RS507/RS507X
Hands-Free Imager
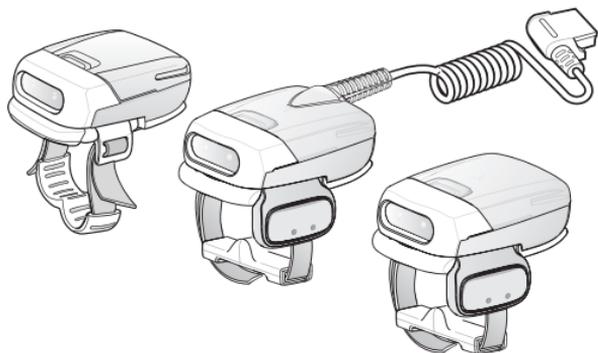
Quick Reference Guide

ZEBRA

Warranty

For the complete Zebra hardware product warranty statement, go to:
www.zebra.com/warranty.

Service Information

If you have a problem using the equipment, contact your facility's Technical or
Systems Support. If there is a problem with the equipment, they will contact the
Zebra Support at: www.zebra.com/support.

For the latest version of this guide go to: www.zebra.com/support.

Introduction

This guide applies to Model Numbers RS507 and RS507X.

The RS507 Hands-Free Imager (also referred to as the Imager) is a wearable barcode scan solution for both 1D and 2D barcode symbologies. The Imager is also compatible with a wide range of mobile computers communicating over Bluetooth.

The Imager is designed for a wide range of applications from management of products in a warehouse, to processing deliveries at a courier facility to processing prescription drugs at the pharmaceutical distribution center.

The Imager uses camera-based scanning technology, designed to offer flexible hands-free operation with ergonomic comfort for right or left hand users.

The Imager can be operated in both manual and auto-triggering modes. Auto-triggering is a patent-pending Intelligent Sensing Technology combining motion and proximity sensing for triggering the Imager.

About this Guide

This guide provides basic information on the following topics:

For more information, refer to the RS507 Hands-Free Imager Product Reference Guide, p/n 72E-120802-xx available at: www.zebra.com/support.

Unpacking the Imager

After opening the shipping box, inspect the contents. You should have received the following:

Model yy: IM = SR focus DL = DL focus z: blank = RS507 (legacy) x = RS507X (new)	Description	Standard Battery	Extended Battery	Corded Adapter	Trigger	Quick Reference Guide
RS507z-**yy**2xxxxSTWR	Cordless, triggered RS507 with standard battery	✓			✓	✓
RS507z-**yy**2xxxxSNWR	Cordless, triggerless RS507 with standard battery	✓				✓
RS507z-**yy**2xxxxENWR	Cordless, triggerless RS507 with extended battery.		✓			✓
RS507z-**yy**2xxxxCTWR	Corded and triggered RS507			✓	✓	✓
RS507z-**yy**2xxxx0TWR	Cordless, triggered RS507 with no battery				✓	✓

- Standard Range (SR): The SR focusing is used to maximize the far reading distance and is the standard offering on all mobile computing products using same imager. The SR focusing is not specified to read 5 mil code 128 or 6.6 mil Databar and is thus inadequate for applications that have these somewhat higher density reading requirements. This is the default configuration and the configuration of choice where the far reading range is more important than the ability to read high density symbols.

- Driver License (DL): The DL focusing is optimized for reading all drivers license and is also specified to read higher density codes such as 5 mil code 128 and Databar and 5 Mil PDF417. As a result it has a slightly reduced range on EAN/UPC codes (typically 12" on photographic quality symbol). This is the preferred configuration where the ability to read these higher density codes is more important than range on medium or low density codes (10 mil and above). DL is recommended in electronics, pharmacy or when handling small items.

Inspect the equipment for damage. If you are missing any equipment or if you find any damaged equipment, contact Zebra Support immediately at: www.zebra.com/support.

Cordless Configuration Features

Trigger Configuration

Imager Window

Battery Release Latch

Battery

Comfort Pad

Trigger Swivel Assembly

Finger Strap

Scan Trigger

Asset Control Label

Restore Key

Left Scan LED

Strap Buckle

Beeper

Right Scan LED

Triggerless Configuration

Triggerless Strap Holder

Corded Configuration Features

Interface Cable Connector to WT4090

Release Latch

mager Window

Comfort Pad

Finger Strap

Corded Adapter

Trigger Swivel Assembly

Scan Trigger

Asset Control Label

Restore Key

Strap Buckle

Left Scan LED

Beeper

Right Scan LED
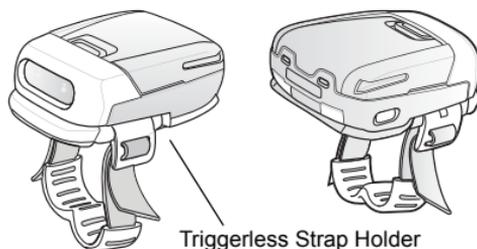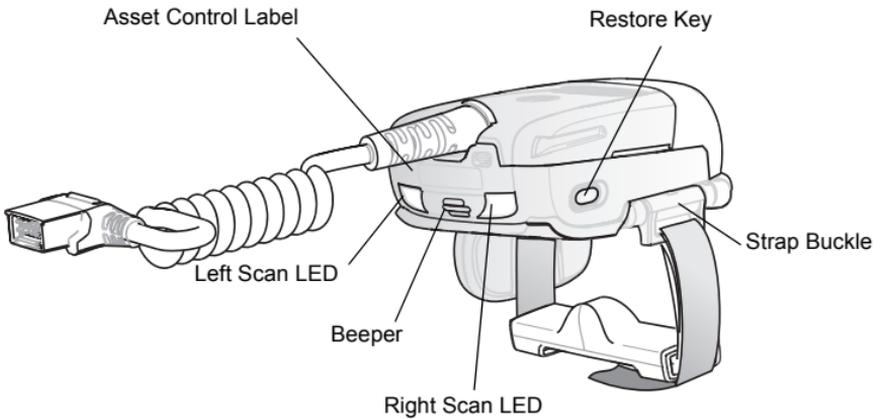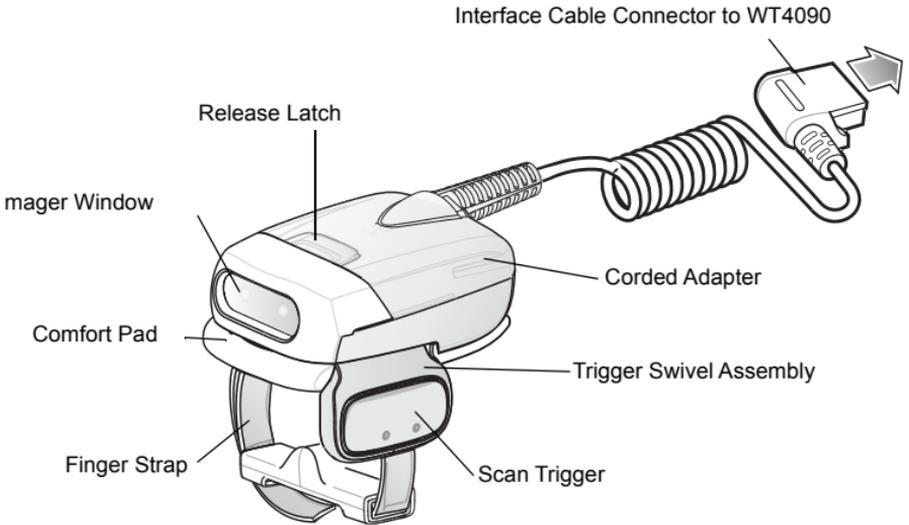
Change Trigger Position

The Trigger Swivel Assembly of the Imager rotates to provide left-hand or right-hand use.

1. From the bottom of the Imager, hold and pull the Comfort Pad out of the Imager.

Finger Strap

Note: It is not necessary to remove the Finger Strap from the Trigger Swivel Assembly.

Comfort Pad

Trigger Swivel Assembly

Strap Buckle
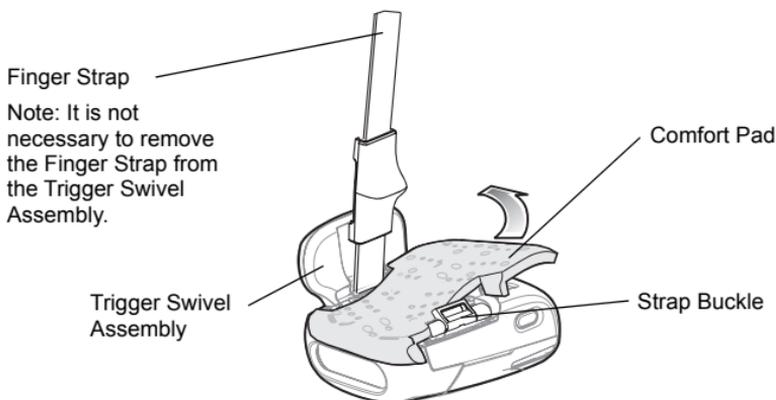
2. Determine whether the Imager is used on the right or left hand and rotate the Trigger Swivel Assembly.

Trigger Swivel Assembly
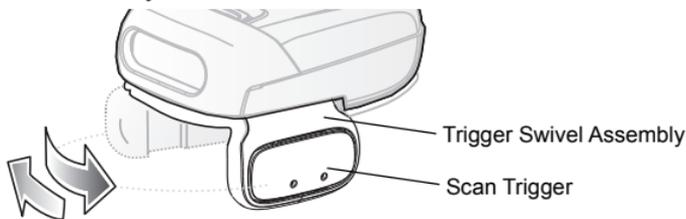
Scan Trigger

⚠ *CAUTION* The Trigger Swivel Assembly only rotates 180° around the bottom of the Imager. Do not rotate the Trigger Swivel Assembly past the designed stops.

3. Rotate the Trigger Swivel Assembly so that the Scan Trigger is positioned next to the thumb when the Imager is placed on the index and middle fingers.

4. Position the Comfort Pad onto the Imager.

5. Press the Comfort Pad onto the Imager. When properly installed, the Comfort Pad "locks" into place.

6. Insert the Finger Strap into the Strap Buckle.

Getting Started - Cordless Configuration

Charge the Battery

Before using the Imager, charge the battery. The 8-Bay Battery Charger supports both standard and extended capacity batteries.

To charge the Imager battery, refer to the SAC5070 8-Bay Battery Charger Quick Reference Guide, p/n 72-11589-xx available at: www.zebra.com/support.

Install the Battery

1. Align the Battery on top of the Imager.
2. Push the battery all the way into the Locking Slots of the Imager.
3. Firmly press the Battery into the Imager until a "click" is heard ensuring the Battery Release Latch is fully engaged with the Imager.
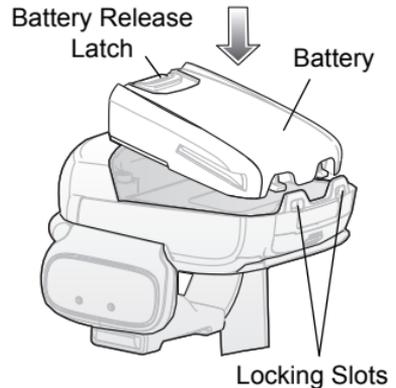
Remove the Battery

1. Hold the Imager in one hand.
2. Press the Battery Release Latch.
3. Pull up the Battery to release from the Locking Slots of the Imager.

Wear the Imager

1. Slide the Imager onto the index and middle fingers with the Scan Trigger next to the thumb.
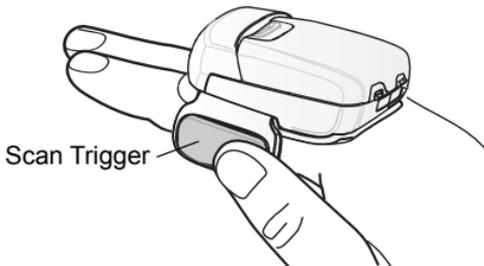
2. Tighten the Finger Strap.

Finger
Strap
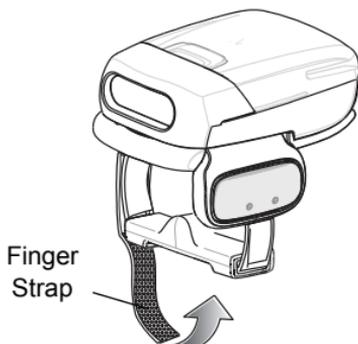
✓ *NOTE* When using the Imager for the first time, after power up, press and
release the Scan Trigger to enable the manual triggering mode (this
operation disables the default auto triggering mode).

Getting Started - Corded Configuration

In order to start using the Imager you must install the Corded Adapter.

Connect Corded Adapter

1. Align the Corded Adapter on top of the
Imager.

2. Push the Corded Adapter all the way
into the Locking Slots of the Imager.

3. Firmly press the Corded Adapter into
the Imager until a "click" is heard
ensuring the Adapter Release Latch is
fully engaged with the Imager.
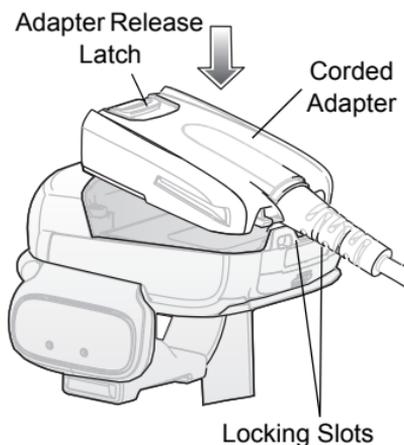
Remove the Corded Adapter

1. Hold the Imager in one hand.

2. Press the Adapter Release Latch.

Adapter Release
Latch

Corded
Adapter

Locking Slots

3. Pull up the Corded Adapter to release from the Locking Slots of the Imager.

Connect to a Wearable Terminal

The Imager connects to a terminal and mounts on the fingers.

To connect the Imager to the terminal:

1. On the terminal, remove the cover from the Terminal Interface Connector.

2. Connect the Interface Cable Connector of the Imager to the Terminal Interface Connector.

Terminal Interface Connector

Interface Cable Connector
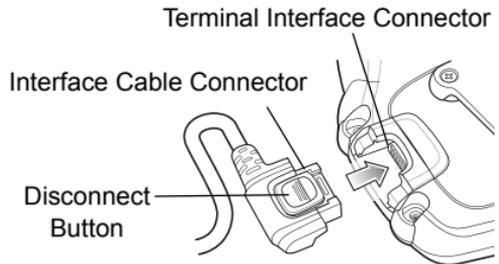
Disconnect Button

To disconnect the Imager from the terminal:

1. Press the Disconnect Button on the Interface Cable Connector.

2. Pull the Interface Cable Connector out of the terminal.

Wear the Imager

1. Slide the Imager onto the index and middle fingers with the Scan Trigger next to the thumb.

Scan Trigger
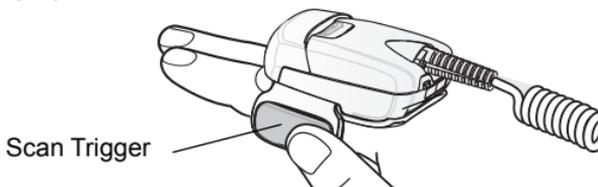
2. Tighten the Finger Strap.

Finger Strap

NOTE When using the Imager for the first time, press and release the Scan Trigger to enable the manual triggering mode (this operation disables the default auto triggering mode).

Status Indications

The Imager has two Scan LEDs that provide identical indications. The Imager is also equipped with a beeper that generates sound indications in variable tones.

✓ **NOTE** In the corded configuration, beep indications are emitted only from the connected terminal.

No.	LED	Beep Indication	Description
1.	None	High/low	Bluetooth communication is disconnected.
2.	Short green flashes	None	Attempting to connect over Bluetooth.
3.	None	Low/high	Imager is connected over Bluetooth.
4.	None	High/low	Bluetooth communication is disconnected - Imager is out of range.
5.	None	high/low/high/low	Properly decoded scan of Bluetooth pairing barcode.
6.	None	Long low/ long high/	Bluetooth connection attempt failed.
7.	None	Long low/ long high/ Long low/ long high/	Bluetooth connection attempt is rejected.
8.	One green flash	High	Proper scanning indication.
9.	None	4 long beeps	No Bluetooth communication after reconnection failure.
10	Red flash	2 short beeps	Low battery.
11	Long red flash followed by a green flash	High/low High/low	Clean boot was performed successfully.

Bluetooth Connection
Establish Bluetooth Connection

To establish Bluetooth connection with a mobile computer:

1. Ensure that the Imager is within a range of 10 meters (30 feet) from the mobile computer.

2. Install the battery in the Imager.

3. Launch the Bluetooth Device (BD) Address application on the mobile computer. Most BD Address applications display a pairing barcode image on the screen of the mobile computer.

4. Scan a pairing barcode from the mobile computer screen or a provided label. The Imager emits one string of high/low/high/low beeps.

5. The Scan LED starts flashing green indicating that the Imager is attempting to establish connection with a mobile computer.

6. When connection is established, the Scan LED turns off and the Imager emits one string of low/high beeps. The Imager is connected and ready for scanning.

NOTE When replacing the Imager battery, the Imager memory retains the pairing information of the last paired mobile computer.

Remove Bluetooth Connection

NOTE Removing Bluetooth connection is only required if the Imager is configured for auto-connect on power on and has to be paired with a different terminal.

1. Scan an unpairing barcode label for disconnecting the Imager from the mobile computer.

2. The Imager emits one string of high/low beeps indicating that Bluetooth communication with the mobile computer is disconnected.

Restore Lost Bluetooth Connection

The Imager maintains Bluetooth communication with a mobile computer within a range of 10 meters (30 feet). When the Imager fails to establish connection or connection is lost during operation, the Imager emits one string of low/high beeps.

To reestablish the Bluetooth connection with a mobile computer:

1. Ensure that the Imager is within a range of 10 meters (30 feet) from the mobile computer.

2. Ensure that the mobile computer is "on and awake" (not in Suspend mode).

3. The Imager automatically attempts reconnecting to the mobile computer for 30 seconds (Scan LED flashes green). If automatic re-connection fails, verify that the Imager is within Bluetooth range and briefly press the Restore Key on the Imager to reconnect.

4. The Scan LED starts flashing green indicating that the Imager is attempting to establish connection with a mobile computer.

5. The Scan LED turns off and the Imager emits one string of low/high beeps indicating that the Imager is connected and ready for scanning.

Scan

The Imager uses digital camera technology to take an image of a barcode and software decoding algorithms are executed to extract the barcode data from the image.

Scan Triggering Modes

Manual Triggering (Triggered models only)

1. Launch a scanning software application on the mobile computer.

2. Position the Imager approximately 9 inches (22.8 cm) from a barcode label and press the Scan Trigger. Position the cross hair laser beam to cover the barcode. The Imager takes a digital picture (image) of the barcode and stores it in memory for decoding.

> ✔ *NOTE* After battery is inserted or a corded adaptor is connected (on both sides), the first trigger press disables the auto triggering mode.

3. One green flash and a high beep sounds to indicate that the barcode was properly decoded.

> ✔ *NOTE* In some applications, proper decoding of a barcode is indicated by a software application running on the mobile computer.

Auto-triggering (Triggerless models only)

The Imager is provided with auto-triggering capability. In auto-triggering mode, both motion and proximity sensors are used to trigger the Imager when the user intends to scan a barcode.

With auto-triggering activated, the Imager automatically scans when motion stops and a barcode is placed within the depth of field of the Imager. The Imager scans the barcode and turns off to conserve power. The Imager can also be configured

to a single or continued scan operation. The motion and proximity features are enabled by default and can be re-configured by the user (see RS507 Hands-Free Imager Product Reference Guide, p/n 72E-120802-xx).

To scan a barcode in auto-triggering mode:

1. Position the Imager approximately 9 inches (22.8 cm) from a barcode label.

2. Hold the Imager steady, aiming at the barcode.

3. The Imager takes a picture (image) of the barcode and stores it in memory for decoding.

4. One green flash of the Scan LED and a high beep indicates that a barcode was properly decoded.

✓   *NOTE*   In some applications, proper decoding of a barcode is indicated by a software application running on the mobile computer.

Aiming the Imager

The aiming pattern of the Imager is a cross hair laser beam with bright center dot (shown below). The virtual rectangle made by the cross hair reflects the field of view of the Imager. The aiming pattern is used to position the barcode within the field of view.

Cross Hair Laser Beam of the Imager Aiming Pattern → ← Virtual rectangle made by the Cross Hair

1. Enter the symbol in any orientation within the virtual rectangle made by the cross hair lines, making use of its omnidirectional reading capability within the entire field of view

1D Bar Code   2D Bar Code

Bright Center Dot   Symbol

Aimer Pattern
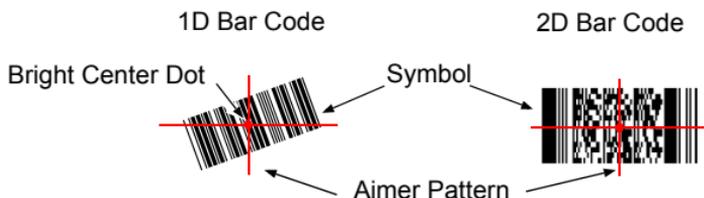
The imager can also read a barcode presented within the aiming pattern but not centered, such as the figure below on the left. The figure on the right, however, may not be decoded.

> *NOTE* When using the application on your mobile computer in "Pick List" mode, the Bright Center Dot can be positioned anywhere on the symbol.

Right

Wrong

The aiming pattern is smaller when the Imager is closer to the symbol and larger when it is farther from the symbol. Scan symbols with smaller bars or elements (mil size) closer to the Imager and those with larger bars or elements (mil size) farther from the Imager.

2. Hold the Imager between two and eleven inches from the barcode (depending on the barcode density).

> *NOTE* When a symbol is under transparent plastic or on a mobile computer screen, it is recommended to use a tilt (pitch) or skew scan angle to avoid reflection.

3. Press the Scan Button. The aiming pattern illuminates red indicating that the laser is on. One green flash of the Scan LED and a high beep indicates that a barcode was properly decoded.

Customize the Imager

Changing from Trigger to Triggerless Configuration

To Change from Trigger to Triggerless configuration:

1. Remove the Comfort Pad (See Comfort Pad Replacement on page 19).

2. Remove the Trigger Swivel Assembly (See Trigger Swivel Assembly Replacement on page 20).

3. Install the Triggerless Strap Holder (See Triggerless Strap Holder Replacement on page 21).

4. Install the Comfort Pad (See Comfort Pad Replacement on page 19).

5. Perform a cold boot (See Cold Boot on page 16).

Changing Triggerless to Trigger Configuration

To change from Triggerless to Trigger configuration:

1. Remove the Comfort Pad (See Comfort Pad Replacement on page 19).

2. Remove the Triggerless Strap Holder (See Finger Strap Replacement (Triggerless Strap Holder) on page 22).

3. Install the Trigger Swivel Assembly (See).

4. Install the Comfort Pad (See).

5. Perform a cold boot (See).

6. Press and release the Scan Trigger to enable the manual triggering mode (this operation disables the default Triggerless mode).

   NOTE When the Imager is used with the WT4XXX, Triggerless mode can also be disabled from the WT4XXX.

Resetting the Imager

If the Imager stops responding to an input, perform a cold boot.

To restore the Imager to its factory default configuration, perform a clean boot.

Cold Boot

Cold boot restores the Imager operation by resetting its software. To perform a cold boot, remove and re-insert the battery into the Imager. When using a corded Imager model with WT4XXX, remove and reconnect the interface cable that connects between the Imager and the WT4XXX.

Clean Boot

Clean boot restores the Imager to its factory default configuration.

To perform clean boot:

1. Remove the battery or Corded Adapter from the Imager.

2. Press and hold the Restore Key.

3. Insert the Battery or Corded Adapter to the Imager.

4. Keep holding the Restore Key pressed for about five seconds until a chirp is heard and the Scan LEDs flash green. The Imager is now in its factory default configuration.

Troubleshooting

Problem	Cause	Solution
Laser aiming pattern does not display when pressing the Scan Trigger.	Corded: Interface cable is not secure. Cordless: Battery is not charged.	Verify that the interface cable is properly connected. Replace or charge the battery.
	Power is not applied to Imager.	Corded: Verify that the mobile computer has a charged battery installed. Cordless: Replace or Charge Imager battery.
	Scan application on the mobile computer is not functioning.	Restart the scanning application on the mobile computer.
	Imager software does not respond.	Reset the Imager (See Resetting the Imager on page 16).
Imager does not decode a barcode.	Bar code is unreadable.	Verify that the barcode is not defective, i.e., smudged or damaged.
	Exit window is dirty.	Clean exit window with a lens tissue. Tissues for eyeglasses work well. Do not use tissues coated with lotion.
	Bar code symbology is not supported or enabled.	See your system administrator.
	Cordless: Bluetooth link is disconnected.	Reestablish Bluetooth connection (See Establish Bluetooth Connection on page 12).

Field Replaceable Parts

	Part	Description
1	KT-CLMPT-RS507-01R	Trigger Swivel Assembly.
2	KT-BKL-RS507-10R	Set of 10 Buckles for Hook and Loop Strap.
3	KT-BKLN-RS507-10R	Set of 10 Buckles for Triggerless Elastic Finger Strap.
4	KT-BKLT-RS507-10R	Set of 10 Buckles for Trigger Elastic Finger Strap.
5	KT-CLMPN-RS507-01R	Triggerless Strap Holder.
6	KT-PAD-RS507-10R	Set of 10 Trigger Comfort Pads.
7	KT-PAD2-RS507-10R	Set of 10 Triggerless Comfort Pads. M2 Screw Included.
8	KT-STRPN-RS507-10R	Set of 10 Triggerless Finger Strap.
9	KT-STRPT-RS507-10R	Set of 10 Trigger Finger Strap.
10	KT-STRP2-RS507-10R	Set of 10 Trigger or Triggerless Elastic Strap.
11	KTBTRYRS50EAB00-01	Standard Battery.
12	KTBTRYRS50EAB02-01	Extended Battery.
13	ADPTRWT-RS507-04R	Corded Adapter.
	KT-ESTRPTRS507-10R	Set of 10 Elastic Straps with Buckles for Trigger and Triggerless configurations.
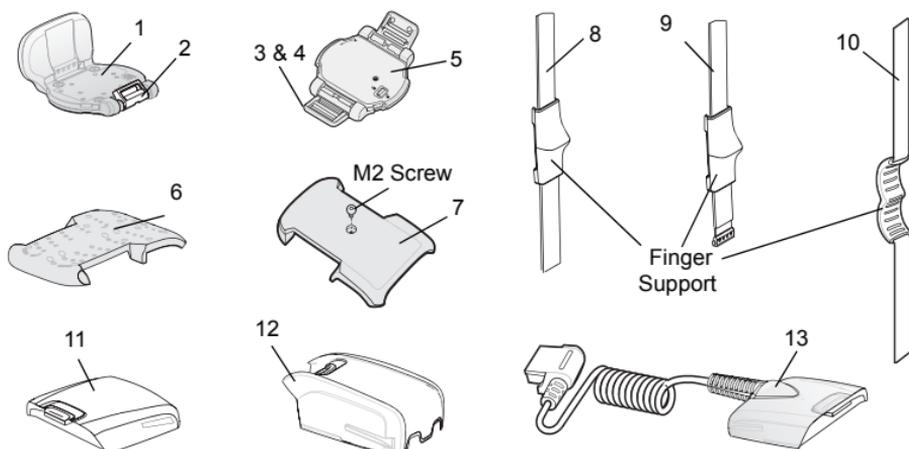
Comfort Pad Replacement

Removal

1. Flip the Imager over, such that the bottom of the Imager and the Comfort Pad are facing upwards.

2. On a Triggerless Strap Holder, use a flat screwdriver to remove the M2 screw.

Trigger Swivel Assembly

3. Insert the tip of your finger under the edge of the Comfort Pad at the back of the Imager.

4. Lift the Comfort Pad upwards and remove it from the Imager.

⚠ *CAUTION* Removing the Comfort Pad other than the described above may result in damage to the Trigger Swivel Assembly of the Imager.

Triggerless Strap Holder

Installation

✓ *NOTE* The Trigger Comfort Pad can only be installed on a Trigger Swivel Assembly.

The Triggerless Comfort Pad can be installed on a Trigger Swivel Assembly without the M2 screw.

1. Position the Comfort Pad onto the Imager as shown.

2. Press the Comfort Pad onto the Imager. When properly installed, the Comfort Pad locks into place.

3. On a Triggerless Swivel Assembly, use a flat screwdriver to install the M2 screw.
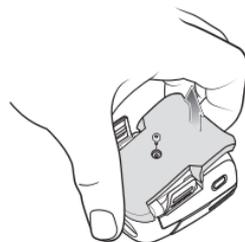
Trigger Swivel Assembly Replacement

Removal

1. Turn the Imager upside-down.

2. Remove the Comfort Pad.

3. Use a paper clip or similar object to press the Release Latch.

4. Rotate the Trigger Swivel Assembly (or Triggerless Strap Holder) to align with the back of the Imager.

5. Lift the Trigger Swivel Assembly off the Imager.
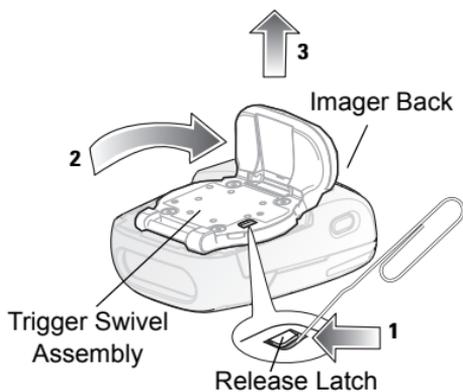
Installation

1. Turn the Imager upside-down.

2. Position the Trigger Swivel Assembly to align with the back of the Imager.

3. Lower the Trigger Swivel Assembly to the Imager.

4. Rotate Trigger Swivel Assembly 1/4 turn counterclockwise.

5. Press the Comfort Pad onto the Imager. When properly installed, the Comfort Pad "locks" into place.
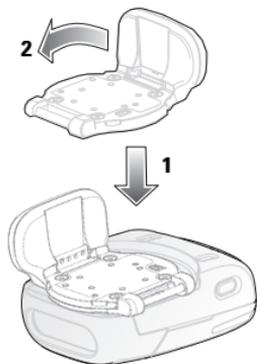
NOTE An optional Triggerless Strap Holder should be installed when the Imager is intended to be used in Motion and Proximity Initiated Bar code Read mode.

Triggerless Strap Holder Replacement

Removal

1. Turn the Imager upside-down.

2. Remove the Comfort Pad.

3. Use a paper clip or similar object to press the Release Latch.

4. Rotate the Triggerless Strap Holder to align with the back of the Imager.

5. Lift the Triggerless Strap Holder off the Imager.
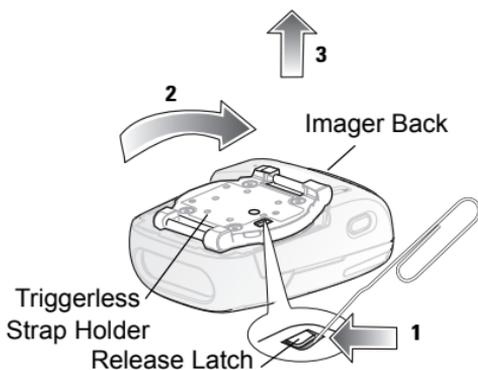
Installation

1. Turn the Imager upside-down.

2. Position the Triggerless Strap Holder to align with the back of the Imager.

3. Lower the Triggerless Strap Holder to the Imager.

4. Rotate Triggerless Strap Holder 1/4 turn counterclockwise.
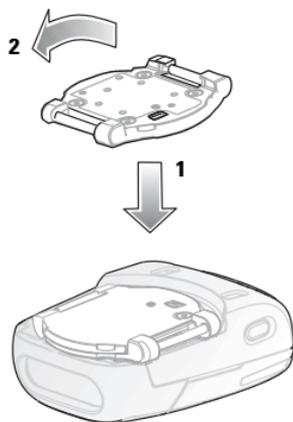
Finger Strap Replacement (Trigger Swivel Assembly)

Removal

1. Remove the Finger Strap from the Strap Buckle.
2. Pull the Finger Strap out of the Trigger Swivel Assembly.

Installation

1. Align a new Finger Strap with the Slots in the Trigger Swivel Assembly.
2. Gently press the Strap Pins to engage with the slots of the Trigger Swivel Assembly. The Strap Pins snap into the slots.
3. Slip the Finger Strap through the Strap Buckle.

Finger Strap

Strap Pins

Trigger Swivel Assembly
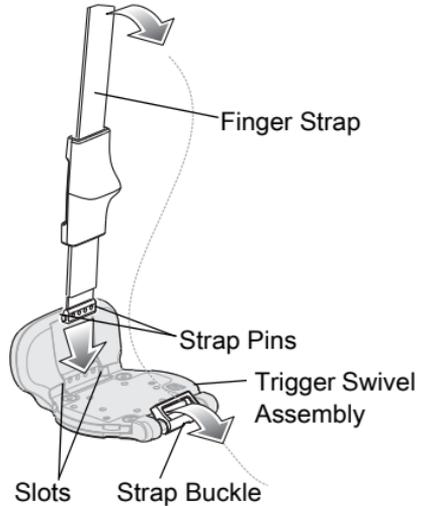
Slots   Strap Buckle

Finger Strap Replacement (Triggerless Strap Holder)

Removal

Remove the Finger Strap from the Strap Buckles.

Installation

Slip the Finger Strap through the Strap Buckles.

Triggerless Strap Holder
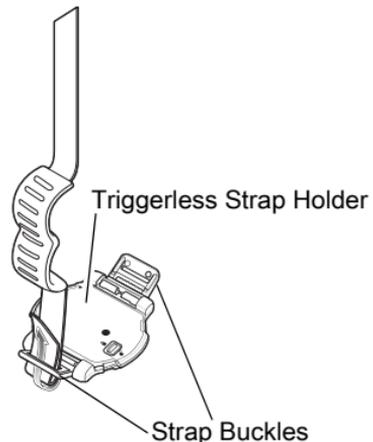
Strap Buckles

Strap Buckle Replacement

Removal

1. Remove the Trigger Swivel Assembly (See Trigger Swivel Assembly Replacement on page 20).

2. Press the Strap Buckle out of the Strap Buckle Pin.

Strap Buckle

Strap Buckle Pin

Trigger Swivel Assembly
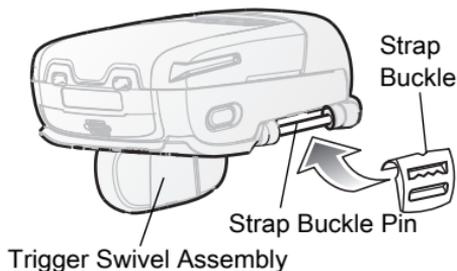
Installation

1. Align the pin slot of the Strap Buckle with the Strap Buckle Pin.

2. Gently, press the pin slot of the Strap Buckle to engage with the Strap Buckle Pin. The pin slot snaps onto the Strap Buckle Pin.

3. Install the Trigger Swivel Assembly (See Trigger Swivel Assembly Replacement on page 20).

Cleaning

Wipe the exit window periodically with a lens tissue or other material suitable for cleaning eyeglasses.

⚠ **CAUTION**   Do not pour, spray, or spill any liquid on the Imager.

The gold plated battery contacts do not tarnish or oxidize. No maintenance should be needed. If the contacts need to be cleaned:

Battery Contacts

1. Wet the tip of a cotton swab with isopropyl alcohol and squeeze the excess alcohol from the swab.

2. Wipe the metal contacts with the damp swab.

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