these readers as they do not use HID Elite and/or MOB keys.

- **HID Reader Manager Application:** Mobile app which connects, via Bluetooth, to a reader for configuration changes, firmware upgrades and reader inspections by Reader Technicians.
- **HID Mobile Access readers:** HID® Signo™ readers, the HID iCLASS SE® Express R10 reader, and supported HID iCLASS SE®/multiCLASS SE® readers.

  > **Note:** HID iCLASS SE/multiCLASS SE, Rev E readers that do not already have Bluetooth/OSDP capability can be upgraded to support these technologies via HID iCLASS SE Bluetooth & OSDP upgrade kits. For more information, refer to the **Reader upgrade** section.



1.3.1 Mobile Access setup

An account is created for an organization through a HID Global onboarding process. During this process, HID Global will set up an account on the HID® Origo™ Management Portal for the organization. Once the account is created and the organization is setup in the system, org administrators can log into the portal (**https://portal.origo.hidglobal.com**) and have access to the Mobile Identities service and the Reader Manager service.

- The Mobile Identities service allows organization administrators to order and purchase subscription user licenses or Mobile IDs through your Access Control Provider, manage their organizations Mobile Access users, and issue and revoke Mobile IDs to user's mobile devices.
- The Reader Manager service allows administrators to enroll and manage Reader Technicians, issue/revoke authorization keys, and carry out Reader Manager service administration. For more information refer to the *HID Reader Manager Portal Administration Guide* (PLT-06368).

1.3.2 Automated onboarding

For organization in the HID Elite Security Program, automated onboarding is an online self-registration process where an organization can setup up an account for the HID Origo Management Portal. Automated onboarding provides instant onboarding and simplifies the ordering process.

To create a HID Origo Management Portal account via the automated onboarding process, go to the Management Portal (**https://portal.origo.hidglobal.com**) site, click **CREATE ACCOUNT**, and enter your organization details.

Once the onboarding process and registration is complete you will be taken through a guided tour of the HID Origo Management Portal, together with the option to enable a free of charge trial subscription.

> **Note:** Organizations that wish to register for the HID Elite Security Program (the most advanced level of card to reader security available, with unique authentication keys for each customer) are required to go though a formal enrollment and acceptance by HID Global. For additional information refer to the *HID Readers and Credentials How to Order Guide* (PLT-02630).

1.4 Reader and Mobile device compatibility

1.4.1 Readers

The HID Reader Manager solution is compatible with HID Signo readers, the HID iCLASS SE Express R10 reader, and HID iCLASS SE/multiCLASS SE Rev E readers (via NFC and/or Bluetooth Smart). While most firmware versions of HID iCLASS SE and multiCLASS SE Rev E readers are compatible you will need to verify this, even if the reader is "Mobile-ready" or "Mobile-enabled". For details on supported firmware versions, refer to the **Reader upgrade** section.

1.4.2 Mobile devices

The HID Reader Manager application is compatible and available for Android and iOS mobile devices. As more supported devices are added with new releases you will need to check for version compatibility at:

https://www.hidglobal.com/reader-manager-system-requirements

Section 02

HID Reader Manager setup

2.1 Overview

This section provides the required steps and procedures to be performed by the Reader Technician in order to install, register, and activate the HID® Reader Manager™ app on a supported mobile device.

The HID Reader Manager app setup process consists of the following steps:

1. The Reader Technician downloads and installs the HID Reader Manager app onto a supported mobile device. See **Download and install the Reader Manager app**.

   > **Note:** For the list of mobile devices compatible with the latest version of the HID Reader Manager App, refer to: https://www.hidglobal.com/reader-manager-system-requirements

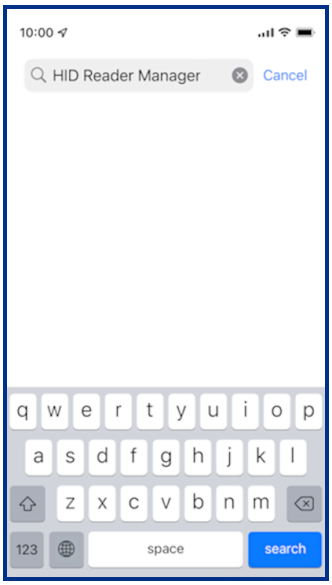
2. The Reader Technician performs registration with the HID Reader Manager app. See **Register a new account within the app**.

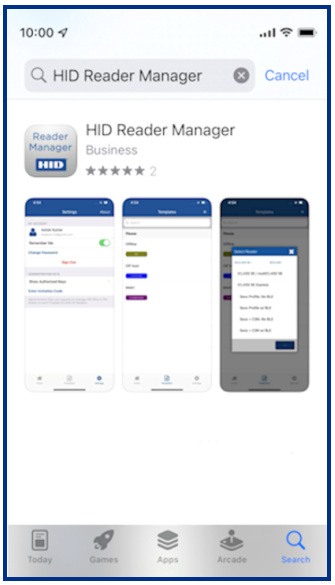
The following additional setup steps are required for HID Elite or Mobile (MOB) key users:

1. The Reader Manager Administrator enrolls the Reader Technician using the Reader Manager service and issues an invitation code and key authorization. See the *HID Reader Manager Portal Administration Guide* (PLT-06368).
2. The Reader Technician activates the issued invitation code in the HID Reader Manager app. See the **Register a new account within the app** section.
3. The Reader Technician verifies key authorization has been received in the HID Reader Manager app. See the **Display authorized keys** section.

2.2 Download and install the Reader Manager app

1. Ensure your iOS mobile device is connected to the Internet, either via mobile data network or Wi-Fi.
2. On your mobile device go to the App Store.
3. Search for **HID Reader Manager**.
4. Download and install the app on your mobile device.



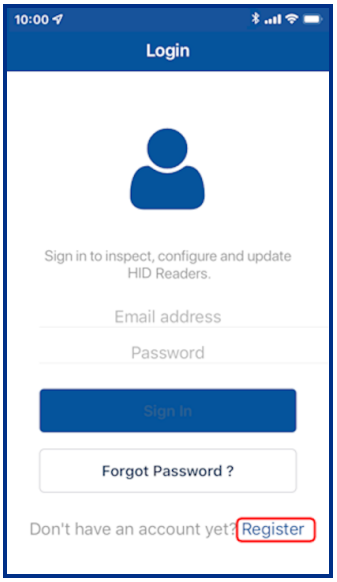


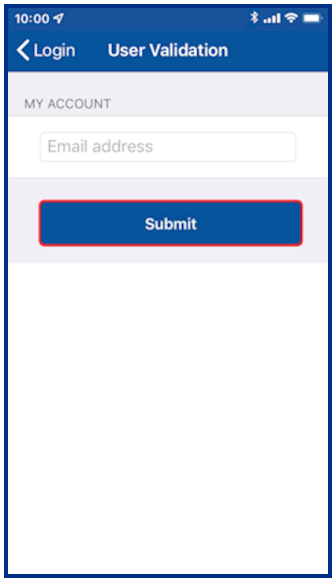
2.3 Register a new account within the app

1. Open the HID Reader Manager app on your mobile device.

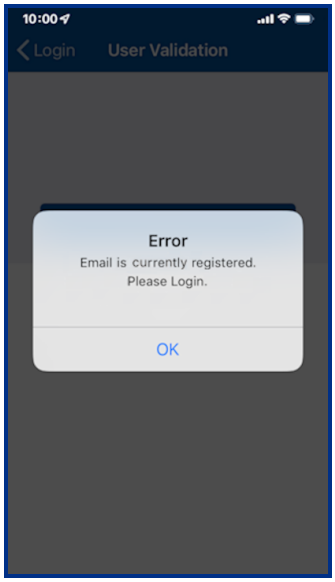
   Note: On the first occurrence of launching the app a **Privacy Notice** is displayed. Read the Privacy Notice content and select **Agree** to continue.

2. On the **Login** screen, tap the **Register** link.
3. On the **User Validation** screen, enter your email address and tap **Submit**.





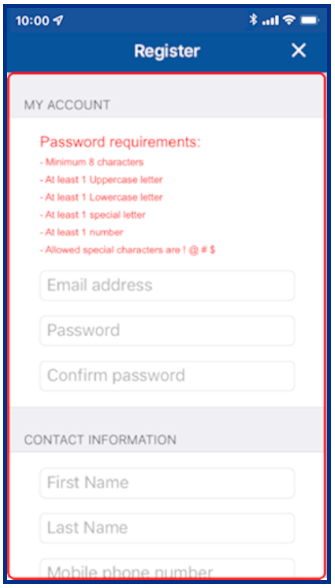
Note: If the entered email address is associated with an existing HID Origo™ Management Portal account (for example, an Org Admin or Reader Manager Admin) or the email address is already registered then the following message is displayed. Tap **OK** to return the **Login** screen and your existing credentials to log into Reader Manager.

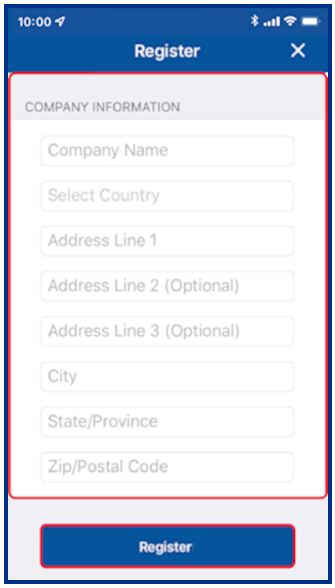


4. On the **License** screen, read the privacy polices and license agreements and tap **AGREE**.

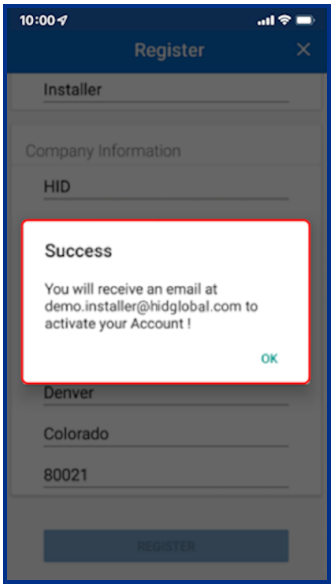
   Note: Tapping **DISAGREE** will return you to the **User Validation** screen.

5. Enter your registration details (optional fields are indicated) and tap **Register**.





6. After receiving a **Success** prompt, tap **OK**.



7. Check your registered email account for a HID Reader Manager email containing an activation link. If you do not receive the HID Reader Manager email within a few minutes of registration, check your Spam or Junk Email folder in case the email was delivered there instead of your Inbox.
8. Open the HID Reader Manager email and click on the activation link included in the email.

   Note: The activation link has an expiry date which is indicated in the email.

9. A successful activation message will appear in a new browser. You can now log into the HID Reader Manager app using the registered email address and password.

2.4 Log into HID Reader Manager

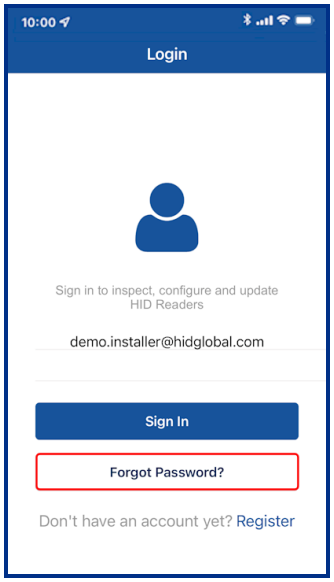
When the account registration process has been completed you can log into the HID Reader Manager app. On the **Login** screen enter the email address and password details provided during registration and tap **Sign In**.

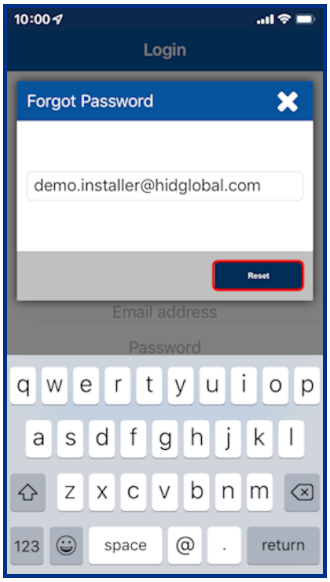
> **Note:** If the user account is inactive you are prompted to complete the registration process by activating the link in the initial registration email.

2.4.1 Password reset

If you have forgotten your password, on the **Login** screen, tap **Forgot Password?**. Enter your email address and tap **Reset**. Your password will be reset via the HID Origo Management Portal therefore check your registered mail account for a password reset email.

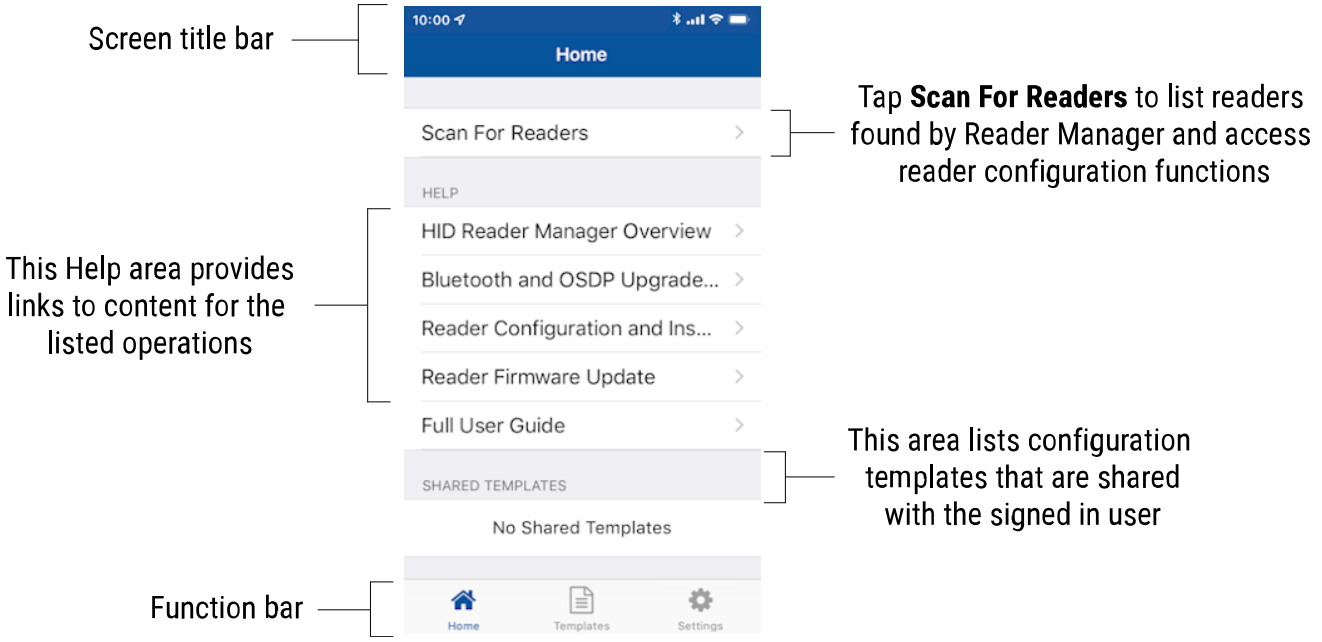
> **Note:**
> - If the login credentials are associated with an Org Admin or Reader Manager Admin then the password can only be reset from within the HID Origo Management Portal.
> - A user account is locked after eight invalid/unsuccessful login attempts. If this occurs use the **Forgot Password** option in the HID Origo Management Portal to regain access to the account.
> - HID Reader Manager does not support multiple accounts on a single device.





2.4.2 Home screen layout

The following provides a description of the HID Reader Manager App **Home** screen.



2.5 Authorization Keys in HID Reader Manager

HID Reader Manager uses key authorization to:

- Securely connect and control access by the mobile app to HID Signo readers, the HID iCLASS SE Express R10 reader, and HID iCLASS SE/multiCLASS SE readers using either of two keyset types:
  - Mobile (MOB####): Issued for HID Mobile Access credentials only.
  - HID Elite (ICE####): Issued for HID Elite physical and/or HID Mobile Access credentials.
- Securely pair the readers and credentials to ensure only matching secure pairs will communicate with each other.

Each key is specific to the individual customer and are issued when enrolling into either the HID Mobile Access or HID Elite credential programs.

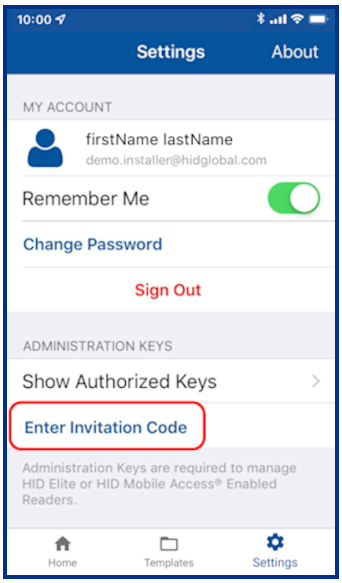
> **Note:** Access to authorization keys must be carefully controlled to ensure only authorized personnel have configuration access to readers and to prevent keys being used and loaded onto unauthorized readers.

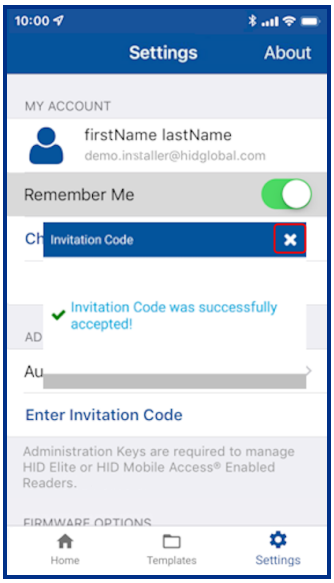
Prior to an Administrator issuing Authorization Keys, the Reader Manager Administrator must enroll the Reader Technician within the HID Reader Manager service. Once the Reader Technician has been enrolled an email will be sent to the Technician's registered email address containing an invitation code. To redeem the invitation code:

1. Log into the HID Reader Manager app using your registered email and password.
2. On the **Home** screen, tap the **Settings** icon.
3. Open the invitation email on the device and tap the invitation link. The invitation code will be automatically entered in the Reader Manager App.
   Alternatively, manually enter the invitation code by tapping **Enter Invitation Code** on the **Settings** screen.
4. Tap **Register Device**.

   > **Note:** The invitation code is a one time use code.

   An **Invitation code was successfully accepted!** message will display if the code was valid and entered correctly. Tap **X** to close.





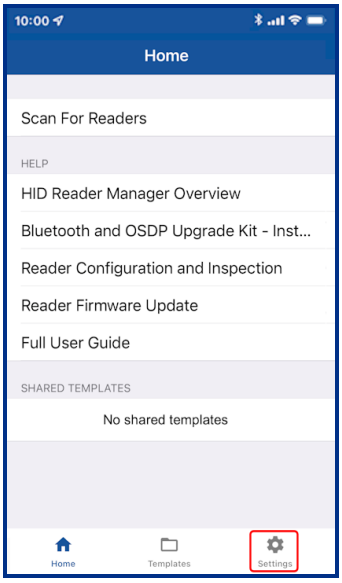
2.5.1 Display authorized keys

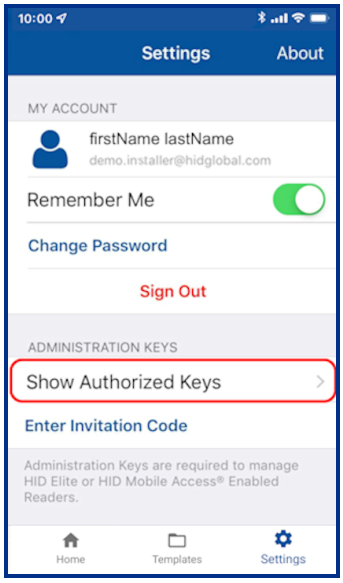
Note: This section does not apply to Standard Key readers as these do not use HID Elite and/or MOB Keys.

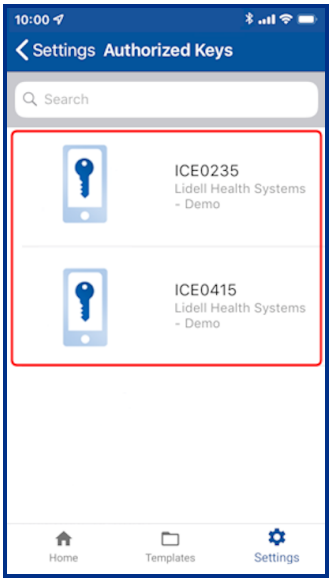
Authorized keys issued via the Reader Manager service can be viewed in the Reader Manager app:

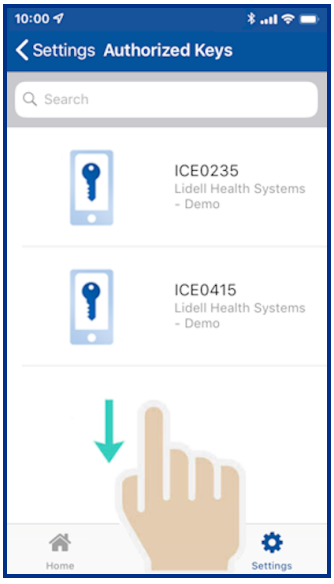
1. On the **Home** screen, tap the **Settings** icon .
2. Tap **Show Authorized Keys** to display authorized keys.

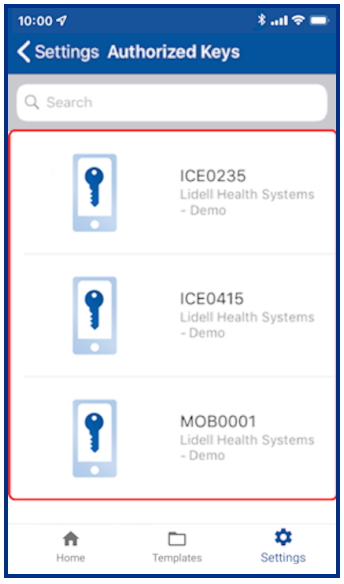
Note: If additional authorized keys are issued they will only be visible after a screen refresh. If an authorized key is not displayed swipe down to refresh the screen.





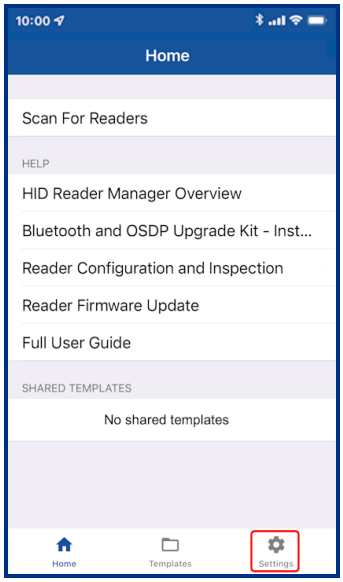


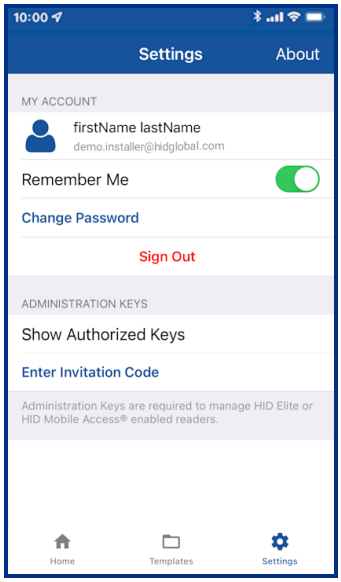




2.6 HID Reader Manager app settings

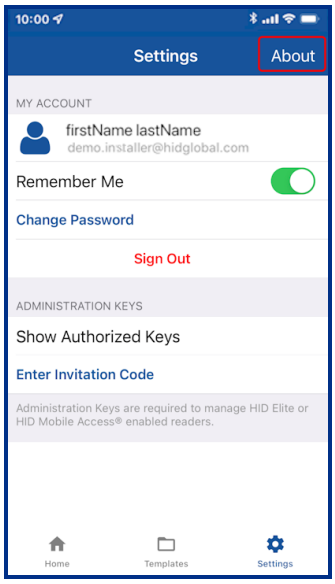
On the **Home** screen, tap the **Settings** icon to access HID Reader Manager app settings.

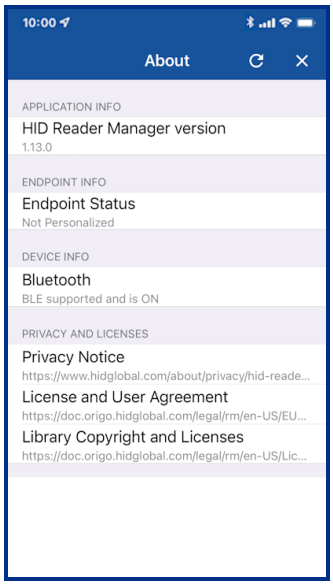




2.6.1 About HID Reader Manager

On the **Settings** screen, tap **About** to display Application, Endpoint, and Device information as well as Privacy and License agreements.





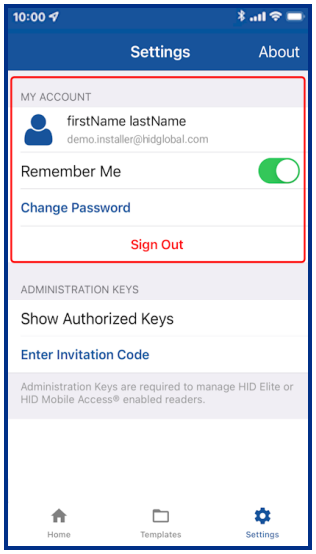
2.6.2 My Account

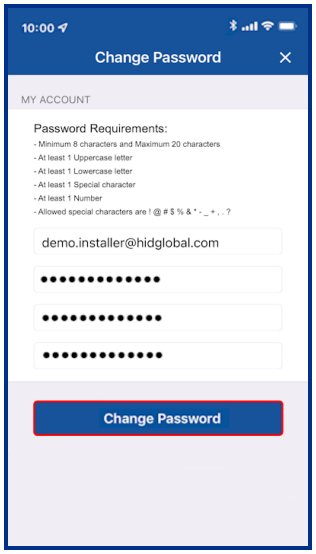
The **MY ACCOUNT** area displays user account information and provides the following options:

- **Remember Me:** enable this option so that the app remembers your account information.
- **Change Password:** tap to access the **Change Password** screen. Enter a new app login password (refer to the on screen password requirements) and tap **Change Password**.

  > **Note:** If the login credentials are associated with an Org Admin or Reader Manager Admin then the password will need to be changed in the HID Origo Management Portal.

- **Sign Out:** tap to exit the app. When signed out of Reader Manager, the user will have to manually enter their email id and password on the login screen to open the app.





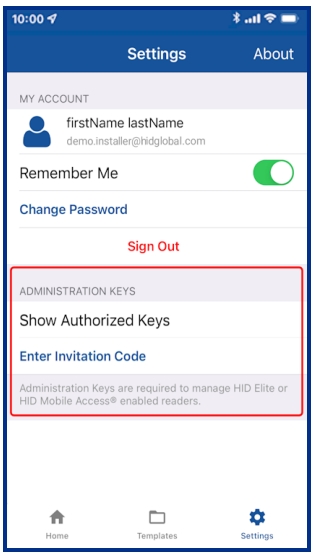
2.6.3 Administration Keys

In the **ADMINISTRATION KEYS** area the following functions are available:

- **Show Authorized Keys:** displays a list of the issued authorized keys.

  > **Note:** Authorized keys are linked to the specific app/device they are issued to. They are not linked to an individual Reader Technician. If a Reader Technician has multiple devices they will require an invitation code/key authorization for each device.

- **Enter Invitation Code:** allows you to enter and redeem the issued invitation code in the app.



Section 03

HID Reader administration

3.1 Overview

The HID Reader Manager App is compatible with the following:

- HID® Signo™ readers.
- HID® iCLASS SE® Express.
- HID® iCLASS SE®/multiCLASS SE® Rev E readers.

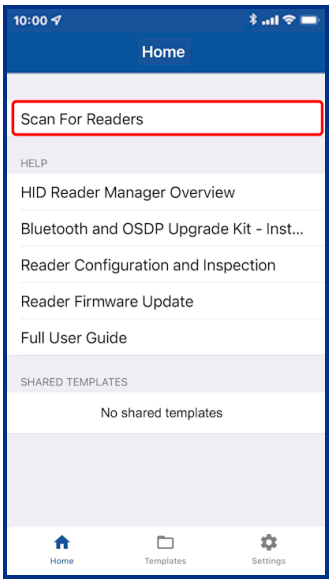
Reader configuration administration with the HID Reader Manager App consists of the following steps:

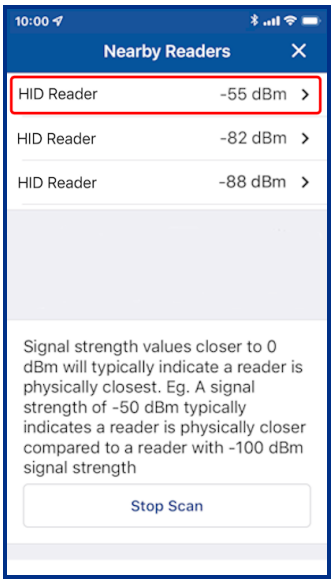
1. **Locate:** Scan, locate, and connect to reader for communication. See **Connect to a reader**.
2. **Inspect:** Examine connected reader hardware, firmware, and configuration details. See **Reader inspection report**.
3. **Configure:** Apply reader configuration changes. See **View detailed reader configuration**.
4. **Upgrade:** Inspect and if necessary upgrade reader firmware. See **Firmware upgrade**.

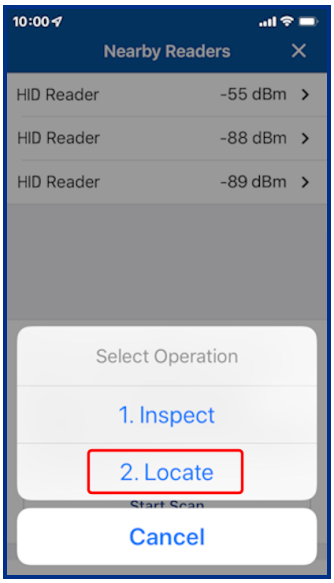
3.2 Connect to a reader

> **Note:** Before attempting to connect to a reader using the HID Reader Manager App, it is recommended you detach the reader from any communication/beeper/LED control lines.

1. On the HID Reader Manager **Home** screen, tap **Scan For Readers**. This will scan for nearby Mobile-enabled or Mobile-ready readers.
2. Select a displayed reader from the **Nearby Readers** screen and, from the **Select Operation** menu, tap **Locate** to ensure the correct reader is selected. The reader will flash and beep for approximately eight seconds.

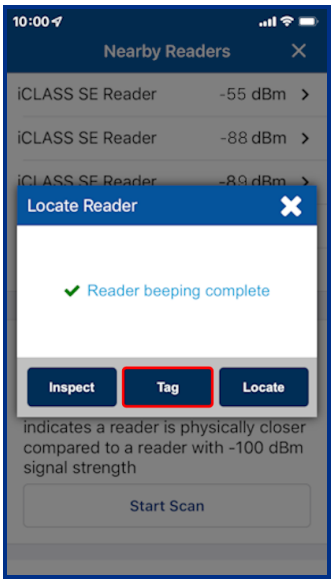


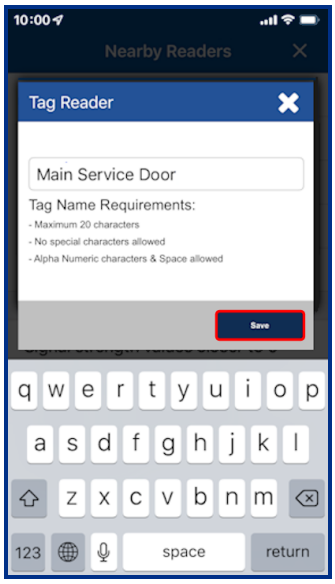


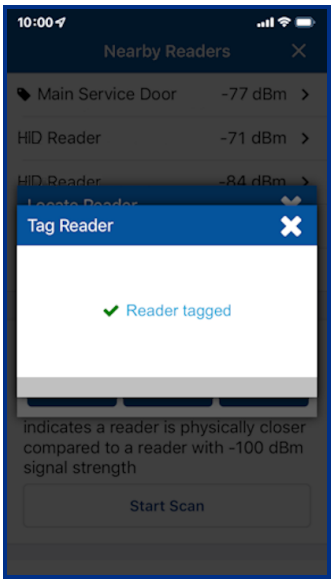


3. If you wish to name the reader for easier identification, tap **Tag**, enter a name (the tagged reader name is only visible on your mobile device), and tap **Save**.

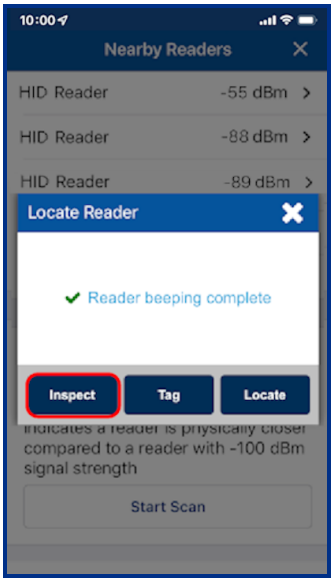
> **Note:** The reader name can be changed whenever necessary using the **Change reader name** option.

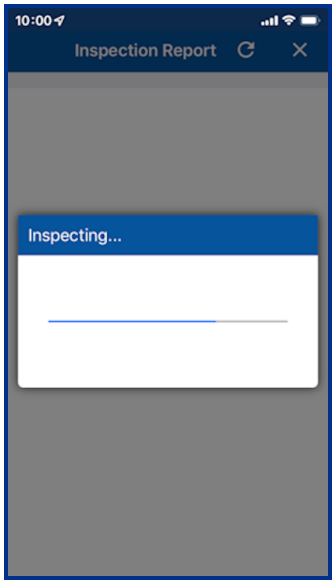


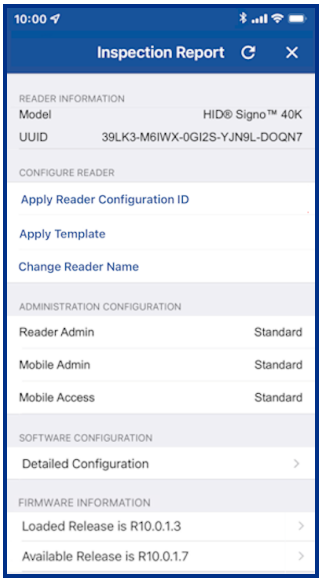




4. Tap **Inspect**. The reader is now connected and reader information is displayed on the **Inspection Report** screen, see **Reader inspection report**.





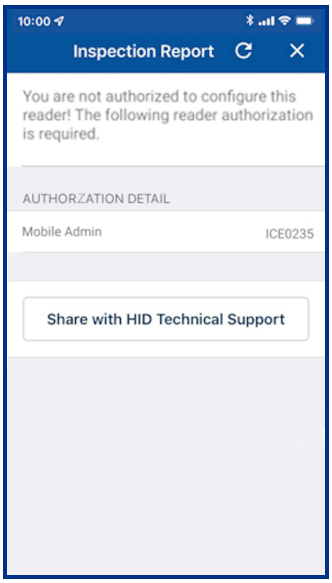


3.3 Reader inspection report

When the reader inspection process is complete the **Inspection Report** screen displays the following configuration details for the connected reader.

- Reader information relating to the Reader Model and UUID (HID Signo readers only)
- Administration configuration information
- Firmware information
- Hardware configuration information

Note: If the Reader Technician does not have authorization for the key loaded in the reader a notification message is displayed along with key authorization details. In order to configure the reader, the Reader Technician must obtain authorization for the key displayed under **AUTHORIZATION DETAIL**.

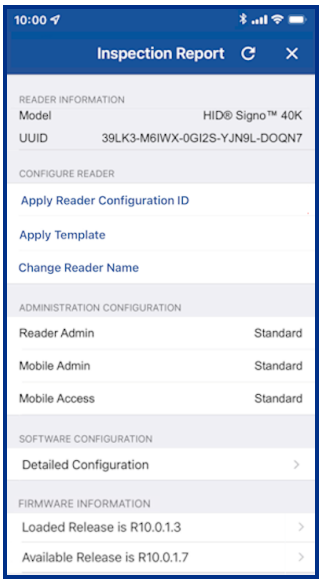


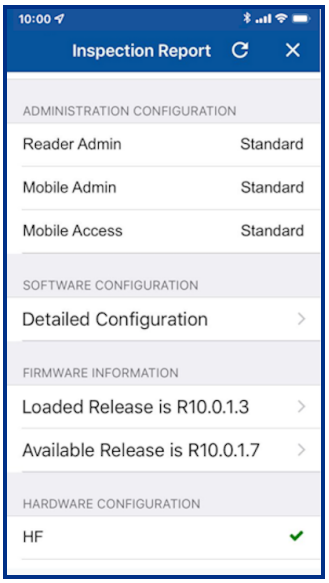
From the **Inspection Report** screen the following can be carried out:

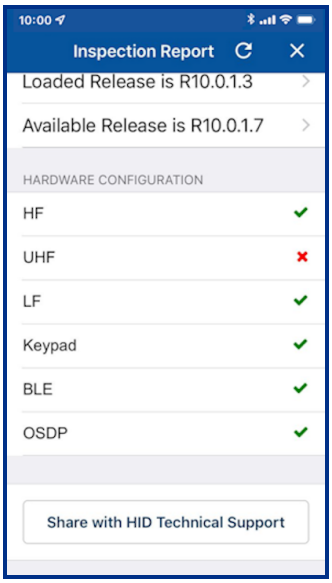
- **Firmware Upgrade:** If prompted perform a reader firmware upgrade or re-install the same version. See the **Firmware upgrade** section.
- **Apply Digital Configuration ID:** For HID Signo readers only, select to apply a Reader Configuration ID (RCID) to the reader. See the **Apply Reader Configuration ID** section.
- **Detailed Configuration:** Select to access detailed reader settings, modify settings and directly apply them to the reader. See the **View detailed reader configuration** section.
- **Configure Reader:**
  - Tap **Apply Template** to select and apply template configuration settings to the reader. See the **Apply a template configuration** section.

    > **Note:** Before applying a template, inspect the reader with the Reader Manager app to determine available configuration settings. Only include valid configurations in the template definition.

  - Tap **Change Reader Name** to assign a name to the reader. See **Change reader name**.
- **Share with HID Technical Support:** Select if you experience an issue while using the application. The issue will be logged in the Incident Reporting System and you will be provided with Incident Id for reference. The Incident Id will need to be quoted when contacting HID Support. For additional information, see **Contact HID Support**.







3.4 Firmware upgrade

On the **Inspection Report** screen you will be notified about any possible firmware upgrade option in the **FIRMWARE UPGRADE** section. It is recommended that optional firmware upgrades are not implemented, other than to resolve a specific issue.

> **Note:** For the list of mobile devices compatible with the latest version of the HID Reader Manager App, refer to: https://www.hidglobal.com/reader-manager-system-requirements

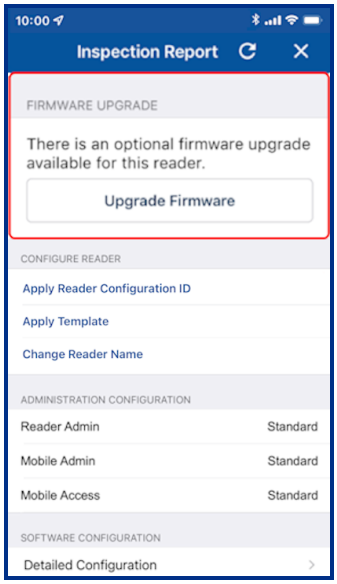
Before starting a firmware upgrade, the following prerequisites/actions are recommended:

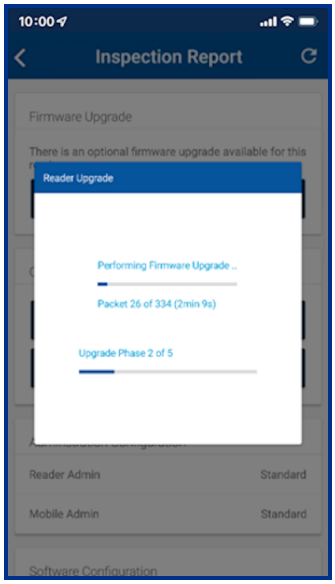
- Disable **Power Saving** mode on the mobile device.
- Ensure the mobile device is fully charged to allow for approximately 15 minutes upgrade per reader.
- Ensure there is good Mobile/WiFi network connectivity (for example, 3 signal bars or more).
- Disconnect any BLE connections to other devices (for example, smartwatch, headphones, keyboards, etc.).
- Only have the Reader Manager App running (ensure you fully close any other open apps).
- If the firmware upgrade is via BLE, and not NFC, it is recommended to disable NFC (if possible) or set the Mobile Access App to **App is in foreground** to prevent mobile credential read attempts.
- During the upgrade process keep the mobile device within a 3 to 5 meter (10 to 16 ft) BLE range.

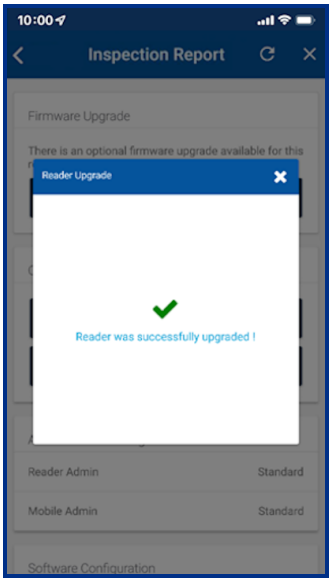
To start the firmware update process, on the **Inspection Report** screen, tap **Upgrade Firmware**.

> **Note:**
> - If the firmware upgrade process fails to start, try power cycling the reader and mobile device, then retry the **Scan**/**Inspect**/**Upgrade** steps.
> - If the firmware upgrade process fails during a phase, try power cycling the reader and ensure the same device is used to resume the upgrade process.
> - If a phase of the upgrade process is interrupted, you can try restarting the process by tapping the **Resume Upgrade** option. The upgrade will automatically resume when connection to the device is restored.

During firmware upgrade the progress of each phase is displayed (the number of upgrade phases may vary depending on the product and firmware release). You are notified when the reader has been successfully upgraded and the reader is automatically re-inspected so that the firmware version can be verified on the **Inspection Report** screen.



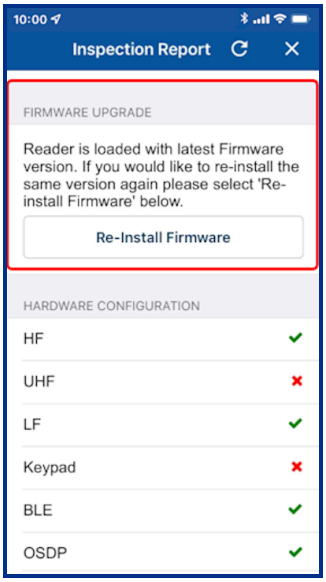




3.4.1 Re-install firmware

If the firmware is already at the latest release then an option to re-install the same firmware version is available.

> **Note:** A re-install of R8.9.1.4 firmware may fail in phase four of the re-install process. If this occurs reader functionality is not affected as the reader is already running R8.9.1.4 firmware.



3.5 Apply Reader Configuration ID

The ability to apply a Reader Configuration ID (RCID) is only available for HID Signo readers and therefore this option is not displayed for other reader models. Currently there are two different RCID formats that can be obtained by contacting your HID Pre-Sales representative:

- **Full Config RCID:** Contains all reader configuration settings and keys.
- **Delta RCID:** Contains a limited number reader configuration settings or one specific reader configuration setting.

Before attempting to apply a RCID to a HID Signo reader, please note the following:

- In order to apply a Full Config RCID, the RCID must match the Reader Admin type (Standard or Elite) and the Reader Credential Profile (Standard, Seos, Smart, or Custom).
- A Delta RCID can be applied to any Reader Admin type (Standard or Elite) with any Reader Credential Profile (Standard, Seos, Smart, or Custom).
- Key rolling via applying a RCID is not supported for Standard to Elite readers or for Elite to Standard readers.
- RCIDs cannot be applied if they have a non-published status or you are not authorized to use the RCID.

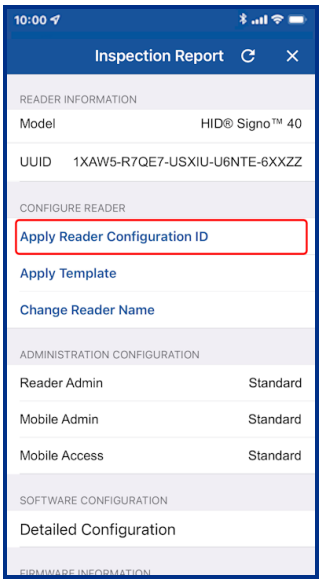
  > **Note:** If the app displays the error message **RCID is not published**, please contact your Pre-Sales representative.

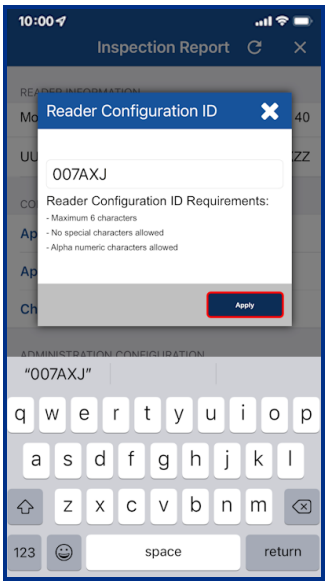
- RCIDs cannot be applied on HID Express readers.

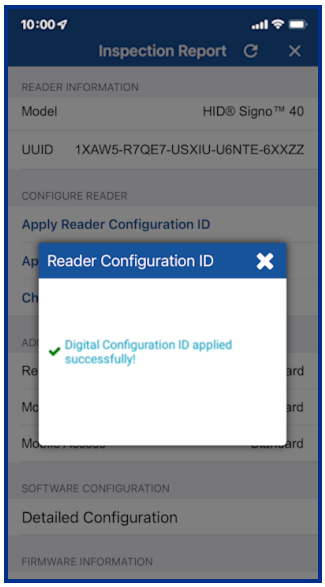
To apply a RCID to a HID Signo reader:

1. On the **Inspection Report** screen, tap **Apply Reader Configuration ID**.
2. Enter the RCID code and tap **Apply**.

   > **Note:** If can take up to minute to fetch and prepare a Full Config RCID.





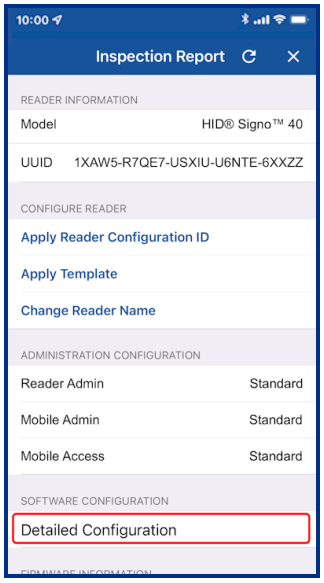


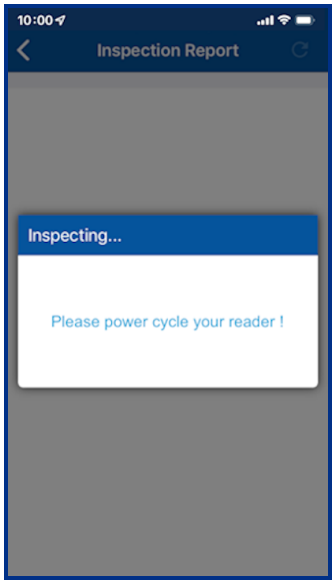
3.6 View detailed reader configuration

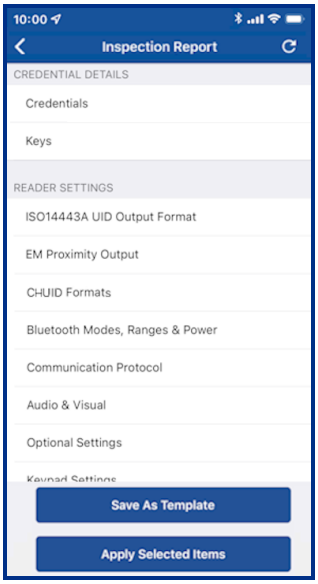
When connected to a reader, on the **Inspection Report** screen, tap **Detailed Configuration** to view and access detailed reader configuration settings.

Note:

- If the reader is a Standard key Mobile-Ready reader or an iCLASS SE Express R10 reader you will be prompted to power cycle the reader.
- If you power cycle the reader from the power source, make sure to keep the mobile device within Bluetooth range to avoid losing connection with the reader.
- For ICE/MOB enabled readers no reader power cycle is required.







3.6.1 Credential details

The **CREDENTIAL DETAILS** section provides options to view the reader profile (for HID Signo reader only), enable/disable credential settings and view/add authorization keys:

- **Credentials:** see the **Credential configuration** section.
- **Keys:** see the **Authorization Keys** section.

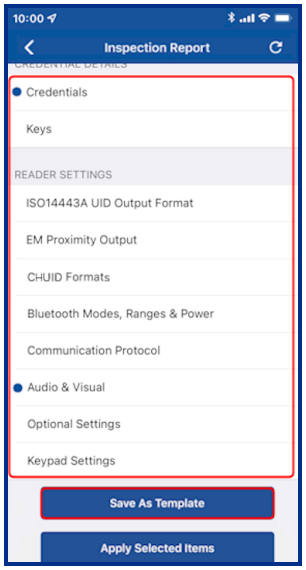
3.6.2 Reader Settings

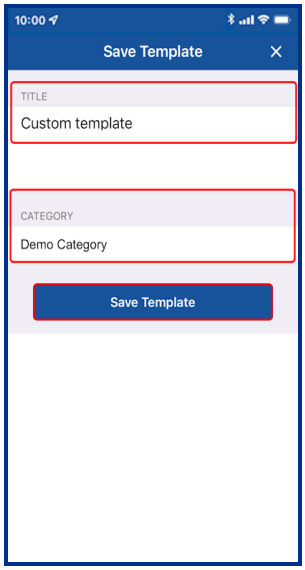
In the **READER SETTINGS** section the following can be configured:

- **ISO14443A UID Output Format:** see the **ISO14443A UID Output Format** section.
- **EM Proximity Output Format:** see the **EM Proximity Output** section (HID Signo readers only).
- **CHUID Formats:** see the **CHUID Formats** section.
- **Bluetooth Modes, Ranges & Power:** see the **Bluetooth Modes, Ranges & Power** section.
- **Communication Protocol:** see the **Communication Protocol** section.
- **Audio & Visual:** see the **Audio & Visual** section.
- **Optional Settings:** see the **Optional Settings** section.
- **Keypad Settings:** see **Keypad Settings** section.
- **Wallet Settings:** see the **Wallet Settings configuration** section.

3.6.3 Save as template

Any changed configuration settings are indicated with a blue circle. To save changed configuration settings to a template, tap **Save as Template**, enter a template **Title** and **Category** and tap **Save Template** To apply template settings, see the **Apply a template configuration** section.



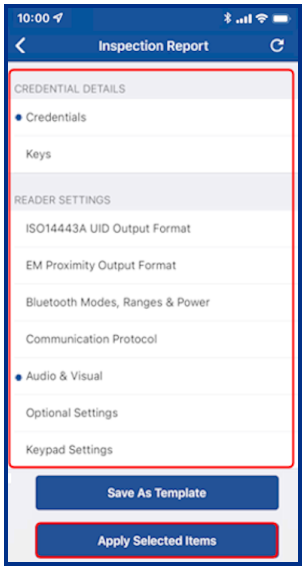


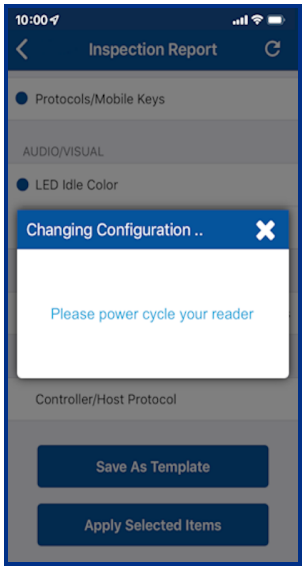
3.6.4 Apply selected items

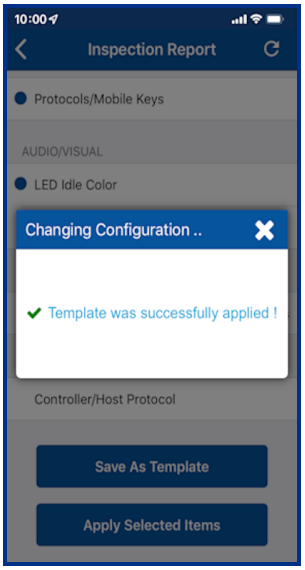
Any changed configuration settings are indicated with a blue circle. To apply changed configuration changes directly to the connected reader, tap **Apply Selected Items**.

Note:

- If the reader is a Standard key Mobile-Ready reader or an iCLASS SE Express R10 reader you will be prompted to power cycle the reader.
- If you power cycle the reader from the power source, make sure to keep the mobile device within Bluetooth range to avoid losing connection with the reader.
- For ICE/MOB enabled readers no reader power cycle is required.



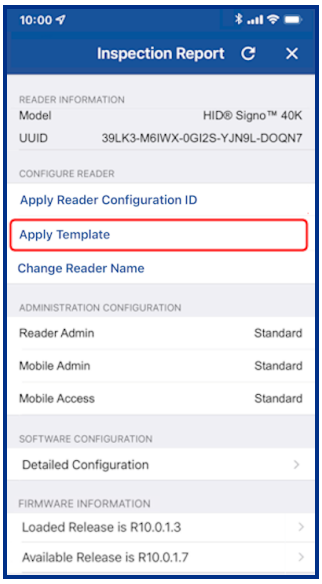


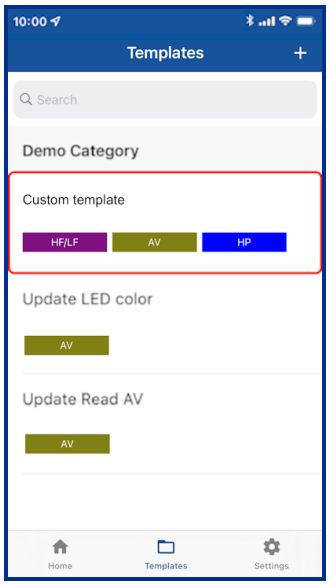


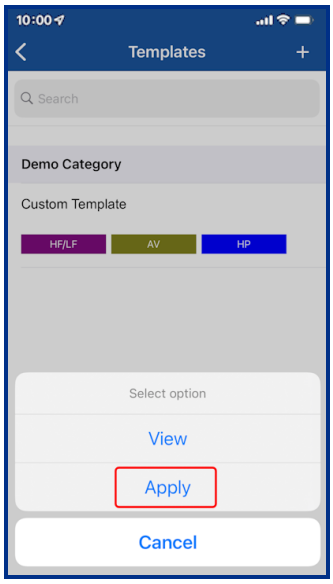
3.7 Apply a template configuration

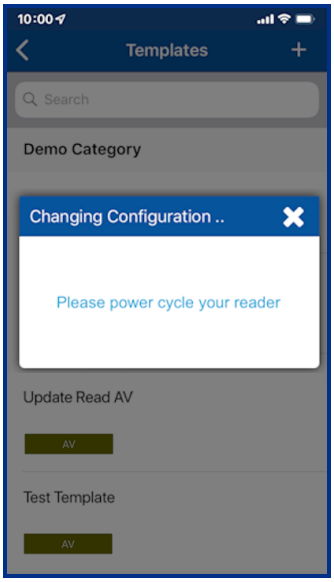
1. When viewing a reader **Inspection Report**, tap **Apply Template**.
2. Select a listed template from the **Templates** screen. From the **Select Operation** menu, tap **Apply**.

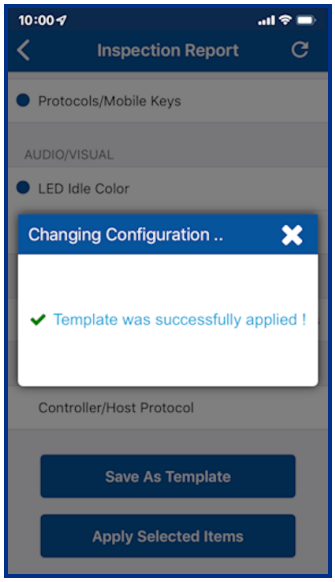
Note:
- If the reader is a Standard key Mobile-Ready reader or an iCLASS SE Express R10 reader you will be prompted to power cycle the reader.
- If power cycle the reader from the power source, make sure to keep the mobile device within Bluetooth range to avoid losing connection with the reader.
- For ICE/MOB enabled readers no reader power cycle is required.











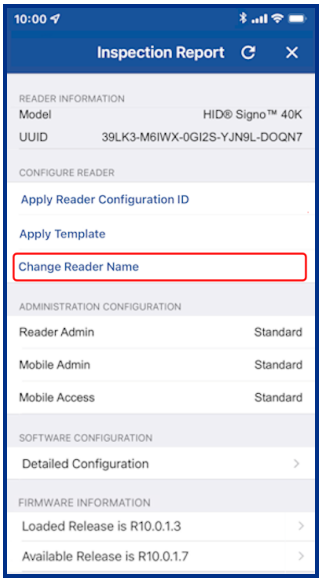
Note: If the operation to apply configuration changes fails, for example “SNMP Authentication Failed”, refer to the **Troubleshooting** section for a possible description of the cause for the failure.

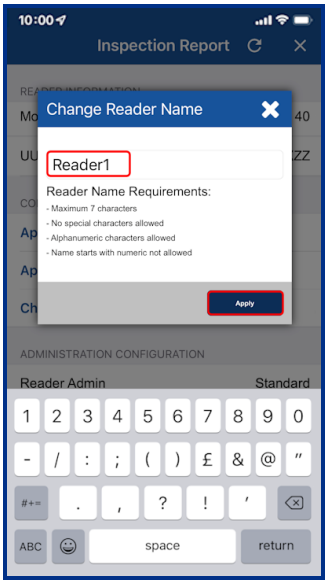
3.8 Change reader name

On the **Inspection Report** screen the reader name can be changed. When changing a reader name with **Change Reader Name**, the reader's name, for example, "iCLASS SE Reader", is changed to a custom name. This custom reader name is visible from within any other Technician's Reader Manager app.

> **Note:** Only HID Signo and iCLASS SE/multiCLASS SE readers support the assignment of a reader name.

1. Tap **Change Reader Name**.
2. Enter a new reader name, following the listed reader name requirements.
3. Tap **Apply**.





Section 04

HID Reader templates

4.1 Overview

Templates store reader configuration settings. When a template is created it can be applied to multiple readers, of the same model, that require the same configuration or shared with other Technicians to speed up reader configuration.

> **Note:** HID is continuously adding new reader features and functionality which can result in technical limitations being introduced into existing older templates. It is therefore recommended that new templates are routinely created so that they continue to be compatible with the latest available versions of Reader Manager that support all reader functions.

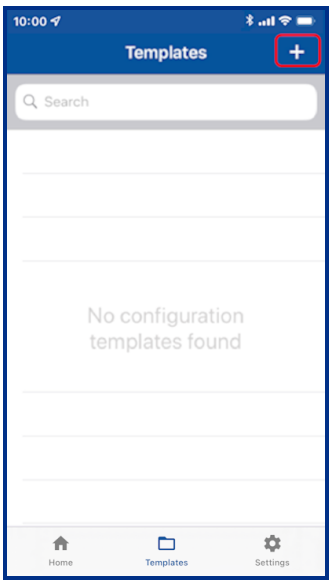
4.2 Create a new template

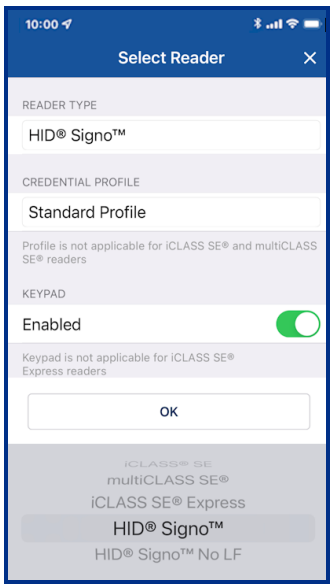
To create a new template:

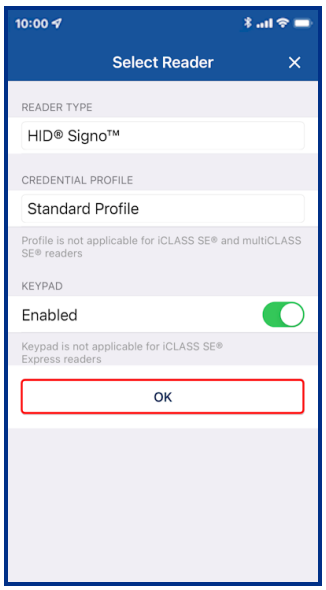
1. On the **Home** screen, tap the **Templates** icon and on the **Templates** screen, tap the plus icon [+].
2. Tap in the **READER TYPE** field and select a reader type from the displayed list.
3. Tap in the **CREDENTIAL PROFILE** field and select a credential profile from the displayed list (HID Signo, HID Signo No LF, and HID iCLASS SE Express readers only).

   > **Note:**
   > The reader credential profile can be determined by inspecting the reader with Reader Manager and selecting **Credential Details** (see **View detailed reader configuration**), or manually from the reader part number:
   >
   > - HID Signo Credential Profiles: **00** = Standard, **01** = Seos, **02** = Smart, **03** = Custom. Example: 20TKS-**00**-000000
   > - HID iCLASS SE Express Credential Profiles: **S** = Seos no BLE, **B** = Seos with BLE , **C** = Seos+CSN no BLE, **D** = Seos+CSN with BLE. Example: 900N**S**NNFK20000
   >
   > For more detailed information, refer to the *Readers and Credentials How to Order Guide* (PLT-02630).

4. If applicable enable the **KEYPAD** option (HID Signo readers and iCLASS SE/multiCLASS SE only). Tap **OK**.

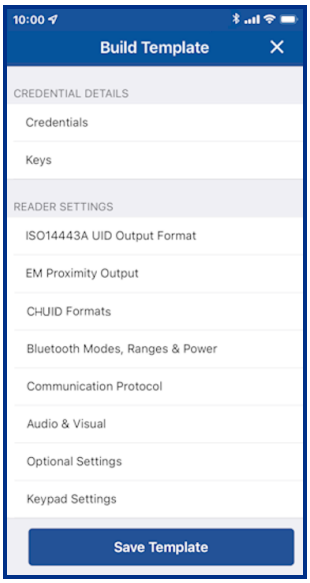






From the **Build Template** screen you can configure and add settings to a template. These reader settings are described in the following sections.

> **Note:** Templates only need to include the reader settings that are applicable to the selected reader type.



4.3 Credential Details configuration

4.3.1 Credential configuration

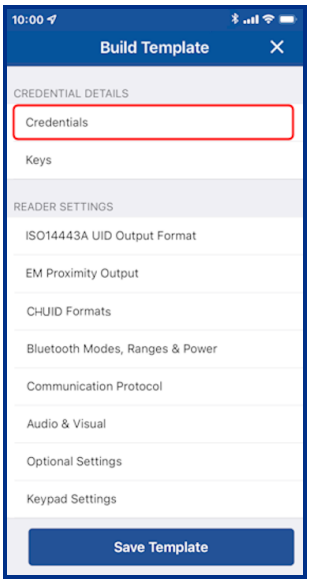
1. From the **CREDENTIAL DETAILS** section, tap **Credentials**.

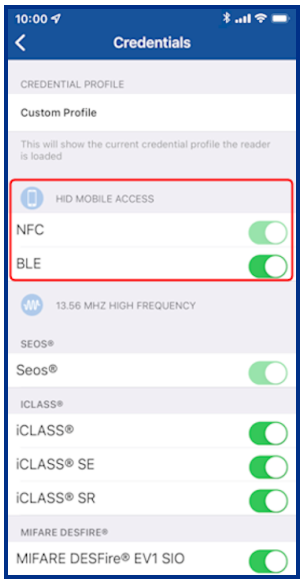
   Note: For HID Signo readers, the credential profile is displayed.

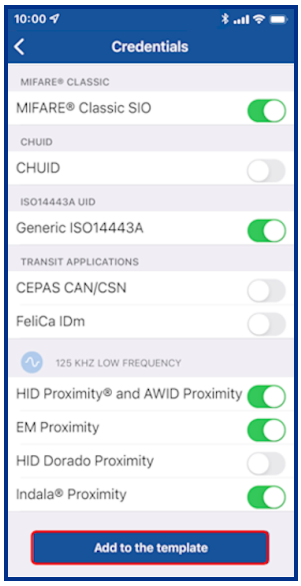
2. Select the desired HID Mobile Access option, **NFC** and/or **BLE**.
3. Enable/disable the required credential types.

   Note:
   - The list of displayed credential options depends on the selected credential profile.
   - The options to enable/disable DESFire® EV3 credential read and Proximity Check are only available for HID Signo readers with firmware version 10.0.2.4 or newer.
     - If EV1 SIO is disabled before updating to firmware version 10.0.2.4 or newer, then EV3 will be disabled after update.
     - If EV1 SIO is enabled before updating to firmware version 10.0.2.4 or newer, then EV3 will be enabled after update.
   - For the iCLASS SE Express reader BLE, MIFARE® DESFire® UID, and MIFARE Classic® UID settings can only be changed if the reader was initially configured with these options when purchased.
   - Configuring Transact Mobile is only applicable for customers that are enrolled in the Transact program. Required minimum firmware versions are:
     - HID Signo = 10.0.2.4
     - HID iCLASS SE = 8.9.2

4. Tap **Add to the template** to save.





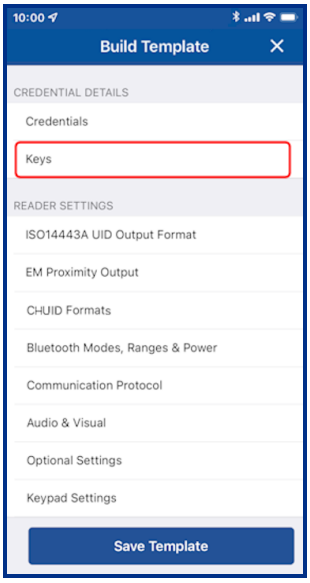


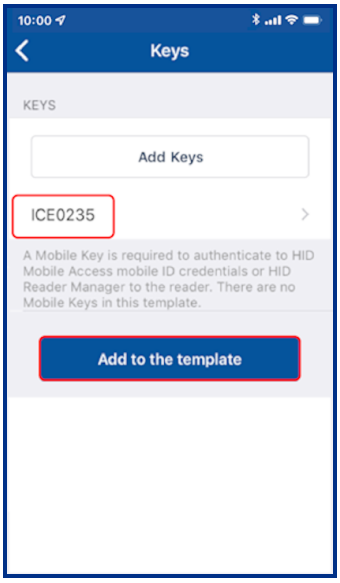
4.3.2 Authorization Keys

1. From the **CREDENTIAL DETAILS** section, tap **Keys**.
2. In the **KEYS** section, tap **Add Keys**.
3. Authorized keys are displayed on the screen. Select an authorization key to load onto the reader (only one key can be loaded).

> **Note:**
> - Reader Manager performs a key store memory check and only displays authorized keys based on the available reader memory space. When attempting to push a key to a reader, if no memory space is available, an **insufficient memory** notification message is displayed.
> - Adding an Elite Key (ICEXXXX) will upgrade all credential keys to that Elite Key.

4. Tap **Add to the template** to save.



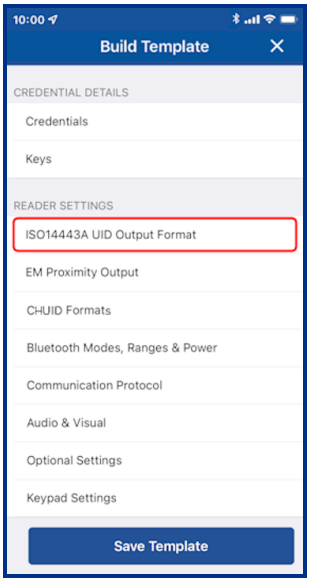


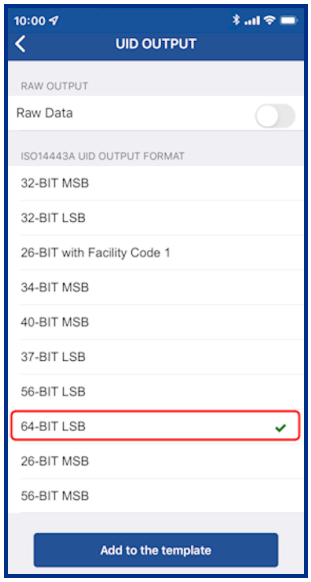
4.4 Reader Settings configuration

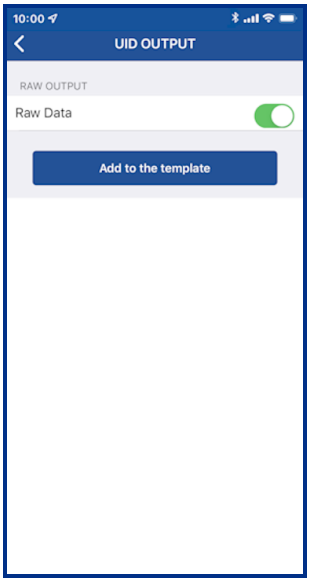
4.4.1 ISO14443A UID Output Format

Note: For iCLASS and Signo readers, ISO14443A UID Output Format configuration settings are only valid for certain credential profiles.

1. From the **READER SETTINGS** section, tap **ISO14443A UID Output Format**.
2. Select output format from the displayed list.
3. If RAW CSN/UID cards are to be supported enable the **Raw Data** option.
4. Tap **Add to the template** to save.



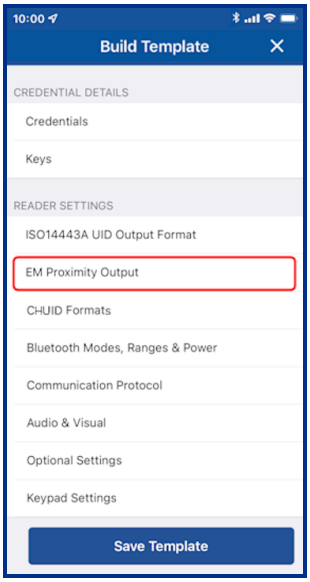


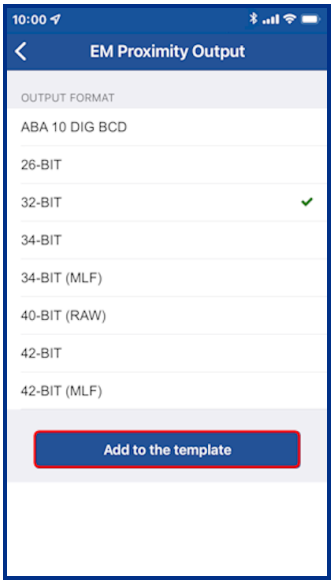


4.4.2 EM Proximity Output

Note: Only applicable for HID Signo readers with a **Standard** or **Custom** credential profile.

1. From the **READER SETTINGS** section, tap **EM Proximity Output**.
2. Select an available **OUTPUT FORMAT**.
3. Tap **Add to the Template** for any changed settings.



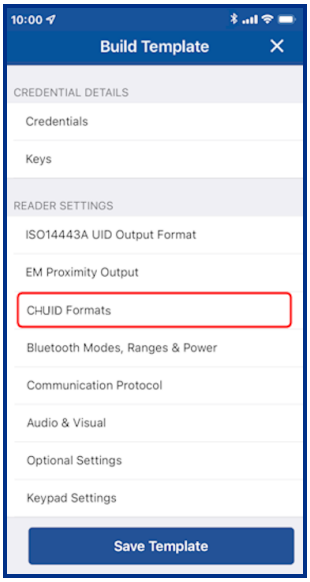


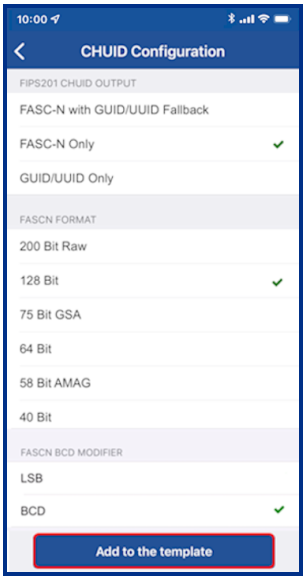
4.4.3 CHUID Formats

Note: Only applicable for HID Signo readers with a **Custom** credential profile.

1. From the **READER SETTINGS** section, tap **CHUID Formats**.
2. Select a **CHUID OUTPUT**, **FASCN FORMAT**, and **FASCN BCD MODIFIER** (if applicable).

   Note: A **FASCN BCD MODIFIER** option can only be selected if the FASCN Format is 128 Bit, 64 Bit, or 40 Bit.
3. Tap **Add to the Template** for any changed settings.





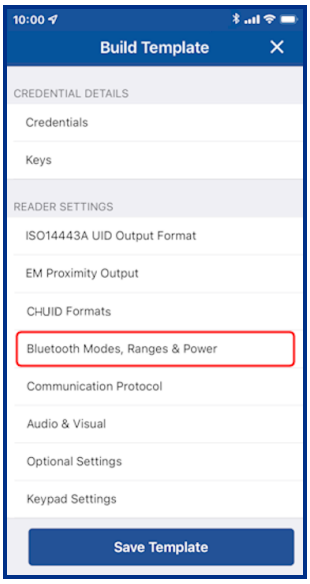
4.4.4 Bluetooth Modes, Ranges & Power

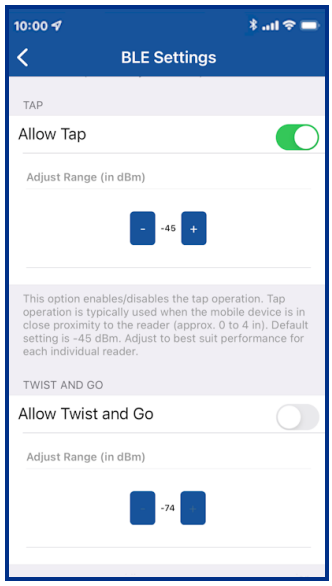
1. From the **READER SETTINGS** section, tap **Bluetooth Modes, Ranges & Power**.
2. On the **BLE Settings** screen, tap in the **APPLICATION BRAND** field and select a listed option

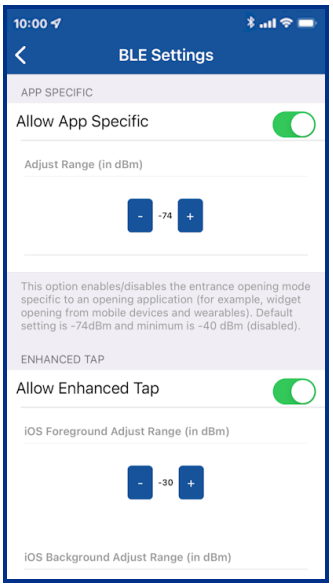
> **Note:** The **Custom** option requires a **lock service code**. A lock service code prevents BLE conflicts between the Mobile Access App and Partner Apps on the same phone and are currently managed by Partner Services.

3. Enable/disable the opening mode and, if necessary, adjust the range settings:
   - **Tap:** Default Tap range for HID Signo is **-45 dBm**. Default tap range for SE readers is **-40 dBm**.
   - **Twist and Go:** Default Twist and Go range is **-74 dBm**.
   - **App Specific:** Default App Specific range is **-74 dBm**.
   - **Enhanced Tap:** For HID Signo readers only, default ranges for iOS Background: **-30 dBm**, iOS Foreground: **-30dBm**, Android: **-45 dBm**.

> **Note:** For each opening mode the default range value is provided on the **BLE Settings** screen.







4. The default Transmit Power setting (Default for HID Signo reader is **-0 dBm**. Default for a SE reader is **-4 dBm**) should not be changed unless absolutely necessary.

> **Note:** For certain installations a higher or lower Transmit Power may be required, however this setting should only be adjusted if the default range settings do not result in the desired read range.

5. Tap **Add to the template** to save.

> **Note:** When connected to a reader that has Standard Keys, the reader must be power cycled to activate updated BLE settings.

As opening ranges deviate between different mobile devices, you should always test and fine tune settings for a specific site. The read range settings listed below provide a starting point for common locations:

SE readers

Location	Tap	Twist and Go
Office environment	-48 dBm	-67 dBm
Elevators	-40 dBm	-57 dBm
Outdoor entrances	-48 dBm	-67 dBm
Garage (user inside vehicle)	-53 dBm	-74 dBm

HID Signo readers

Location	Tap	Twist and Go	Enhanced Tap (iOS)[1]	Enhanced Tap (Android)
Office environment	-45 dBm	-74 dBm	-30 dBm	-45 dBm

1. iOS Background and iOS Foreground.

4.4.5 Communication Protocol

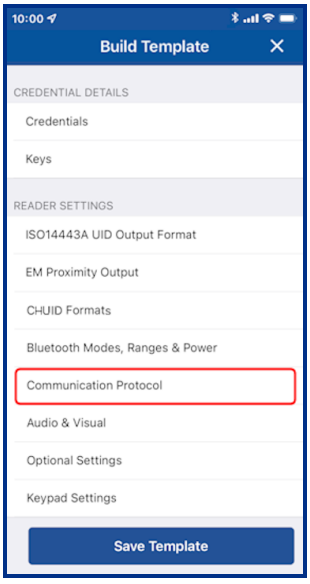
1. From the **READER SETTINGS** section, tap **Communication Protocol**.
2. Enable the Reader to Controller communication protocol, either **Wiegand** or **OSDP** (not both).

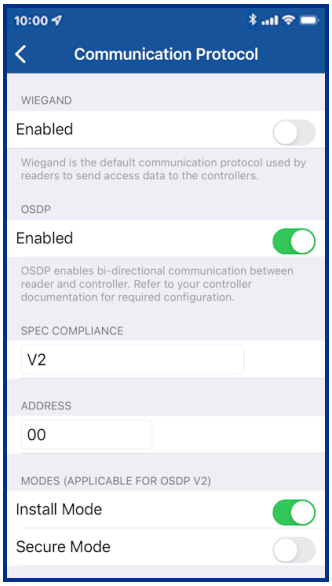
   > **Note:** OSDP is not applicable to iCLASS SE Express R10 readers as these readers are Wiegand capable only.

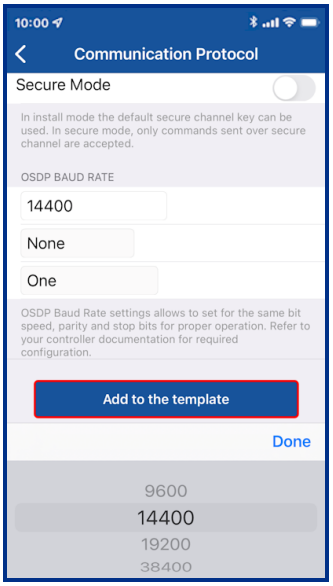
3. If **OSDP** is enabled:
   - Select the spec compliance value, **V1** or **V2**.
   - Enable **Install Mode** (default) to use factory default keys (only applicable if **V2** is selected as the spec compliance value).
   - Enable **Secure Mode** (not default) to require the reader to use secure communication (only applicable if **V2** is selected as the spec compliance value).

     > **Note:** For the reader to successfully connect to a panel via OSDP V2, it is recommended that **Secure Mode** is disabled.

   - Select the **OSDP Baud Rate** (the **Stop bit** and **Parity** fields are read only).
4. Tap **Add to the template** to save.



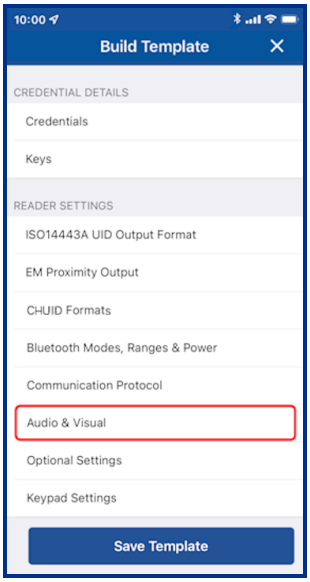


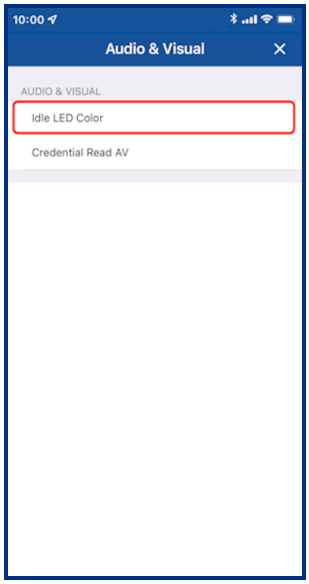


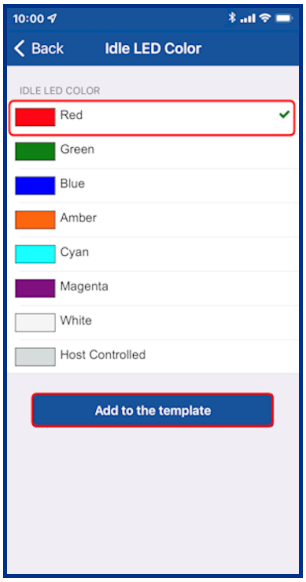
4.4.6 Audio & Visual

1. From the **READER SETTINGS** section, tap **Audio & Visual**.
2. From the **AUDIO & VISUAL** section, tap **Idle LED Color**.
3. Select a color and tap **Add to the template**.

> **Note: Idle LED Color** selections for the HID iCLASS SE Express R10 reader are **Red** or **Blue**.

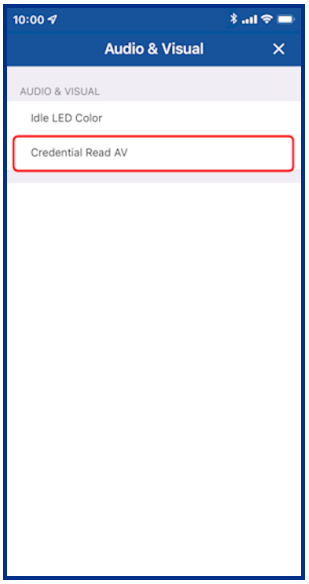


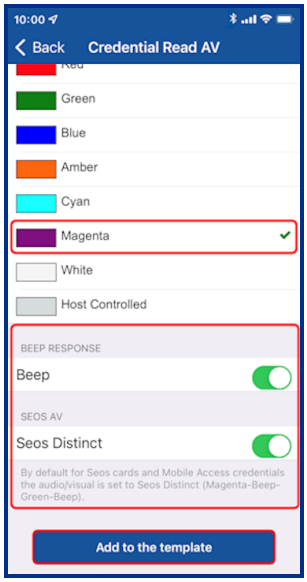




4. Tap **Credential Read AV**.
5. Select a color and enable/disable the **BEEP RESPONSE** and **SEOS AV** settings using the options. Tap **Add to the template** to save.

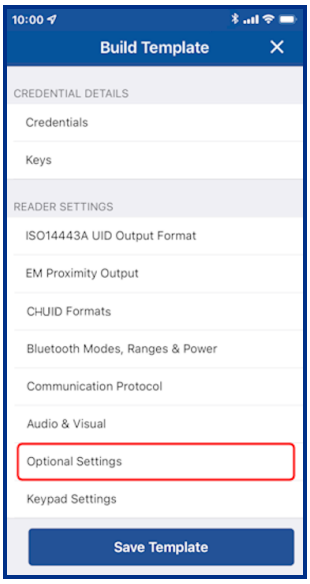
> **Note: Credential Read AV** options for the iCLASS SE Express R10 reader are **Green** or **No Response**.

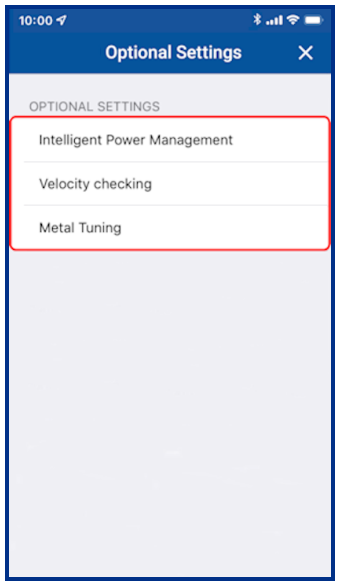


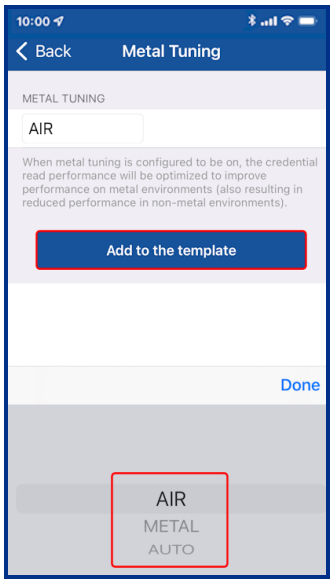


4.4.7 Optional Settings

1. From the **READER SETTINGS** section, tap **Optional Settings**.
2. Enable/disable the following options as necessary:
   - **Intelligent Power Management**
   - **Velocity checking**
   - **Metal Tuning**. Select a listed setting (HID Signo readers and iCLASS SE Express R10 only).
   - Tap **Add to the Template** for any changed settings.



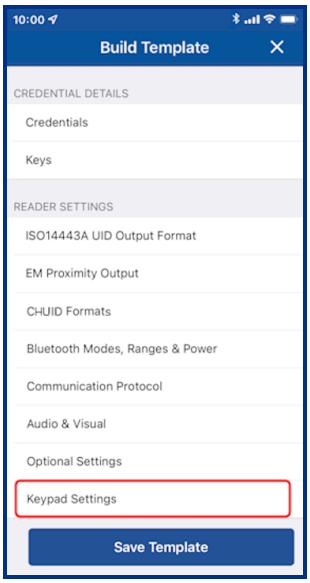


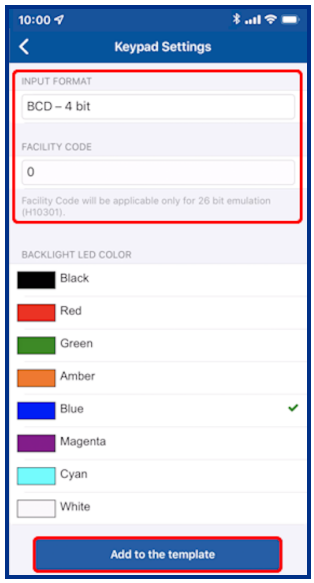


4.4.8 Keypad Settings

If the **KEYPAD** option is enabled (for HID Signo readers and iCLASS SE/muliCLASS SE only):

1. From the **READER SETTINGS** section, tap **Keypad Settings**.
2. Select an available **INPUT FORMAT** and, if applicable, enter a **FACILITY CODE**.
3. Select a keypad backlight color from the displayed list (HID Signo readers only).
4. Tap **Add to the Template** for any changed settings.





4.5 Wallet Settings configuration

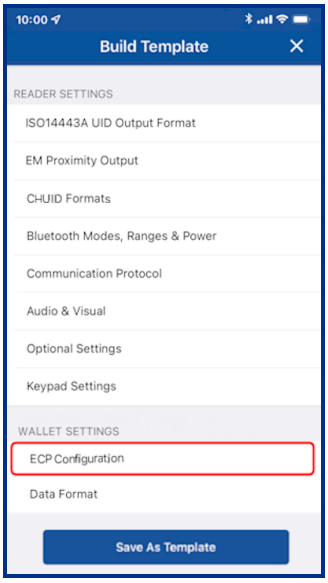
Note: Wallet configuration is only applicable for customers that are enrolled in the Wallet program.

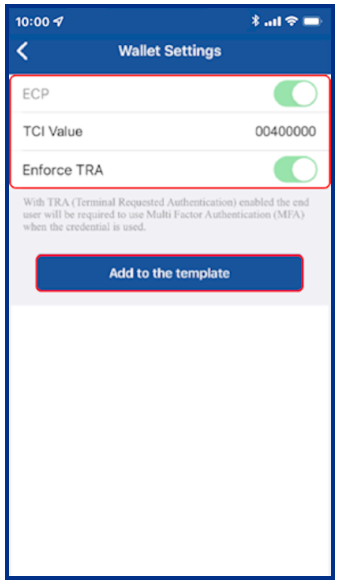
Enabling ECP (Enhanced Contactless Polling) will allow Wallet keys to be pushed along with Mobile Access keys. The following reader configuration specifications apply:

- Wallet settings are only applicable for HID Signo/iCLASS SE readers that are loaded with MOB or ICE keys.
- Wallet settings are only supported in HID iCLASS SE/multiCLASS SE Readers running firmware Version 8.9 and above. HID iCLASS/multiCLASS SE Readers running firmware Version 8.8 or below must be upgraded to firmware Version 8.9 for Wallet settings to be supported.
- Wallet settings are supported in HID Signo readers by default for all firmware versions.
- From Reader Manager 1.6.0 Wallet configuration has been optimized, reducing the number of steps needed to complete Wallet setting configuration:
  - For standard readers the user only needs to push MOB or ICE keys. The rest of the process is automated.
  - For readers shipped from HID with MOB or ICE Mobile Keysets, the user only needs to enable the TCI value in the reader configuration.

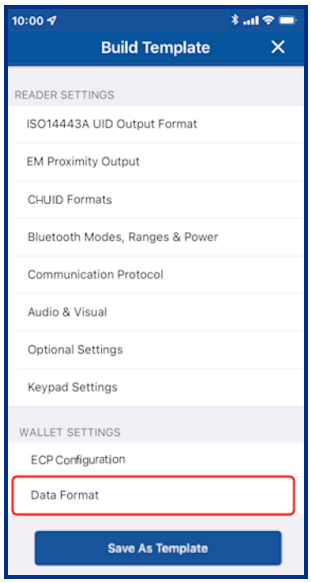
If the reader configuration supports Wallet settings:

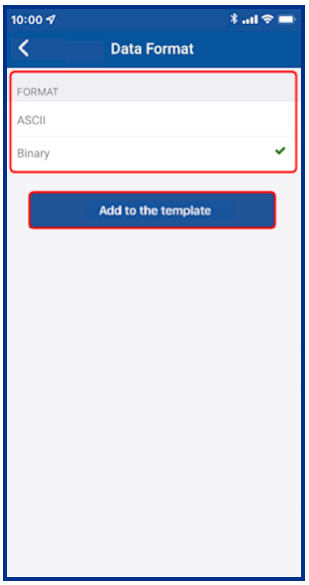
1. From the **WALLET SETTINGS** section, tap **ECP Configuration**.
2. Enable the **ECP** option. A **TCI Value** is automatically assigned.
3. To force mobile access users to use MFA (Multi Factor Authentication) when a mobile device is presented to the reader, enable the **Enforce TRA** option.
4. Tap **Add to the Template** for the selected settings.





For customers that are enrolled in the Transact program, from the **WALLET SETTINGS** section, tap **Data Format** and select a format for Transact Credential output. Tap **Add to the Template** for the selected settings.





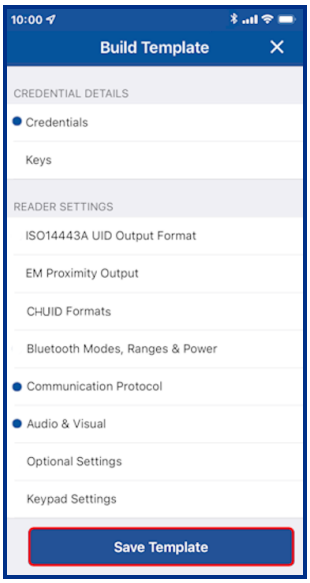
4.6 Manage templates

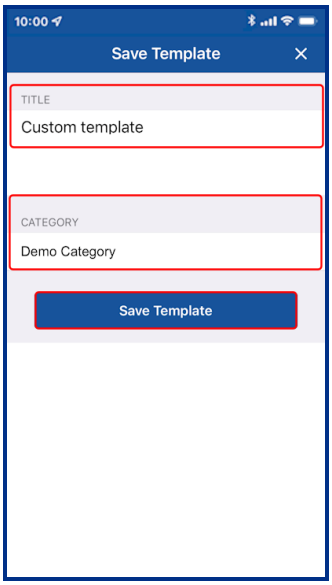
4.6.1 Save a new template

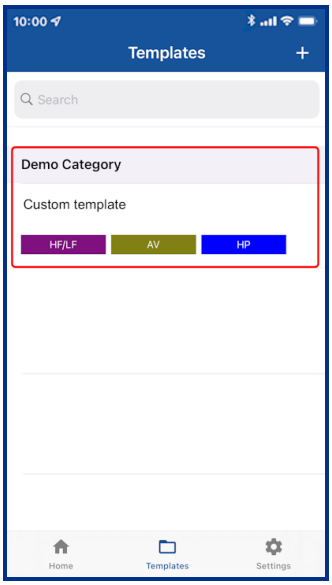
1. When configuration settings are selected and added to the template, tap **Save Template**.
2. Tap in the **TITLE** area and enter a title for the template.
3. Tap in the **CATEGORY** area and tap **Select Category**. Select an existing category from the displayed list or add a new category and select this newly created category. Tap **Save Template**.

   > **Note:** A category must be selected before the template can be saved.

   The new template is displayed on the **Templates** screen with indicators for the configuration types within the template.





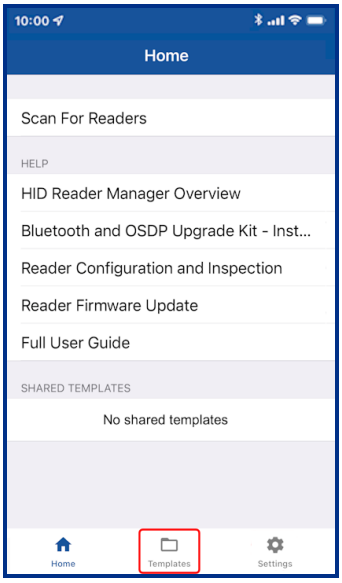


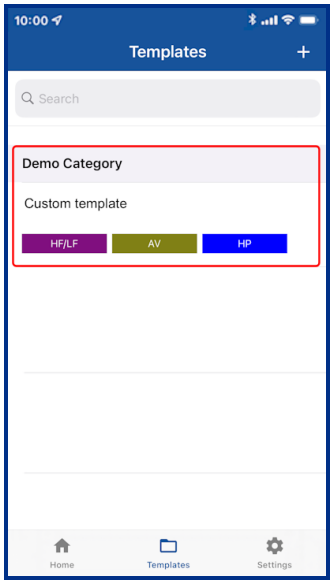
4.6.2 Share a template

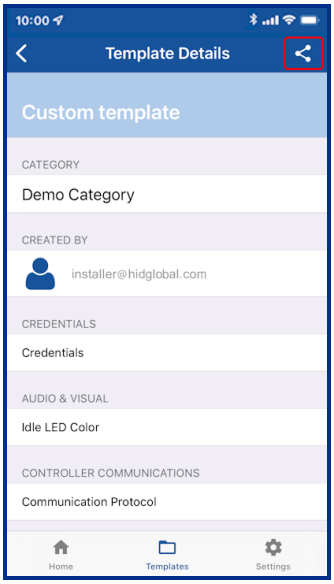
Templates can be shared with other Reader Technicians to speed up the configuration of multiple readers.

> **Note:** Templates that contain a MOB/ICE key can only be shared with reader technicians that are authorized for that specific key.

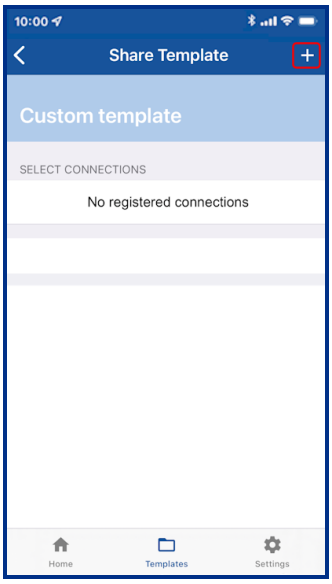
1. On the **Home** screen, tap the **Templates** icon and select a displayed template to be shared. On the **Template Details** screen tap the share icon [ ].

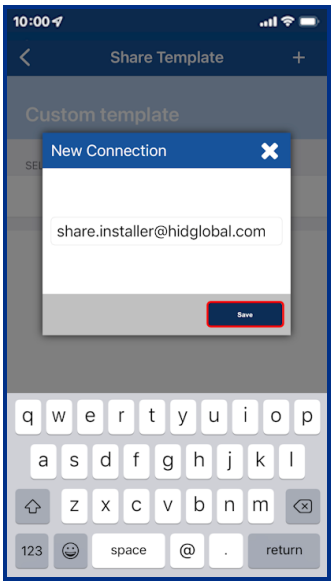


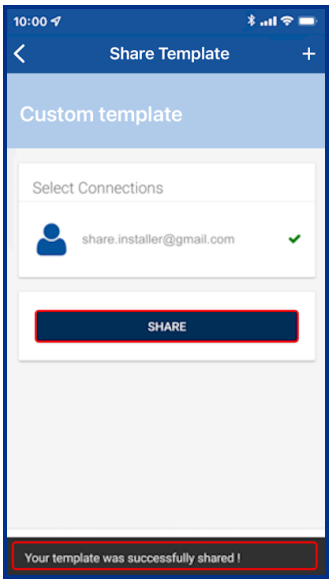




2. Tap the plus icon [ ] and, in the **New Connection** box, enter the email address of another Technician (this can be any Technician that is already registered). Tap **Save**.
3. When the connection has been made, tap **SHARE**. A success message will appear at the bottom of the screen.

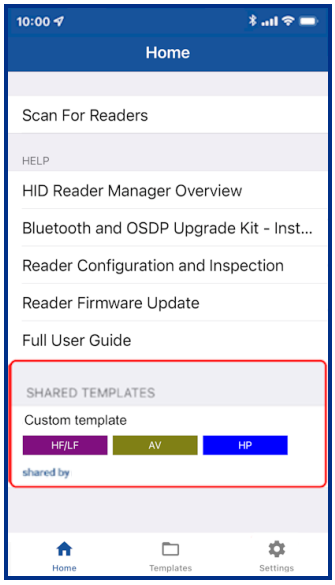


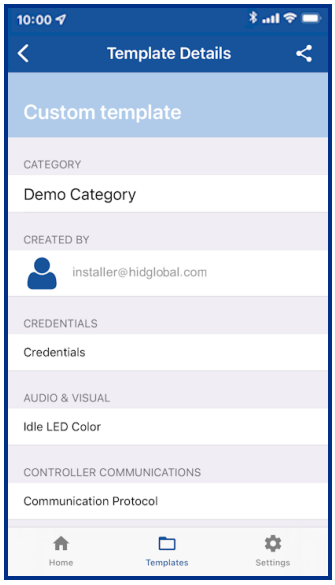




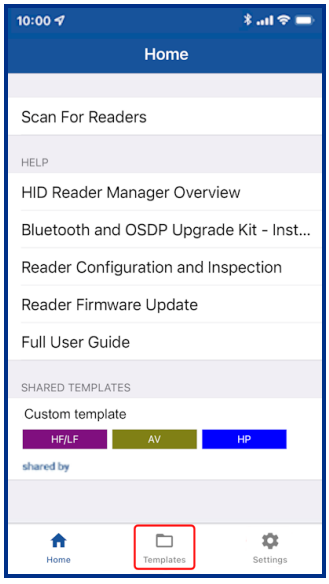
4.6.3 Display template details

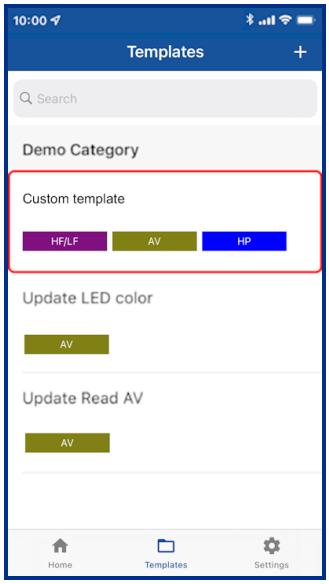
Configuration templates shared with a Reader Technician that is logged into HID Reader Manager app are displayed in the **SHARED TEMPLATES** area on the **Home** screen. Tap on a displayed shared template to view the template details.

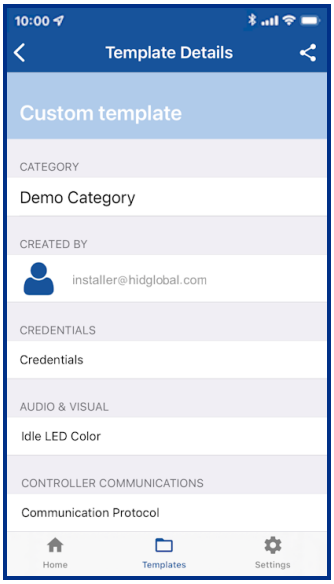




To view the list of created templates tap the **Templates** icon on the HID Reader Manager Home screen. Existing templates are listed on the **Templates** screen. Tap on a displayed template to view the template details.



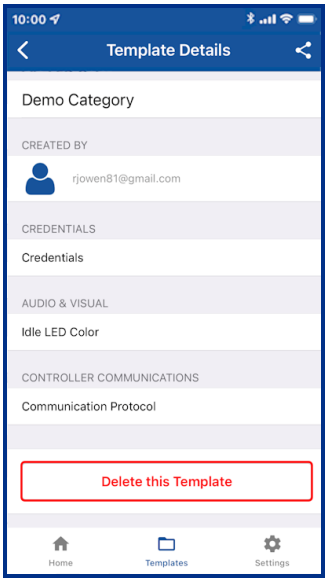


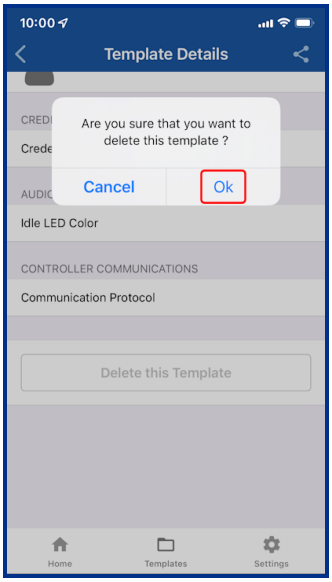


4.6.4 Delete a template

When template details are displayed, the template can be deleted:

1. Swipe down to the bottom of the **Template Details** screen and tap **Delete this Template**.
2. Tap **OK** to delete the template.





Section 05

Troubleshooting

5.1 Reader Manager App messages

5.1.1 Error and warning messages

Message	Description and next step to attempt resolution
"There does not seem to be an internet connection."	Internet connectivity is not available for the mobile device. Check the mobile device Settings > Connections.
"Problem connecting to HID Servers."	The Reader Manager app could not reach HID Reader Manager servers. Please check mobile device Internet connection.
"Issues at HID Servers, please try again."	HID Reader Manager servers are down. Please periodically try again and check your email for any service distribution notification. If the issue persists uninstall and reinstall the app and try to log in again.
"Invalid Email or Password."	The entered username or password, or both are incorrect. Please enter a valid email or password. **Note:** If you have login credentials for the HID Origo Management Portal then use these to log into the Reader Manager App, or reset your password through the Portal.
"Invalid Email."	The entered email address is incorrect. Please enter a valid email.
"This user already exists."	During registration the entered user is already registered. Login using existing credentials. **Note:** If you have login credentials for the HID Origo Management Portal then use these to log into the Reader Manager App, or reset your password through the Portal.
"Failed to register the user."	The user tries to register when HID Reader Manager servers are down. Please periodically try again and check the HID Origo Service Status page.
"This category already exists."	The user tries to add a template category that already exists. Please use a new category or select the existing category.
"You are not authorized to apply this template."	The user is not authorized to apply the template. Please request key authorization for this reader from the Reader Manager Service Administrator.
"The template can not be applied. iCLASS SE reader does not support the selected {configuration_item} in the template."	The template being applied to the reader contains configuration items not supported by the reader. Make sure the configuration items in the template are valid for your reader.
"Invalid Invitation Code, Please Try again."	The user has entered an incorrect or invalid invitation code. Please ensure the code was entered correctly. If the issue persists contact the Reader Manager Service Administrator to check if the code has already been redeemed and to request a new invite code.
"Failed to connect to reader."	Lost BLE connection. The reader does not respond to the Reader Manager app. Ensure the BLE module is seated securely (iCLASS SE reader only), devices is compatible HID Reader Manager, and the reader is properly powered. Please try again with the mobile device closer to the reader.

Message	Description and next step to attempt resolution
"There was an error during the name change."	During a Change Reader Name transaction the BLE/Internet connection is disrupted. Please try again.
"You are not authorized to configure this reader."	The user does not have authorization keys/credentials to access the reader. Please request key authorization for this reader from the Reader Manager Service Administrator.
"An unknown error has occurred."	A general non-specific error has occurred. Please try again.
"Please close all other applications on this device and ensure it remains unlocked during upgrade."	Before upgrade close all open applications on the mobile device to avoid BLE collision.
"Required permission to access Readers."	The user has disabled device Location Services for the Reader Manager app. Please enable location services for the reader manager app in the mobile device settings.
"To reenable, please go to Settings and turn on Location Service for this app."	The user should ensure mobile device Location Services is enabled for the Reader Manager app.
"Please power cycle your reader."	Power cycle the reader to authenticate the user and proceed with transactions such as upgrade firmware, updating config items.
"The version of firmware currently loaded is not supported with the HID Reader Manger application. Please refer to the user guide located on home screen for supported firmware versions."	The firmware version is unsupported by the Reader Manager app.
"This module can not be used to upgrade the Reader. Use the module with the latest firmware."	The BLE smart module firmware/hardware version is unsupported by the Reader Manager app. Please ensure the module used for the upgrade is from an Bluetooth and OSDP Upgrade Kit. See HID iCLASS SE Bluetooth & OSDP upgrade kits.
"This reader is protected using Custom Admin keys and can not be configured or upgraded."	The reader is configured with custom keys. The reader technician cannot proceed with configuration changes or upgrade as this reader is not supported.
"SNMP Authentication Failed. This reader has previously been updated with SNMP keys which have not been synched with the Reader Manager service. Due to this Reader Manager cannot be used to configure or upgrade the Reader."	HID Reader Manager does not upgrade and/or configure a reader that has had the SNMP keys rolled using Configuration Cards (specifically, SEC9X-CRD-E-P000, SEC9X-CRD-E-P002, or CP1000D Configuration Cards), as the new SNMP keys have not been synced with the Reader Manager Service. A resolution for this issue is targeted for a future HID Reader Manager release.

5.1.2 Information messages

Message	Description and next step to attempt resolution
"You will receive an email at {registered_email} to activate your Account."	Information message to the user to activate the account with the mail sent to registered email address. Please activate account to use the application.
"No reader found"	No nearby readers found during Scan For Readers action. Please move the mobile device closer to the reader and scan for readers again.
"Reader beeping complete"	Locating the reader is completed. Reader is identified and can now be tagged or inspected.
"A new category was saved"	A new template category added has been successfully added and saved.
"Your template has been saved"	A new template has been successfully added and saved.

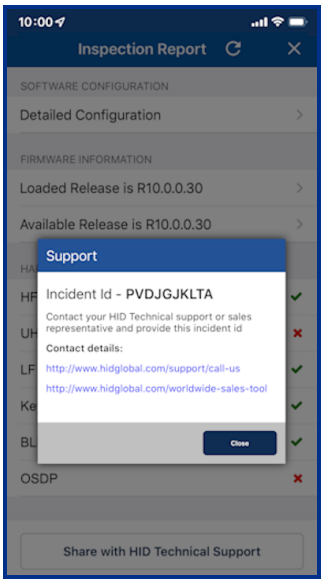
5.1.3 Validation messages

Message	Description and next step to attempt resolution
"New Password is not compliant to requirements"	The new Password entered has not met the password requirement rules. Please use a password which meets the requirements detailed on the screen.
"New Password & Confirm New Password are not same"	The entered Password and Confirm password do not match. Please re-enter passwords.
"Invalid old Password"	A previously used password has attempted to be used. Please use a different password.
"No Configuration item has been selected"	User tries to save reader configuration options without selecting any configuration values. Please select a configuration option before saving.

5.2 Contact HID Support

When using the Reader Manager app, if any issues are experienced with a reader, for example, Locate reader, Inspect reader, View Detailed Inspection Report, Configure reader, Upgrade firmware, an **Incident Id** can be generated.

On the **Inspection Report** screen, tap **Share with HID Technical Support**. An **Incident Id** reference will be generated and HID Support contact details are displayed. Take a note of the **Incident Id** reference number and provide this when contacting HID Support about the issue.



5.2.1 Additional information

Below is a sample of additional information that you may be asked to provide to HID Support:

- What is the HW Version?
- Have any firmware or configuration cards been used on the reader? If yes, why?
- Can you provide a photo of the reader label, including the QR code?
- Is the reader operating in Wiegand or OSDP?
- How is the reader powered? Panel or power supply?
- What is the make/model of the panel/power supply?
- What is the voltage at the reader?
- What is the available current for the reader?
- What is the cable type utilized for the connection from the panel/power supply to the reader?
- What is the cable length between the panel/power supply and the reader?
- What type of card(s) are being used with the reader? (be as specific as possible, provide photos of the cards).
- What is the reader mounted to? (for example, Drywall, Masonry, Metal, etc.).
- Is the reader being used with Mobile Access (if so what mobile device is being used and is BLE or NFC being utilized)?
- Please describe, in as much detail as possible, the issue being seen.

Appendix A

Reader upgrade

A.1 Supported firmware versions for upgrade

A.1.1 HID iCLASS/mutiCLASS SE readers

Reader FW	Admin Configuration	Supported?	Comment
R7 SP1	Standard	No	
R7 SP1	ICE	No	
R7 SP3	Standard	No	
R7 SP3	ICE	No	
R7 SP8	Standard	No	
R7 SP8	ICE	No	
R8.2.1	Standard	No	
R8.2.1	ICE	No	
R8.2.2	Standard	No	
R8.2.2	ICE	No	
R8.3.0	Standard	No	
R8.3.0	ICE/MOB	No	
R8.3.1.6	Standard	No	
R8.3.1.6	ICE/MOB	No	
R8.3.2.1	Standard	No	
R8.3.2.1	ICE/MOB	No	
R8.4.0.6*	Standard	No	
R8.4.0.6	ICE/MOB	Yes	
R8.4.1.0*	Standard	No	
R8.4.1.0	ICE/MOB	Yes	
R8.4.2.0*	Standard	No	
R8.4.2.1	ICE/MOB	Yes	
R8.5.0.9*	Standard	No	
R8.5.0.9	ICE/MOB	Yes	
R8.6.0.4	Standard	Yes	
R8.6.0.4	ICE/MOB	Yes	
R8.7	Standard	Yes	SE Biometric readers only
R8.7	ICE/MOB	Yes	SE Biometric readers only
R8.8.0.11	Standard	Yes	
R8.8.0.11	ICE/MOB	Yes	
R8.9.0.11	Standard	Yes	
R8.9.0.11	ICE/MOB	Yes	

Reader FW	Admin Configuration	Supported?	Comment
R8.9.1.3	Standard	Yes	
R8.9.1.3	ICE/MOB	Yes	
R8.9.1.4	Standard	Yes	
R8.9.1.4	ICE/MOB	Yes	
R8.9.2.1	Standard	Yes	Direct firmware upgrade from R8.4, R8.5, and R7SP8 to R8.9.2.1 is supported.
R8.9.2.1	ICE/MOB	Yes	

*Support for R8.4.0.6, R8.4.1.0, R8.4.2.0, and R8.5.0.9 Standard readers does not enforce the power cycle requirement, however, as they require the 8.6.0.4 version of module they indirectly require power cycle.

A.1.2 HID iCLASS SE Express readers

Reader FW	Admin Configuration	Supported?	Comment
R9.0.0.17	Standard	Yes	
R9.0.0.17	ICE/MOB	Yes	

A.1.3 HID Signo readers

Reader FW	Admin Configuration	Supported?	Comment
R10.0.0.31	Standard	Yes	
R10.0.0.31	ICE/MOB	Yes	
R10.0.1.0	Standard	Yes	
R10.0.1.0	ICE/MOB	Yes	
R10.0.1.1	Standard	Yes	
R10.0.1.1	ICE/MOB	Yes	
R10.0.1.3	Standard	Yes	
R10.0.1.3	ICE/MOB	Yes	
R10.0.1.7	Standard	Yes	
R10.0.1.7	ICE/MOB	Yes	
R10.0.2.4	Standard	Yes	
R10.0.2.4	ICE/MOB	Yes	
R10.0.2.5	Standard	Yes	
R10.0.2.5	ICE/MOB	Yes	
R10.0.3.0	Standard	Yes	
R10.0.3.0	ICE/MOB	Yes	
R10.0.3.1	Standard	Yes	Firmware upgrade from 10.0.1.0, 10.0.1.1, 10.0.1.3 (SP1), and 10.0.1.7 (SP1.5) to R10.0.3.1 is supported. Firmware upgrade from R10.0.0.31 to R10.0.3.1 is implemented through an automatic two step upgrade process and therefore can take longer (approx. nine minutes).
R10.0.3.1	ICE/MOB	Yes	
R10.0.4.2	Standard	Yes	
R10.0.4.2	ICE/MOB	Yes	

A.2 HID iCLASS SE reader upgrade

A.2.1 HID iCLASS SE Bluetooth & OSDP upgrade kits

HID iCLASS SE Bluetooth & OSDP upgrade kits allow HID iCLASS SE/multiCLASS SE Rev E readers, that do not already have Bluetooth/OSDP capability, to be upgraded to support these technologies.

If your HID iCLASS SE/multiCLASS SE, Rev E reader does not already have Bluetooth/OSDP capability you will need to upgrade the reader using one of the following upgrade kits. Depending on the reader model the following upgrade kits are available:

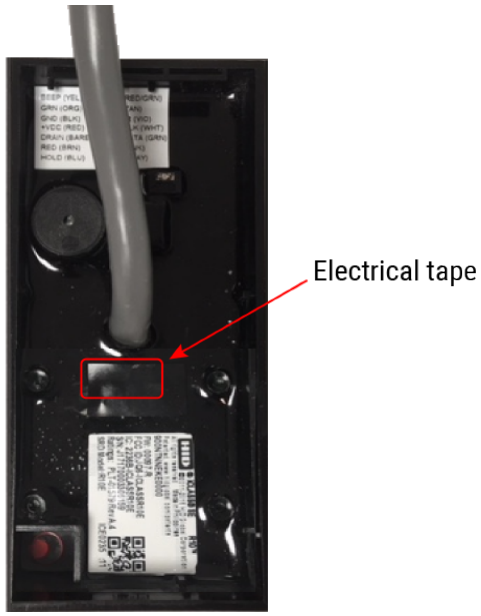
Upgrade kit part number	Description	Reader model
BLEOSDP-UPG-A-900	iCLASS SE Bluetooth & OSDP upgrade kit	R10/RP10
BLEOSDP-UPG-A-910	iCLASS SE Bluetooth & OSDP upgrade kit	R15/RP15
BLEOSDP-UPG-A-920	iCLASS SE Bluetooth & OSDP upgrade kit	R40/RP40
BLEOSDP-UPG-A-921	iCLASS SE Bluetooth & OSDP upgrade kit	RK40/RPK40

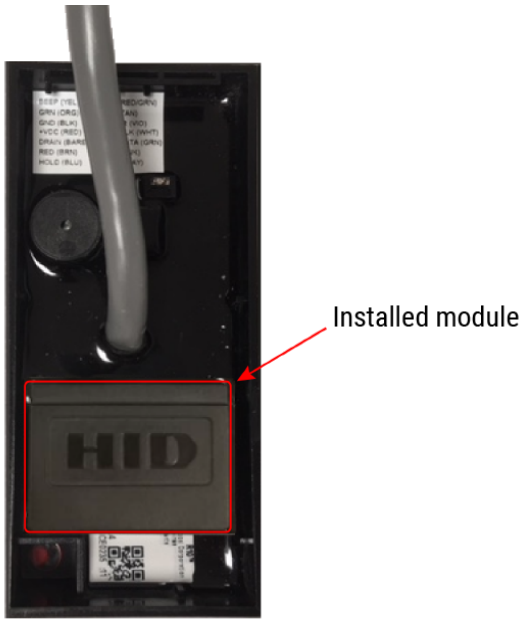
Note: The above iCLASS SE Bluetooth & OSDP upgrade kits can only be used for upgrading HID iCLASS SE/multiCLASS SE Rev E readers.

A.2.2 HID iCLASS SE/multiCLASS SE Bluetooth & OSDP upgrade kit instructions

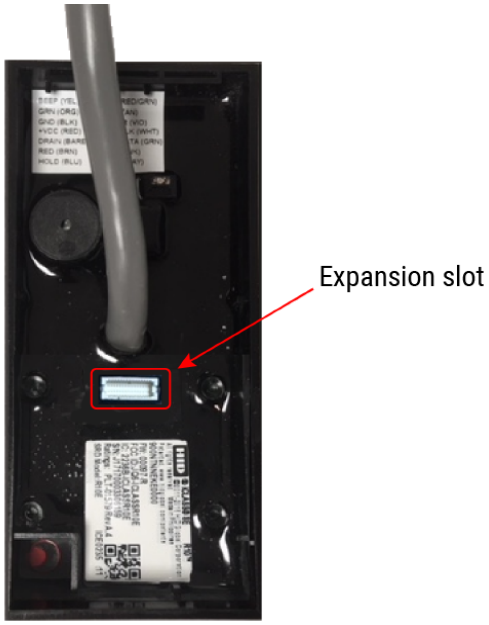
1. Disconnect power to the reader.
2. Remove the reader from the reader backplate.
3. On the back of the reader remove the electrical tape covering the module expansion slot.

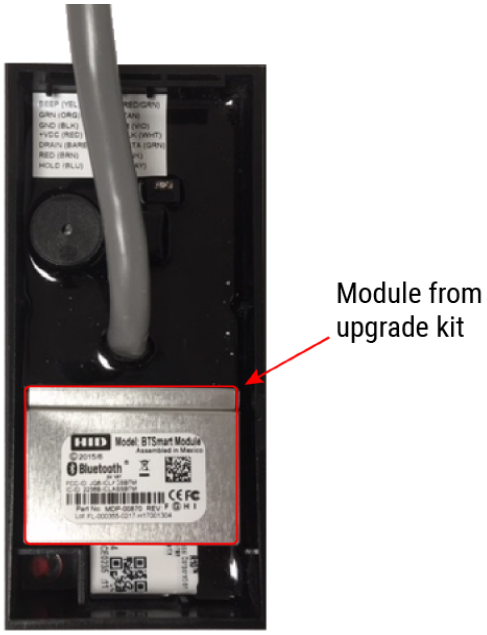
> **Note:** If the reader has a module already installed, remove this as it will be replaced with the module from the iCLASS SE Bluetooth & OSDP upgrade kit.





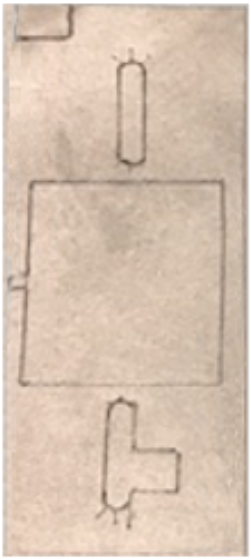
4. Insert the upgrade module into the expansion slot. Take care not to touch the expansion slot with anything apart from the module as this could remove the colorless anti-corrosive compound.





5. Remove the reader backplate from the wall.
6. With paper backing still intact, align the metallic sticker from the upgrade kit with the reader backplate to ensure correct orientation.
7. Remove paper backing from metallic sticker and carefully adhere the sticker to the inside of the reader backplane.

> **Note:** The metallic sticker has cutouts to allow reader wiring to remain intact during installation.



8. Re-install the reader backplate to the wall.
9. Re-install the reader onto the reader backplate. Ensure the reader wiring is correct, refer to the reader installation guide.

> **Note:** Different conductors are used for Wiegand vs OSDP communication.

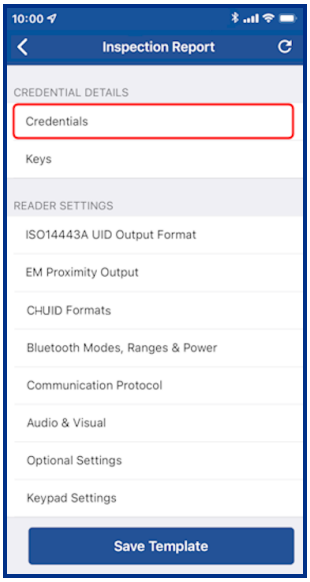
A.2.3 Configure reader in HID Reader Manager

If the reader is ready to be configured, use the following procedure to configure the reader to support Bluetooth for HID Mobile Access and/or OSDP controller communication.

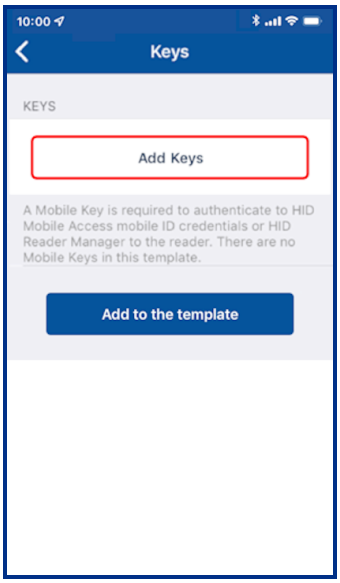
> **Note:** This procedure assumes the Reader Technician has setup the HID Reader Manager app on a mobile device and the Reader Manager Administrator has enrolled the Reader Technician and issued key authorization in the HID Reader Manager Service, refer to the *HID Reader Manager Portal Adminstration Guide* (PLT-06368).

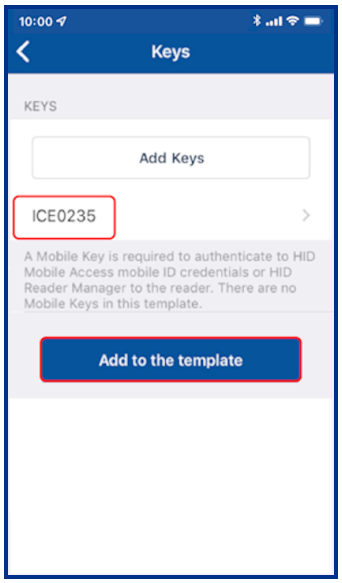
1. Log into the HID Reader Manager app.
2. Connect the HID Reader Manager app to the reader. See **Connect to a reader**.
3. In the HID Reader Manager app inspect the reader configuration and, if indicated, upgrade the reader firmware. See **Reader inspection report**.
4. To configure the reader to support Bluetooth for HID Mobile Access and/or OSDP controller communication, on the **Inspection Report** screen tap **Detailed Configuration**.
5. In the **CREDENTIAL DETAILS** section, tap **Credentials**.
6. In the **HID MOBILE ACCESS** section, enable the **BLE** option.

iCLASS SE / multiCLASS SE

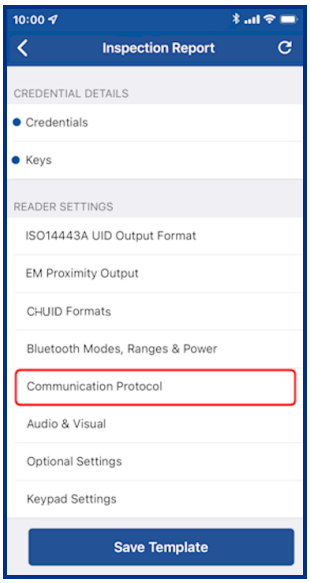


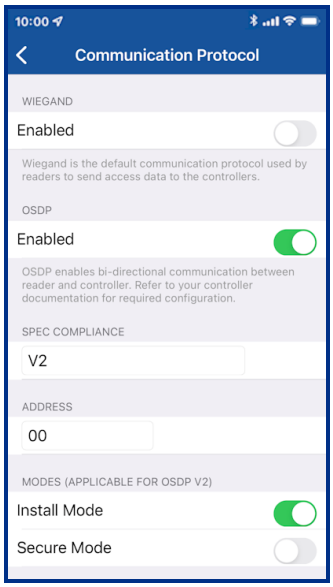
7. Back on the **Inspection Report** screen, in the **CREDENTIAL DETAILS** section, tap **Keys**.
8. Tap **Add Keys** and select the authorization key to be loaded onto the reader (only one key can be loaded). The selected authorization key will be displayed on the screen.
9. Tap **Add to the template** to save.

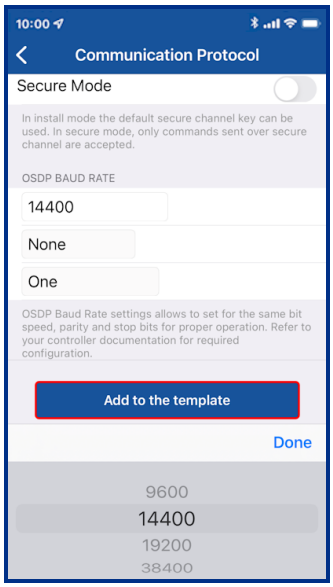




10. To configure the reader for OSDP controller communication (optional), in the **READER SETTINGS** section, tap **Communication Protocol**.
11. Enable the **OSDP** option and tap **Add to the template** to save.

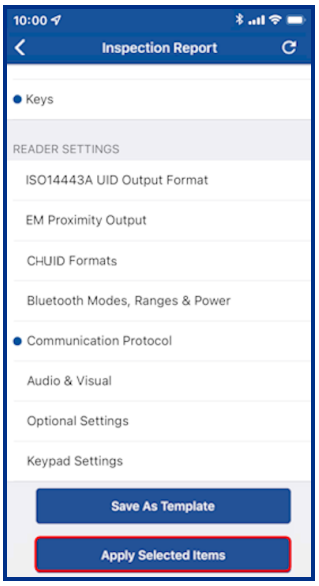


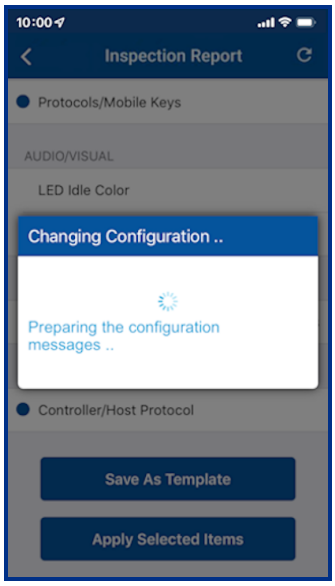


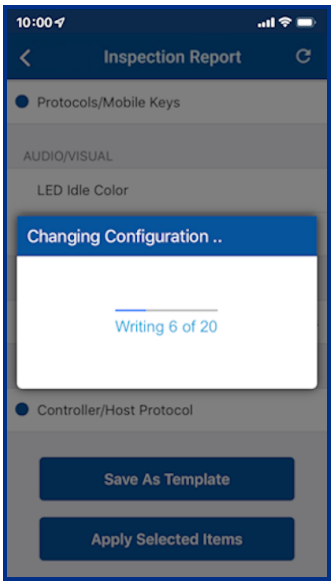


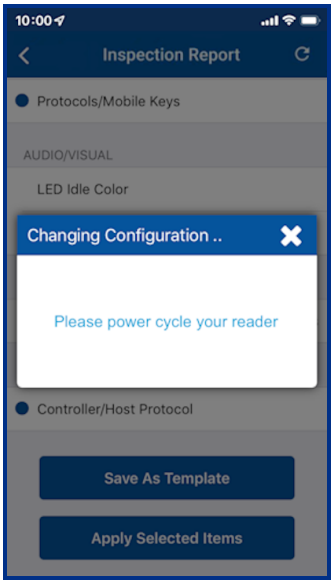
12. On the **Inspection Report** screen, tap **Apply Selected Items**. The selected configuration settings are applied to the reader.

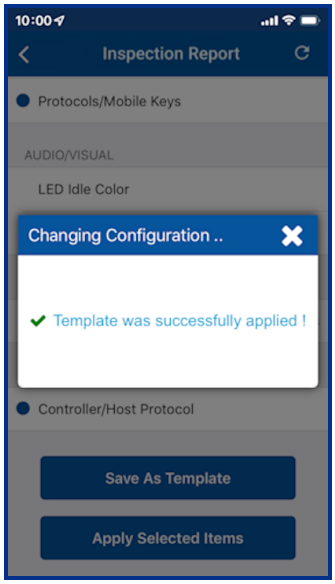
> **Note:** If the reader is a Standard key Mobile-Ready reader you will be prompted to power cycle the reader. For ICE/MOB enabled readers no reader power cycle is required.











13. It is important to fully test any configuration changes performed with the HID Reader Manager app to ensure complete working functionality:
    - If you have upgraded to Mobile Access, test mobile credentials with the Mobile Access app to confirm communication with the reader and BLE operations perform as configured.
    - If you have loaded any mobile keys, ensure that all credentials work at the reader.

Appendix **B**

Identify HID reader models

B.1 Physically inspect reader

The following provides a number of ways you can identify the reader product model through physical inspection of the reader:

1. Check the size of the reader to identify the reader model. HID® Signo™, iCLASS SE®, and multiCLASS SE® readers are available in different form factors for various installation environments. For reader specifications refer to: **https://www.hidglobal.com/products/readers**.
2. Check the reader front product labeling:
   - HID Signo readers have grayscale HID labels.
   - iCLASS SE Express R10 readers have a blue HID label.
   - iCLASS/multiCLASS readers have a blue HID label with “iCLASS SE” or "multiCLASS SE".

HID Signo 20

iCLASS SE Express R10

iCLASS/multiCLASS SE R10

B.2 Check the product labeling

B.2.1 HID Signo readers

The HID Signo reader model and part number is printed on the product labeling, for example:

40TKS-00-000000 (HID Signo 40, terminal strip)

For detailed information on HID Signo reader order part numbers refer to the *HID Readers and Credentials How to Order Guide* (PLT-02630).

The product label is located on:

- The original box packaging in which the reader was supplied.

- The back of the reader.

> **Note:** If the reader is already installed, the reader will have to be removed from it's housing to access the product label.

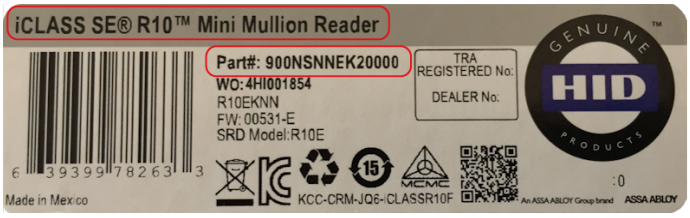
B.2.2 iCLASS SE readers

The HID reader model and part number is printed on the product labeling. iCLASS SE part numbers start with a three-digit number containing the number nine (9xx), for example: **900NSNNEK20000**

For detailed information on iCLASS SE reader order part numbers refer to the *HID Readers and Credentials How to Order Guide* (PLT-02630).

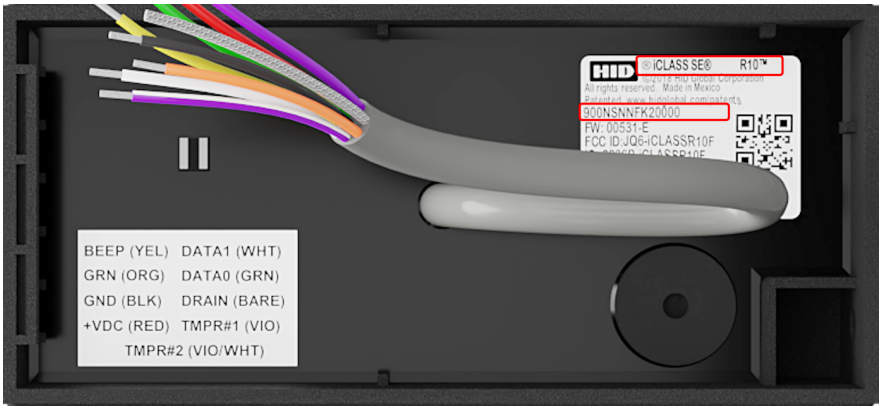
The product label is located on:

- The original box packaging in which the reader was supplied.



- The back of the reader.

> **Note:** If the reader is already installed, the reader will have to be removed from it's housing to access the product label.



B.2.3 Mobile-Capable readers

iCLASS SE (R10, R15, R40, and RK40) readers and multiCLASS SE (RP10, RP15, RP40, and RPK40) readers, Revision E or newer. You can identify this version of reader via the part number, either on POs, invoices or the reader label on inside of the reader. Part numbers that have an **A** as the eighth digit are the iCLASS SE Rev D readers, whereas part numbers that have an **E** as the eighth digit are the iCLASS SE Rev E readers.

- **Rev D Example:** 900NTNN**A**K00000 (not Mobile-Capable)
- **Rev E Example:** 900NTNN**E**K00000

B.2.4 Mobile-Enabled and Mobile-Ready readers

Mobile-Enabled and Mobile-Ready readers with BLE will have a part number that contains the letter **M** as the fifth character location, for example:

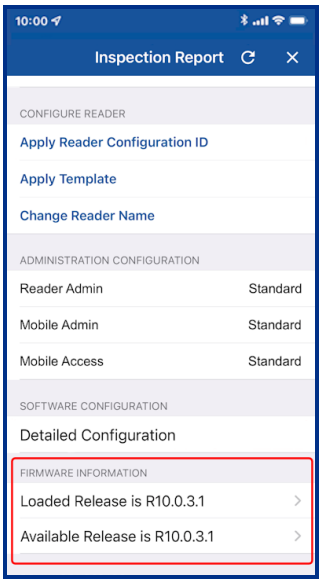
- 920P**M**NNEKMA010
- 920P**M**NNEKEA003

B.3 Check the reader firmware version with Reader Manager

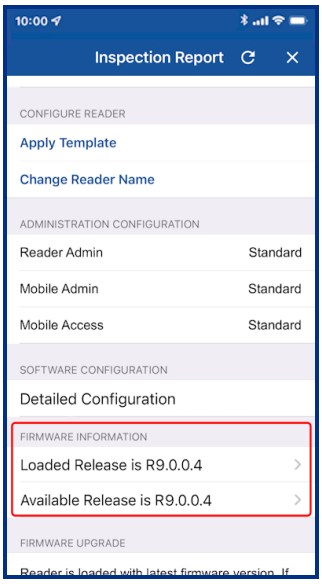
Connect the Reader Manager app to a reader and inspect the reader configuration, see **Connect to a reader**. In the **FIRMWARE INFORMATION** section, check the displayed **Loaded Release** version number:

- If the **Loaded Release** version number is **10**.x.x.x, then the reader is HID® Signo™ reader.
- If the **Loaded Release** version number is **9**.x.x.x, then the reader is an iCLASS SE® Express R10 reader.
- If the **Loaded Release** version number is **8**.x.x.x, then the reader is an iCLASS/multiCLASS SE® Rev E reader.

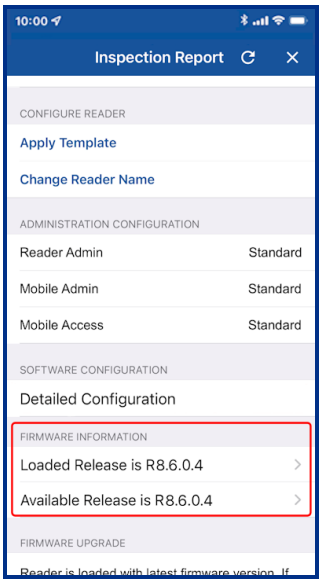
HID Signo



iCLASS SE Express R10



iCLASS/multiCLASS SE Rev E



Glossary

Term	Description
App Specific (opening mode)	This opening modes can be enabled/disabled using the HID Reader Manager App and is specific to an application, for example, widget opening from a wearable such as a smartwatch.
BLE	Bluetooth Low Energy (formerly marketed as Bluetooth Smart) is a wireless personal area network technology.
Credential Container	A mobile device which holds a credential.
End customer	The Organization that uses HID products and services.
Enhanced Tap (opening mode)	This opening modes can be enabled/disabled using the HID Reader Manager App. When approaching a reader the mobile device is brought very close to, or touching the reader (a similar user experience to using a physical credential). As opposed to standard Tap, where your mobile device attempts to connect to the reader, the Enhanced Tap opening mode operates with the reader attempting to connect to the mobile device. This allows the Enhanced Tap operation mode to achieve faster opening times.
Invitation code	Invitation codes are issued to users as the first step in registering a new device. Invitation codes consist of a 16 character alphanumerical sequence and are used to authenticate devices and associate them with the relevant user.
MA	HID Mobile Access®. Mobile access is the use of a mobile device, such as a smartphone, tablet or wearable, to gain access to secured doors, gates, networks, services and more.
MFA	Multi-Factor Authentication. A security system that requires more than one method of authentication from independent categories of credentials to verify the user's identity for a login or other transaction.
Mobile credential/Mobile ID	Virtual credentials that are stored on a mobile device. Mobile IDs are issued and/or revoked via the HID Mobile Access portal. Mobile IDs are unique to each device and cannot be copied. If a user switches devices, a new Mobile ID must be issued.
Mobile-enabled readers	Mobile-enabled readers are fully activated and personalized to support an organization's specific Mobile ID's. These readers can only be ordered after the organization has completed registration for HID Mobile Access or HID Elite program. MOB or ICE Mobile Keyset will be required at time of order.
Mobile-ready readers	Mobile-ready readers are prepared to support HID Mobile Access but lack the personalized configuration (Mobile Keyset) to read an organization's specific Mobile ID's. These readers can be ordered at any time but will require field activation after the organization has completed registration for HID Mobile Access. To support a specific organization's Mobile IDs, these readers need to be personalized (Mobile Keyset loaded) using the HID Reader Manager App or a Mobile Key Card.
Mobile Keyset (MOB or ICE)	Mobile Keyset is a reference number for a set of cryptographic keys loaded into a reader. Mobile IDs, Mobile Key cards, and Mobile Admin cards will securely authenticate only with readers programmed with a matching keyset. An organization is assigned a Mobile Keyset upon registration into either the HID Elite™ (ICE) or HID Mobile Access (MOB) programs. The correct Mobile Keyset must be supplied when ordering mobile-enabled readers, Mobile IDs, Mobile Key cards, and Mobile Admin cards.
Organization Administrator	User with sufficient privileges to add new Reader Manager Administrator users.
Organization ID	Organization ID is a reference number for a unique account within the Mobile Access Portal. It is assigned at the conclusion of account registration. The correct Organization ID must be supplied when ordering Mobile IDs and Mobile Admin cards.

Term	Description
OSDP	Open Supervised Device Protocol (OSDP) is an access control communications standard developed by the Security Industry Association (SIA) to improve interoperability among access control and security products.
RCID	A Reader Configuration ID (RCID) contains all reader configuration settings and keys. The ability to apply a RCID to a reader, using the HID Reader Manager App, is only available for HID Signo readers. A RCID can be obtained by contacting your HID Pre-Sales representative.
Reader Manager Administrator	User with full access to all HID Reader Manager Service functionality, including enrolling Reader Technicians, issuing invitation codes and authorization keys.
Reader Technician	The person that performs reader upgrades and reader configuration changes using the HID® Reader Manager™ app.
Tap (opening mode)	This opening modes can be enabled/disabled using the HID Reader Manager App. When approaching a reader the mobile device is brought very close to, or touching the reader (a similar user experience to using a physical credential).
Twist and Go (opening mode)	This opening modes can be enabled/disabled using the HID Reader Manager App. When approaching a reader the mobile device holder initiates access by twisting the mobile device in a sharp 90 degree rotation in either direction (a similar motion to using a physical door handle). Typically used when the mobile device is at a longer distance from the reader.

Revision history

Date	Description	Revision
February 2023	Section A.1.3 HID Signo readers. Updated supported reader firmware information for 10.0.4.2.	B.7
October 2022	• Section 2.4 Log into HID Reader Manager. Added note related to the indication of a not active account. • Section 3.2 Create new template. Updated section for HID Signo No LF. • Section 4.5 Reader Digital Configuration ID. Updated section for "Reader Digital Configuration ID".	B.6
July 2022	• Section 2.3 Register a new account within the app. Added note related to the new Reader Manager Privacy Notice. • Section 3.3.2 Authorization Keys. Added note related to Reader Manager performing a key store memory check when displaying Authorized Keys. • Section 4.3 Reader inspection report. Added note related to Reader Manager displaying configured keys in the reader. • Section 4.4 Firmware upgrade. Updated firmware upgrade recommended prerequisites. Added note related to interruption of the firmware upgrade process and the Resume Upgrade option. • Section 4.5 Apply Digital Configuration ID. New section added for applying DCIDs to HID Signo readers.	B.5
May 2022	• Section A.1.1 HID iCLASS/mutiCLASS SE readers. Updated reader firmware information for 8.4.0.6 (Standard), 8.4.1.0 (Standard), 8.4.2.0 (Standard), and 8.5.0.9 (Standard). • Section A.1.3 HID Signo readers. Updated reader firmware information for 10.0.2.5, 10.0.3.0, and 10.0.3.1.	B.4
April 2022	Section 3.4.5 Communication Protocol. Updated information related to when OSDP is enabled.	B.3
April 2022	• Section 2.4 Log into HID Reader Manager. Updated Notes to provide information on unsuccessful login attempts. • Section 2.6.2 My Account. Updated description relating to signing out of the App. • Section 3.4.3 CHUID Formats. New section added for the ability to configure CHUID output format. • Section 3.5 Wallet Settings configuration. Updated section with information relating to configuring the Data Format for Transact Credential output. • Section 4.3 Firmware upgrade. Updated section with information relating to recommended prerequisites before starting firmware upgrade. • Section 4.4.2 Reader Settings. Added CHUID Formats to the list of reader settings that can be configured. • Section A.1.1 HID iCLASS/multiCLASS SE readers. Updated the reader firmware information for R8.4.0.6 (Standard), R8.4.1.0 (Standard), R8.4.2.0 (Standard), and R8.5.0.9 (Standard). • Section A.1.3 HID Signo readers. Updated supported firmware upgrade information for R10.0.2.5 (Std), R10.0.2.5 (ICE/MOB), R10.0.3.0 (Std), R10.0.3.0 (ICE/MOB). • Section A.1.3 HID Signo readers. Added firmware upgrade support to version R10.0.3.1. • Glossary. Updated Glossary to provide definitions for the App Specific/Tap/Enhanced Tap/Twist and Go opening operational modes. • Removed content relating to HID Reader Manager Portal. This content can now be found in the HID Reader Manager Portal Administration Guide (PLT-06368).	B.2

Date	Description	Revision
January 2022	• Section 2.4.1 (Create a new template). Added note relating to Credential Profiles. • Section 2.4.1 (Credential details). Updated section for the ability to enable/disable Transact and generic ISO14443A UID credentials. • Section 4.2 Contact HID Technical Support. Updated section to list additional information that may be required by HID Technical Support. • Section A.1.1 HID iCLASS/multiCLASS SE readers. Added firmware version 8.9.2.1 for HID iCLASS and multiCLASS SE readers.	B.1
October 2021	• Section 2.4.1 (EM Proximity Output Format settings). New section added for the capability to select the EM Proximity Output Format. • Section A.1.3 HID Signo readers. Added firmware version 10.0.2.5 for HID Signo readers.	B.0
August 2021	• Section 2.4.1 (ISO14443A UID Output Format settings). Updated section for the ability to enable/disable the Raw Data option and the 64-Bit LSB format option. • Section 2.4.4 Reader Inspection report. Updated section and screenshots for the ability to identify the Reader Model for Signo readers.	A.9
May 2021	• Section 2.4.1 (Credential details). Updated section for the capability to enable/disable DESFire EV3 credential read and Proximity Check. • Appendix A.1.3. HID Signo readers table. Added entries for R10.0.2.4 firmware support.	A.8
May 2021	• Section 2.4.1 (Create a new template). User note added related to template creation. • Appendix A.1.1. HID SE readers table. Added entries for R8.9.1.4 firmware support.	A.7
February 2021	• Section 2.4.1 (Wallet Settings). Updated section for optimized Wallet setting configuration in Reader Manager 1.6.0. • Section 2.4.4. Updated Reader Inspection Report section. • Section 2.4.5. Updated Firmware Upgrade section for the re-install firmware function. • Section 3. Removed sections relating to the Legacy SIS Portal. • Appendix A.1.1. Table comments updated for the Reader Manager 1.6.0 two step FW upgrade path to 8.9.1.3. • Appendix B.2. Updated section for HID Signo reader product labeling.	A.6
September 2020	• Section 2.3.1. Updated the Credential settings sub-section for the ability to enable/disable an Indala Proximity credential and the display of credential profile information for HID Signo readers. • Section 2.3.1. Updated the Bluetooth Modes, Ranges & Power settings sub-section to add default range values. • Section 2.3.1. Updated the Communication Protocol settings sub-section for the ability to change/configure OSDP baud rate for both HID iCLASS SE and HID Signo readers. • Section 2.3.1. Updated the Keypad settings sub-section for setting the keypad backlight color for HID Signo readers. • Appendix A.1. Updated section to list reader firmware versions that can be upgraded.	A.5
May 2020	Updates throughout document for HID Reader Manager 1.4.0.	A.4
September 2019	Updated the following sections for the functionality to enable/disable High Frequency and Low Frequency credentials for iCLASS SE readers: • Section 2.3.1.1 Credential and Keys settings. • Section 2.3.6 View detailed reader configuration. • Appendix A - Configure reader in HID Reader Manager.	A.3

Date	Description	Revision
July 2019	• Section 2.3.1 Create a new template. Updated section for the select reader option and select charging profile option for iCLASS SE Express. • Section 2.3.6 View detailed reader configuration. Updated section for enable/disable Mifare & Desfire UID and Priority options for iCLASS SE Express. • Section A.2.2.1 Configure reader in HID Reader Manager. Updated section for enable/disable Mifare & Desfire UID and Priority options for iCLASS SE Express. • Section 2.3.5 Update reader firmware and Section 2.3.7 Apply configuration changes. Added note relating to "SNMP Authentication Failed" message. • Section 4.1.1 Error and warning messages. Updated Error and warning message table for "SNMP Authentication Failed" message.	A.2
January 2019	Updates implemented for Reader Manager 1.1.0 and for the iCLASS SE Express R10: • Section 2.3 Basic app functionality. Updated sections for new and changed template configuration settings. • Section 3.5.2 Enroll Reader Manager Admin (HID Origo Management Portal) • Appendix A - Configure reader in HID Reader Manager. Updated section for new settings. • Appendix B - Identify HID reader models. New section.	A.1
September 2018	Initial release.	A.0

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