Zebra Access Management System
Cabinet / Portal / Device

User Guide
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Publication Date

May 10, 2021
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Introduction

The guide provides information about installing and using the Zebra Access Management System (ZAMS) software that is used with the Zebra Intelligent Cabinet product.

IMPORTANT: If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: zebra.com/support.

Chapter Descriptions

Topics covered in this guide are as follows:

• Getting Started provides an overview of the ZAMS application, Cabinet set up, and network requirements.

• ZAMS General Usage provides information on battery indications, creating a PIN, using the dashboard, device registration, and Bluetooth proximity.

• ZAMS Portal Access and Usage provides information on accessing and using ZAMS on the portal.

• Troubleshooting provides information on potential problems, causes, and solutions.

Notational Conventions

The following conventions are used in this document:

• Bullets (*) indicate:
  • Action items
  • Lists of alternatives
  • Lists of required steps that are not necessarily sequential.

• Sequential lists (such as those that describe step-by-step procedures) appear as numbered lists.

Icon Conventions

The documentation set is designed to give the reader more visual clues. The following graphic icons are used throughout the documentation set. These icons and their associated meanings are described below.

NOTE: The text here indicates information that is supplemental for the user to know and that is not required to complete a task.
**IMPORTANT:** The text here indicates information that is important for the user to know.

**WARNING:** Warning text goes here. If danger is not avoided, the user CAN be seriously injured or killed. Confirm with your Compliance Engineer before using this.

### Related Documents and Software

The following documents provide more information about Intelligent Cabinets:

- Racks 1 & 2 Shipping and Unpacking Quick Reference Guide
- Zebra Cabinet Site Installation Guide
- Zebra Cabinet Shelf Assembly Instructions
- Access Management System Installation Guide
- Access Management System Cabinet and Mobile Device Quick Reference Guide
- dwprofile_AmsDevicePIN\(^1\) - DataWedge profile for AMS application PIN scanning
- dwprofile_AmsDeviceReg\(^1\) - DataWedge profile for AMS application device registration
- StageNow installation files\(^1\) - StageNow software staging solution for simple profile creation and device deployment.
- Release notes\(^1\)

For the latest version of this guide and all guides, go to [zebra.com/support](http://zebra.com/support).

\(^1\) Actual filenames may have a version extension to match the software release it applies to.
Zebra Access Management System Overview

Product Overview

The Zebra Access Management System (ZAMS) application is a secure solution designed to help organizations reduce the number of missing or unaccounted mobile computers.

![ZAMS Dashboard]

Designed to run on Android terminals, this low touch solution is easily deployed and managed, providing the perfect way of accounting for your mobile assets while keeping the overhead of managing the potential losses to a minimum.

The solution uniquely monitors and reports on the devices by serial number, user, and location providing organizations with the clarity required to quickly recognize if terminals are missing.

The ZAMS portal is the perfect way to set up the solution across multiple locations. Password protected user access allows visibility of assets at a local or global level giving customers the tools to manage missing terminals from a mobile computer fleet easily.

Operator Process Overview

Designed not to intrude on a user’s daily activity, ZAMS provides a simple security screen or a lock-screen, displayed on the terminal, while the terminal is On Charge.

The user facing security screen highlights the terminals batteries charge level (while in its cradle) and this clear visual que helps users pick a terminal that’s charged ready for the shift.
To activate a terminal for the shift, the operator enters a PIN code to unlock the security screen. The operator is driven to unlock the terminal within a few minutes. If the unit is not successfully unlocked within a specified time frame, a built-in timer sounds a reminder alarm to drive the correct process and make sure the application can pass the user ID and serial combination to the servers. Once the unit is returned to the Cabinet or charging dock, it automatically logs the user off and reports the terminal has been returned to the charging location.

**Adding Terminals to Locations**

Adding terminals to location is a simple process that requires firstly that the ZAMS APK is installed on the terminals.

**Adding Terminals to the Database**

Each terminal is registered and logged and linked to the location (ZAMS database) using a dynamic barcode that is either printed from the administration portal for use by the installation team or displayed locally to the charging location on the optional display module. Once the terminals have been registered, they are ready to go to work, no other intervention is required on the mobile computers.

**Using the Reporting and Administration Portal**

The ZAMS portal is password protected, authorized users can create custom locations and add user IDs. The portal provides the custom generated barcodes which are used to add the terminal serial numbers and or IDs to the database.

**Admin Process Overview**

The Reporting and Admin portal provides the client the ability to set up the solution. The password protected, multi-level menu helps drive the administration staff to add mobile computers to the database (by location), add users and monitor terminals On Charge, monitor terminals in use with which operators, and monitor missing terminals.

**ZAMS Network Requirements**

The ZAMS network is picture in Figure 2. Refer to the ZAMS Installation Guide for detailed network requirements (see Related Documents and Software on page 3).
The UV-C Device Sanitizer Tracing app is an optional health and safety feature that provides sanitization indications. If this app installed, the shield indicators are visible along with the battery icon. The three indicators are:

- **Green** - Device is sanitized and safe to handle.
- **Amber** - Device is due to be sanitized.
- **Red** - Device sanitization is overdue.
If the Company Admin turns on the optional feature Bluetooth proximity on the portal, then Bluetooth Proximity is enabled automatically after successful registration of the ZAMS device with the Cabinet.

When Bluetooth Proximity is enabled, the device can pair with the Cabinet dashboard and measure the distance between the mobile device and the Cabinet dashboard device. If the user is more than approximately 2 meters away from the Cabinet dashboard, the alarm triggers regardless of timer duration. No data is transferred between the dashboard and the mobile device over the Bluetooth connection. It’s there only to measure the distance.

When Bluetooth Proximity is enabled and you are successfully logged in, ZAMS is only triggered when the device is put back on power within 2 meters of the Cabinet dashboard.

**NOTE:** Electro-magnetic noise at a site can interfere with the ability of the devices to measure the distance accurately.

The message **Bluetooth proximity is disabled** displays when Bluetooth is disabled.

Bluetooth Proximity can be enabled from the ZAMS portal at Company (for all locations) or at a Location level.
This chapter describes the following ZAMS app features:

- Battery indications
- PIN code entry and considerations
- ZAMS Cabinet set up and registration.

General Usage

1. Take only devices with fully charged batteries from the Cabinet. Devices that are fully charged have a green battery indicator.

   When the device is placed On Charge, the ZAMS application displays the charging screen with battery status indicators as follows:
   - Mostly or fully charged displays a green battery indicator.
   - Approximately half or more of charged capacity displays a yellow battery indicator.
   - Less than half displays an orange battery indicator.
   - Critically low charge displays a red battery indicator.

2. Once the device has been removed from its cradle, the ZAMS application displays a prompts to enter a PIN (Passcode Identification Number).
NOTE: A PIN is a form of User ID. Do not confuse this with a password that is often associated with the term PIN.

Considerations:

• If a valid PIN is not entered within a specified time period (configurable by Company or Location), the application triggers an alarm. The alarm volume can not be adjusted. Users can place the device back into the Cabinet if they do not want to continue using the device. If the PIN is invalid, then an invalid pin message displays.

• If the device is physically locked in ZAMS cradle lock, swipe down from the Battery icon on the charging screen. This triggers the Enter Your Passcode screen in the same way as if the device is undocked. If the correct PIN is entered, the device unlocks.

• If the correct PIN is entered but the device is not removed after 30 seconds, the cradle locks again and after 60 seconds, the app goes back to the charging screen.

• When a valid PIN is entered and the device is successfully logged in, the same PIN can not be used by any other user from Company to log in. Once a user enters the same PIN which is currently in use, an error message displays (for example, User is already logged-in on device 1xxxxxxxxxxxx9).

• The Scan PIN Code for login functionality allows the user to scan a barcode while the device is docked and the cradle lock is on. To enable this functionality, there is a requirement to create a new DataWedge profile. See the ZAMS Installation Guide for detailed information.
• Once the device is registered, the Register Device button label at the bottom of the ZAMS screen changes to a new label Update Settings. This function allows updating the settings of the application. This button can be used to scan BLE QR code to trigger BLE proximity function or scan a Master Unlock Code in case of lost power or other emergencies.

• If a device is taken out from the cradle and a PIN is not entered, press the home screen to go into the OS. However, the app continues to come to the foreground after fixed intervals to prompt the user to enter the PIN before the timer expires.

• When the device is docked (status On Charge) then the last updated time on Cabinet and Portal updates once the battery percentage level changes.

• An Unable to communicate with cabinet error message displays on the ZAMS device charging screen when there is no connectivity between the ZAMS device and Cabinet.

• At the time of registration of the ZAMS device with a Cabinet, the timer is updated on the lock screen according to the settings of alarm timeout configured for the respective Cabinet.

• While the Device is docked and in On Charge status, it goes to sleep as per the time configured. The ZAMS screen is still visible and the brightness of the screen is reduced.

ZAMS Cabinet

The Zebra Access Management System provides a display module on or near the Cabinet to display the current statistics of the devices.

Home

Select Home to display a summary of the current devices registered with the Cabinet. The statistics on this page update automatically when there is a change to the state of any of the devices.

• On Charge – The number of devices that are currently On Charge in the Cabinet.

• In Use – The number of devices that have been removed from the Cabinet and successfully logged in.

• Missing – The number of devices that have been removed from the Cabinet and have not yet logged in. This list also display the items with missing status having a status reason (Not Returned, Communication Lost, & Invalid Pin).

The location and the Cabinet name is displayed at the top of the screen. The Company that the Cabinet belongs to displays at the bottom of the screen.
Figure 4  ZAMS Home Summary Screen
On Charge

The ON CHARGE tab lists all the devices currently On Charge in the Cabinet by serial number. It also displays the latest battery level along with a time stamp of the entry into the database.

To view the On Charge devices:

1. Click Details.

2. Click On Charge.
In Use

The **IN USE** tab lists all the devices that are no longer in the Cabinet. The list displays the users who have been successfully logged in along with the serial number of the devices. The username of the device is also shown along with a time stamp of when the device was logged in.

To view the in use devices:

1. Click **Details**.

2. Click **IN USE**.

Missing

The **MISSING** tab lists all the devices that have been removed from the Cabinet but not yet logged in. These devices are not highlighted with any color.

Missing Devices that have been missing for longer than five minutes are highlighted in RED color at the top of the list. This list shows the serial numbers of the devices and also when the devices were removed from the Cabinet. The devices falling in this category are listed as Missing with three Status reasons.

Status ==> MISSING  Status Reason==>INVALID_LOGIN

Status ==> MISSING  Status Reason==>NOT_RETURNED

Status ==> MISSING  Status Reason==>COMMUNICATION_LOST
To view devices considered missing:

1. **Click Details.**

2. **Click Missing.**

**ZAMS Cabinet Set Up**

The ZAMS installation process consists of establishing network connectivity, accessing the Portal, and installing APKs and supporting files for the cabinets. For detailed installation and set up information, refer to the ZAMS Installation Guide (see Related Documents and Software on page 3).
ZAMS Portal Access and Usage

Zebra Access Management System Portal

The ZAMS management portal is a cloud based server accessible from a web page that allows for remote management of the ZAMS system across cabinets and company sites.

Accessing ZAMS Account

1. Open a browser on your PC or laptop and enter the URL: https://zams.zebra.com.

2. From the Account drop-down menu, click Sign in. The Sign in dialogue box displays.
3. Enter Username and Password.

4. Click **Sign in**. The ZAMS Portal Dashboard displays.

Resetting Password

The password must include the following criteria:

- Be between 8 and 50 characters long.
- Contain at least one digit.
- Contain at least one lower case character.
- Contain at least one upper case character.
- Contain at least one special character.
To change your password:

1. Select **Password** from the Account drop-down menu. The password must contain at least 8 characters (letters or numbers).

2. Complete all fields and click **Save**.

**Selecting ZAMS Portal Dashboard Options**

The first screen the application displays is the Zebra Access Management System Dashboard.

1. Click on the drop-down menus and select the desired **Company**, **Site**, and **Cabinet**.

2. Click on **Show Stats**.

The application displays real-time statistics from the selected Cabinet of the desired Site belonging to the relevant Company while the browser remains on the page.
Viewing Device Details

To view device details:

1. From the dashboard statistics display, click View to see the details of any set of devices. This page does not update automatically.

2. The list of devices displays and provides information on each individual device in the selected state which include:
   - **On Charge** – The number of devices currently On Charge in the Cabinet.
   - **In Use** – The number of devices removed from the Cabinet and successfully logged in.
   - **Missing** – The number of devices removed from the Cabinet and have not yet logged in. The Missing status has three classifications and cover three Status reasons for missing device; Missing> Not_Returned, Missing> Invalid_Login, Missing> Communication_Lost.

Missing Devices Report

To view a missing devices report:

1. Select the Location and Cabinet for which you would like to see the Missing devices.
2. Click Show Stats. The report lists the Device Name, Serial number, and Last Update information for the selection criteria.
Historical Reports

Historical data can be generated from the portal according to the desired criteria and downloaded in PDF format. There are three types of historical reports:

- Cabinet Devices Report (see To generate a Cabinet Devices Report: on page 20)
- Device Status Report (see To generate a Device Status Report: on page 21)
- User Devices Report (see The generate a User Device Report: on page 22)

Generating Historical Reports

To generate and download reports:

1. Log in to the Portal using Company Admin credentials.
2. Click on Reports from the top tabs.
3. Click on Historical Reports from the drop-down menu. The Historical Reports screen displays.
4. Select the desired report to generate from the Select Report drop-down menu.

- To generate a Cabinet Devices Report:
  a. Select the desired date from the Begin Date field.
  b. Select the desired date from the End Date field.
  c. Enter the Cabinet name (example: DanDevCabinet).
d. Click on **Generate Report**.

- To generate a **Device Status Report**:
  a. Select the desired date from the **Begin Date** field.
  b. Select the desired date from the **End Date** field.
  c. Enter the **Device name** (example: DanDevCabinet).
  d. Click on **Load Cabinet**. All the cabinets associated with s/n of the Device Name entered loads.
  e. There are two report generation options:
     - If a cabinet is not selected and **Generate** is selected, the complete history of the Device Status Report loads (device associated with all the cabinets in the selected date range). Cabinet name **Multiple** generates a complete list with all the cabinets the device has been associated and all relevant data.
• If a Cabinet is selected and **Generate** is selected, the Device Status Report only for that specific cabinet in the selected date range generates.

![Device Status Report Image]

• The generate a **User Device Report**:
  a. Select the desired date from the **Begin Date** field.
  b. Select the desired date from the **End Date** field.
  c. Enter the **User ID**.
  d. Click **Generate**.

![User Devices Report Image]
Generating Unlock Code

To generate a QR Code to unlock devices in the event of a power failure:

1. Click **Master Unlock Code** from the **Utilities** drop-down menu.

2. Click **Generate Unlock Code**.
3. Scan the QR Code from the portal to unlock the mobile device.

NOTE: The Master QR is set to expire after 48 hours after being generated.

Adding Device User

A Company Admin can create new device users as follows:

1. Login to ZAMS web portal as Company Admin.
2. Go to Administration > User Management.
3. Click on Create User.
4. Select Role as Role_Device_User.
5. Provide a unique email address that has not been used before.
6. Enter first name and last name.
7. Enter device login.
8. Select Company from the drop-down menu.
9. Enter a unique PIN code. The app provides information on how many digits based on the Company PIN code configuration. This PIN should be unique as it identifies the user to the system.
10. Check the Activated box.
11. Select the default language.
12. Save the record.

NOTE: If the email address or the PIN code already exists, an error message displays at the top of the screen and disappears after a few seconds.
# Troubleshooting

## Table 4  Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Possible Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zebra Terminal displays <strong>Unable to communicate with cabinet</strong> message displayed when docked.</td>
<td>There is a connectivity issue between the mobile computers and the reporting module. Check that the Wi-Fi networks are running correctly.</td>
<td>Report the problem to your Help Desk.</td>
</tr>
<tr>
<td><strong>Unable to reach to the Cabinet. Please scan QR code</strong> message displayed if undocked.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZAMS application does not allow a user to log on to the terminal.</td>
<td>The password is not recognized as valid.</td>
<td>Return the terminal to its Location/cradle to stop the alarm sounding and reset the Lock screen. Report the password issue to your Help Desk.</td>
</tr>
<tr>
<td>Access denied to the Admin Portal.</td>
<td>The password is not valid. Check your password before attempting to log in again.</td>
<td>Report the problem to your help desk.</td>
</tr>
<tr>
<td>ZAMS Lock screen is not shown but the alarm is sounding after the allotted time.</td>
<td>To allow some third-party applications to have access, ZAMS can to move into the background but still function.</td>
<td>Tap on the <strong>Zebra Access Management System</strong> Icon and bring it to the foreground to allow sign on. Alternatively, return the terminal to its Location/cradle to stop the alarm sounding and re-set the lock screen.</td>
</tr>
<tr>
<td>The ZAMS Lock screen does not come to the foreground when the terminal is returned to its charging cradle.</td>
<td>Check that the terminal is seated correctly in the cradle, the cradle is functioning correctly, and power is supplied.</td>
<td>If the issue persists, report it to your help desk.</td>
</tr>
<tr>
<td>Mobile Computer does not allow one or some of the following:</td>
<td>If during the initial loading of the APK, permission is not granted for Camera / Location / Microphone / access to storage or the Telephone, then the application will not function correctly.</td>
<td>Reinstall the Zebra Access Management System APK and accept all permissions.</td>
</tr>
<tr>
<td>• Scan QR code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Access to its location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Store its registration data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Technical Support

When your own Help Desk is unable to solve your issue entitled to technical support, you can escalate issues to the Zebra support team. Please escalate issues to Zebra only after you have utilized your own support procedures and still require assistance.

Multi-lingual support is provided during normal regional business hours only. After hours technical support is provided in English only for products under contracts that include 24/7 support. Each region observes various local regional holidays, and days are subject to change from year to year. For information regarding Zebra Support go to: zebra.com/us/en/about-zebra/contact-zebra/contact-tech-support.html.

Zebra also provides access to technical and solution training as well as access to professional services offerings to ensure your ability to effectively deploy Zebra solutions.

Contact your account team to learn more.