

# **Dolphin 75e Wearable Solution**

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Powered by Android

## **User's Guide**

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## **Contact Customer Support**

To search our knowledge base for a solution or to log in to the Technical Support portal and report a problem, go to [www.hsmcontactsupport.com](http://www.hsmcontactsupport.com).

For our latest contact information, see [www.honeywellaidc.com/locations](http://www.honeywellaidc.com/locations).

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### **Limited Warranty**

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# Getting Started

## Overview

The Dolphin 75e Wearable Solution consists of a Dolphin 75e terminal, a wearable sled, a ring scanner (optional), and/or headset (optional). The wearable sled is available in one of the following configurations:

- Arm Mount Sled ([page 3-2](#))
- Belt Mount Sled ([page 3-4](#))

The terminal is available in either standard or extended battery versions. The Dolphin 75e Wearable Solution is IP 54 rated.

## What You Need

There are several use cases for the Honeywell Wearable Solution. The examples below indicate the typical items used in sample use cases. The Dolphin 75e terminal and accessories may be packaged separately from the other wearable accessories.

### ***Belt Mount with Voice***

- Dolphin 75e
- Belt mount sled
- Belt mount clip
- Headset adapter cable
- Headset

### ***Arm Mount with Tethered Ring Scanner***

- Dolphin 75e
- Arm mount sled
- Armband
- Tethered Ring Scanner

### ***Arm Mount with Voice and Tethered Ring Scanner***

- Dolphin 75e
- Arm mount sled
- Armband
- Audio end cap (to replace standard end cap)
- Headset adapter cable
- Headset
- Tethered Ring Scanner

## About this Guide

This guide provides assembling and mounting instructions as well as information about terminal setup and configuration as a wearable solution. Daily use instructions are included. This document describes only those features of the Dolphin 75e unique to the Wearable Solution.

### ***Additional Documents***

This guide is intended to supplement the following documents available at [www.honeywellaidc.com](http://www.honeywellaidc.com):

- *Dolphin 75e Powered by Android 4.4 User's Guide*
- *Dolphin Power Tools User's Guide for Devices Powered by Android*
- Honeywell\_MobilitySDK\_Android\_D75e version 1.00.00.0011 or higher

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## Before You Begin

Here is a list of things you should check before you begin.

### Minimum Software Requirements

The minimum software requirements for the terminal:

- Build number 56.01.12.0160
- Power Tools 3.11.3126

To update your software see page [4-1](#).

### Battery

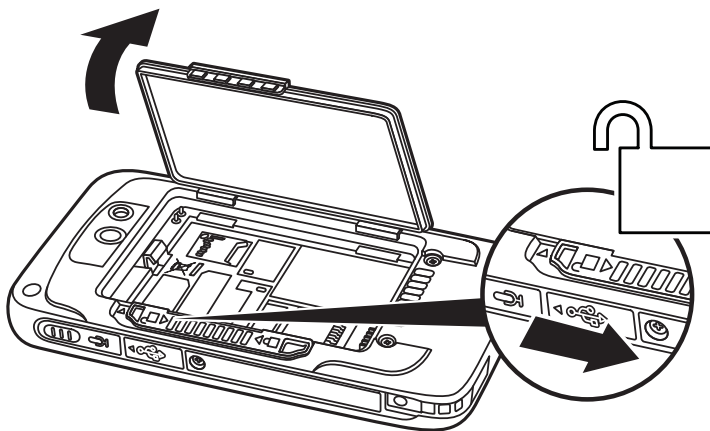
The Dolphin 75e is designed for use with battery part numbers BAT-STANDARD-02 (Li-ion 3.7 V, 6.179 watt hour) and BAT-EXTENDED-02 (Li-ion 3.7 V, 12.358 watt hour) manufactured for Honeywell International Inc.



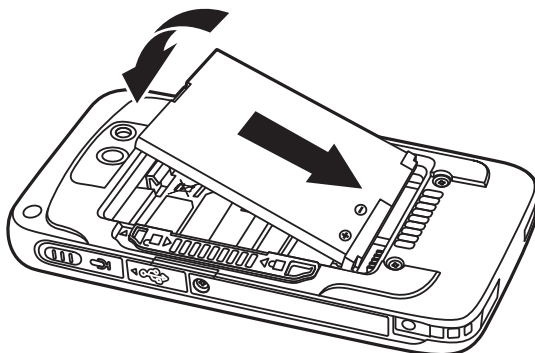
*We recommend use of Honeywell Li-ion battery packs. Use of any non-Honeywell battery may result in damage not covered by the warranty.*

### Install the Battery

1. Unlock and remove battery door.

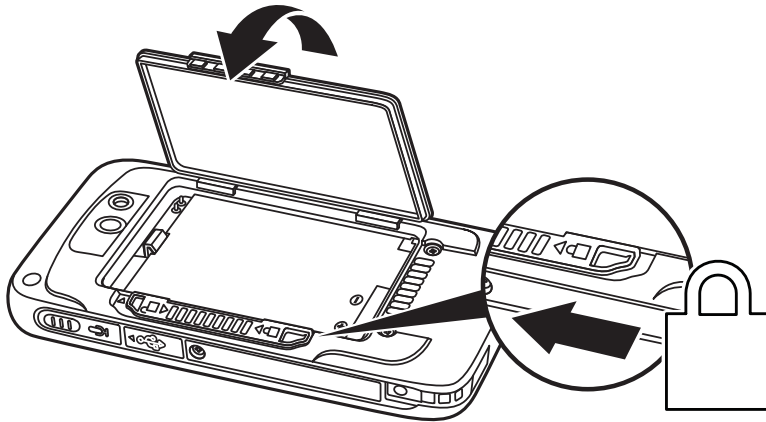


2. Insert the battery.





- 
3. Close battery door. Apply pressure to the edges of the battery door to ensure the door is properly closed. Engage the door lock.



### ***Charge the Battery***

For best results, use a freshly charged battery for each shift. For information on charging the terminal and the charge bases that are available, see the User's Guide for your terminal.



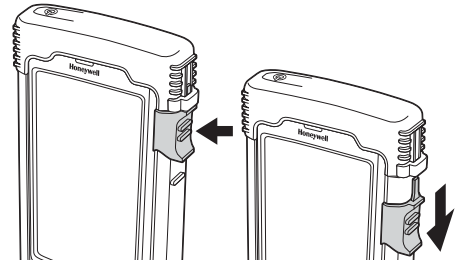
## Installing and Mounting

### Arm Mount Applications

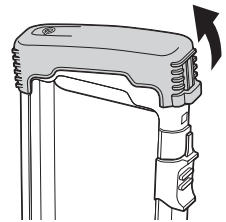
This section describes how to install and mount the arm mount configuration.

#### Install the Terminal in the Arm Mount Sled

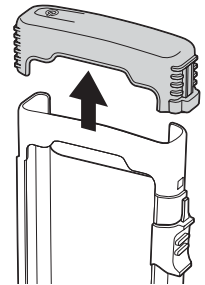
1. If the end cap is installed on the sled, slide the lock down to release the end cap.



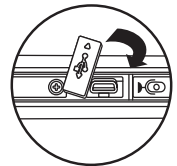
2. Push up on the right side (the side with the lock) of end cap. Do not attempt to remove the end cap without sliding the lock first!



3. Pull the end cap off the sled.

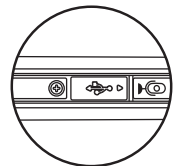


4. Make sure the USB door is closed. Rotate the door on the right side of the Dolphin 75e to close.

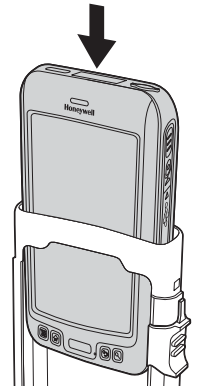


5. Press until the door is flush with the side of the terminal.

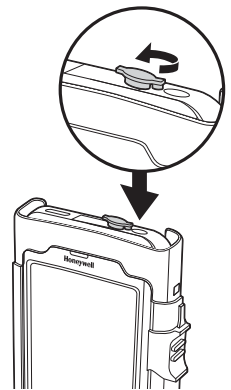
*Note: If the door is not flush, it may be difficult to remove the terminal from the sled.*



6. Slide the Dolphin 75e into the sled.

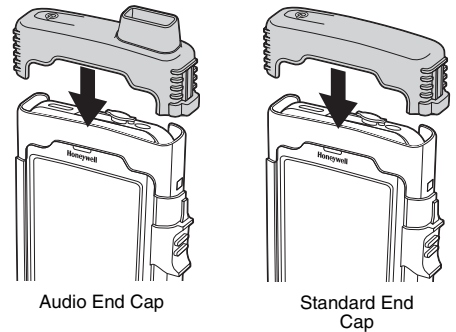


7. If using the audio end cap, make sure audio jack door is open. Pull the rubber door out and rotate the door 180° as shown to prevent damage.

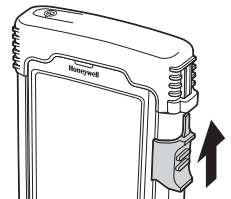


8. If using the audio end cap, make sure the audio cable is not installed in the end cap.

9. Slide the end cap straight onto the sled until it clicks in place.



10. Slide the lock closed to secure the end cap.

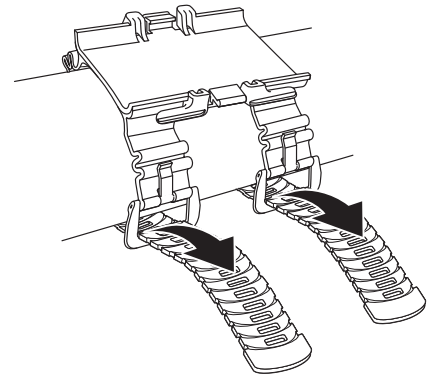


## Mount the Arm Band and Attach the Terminal

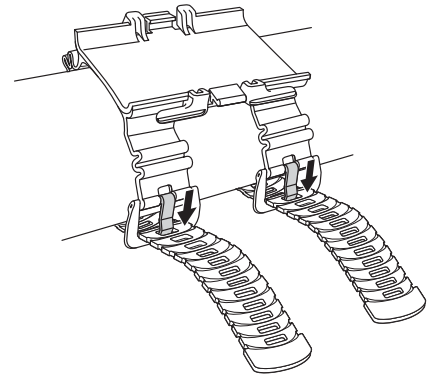
It is recommended that each user have their own arm band for hygiene reasons. The arm band can be washed between uses. Be sure to remove the sled from the arm band before washing the arm band.

*Note: The illustrations in this procedure assume the sled has not yet been mounted to the arm band. However the sled can be mounted to the arm band before the user puts the arm band on.*

1. If the arm band straps are not fed through the buckles, feed them through to form a loop before placing the arm band on the arm. For ease of installation, the straps should be kept looped through the buckles.
2. Place and balance the arm band assembly on the top of the desired arm with the buckles toward the outside of the arm.
3. Using the other hand, pull each strap end straight away from the arm until the arm band is comfortably secured.

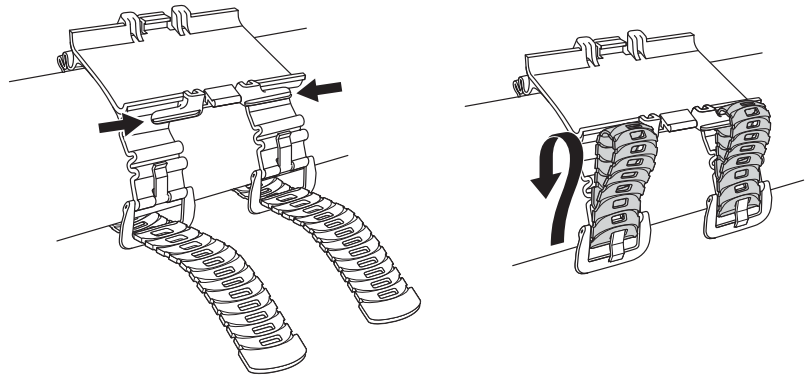


4. Ensure the latch on each buckle is through a hole in the strap.

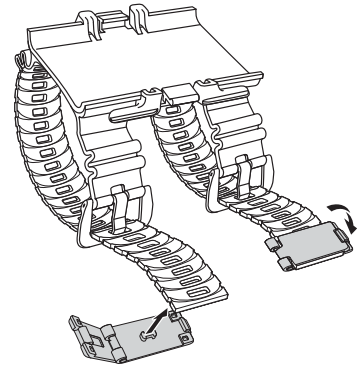


1. If there is excess strap length:

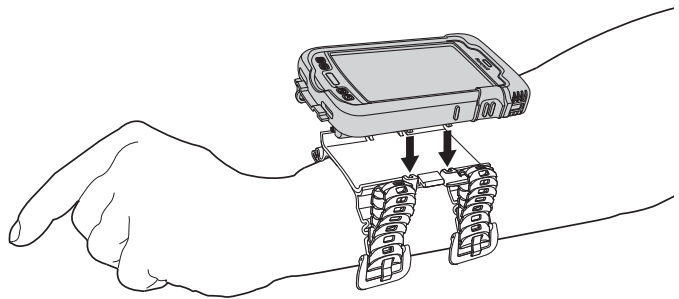
- Loop the excess strap behind the horns on the sled, as shown, or



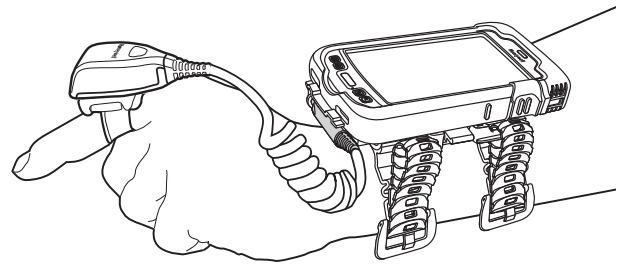
- 
- Trim the straps to length and use the provided clips to terminate the strap end.



2. Align the sled assembly with the arm band and press on the sled until it latches onto the arm band. Be sure to align tabs on the back of sled with the notches on the arm band. The end of the sled with the ring scanner connector must face toward the hand.



3. If using the ring scanner (see [Connect the Ring Scanner \(Optional\)](#) on page 2-9.), slide the ring scanner over the index finger and adjust the strap (if applicable) for a comfortable fit.



4. To remove the sled assembly, unbuckle and loosen the straps. It is not necessary to remove the strap from the buckle.

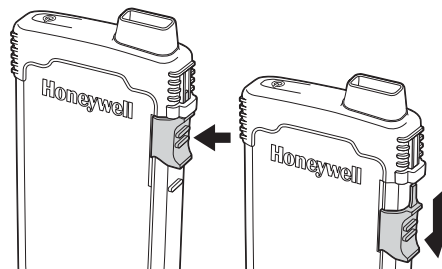
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## Belt Mount Applications

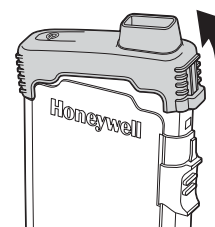
This section describes how to install and mount the belt mount configuration.

### Install the Terminal in the Belt Mount Sled

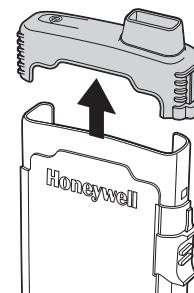
1. If the end cap is installed on the sled, slide the lock down to release the end cap.



2. Push up on the right side (the side with the lock) of end cap. Do not attempt to remove the end cap without sliding the lock first!



3. Pull the end cap off the sled.

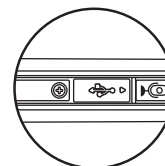


4. Make sure the USB door is closed. Rotate the door on the right side of the Dolphin 75e to close.



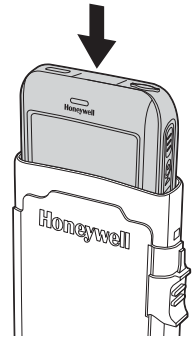
5. Press until the door is flush with the side of the terminal.

*Note: If the door is not flush, it may be difficult to remove the terminal from the sled.*

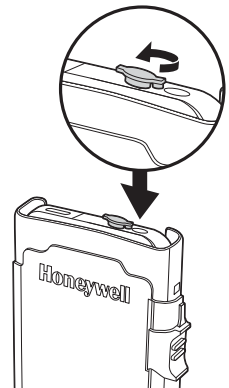


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6. Slide the Dolphin 75e into the sled.

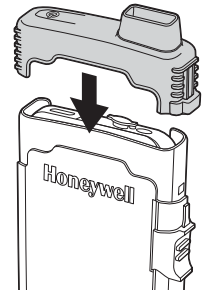


7. Make sure audio jack door is open. Pull the rubber door out and rotate the door 180° as shown to prevent damage.

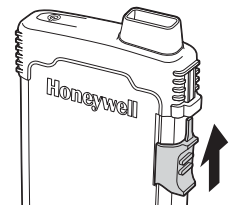


8. Make sure the audio cable is not installed in the end cap.

9. Slide the end cap straight onto the sled until it clicks in place.



10. Slide the lock closed to secure the end cap.

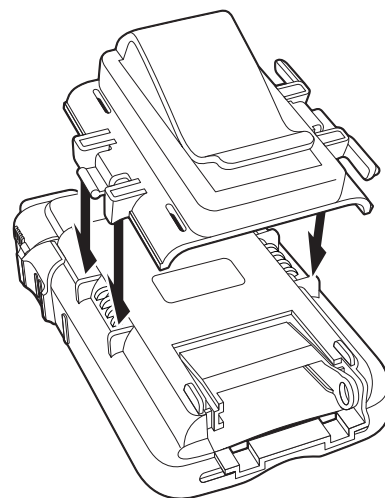




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### ***Attach the Sled to the Belt Clip***

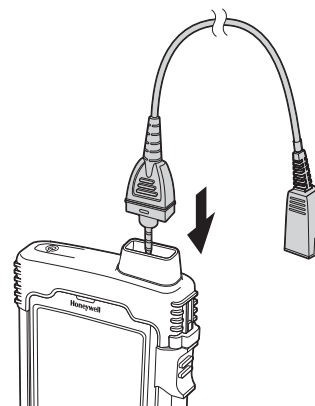
1. Align the sled assembly with the belt clip and press on the sled until it latches onto the belt clip. Be sure to align tabs on the back of sled with the notches on the belt clip.



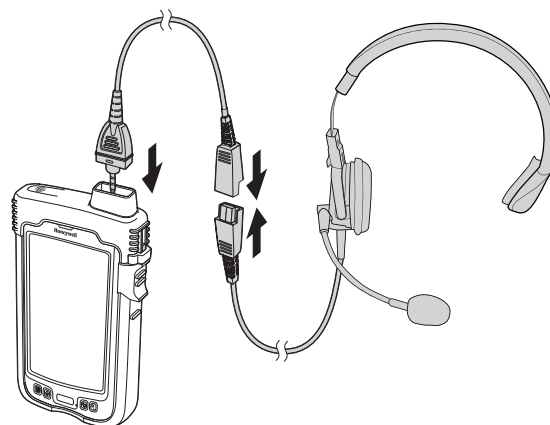
2. Slide the clip over a belt to wear the assembly.

### ***Attach the Headset (Optional)***

1. Make sure the audio jack door is open as shown in the previous section.
2. Slide the 3.5mm audio connector into the end cap.

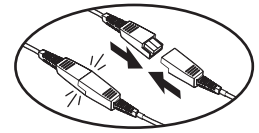


3. Attach the quick disconnect end of the headset adapter cable to the headset's cable.



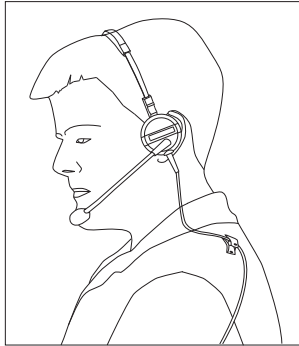
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4. Slide the cable ends together until they click. Do not twist or bend the connectors.



### ***Adjusting Headset / Microphone and Securing Cable***

The headset consists of an earpiece, a microphone, a clothing clip and a cable. The headset attaches to the audio cable end of the voice cable which attaches to the audio end cap.



Do not twist the microphone boom when adjusting the microphone. The microphone should be adjusted to be about one or two finger widths from your mouth.

Make sure the microphone is pointed at your mouth. Note the small "Talk" label near the mouthpiece. Make sure the Talk label is in front of your mouth. The microphone cable can be routed over or under clothing.

#### ***Under Clothing***

Leave the cable exposed only at the top of the collar. Be sure to leave a small loop of cable to allow movement of your head.

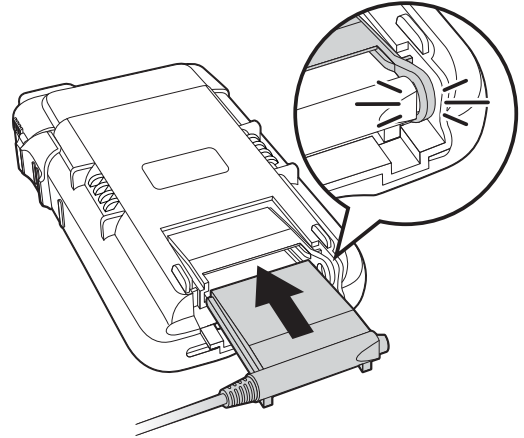
#### ***Over Clothing***

Use clothing clips to hold the cable close to your body. Tuck the cable under the belt, but leave a small loop where it goes under the belt. Do not wear the cable on the front of your body. It may get in your way or get caught on protruding objects.

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## Connect the Ring Scanner (Optional)

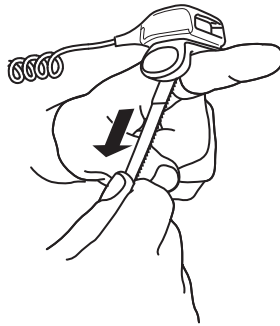
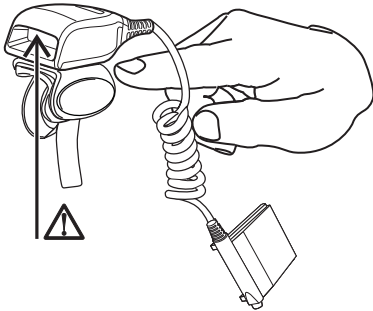
1. Slide the ring scanner cable connector into the bottom of the sled until the connector ring clicks shut.  
It is not necessary to remove the ring scanner from the sled before removing the Dolphin 75e from the sled.
2. When connected to the Dolphin 75e that is powered up, the terminal beeps emits 3 beeps and the ring scanner LED blinks green one time. The scanner is ready to scan.



## Attaching the Ring to your Finger

1. Remove shipping film off the scanner window.
2. Slide finger into loosened ring strap.
3. Pull ring strap to secure ring to finger.

*Note: If using the C-ring simply slide on to finger.*

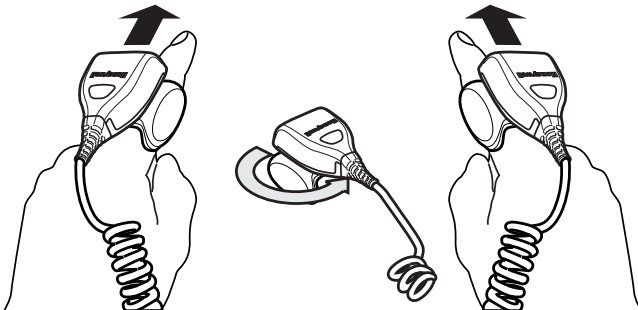


The ring scanner has a built-in quick disconnect designed for occasional safety hazards. It is not intended for frequent, normal removal of the ring scanner from the hand.

Do not touch, push against or brace your finger on the scan aperture at any time.

## Trigger Rotation

The scanner head can be rotated 180° to be work on the right or left hand.






## About the Hardware

### About the Terminal

For more information on the Dolphin 75e, see the User's Guide for your product.

#### Turn Power On

To turn the terminal **On**, press and release the **Power** button .




#### Turn Power Off

1. Press and hold the Power button  until the options menu displays.
2. Touch **Power Off**.

#### Sleep Mode (Suspend Mode)

**Sleep** mode automatically turns the touch panel display off and locks the terminal to save battery power when the terminal is inactive for a programmed period of time. The automatic timeout limits are adjustable.

To wake up from sleep mode and unlock the screen:

1. Press and release the **Power** button  to wake the terminal.
2. Drag the  to the edge of the display or press the **Menu** button  to unlock the terminal.

To manually place the terminal in **Sleep Mode** press and release the **Power** button .


To adjust the timeout limit, touch **All Apps**  > **Settings**  > **Display** > **Sleep**.

#### Restart the Terminal

You may need to restart the terminal to correct conditions where an application stops responding to the system or the terminal seems to be locked up.

- Press and hold the **Power** button  until the option menu displays, and then select **Reboot**.

To perform a restart if the touch panel display is unresponsive:

- Press and hold the **Power** button  for approximately 8 seconds until the terminal starts to reboot. When the reset is complete, the **Lock** screen displays.



*Note: The Internal storage\honeywell folder on the Dolphin terminal is semi-permanent storage on the terminal. By default, files in this folder are maintained after a **Reboot**.*

#### Reset the Terminal




If the terminal completely stops responding, you may need to perform a **Factory Reset (Clean Boot)**. Because a **Factory Reset** can result in data loss, use this method only if all other recovery methods have failed. All personal content is erased (e.g., emails, pictures, contacts) and factory default settings are restored when a factory reset is performed.



**Caution:** A **Factory Reset (Clean Boot)** erases the memory in the terminal, including all applications and data files, with the exception of those found in the Flash File Store or any removable storage.

1. Touch **All Apps**  > **Settings** .
2. Select **Backup & Reset**, and then **Factory Data Reset**.
3. To erase all data on the SD card in addition to all data from internal storage, check the **Erase SD card** box.
4. To erase all data in the IPSM in addition to all data from the internal storage, check the **Erase IPSM** box.
5. Select **Reset phone**.

To perform a **Factory Reset** if the touchscreen is unresponsive and all other recovery methods have failed:

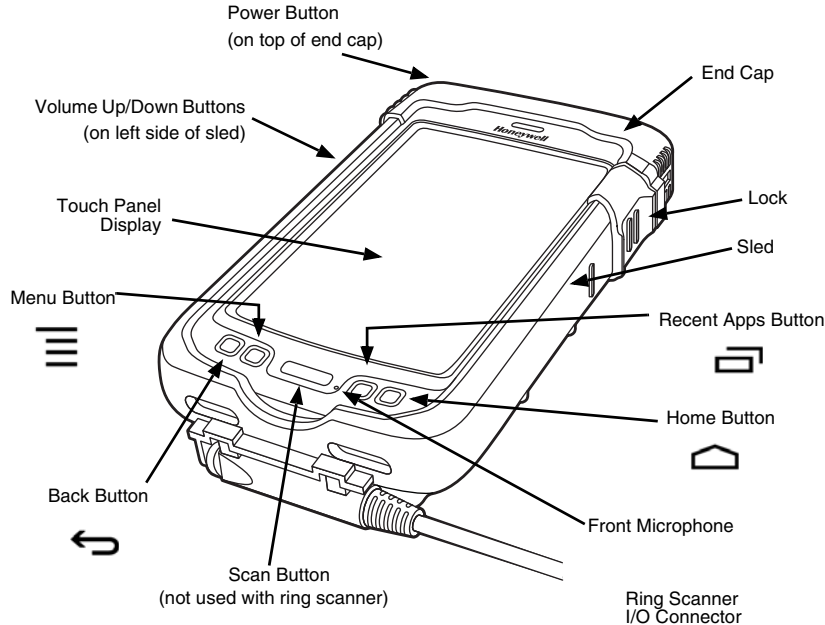
1. Press and hold the **Power** button  for approximately 8 seconds until the terminal starts to reboot.
2. Press and hold the **Recent**  and **Volume Down**  buttons.

## About the Arm Mount Sled

### Arm Mount Features

The arm-mounted sled:

- Mounts the terminal on the user's left or right arm
- Helps protect the terminal from impact
- Allows for use of the terminal display
- Includes an option to support voice applications via an audio cable and headset
- Supports a tethered ring scanner.



### Terminal Features Not Used

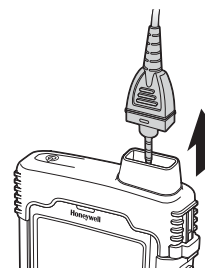
When the terminal is installed in the arm mounted sled, the following features are not available:

- Internal scanner
- Micro-USB port

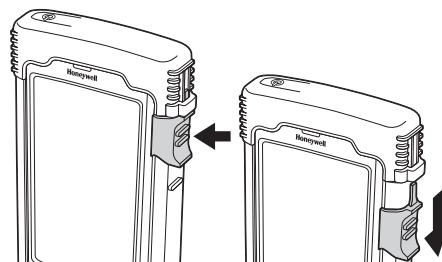
---

## **Remove the Terminal from the Arm Mount Sled**

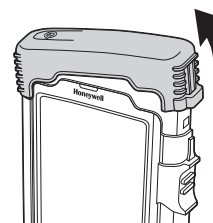
1. If the audio end cap is used, remove the audio cable. To prevent damage to the terminal always unplug the audio cable (if used) before removing the end cap.



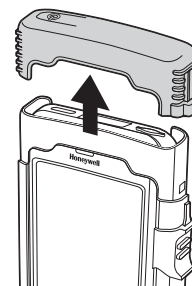
2. Slide the lock down to release the end cap.



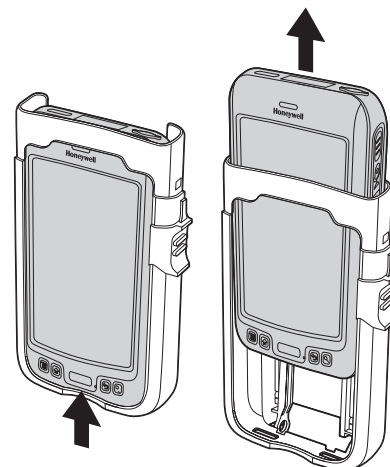
3. Push up on the right side of the end cap. Do not attempt to remove the end cap without opening the lock first!



4. Pull the end cap off of the sled.



5. Slide the terminal out of the sled. Use the notch in the bottom of the sled to push the terminal.



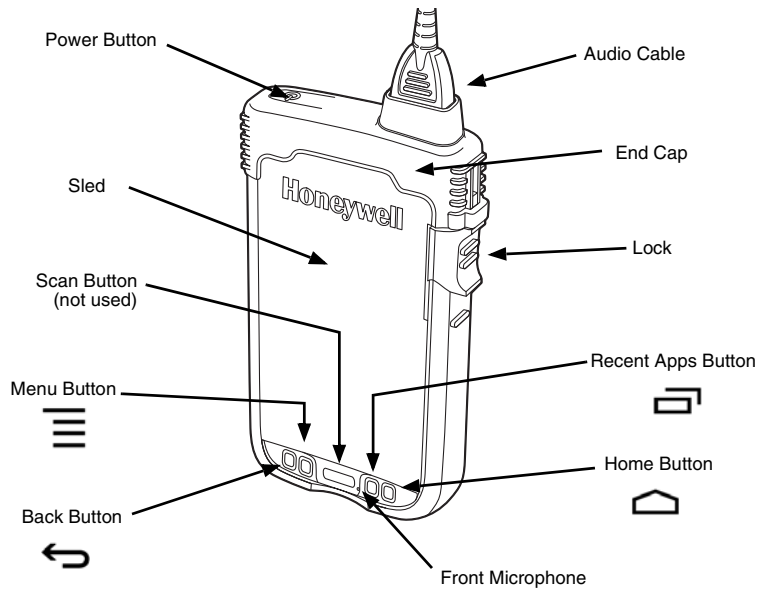
---

## About the Belt Mount Sled

### Belt Mount Features

The belt-mounted sled:

- Mounts the terminal on the user's belt
- Helps protect the terminal from impact
- Conceals the terminal display
- Designed for voice applications via an audio cable and headset



The sled encases the terminal including the touch panel and helps protect the terminal from impacts.

### Terminal Features Not Used

When the terminal is installed in the belt mounted sled, the following features are not available:

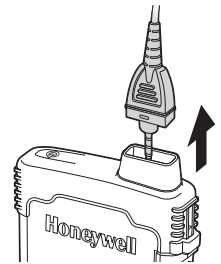
- Touch screen display
- Micro-USB port
- Internal scanner.



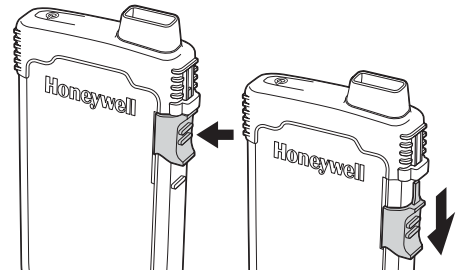
---

## Remove the Terminal from the Belt Mount Sled

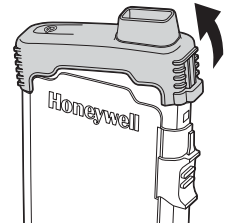
1. If the audio end cap is used, remove the audio cable. To prevent damage to the terminal always unplug the audio cable before removing the end cap.



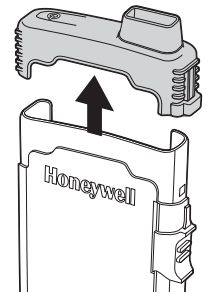
2. Slide the lock down to release the end cap.



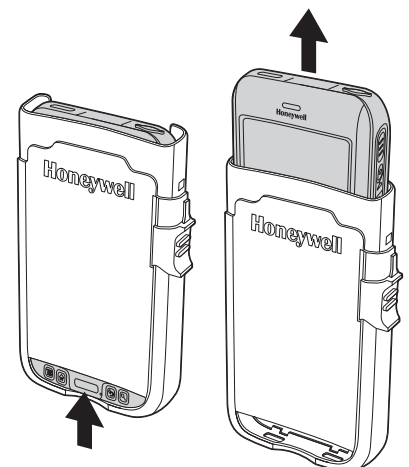
3. Push up on the right side of the end cap. Do not attempt to remove the end cap without opening the lock first!



4. Pull the end cap off of the sled.



5. Slide the terminal out of the sled. Use the notch in the bottom of the sled to push the terminal.



---

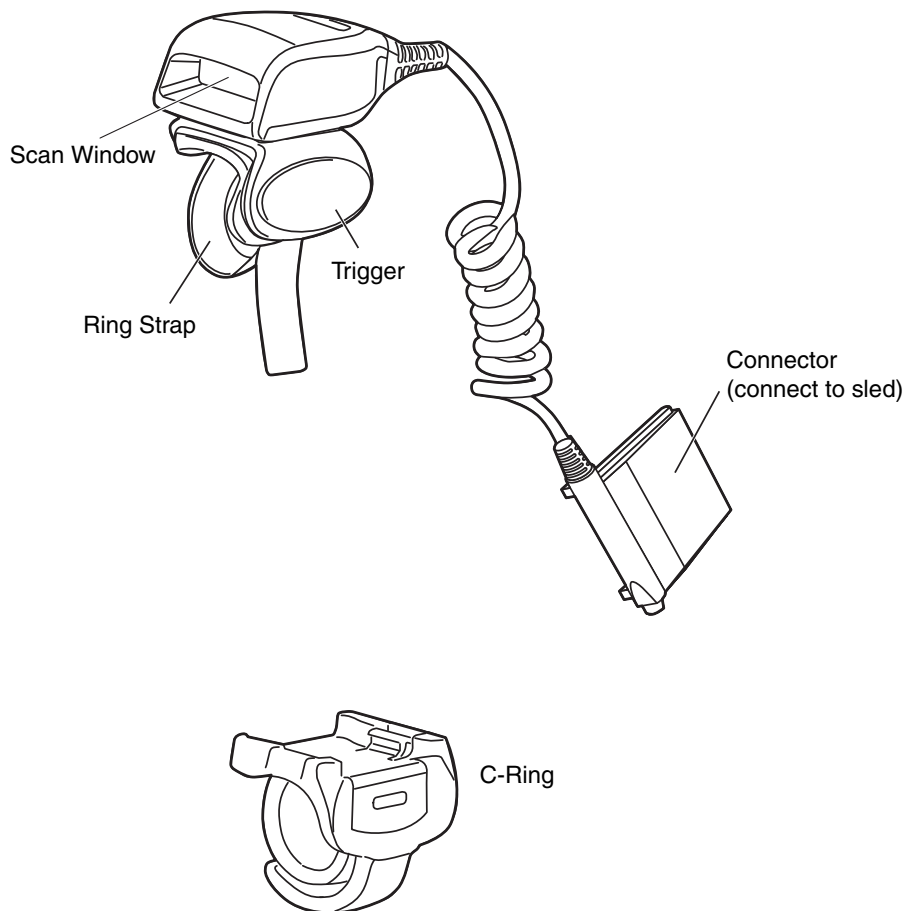
## About the 8620 Ring Scanner

### Ring Scanner Features

The ring scanner is shipped with 3 different finger attachments:

- Ring strap which is adjustable to your finger size
- Gray C-ring for small to medium sized fingers (self adjustable)
- Black C-ring for medium to large sized finger (self adjustable)

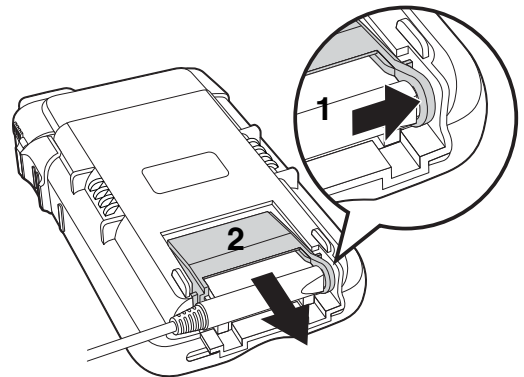
The trigger and ring strap/C-ring are user replaceable as described in this section.



---

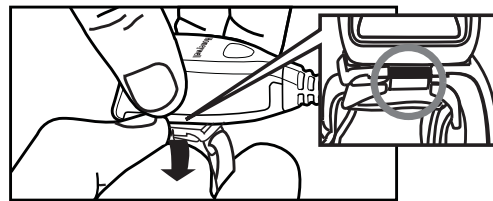
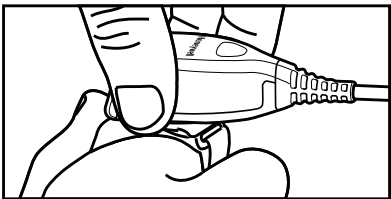
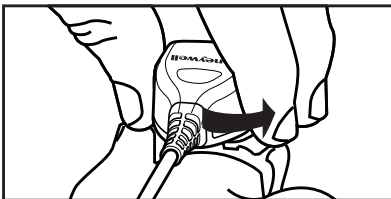
## ***Eject the Ring Scanner***

1. To eject the ring scanner, open the connector ring with one hand, pulling toward the outside of the sled.
2. Push the ring scanner connector out of the sled.

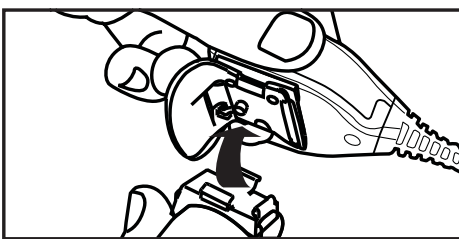


## ***Remove the Ring Strap/C-Ring***

1. Turn the scanner 90°.
2. Press latch down.



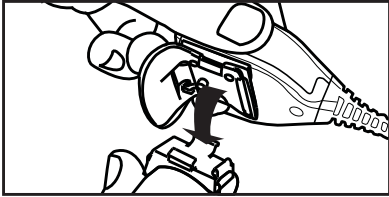
3. Remove the ring strap or c-ring.



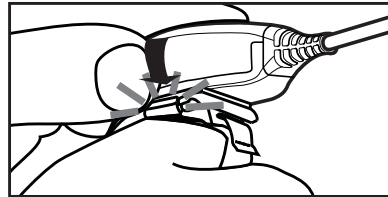
---

## Replace the Ring Strap/C-Ring

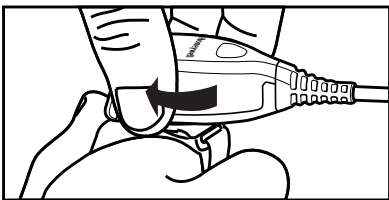
1. Connect ring latch with trigger catch.



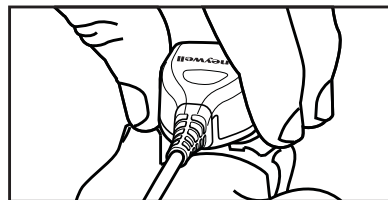
2. Press together until a click occurs.



3. Turn 90°.

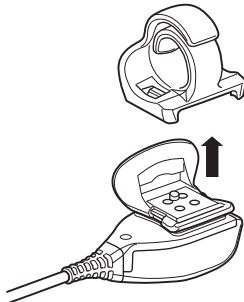


4. Ready to scan.

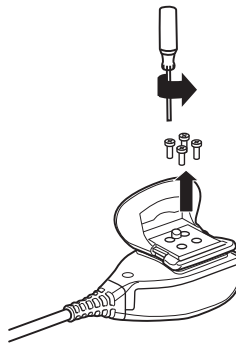


## Remove the Trigger

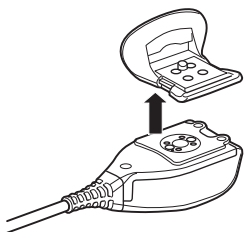
1. Remove ring strap or c-ring.



2. Unscrew the 4 screws.



3. Remove trigger.

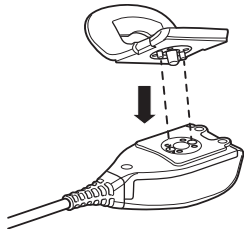


*Note: When removing the trigger be careful that the metal spring is not dislodged.*

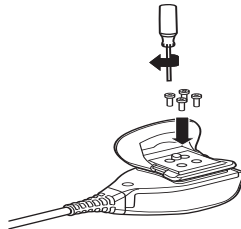
---

## Replace the Trigger

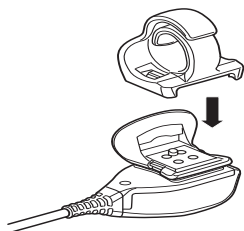
1. Place trigger on the scanner.



2. Screw in the 4 screws to secure the trigger.



3. Snap on ring strap or c-ring.



---

## **Battery Specifications**

### **Storing Batteries**

To maintain top performance from batteries, avoid storing batteries outside of the following temperature ranges:

- 14°F to 113°F (-10°C to +45°C) for short term storage of less than one month
- 32°F to 86°F (-0°C to +30°C) for long term storage

Do not store batteries in extremely high humidity. For prolonged storage, do not keep batteries stored in a charger that is connected to a power source.

### **Guidelines for Battery Pack Use and Disposal**

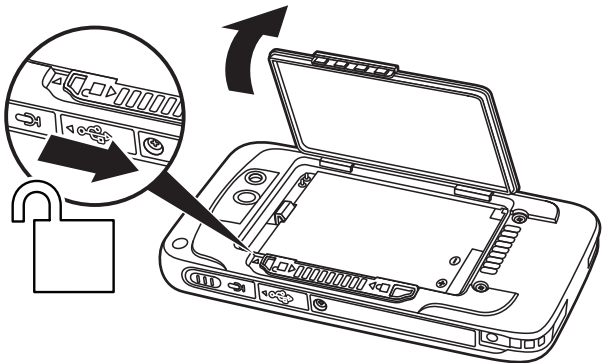
The following are general guidelines for the safe use and disposal of batteries:

- Do not disassemble or open crush, bend or deform, puncture or shred.
- Do not modify or re-manufacture, attempt to insert foreign objects into the battery, immerse or expose to water or other liquids, expose to fire, explosion or other hazard.
- Improper battery use may result in a fire, explosion or other hazard.
- We recommend use of Honeywell Li-ion battery packs. Use of any non-Honeywell battery may pose a personal hazard to the user.
- Only use the battery for the system for which it is specified. Do not use a battery in any other manner outside its intended use in Dolphin terminals and peripherals.
- Only use the battery with a charging system that has been qualified with the system per CTIA Certification Requirements for Battery System Compliance to IEEE 1725. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Replace the battery only with another battery that has been qualified with the system per this standard, IEEE-Std-1725. Use of an unqualified battery may present a risk of fire, explosion, leakage or other hazard.
- Replace defective batteries immediately; using a defective battery could damage the Dolphin terminal.
- Never throw a used battery in the trash. Promptly dispose of used batteries in accordance with local regulations.
- Do not short-circuit a battery or throw it into a fire; it can explode and cause severe personal injury. Do not allow metallic conductive objects to contact battery terminals.
- If you observe that the Honeywell battery supplied is physically damaged, please send it to Honeywell International Inc. or an authorized service center for inspection, see [Product Service and Repair](#) on page [TOC-iii](#).
- Battery usage by children should be supervised.
- Avoid dropping the terminal or battery. If the terminal or battery is dropped, especially on a hard surface, and the user suspects damage, send it to a Honeywell International Inc. or an authorized service center for inspection.
- If you are not sure the battery or charger is working properly, send it to Honeywell International Inc. or an authorized service center for inspection, See [Product Service and Repair](#) on page [TOC-iii](#).
- Excessive discharge can degrade battery performance. Recharge the battery when your terminal indicates low battery power.
- Although your battery can be recharged many times, the battery life is limited. Replace it after the battery is unable to hold an adequate charge.

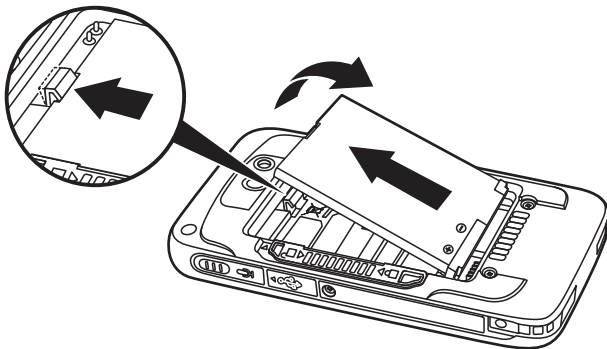
---

## Replace the Battery

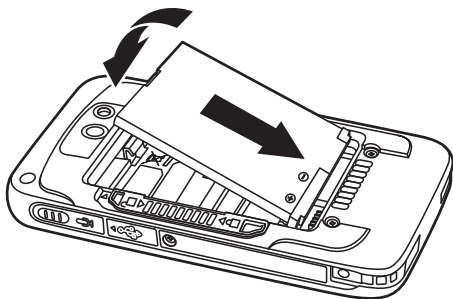
1. Remove the terminal from the arm mount sled (or belt mount sled).
2. Power off the terminal (see page 3-10).
3. Unlock and remove the battery door.



4. Pull the battery latch back and remove the battery.



5. Insert the new battery and install the battery door.



*Note: For information on charging the terminal and the charge bases that are available, see the User's Guide for your terminal.*





# Using the Ring Scanner

## Overview

The 8620 ring scanner is a wearable external image engine that connects to the Dolphin 75e Wearable Solution. It reads popular 1D and 2D bar codes and supports omni-directional aiming and decoding for greater flexibility in real-world settings.

### Minimum Software Requirements

The terminal must have the minimum software requirements to work with the 8620 ring scanner:

- Build number 56.01.12.0160
- Power Tools 3.11.3126

To check the current software version:

1. Touch **All Apps**  > **Settings** .
2. Select **About phone** and check the **Build number**.




To check the Power Tools version

1. Touch **All Apps**  > **Power Tools**  > **Diagnostic Information** .
2. Select **SysInfo** and check **POWER TOOLS AND DEMOS INFO**.

### Updating the Software



Software updates are available from [Customer Support](#) or [www.honeywellaidc.com](http://www.honeywellaidc.com).

To install a software upgrade:



1. Copy the upgrade file (\*.zip) into one of the following folders:
  - Internal storage\honeywell\autoinstall on the terminal  
Software updates saved to this folder, do not persist when a Factory Reset (Clean Boot) is performed.
  - IPSM card\honeywell\autoinstall on the terminal  
Software updates saved to this folder, persist when a Factory Reset (Clean Boot) is performed.
  - \honeywell\autoinstall on an SD card (if installed)  
Software updates saved to this folder, do not persist when a Factory Reset (Clean Boot) is performed.
2. Touch **All Apps**  > **AutoInstall Settings** . Verify **Autoinstall** is enabled.
3. Select **Packages Update** from the **AutoInstall Settings**  screen. The terminal automatically initiates a reboot and installs the software upgrade.

Depending on where you saved the file, you can also initiate a software upgrade using the terminal buttons instead of the package update option.

If the file is located in the **IPSM card\honeywell\autoinstall** folder:

- Initiate a terminal **Reboot**. When the Honeywell logo appears and the green LED turns On, simultaneously press and hold the **Volume Up**  and **Home**  buttons until the green LED turns Off.

If the file is located in the **\honeywell\autoinstall** on an SD card:

- Initiate a terminal **Reboot**. When Honeywell logo appears and the green LED turns On, simultaneously press and hold the **Volume Down**  and **Home**  buttons until the green LED turns Off.

---

## Decoding Bar Codes

Once the ring scanner is connected, it is ready to scan bar codes. Applications coded to use the ring scanner and applications that receive data through the scan wedge feature automatically use the ring scanner (instead of the internal scanner) when it is connected to the terminal.

### Aiming Beam

When scanning bar codes, place the aimer over the bar code to be read.

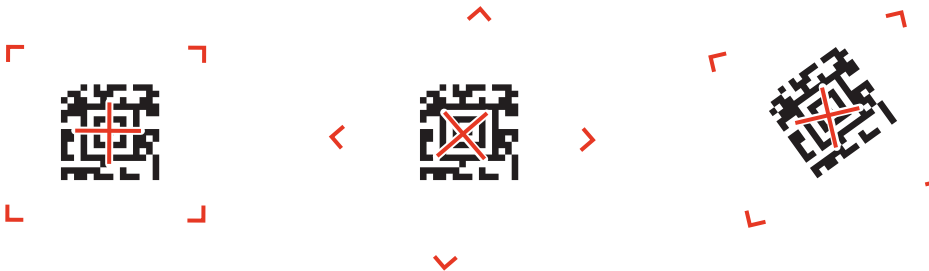


Warning: Do not stare directly in to the laser beam

#### Linear Bar Code.



#### 2D Matrix Symbol



## Scan Wedging

The scan wedge feature sends scanned bar code data to an active application as Android keyboard input. By default, scan wedging is enabled on Dolphin 75e terminals powered by Android. Applications coded to use the ring scanner or applications that receive data through the scan wedge feature can be used.

*Note: If an application claims the ring scanner through the BarcodeReader API, the scan wedge feature is temporarily disabled. See [For Developers](#) on page 4-8.*

### Scan Data Processing and Settings

The scan wedge settings control the actions that occur between scanning a bar code and wedging the data to the application. The following table identifies the settings associated with each step in the scan data process.

Process Step	Associated Scan Setting
Decode bar code	Symbology Settings
Interpret bar code as ISO8859-1	

Process Step	Associated Scan Setting	
Detect special bar codes and implement specific action instead of normal processing. <ul style="list-style-type: none"> <li>• URL bar code starts browser</li> <li>• Scan-to-Intent starts an application</li> <li>• EZConfig bar code starts EZConfig</li> </ul>	Data Processing Settings	Launch Browser Scan To Intent Launch EZ Config
Convert to selected character set	Data Processing Settings	Charset
Attach Prefixes and Suffix. The data string is composed in the following order: <ul style="list-style-type: none"> <li>• Prefix</li> <li>• Symbology Prefix</li> <li>• Bar code data</li> <li>• Suffix</li> </ul> Interpret substitutions of the Prefix and Suffix strings.	Data Processing Settings	Prefix Symbology Prefix Suffix
Activate a Total Freedom plugin.	Data Processing Settings	Data Editing Plugin
Inject the final data string as Android KeyEvent.	Data Processing Settings	Wedge

### ***Prefix and Suffix Interpretation***

Substitutions occur within the Prefix and Suffix string values.



Substring	Replacement Character Code	Wedged as a KeyEvent
\r	13	No
\n	10	Yes
\t	9	Yes
\\	'\'	No

### ***Changing the Scan Settings of the Default Profile***


The scan wedge settings are organized by app profile. Changes made to the Default profile apply to all applications with no profile.

*Note: You will not see the ring scanner settings if it is not connected to the terminal.*

To modify the scan wedge Default profile:

1. Touch **All Apps**  > **Settings**  > **Scanning**.
2. Touch **Ring Scanner**.
3. Touch **Default Profile**.
4. Select either [Data Processing Settings](#), [Symbology Settings](#), [Imager Settings](#), [Trigger Settings](#) or [Notification Settings](#).
5. Modify the settings to meet your application needs.

To discard all changes made to the Default profile and restore the default values:

1. Touch more  in the upper right corner of any scan settings screens,
2. Touch **Restore all defaults**.

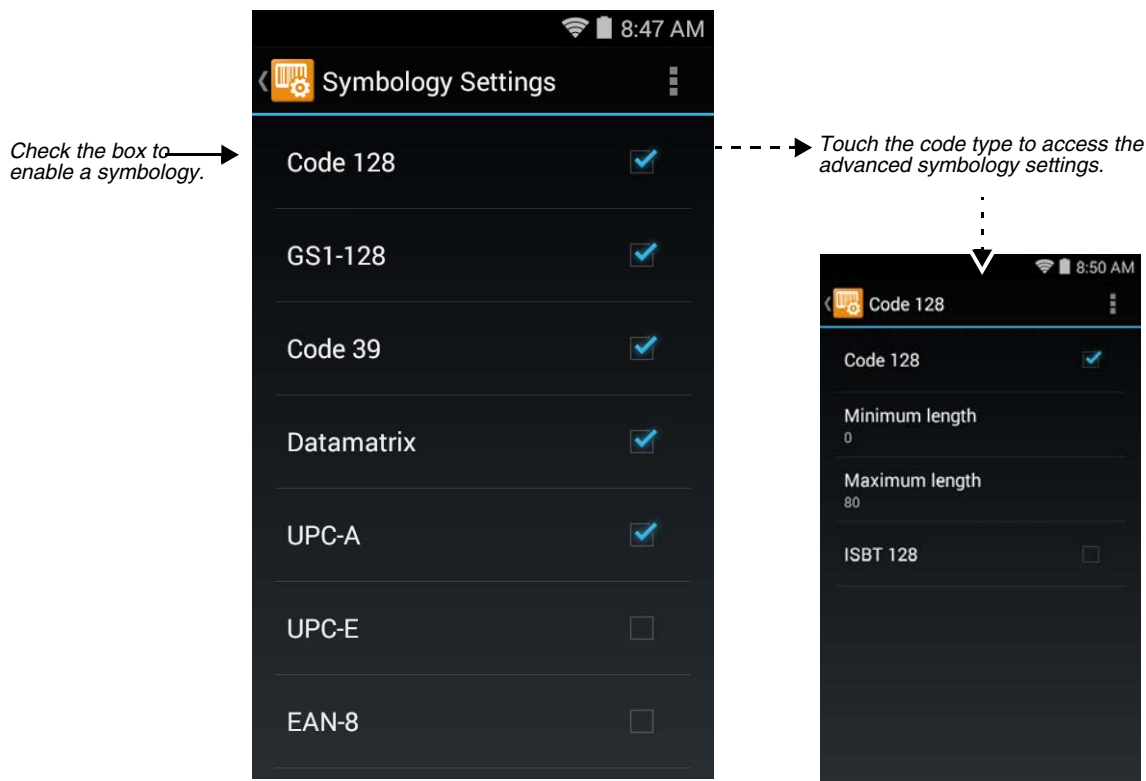
**Important:** This option effects all settings within the profile, not just the specific settings screen open at the time the option is selected.

## Data Processing Settings

Setting	Description	Default Value
Wedge	Enable or disable sending the bar code data as Android KeyEvents, when sending data to the active application.	Enabled
Charset	Select the character set used when interpreting the bar code byte data into a string. <ul style="list-style-type: none"> <li>• ISO-8859-1</li> <li>• US-ASCII</li> <li>• UTF-16</li> <li>• UTF-16BE</li> <li>• UTF-16LE</li> <li>• UTF-8</li> </ul> Corresponds to BarcodeReader property: PROPERTY_DATA_PROCESSOR_CHARSET	ISO-8859-1
Prefix	Define string added before the decoded bar code data.	None
Suffix	Define string added after the decoded bar code data.	None
Data Editing Plugin	Specify a Total Freedom data editing plug-in.	No plug-in specified
Symbology Prefix	Specify a symbology identifier prefix to the bar code data. <ul style="list-style-type: none"> <li>• None</li> <li>• Honeywell</li> <li>• AIM</li> </ul>	None
Launch Browser	Enable or disable URL bar code handling. If a bar code starts with http:// or https://, the browser opens using the bar code data as a URL. Corresponds to BarcodeReader property PROPERTY_DATA_PROCESSOR_LAUNCH_BROWSER.	Enabled
Scan to Intent	Enable or disable special handling of scan-to-intent bar codes. Applies to bar codes in one of the following formats: <pre> // ACTION // intent-suffix '\$' extra-data </pre> Where: ACTION and extra-data are any string of characters. Launches an application listening for the intent: Intent action: "com.honeywell.scantointent.intent.action." + ACTION Intent extra "com.honeywell.scantointent.intent.extra.DATA" contains the remainder of the bar code data after the first '\$' character. Corresponds to BarcodeReader property PROPERTY_DATA_PROCESSOR_SCAN_TO_INTENT	Enabled
Launch EZ Config	Enable or Disable special handling of EZConfig bar codes. Applies to EZConfig bar codes, which are encoded with the Aztec symbology and containing specific header data. Corresponds to BarcodeReader property PROPERTY_DATA_PROCESSOR_LAUNCH_EZ_CONFIG.	Enabled

## Symbology Settings

The Symbology Settings specify how bar codes are decoded during scanning. Symbologies with a check mark to the right are enabled. To enable or disable a symbology, touch the check box. Select a symbology name from the list to access configuration parameters specific to the symbology type. Swipe up or down to scroll up or down the list of available symbologies.



## Imager Settings

The Override Recommended Values setting is disabled by default. The recommended Imager Settings are designed to work in a wide range of environments and should not normally need to be modified.

## Trigger Settings

Setting	Description	Default Value
Decode Timeout	Scanning will automatically turn off after this number of seconds if the scan trigger is held and nothing has successfully decoded.	20



## Notification Settings

Setting	Description	Default Value
Good Read Notification	Enable or disable a good read notification. The notification includes a short green blink of the scan LED, a short beep tied to the system volume, and optionally a short vibration.	Enabled
Bad Read Notification	Enable or disable notification of a failed scan. The notification includes a short red blink of the scan LED, an error beep tied to system volume, and optionally a short vibration.	Disabled

Setting	Description	Default Value
Vibrate Enabled	Enable or disable vibrate along with Good Read or Bad Read notifications.	Disabled




## Adding a Scanning Profile

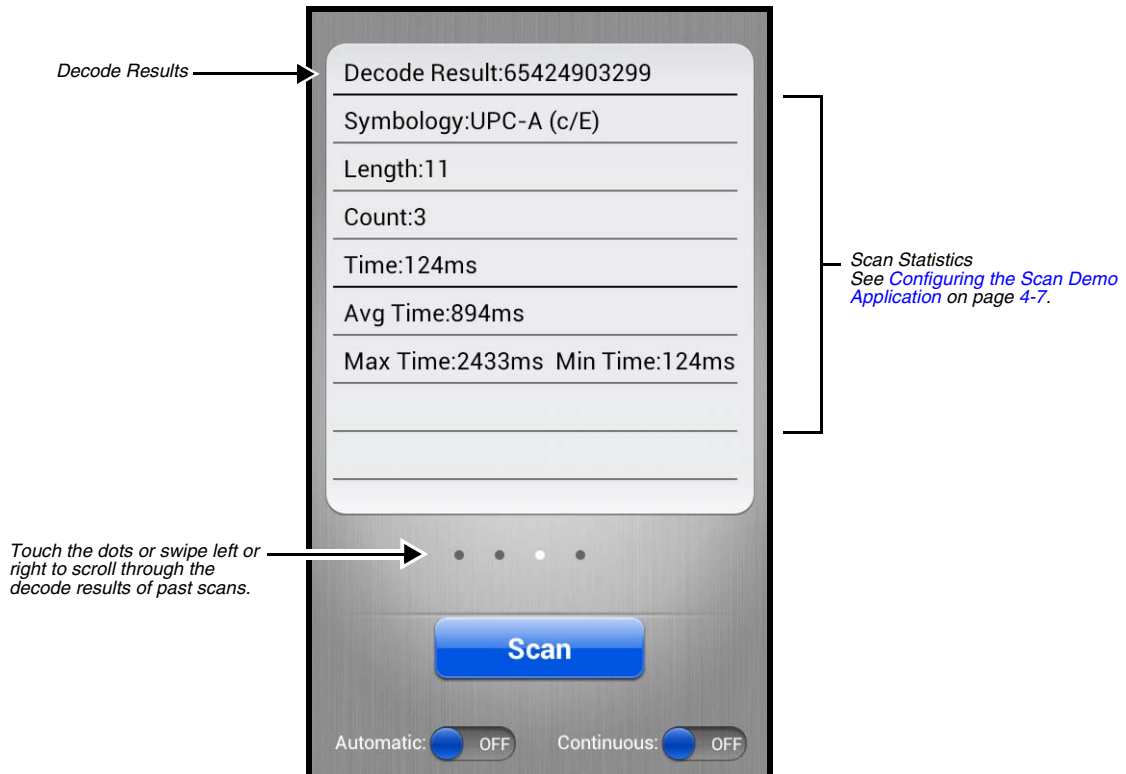
To create a scan setting profile for a custom app on the terminal:

1. Touch **All Apps**  > **Settings**  > **Scanning**.
2. Touch **Ring Scanner**.
3. Touch the **plus sign (+)** in the upper right corner of the App Profiles screen.
4. Select the custom app from the Target App list. The profile appears on the App Profiles screen list. You can now select and modify the scan settings of the new profile.

## Using Scan Demo to Decode a Bar Code

Scan Demo demonstrates the functionality of the ring scanner and is not intended as a functional business solution. Detailed information on how to create custom applications for your Dolphin terminal is provided in the *Software Development Kit (SDK)*, available for download at [www.honeywellaidc.com](http://www.honeywellaidc.com).

1. Touch **All Apps**  > **Demos**  > **Scan Demo**  to open the Scan Demo application.
2. Point the ring scanner at the bar code. For optimum performance, avoid reflections by scanning the bar code at a slight angle.
3. Press the trigger. Center the aimer over the bar code (see [Aiming Beam](#) on page 4-2).
4. The bar code is decoded and the results appear on the screen.



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## Automatic Scanning

Enable **Automatic** scanning mode to activate the ring scanner for continuous scanning without requiring the operator to press the trigger for each bar code presented in the field of view. To configure the time interval between scan attempts, see **Auto Scan Delay** under [Configuring the Scan Demo Application](#) (page 4-7).



1. Slide the Automatic blue button to the **ON** position to enable the feature.
2. Press the ring scanner trigger to activate the ring scanner. Once activated, the ring scanner automatically scans and decodes bar codes presented in it's the field of view.
3. To turn off Automatic scanning slide the blue button to **OFF**.
4. Slide the Automatic blue button to the **OFF** position to disable the feature.

## Continuous Scanning

Enable **Continuous** scanning mode to activate the imager for continuous scanning only when the operator touches and holds **Scan** or presses and holds the **Scan** button. The time interval between scan attempts is minimal and not configurable.

1. Slide the Continuous blue button to the **ON** position to enable the feature.
2. Press and hold trigger to activate the ring scanner. The ring scanner scans and decodes bar codes presented in the it's field of view as long as the trigger is pressed.
3. Release the trigger to deactivate the ring scanner.
4. Slide the Continuous blue button to the **OFF** position to disable the feature.

## Configuring the Scan Demo Application

1. Open the **Scan Demo** application, and then press the **Menu** button .
2. Touch **Scan Settings**, **Symbology Settings**, or **Notification Settings**.
3. Modify the settings to meet your application needs, and then press the **Back** button  to return to the Scan Demo screen.

### Scan Settings

Touch the check box to enable or disable a feature. A check mark indicates enabled.

Setting	Description	Default Value
<b>View Statistics</b>	When enabled, scan results displayed include the length of bar code, the number of scans completed, the number of milliseconds (ms) to decode the bar code, the average decode time of all the bar codes decoded, the shortest decode time of all bar codes decoded, and the longest decode time of all bar codes decoded.	Enabled
<b>Auto Scan Delay</b>	Program the number of seconds between scan attempts by tapping the menu arrow, and then entering the delay interval in second. The value should be greater than 0 and less than 100000. Touch <b>OK</b> to save.	1
<b>Auto Send</b>	When enabled, decoded data is sent to a designated server.	Disabled
<b>RF Configuration</b>	Touch to view and/or edit the Server IP address and the Port used for RF communication. When the Back button is pressed, the terminal attempts to establish communication.	

### Symbology Settings

For information on these settings, [Symbology Settings](#) on page 4-5.

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## Notification Settings

For information on these settings, [Notification Settings](#) on page 4-5.

## Power Tools

The ring scanner works the same as the internal scanner when using Power Tools (such as ScanWedge). See the *Dolphin Power Tools User's Guide for Devices Powered by Android* available at [www.honeywellaidc.com](http://www.honeywellaidc.com) for more information.

## For Developers

Android applications can directly access the ring scanner using the same API used to access the internal scanner. Accessing the ring scanner requires version 1.00.00.0011 or higher of Honeywell\_MobilitySDK\_Android\_D75e. Detailed information on how to create custom applications for your Dolphin terminal is provided in the Android SDK add-on available for download at [www.honeywellaidc.com](http://www.honeywellaidc.com).

## Upgrading Ring Scanner Firmware

It may be necessary to upgrade the ring scanner firmware. To upgrade the firmware you will need:

- EZConfig-Scanning Software
- Interface Adapter (P/N: 8600502ADAPTER) to connect the ring scanner to a PC
- Standard USB-A to USB-B cable
- Firmware upgrade file

To upgrade the ring scanner firmware:

1. Disconnect the ring scanner from the sled.
2. Insert the ring scanner in to the interface adapter.
3. Connect the interface adapter to the PC using the USB cable.
4. Download the EZConfig-Scanning software from the web and follow the **Update Firmware** instructions in EZConfig.

### Installing EZConfig-Scanning from the Web

*Note: EZConfig-Scanning requires .NET software. If .NET is not installed on your PC, you will be prompted to install it during the EZConfig-Scanning installation.*

1. Access the Honeywell web site at [www.honeywellaidc.com](http://www.honeywellaidc.com) from your PC.
2. Click on the **Products** tab. Under **Software**, select **Device Management**.
3. Click on **EZConfig-Device Configuration Software**.
4. Click on the **Software** tab. Select **EZConfig Cloud For Scanning** (online version, must register for access) or **EZConfig for Scanning** (to install on your PC, follow the next steps).
5. To install on your PC, when prompted, select **Save File**, and save the files to the **c:\windows\temp** directory.
6. Once you have finished downloading the file, exit the web site.
7. Using Explorer, go to the **c:\windows\temp** file.
8. Double click on the **Setup.exe** file. Follow the screen prompts to install the EZConfig-Scanning program.
9. If you've selected the defaults during installation, you can click on **Start Menu-All Programs-Honeywell-EZConfig-Scanning** and select EZConfig for your browser.



# Ring Scanner Specifications

## 8620 Ring Scanner Specifications

Parameter	Specification
Dimensions (Typical): Height Length	8.7 in. (221 mm) 1.69 in. (42.9 mm)
Illumination LED: White LED	Cool white (5700K) IEC62471: "Exempt Risk Group"
Aiming: Peak Wavelength Laser Optical Power Laser (CW)	650nm IEC 60825-1: "Class 2" <1mW with a beam divergence of <1.5mRAD (worst case)
Image Size	838 x 640 pixels
Skew Angle	±60° typical, 200 lux, EAN/UPC
Pitch Angle	±45° typical, 200 lux, EAN/UPC
Motion Tolerance:	580cm (228 in) per second typical on 13 mil UPC/EAN at optimal focus
Minimum X dimension	1D codes: 5 mil PDF417: 6.7 mil 2D codes: 10 mil
Symbol Contrast	100% UPC: 20% contrast
Voltage Requirements	5V ±5% (USB interface compliant)
Current Draw @5VDC @ 25°C	Idle (imager power off): 77mA Idle (imager power on): 96mA Operating average: 296mA Suspend mode: <2.5mA (USB compliant)
Temperature Ranges: Operating Storage	-13°F to +122°F (-25°C to 50°C) -40°F to +140°F (-40°C to 60°C)
Humidity	5% to 95% non-condensing @ 50°C
Mechanical Drop	Operational after 30 drops at 23°, and 50°C Operational after 12 drops at -25°C
Vibration	Vibration Type: Standard Type Frequency Range: 2-10 Hz 14mm Pk-Pk, 13-55HZ 1.5mm Pk-Pk, 70-200Hz 2G Frequency Deviation: 1 octave/minute Cycle Time for 3 Axis: 2 hours total
ESD Tolerance	Up to 20kV direct air Up to 10 kV indirect coupling plane
Sealant Rating	IP54

## Supported Bar Code Symbolologies

Symbology Type	Symbology Name	
<b>1D Symbolologies</b>	Codabar	ISBN
	Code 11	ISBN with Add On
	Code 32 Pharmaceutical (PARAF)	ISBT 128
	Code 39	Matrix 2 of 5
	Code 93	MSI
	Code 128	Straight 2 of 5 IATA
	EAN with Add On	Straight 2 of 5 Industrial
	EAN with Extended Coupon Code	Telepen
	EAN-8	TLC-39
	EAN-13	Trioptic Code
	GS1-128	UPC with Add On
	GS1 Databar	UPC-A
	Interleaved 2 or 5	UPC-E
	<b>2D Symbolologies</b>	Aztec
Codablock A		Micro PDF
Codablock F		PDF417
DataMatrix		QR Code
HanXin		TLC39
<b>Postal Codes</b>	Australian Post	Kix (Netherlands) Post
	British Post	Korean Post
	Canadian Post	Planet
	China Post	Postal-4i
	IntelligentMail	Postnet
	Japanese Post	

### Field of View

Horizontal Field of View  $42.9^{\circ} \pm 1.2^{\circ}$  (Field Angle  $\pm 21.4^{\circ}$ )

Vertical Field of View  $33.0^{\circ} \pm 0.8^{\circ}$  (Field Angle  $\pm 16.5^{\circ}$ )

### Depth of Field

The depth of field measurements used the following parameters:

- Distances are measured from the front of the scanner.
- $+23^{\circ}\text{C}$  ( $+73^{\circ}\text{F}$ ), 0 lux
- Photographic quality codes

#### Typical Performance

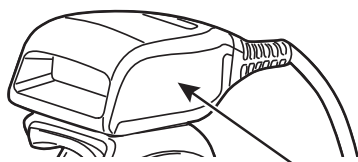
Symbology	Distance
5 mil C39	54 - 153 mm (2.1 - 6.0 in)
10 mil C39	18 - 328 mm (0.7 - 12.9 in)
100% 13 mil UPC	36 - 409 mm (1.4 - 16.1 in)
6.7 mil PDF417	36 - 175 mm (1.4 - 6.9 in)
10 mil DataMatrix	43 - 193 mm (1.7 - 7.6 in)

## Guaranteed Performance

Symbology	Distance
5 mil C39	81 - 132 mm (3.2 - 5.2 in)
10 mil C39	38 - 295 mm (1.5 - 11.6 in)
100% 13 mil UPC	43 - 371 mm (1.7 - 14.6 in)
6.7 mil PDF417	54 - 158 mm (2.1 - 6.2 in)
10 mil DataMatrix	64 - 175 mm (2.5 - 6.9 in)

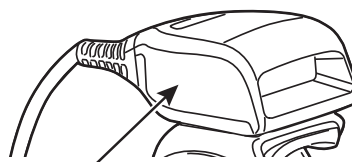
## Required Safety Labels

Left Side of Scanner

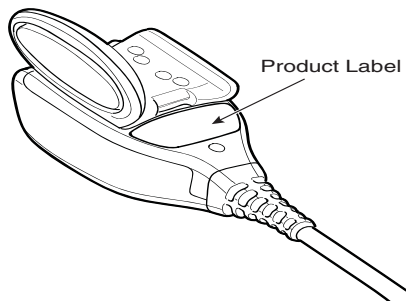


Laser Safety Label

Right Side of Scanner

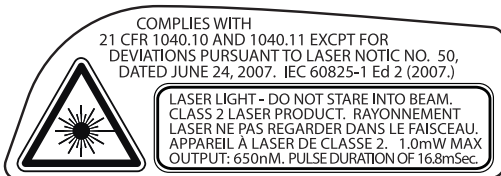


Compliance Label



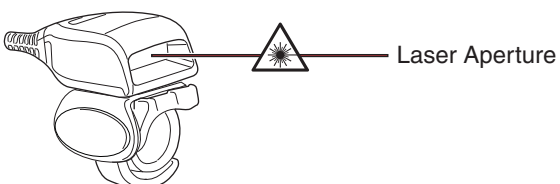
Product Label

## Laser Label



Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

## Laser Aperture Location



Laser Aperture



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Honeywell  
9680 Old Bailes Road  
Fort Mill, SC 29707

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