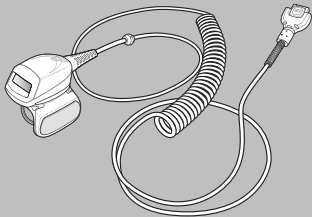
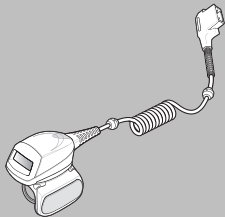


# RS419 RING SCANNER QUICK REFERENCE GUIDE



Zebra reserves the right to make changes to any product to improve reliability, function, or design. Zebra does not assume any product liability arising out of, or in connection with, the application or use of any product, circuit, or application described herein.

No license is granted, either expressly or by implication, estoppel, or otherwise under any patent right or patent, covering or relating to any combination, system, apparatus, machine, material, method, or process in which Zebra products might be used. An implied license exists only for equipment, circuits, and subsystems contained in Zebra products.

## **Warranty**

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

## **Service Information**

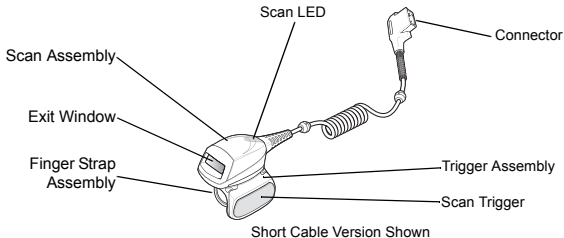
If you have a problem using the equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact the Zebra Global Customer Support Center at: <http://www.zebra.com/support>.

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

# Introduction

The RS419 ring scanner is a modular, wearable laser scanner that allows the operator hands-free bar code scanning capability. The scanner is used with the WT4090 and WT41N0 wearable terminal.

The RS419 is worn on the operator's index finger, and utilizes a thumb-operated trigger. The RS419 connects via an interface cable to the wearable terminal, which provides power and performs the data collection functions. The RS419 is available in two configurations; a short cable version for connection to a wrist mounted wearable terminal, and a long cable version for connection to a hip mounted wearable terminal.



# Changing Trigger Position

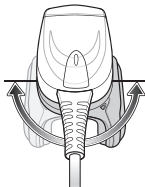
The trigger assembly of the RS419 rotates to provide left-hand or right-hand use.

1. Determine whether the RS419 is used on the right or left hand.



**CAUTION** The trigger assembly only rotates 180° around the back of the scan assembly. Do not rotate the trigger assembly past the designed stops.

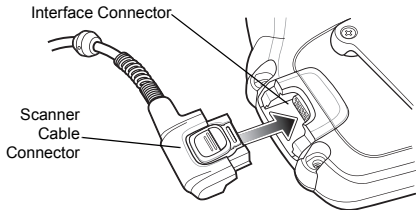
2. Rotate the trigger assembly so that the scan trigger is positioned next to the thumb when the RS419 is placed on the index finger.



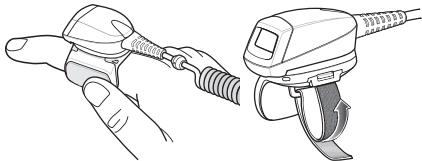
## Installation

The RS419 connects to the wearable terminal and mounts on the index finger.

1. On the wearable terminal, remove the connector cap.
2. Connect the RS419 interface cable to the wearable terminal interface connector. If connecting to a wrist mounted wearable terminal, connect to the interface connector closest to the wrist.



3. Slide the RS419 onto the index finger with the scan trigger next to the thumb.



4. Tighten the finger strap.

5. If required, cut excess finger strap material.
6. Warm boot the wearable terminal.

## Using the Scanner

Not to be used in condensing environments.

To scan bar codes:

1. Turn on the wearable terminal.
2. Launch a scanning application.
3. Press the scan trigger and aim the RS419 at a bar code.

The scan LED lights red to indicate the laser is on.

4. Position the red laser beam so that it covers the entire length of the bar code.



5. If the decode is successful the LED turns green. The terminal beeps if programmed accordingly.

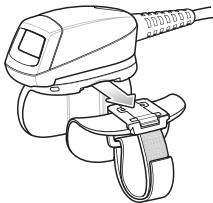
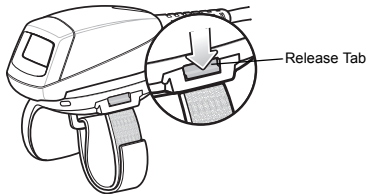
## **Scanning Tips**

- For larger bar codes, hold the RS419 farther away from the bar code.
- For bar codes with bars that are closer together, hold the RS419 closer to the bar code.
- The optimal scanning distance varies with bar code density, but 10 to 25 cm (4 to 10 inches) generally works. Practice to determine what distances to work within.
- Do not position the RS419 exactly perpendicular to the bar code being scanned. In this position, reflected light can bounce back into the exit window, and possibly prevent a successful decode.

## **Finger Strap Assembly Replacement**

The finger strap assembly can be changed for each user or for replacement. To replace the finger strap assembly:

1. Press down on the finger strap assembly release tab.



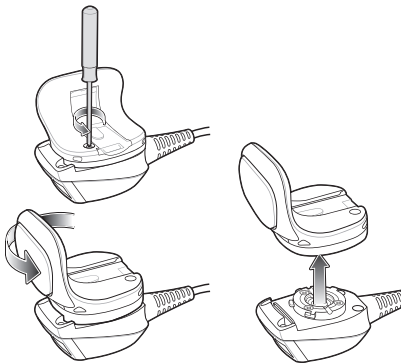
2. Slide the finger strap assembly out of the trigger assembly.
3. Align a new finger strap assembly with the slot in the trigger assembly.
4. Push the finger strap assembly into the trigger assembly until the release tab clicks into place.
5. Insert your index finger through the finger strap. Tighten the strap and press the hook and pile together.
6. If required, cut excess finger strap material.



# Replacing the Trigger Assembly

To replace the trigger assembly:

1. Remove the finger strap assembly.
2. Turn the RS419 upside-down.
3. Remove the set screw with screwdriver.
4. Turn the trigger assembly counter-clockwise until the exit window and scan trigger align.
5. Lift the trigger assembly off the scan assembly.
6. Align replacement trigger assembly with scan assembly.
7. Rotate trigger assembly 1/4 turn clockwise.
8. Tighten the set screw with screwdriver.
9. Replace finger strap assembly.



# Cleaning



## **CAUTION**

Always wear eye protection.

Read warning label on compressed air and alcohol product before using. If you have to use any other solution for medical reasons please contact Zebra for more information.



## **WARNING!**

AVOID EXPOSING THIS PRODUCT TO CONTACT WITH HOT OIL OR OTHER FLAMMABLE LIQUIDS. IF SUCH EXPOSURE OCCURS, UNPLUG THE DEVICE AND CLEAN THE PRODUCT IMMEDIATELY IN ACCORDANCE WITH THESE GUIDELINES.

## Approved Cleanser Active Ingredients

100% of the active ingredients in any cleaner must consist of one or some combination of the following: isopropyl alcohol, bleach/sodium hypochlorite, hydrogen peroxide or mild dish soap.

## Harmful Ingredients

The following chemicals are known to damage the plastics on the RS419 and should not come in contact with the device: ammonia solutions, compounds of amines or ammonia; acetone; ketones; ethers; aromatic and chlorinated hydrocarbons; aqueous or alcoholic alkaline solutions; ethanamine; toluene; trichloroethylene; benzene; carbolic acid and TB-lysoform.

## **Cleaning Instructions**

Do not apply liquid directly to the RS419. Dampen a soft cloth or use pre-moistened wipes. Do not wrap the device in the cloth or wipe, but gently wipe the unit. Be careful not to let liquid pool around the display window or other places. Allow the unit to air dry before use.

## **Special Cleaning Notes**

Many vinyl gloves contain phthalate additives, which are often not recommended for medical use and are known to be harmful to the housing of the RS419. The RS419 should not be handled while wearing vinyl gloves containing phthalates, or before hands are washed to remove contaminant residue after gloves are removed. If products containing any of the harmful ingredients listed above are used prior to handling the RS419, such as hand sanitizer that contain ethanolamine, hands must be completely dry before handling the RS419 to prevent damage to the plastics.

## **Materials Required**

- Alcohol wipes
- Lens tissue
- Cotton tipped applicators
- Isopropyl alcohol
- Can of compressed air with a tube.

# Cleaning the RS419

## *Housing*

Using the alcohol wipes, wipe the housing.

## *Exit Window*

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

## *Connector*

1. Disconnect the RS419 from the WT41N0.
2. Dip the cotton portion of the cotton tipped applicator in isopropyl alcohol.
3. Rub the cotton portion of the cotton tipped applicator back-and-forth across the connector. Do not leave any cotton residue on the connector.
4. Repeat at least three times.
5. Use the cotton tipped applicator dipped in alcohol to remove any grease and dirt near the connector area.
6. Use a dry cotton tipped applicator and repeat steps 4 through 6.



**CAUTION** Do not point nozzle at yourself and others, ensure the nozzle or tube is away from your face.

7. Spray compressed air on the connector area by pointing the tube/nozzle about ½ inch away from the surface.
8. Inspect the area for any grease or dirt, repeat if required.

## **Cleaning Frequency**

The cleaning frequency is up to the customer's discretion due to the varied environments in which the mobile devices are used. They may be cleaned as frequently as required. However when used in dirty environments it may be advisable to periodically clean the scanner exit window to ensure optimum scanning performance.

# Troubleshooting

Symptom	Probable Cause	Action
Laser beam does not display when pressing the trigger.	Interface cable is not secure.	Verify that the interface cable connection is connected properly.
	Power is not applied to RS419.	Power for the RS419 is provided by the wearable terminal. Verify that the wearable terminal has a charged battery installed.
	Scan enabled application on the wearable terminal is not running.	Launch scanning application on the wearable terminal.
RS419 does not decode a bar code.	Bar code is unreadable.	Verify that the bar code is not defective, i.e., smudged or broken.
	Exit window is dirty.	Clean exit window with a lens tissue. Tissues for eyeglasses work well. Do not use tissues coated with lotion.
	Symbology is not enabled.	See your system administrator.

Symptom	Probable Cause	Action
Condensation appears on the inside or the outside of the exit window.	Using the ring scanner in a hot and humid environment after being in a freezer environment.	Wipe condensation from exit window with a soft cloth. For condensation on the inside, dedicate ring scanner to freezer or hot and humid environment. Do not pass between environments with the same ring scanner.

## Ergonomic Recommendations



### **CAUTION**

In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure

- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

## Regulatory Information

This guide applies to Model Number RS419.

All Zebra devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required.

Local language translations are available at the following website: <http://www.zebra.com/support>.

Any changes or modifications to Zebra equipment, not expressly approved by Zebra, could void the user's authority to operate the equipment.

For use only with Zebra approved and UL Listed mobile computers. Zebra approved and UL Listed accessories and/or Zebra approved and UL Listed/Recognized battery packs.



### **Laser Devices**

Complies with 21CFR1040.10 AND 1040.11 except for deviations pursuant to Laser Notice NO. 50, dated June 24, 2007 and IEC 60825-1 (Ed. 2.0), EN60825-1: 2007.

The laser classification is marked on one of the labels on the device.



Class 1 Laser devices are not considered to be hazardous when used for their intended purpose. The following statement is required to comply with US and international regulations:

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

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.



LASER LIGHT- DO NOT STARE  
INTO BEAM . CLASS 2 LASER PRODUCT.  
LASERLICHT - NICHT IN DEN STRAHL BLICKEN.  
LASERKLASSE 2, LUMIERE LASER - NE PAS  
REGARDER DANS LE FAISCEAU, APPAREIL À LASER  
DE CLASSE 2 630-680nm, 1mW  
激光辐射 勿直视光束 2类激光产品

## Radio Frequency Interference Requirements-FCC

**FC** Tested to comply  
with FCC Standards  
FOR HOME OR OFFICE USE

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate

radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

### ***Radio Frequency Interference Requirements - Canada***

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

# Marking and European Economic Area (EEA)

## *Statement of Compliance*

Zebra, hereby, declares that this device is in compliance with all the applicable Directives, 2004/108/EC, 2006/95/EC and 2011/65/EU. A Declaration of Conformity may be obtained from <http://www.zebra.com/doc>.

## **Japan (VCCI) - Voluntary Control Council for Interference**

### *Class B ITE*

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

## **Korea Warning Statement for Class B ITE**

기종별	사용자안내문
B급 기기 (가정용 방송통신기자재)	이 기기는 가정용 (B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

# Taiwan Statement



R32626

條碼掃描器

型号：RS419

墨西哥制造



## Waste Electrical and Electronic Equipment (WEEE)

**English:** For EU Customers: All products at the end of their life must be returned to Zebra for recycling. For information on how to return product, please go to: <http://www.zebra.com/weee>.

**Français:** Clients de l'Union Européenne: Tous les produits en fin de cycle de vie doivent être retournés à Zebra pour recyclage. Pour de plus amples informations sur le retour de produits, consultez : <http://www.zebra.com/weee>.

**Español:** Para clientes en la Unión Europea: todos los productos deberán entregarse a Zebra al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: <http://www.zebra.com/weee>.

**Bulgarian:** За клиенти от ЕС: След края на полезния им живот всички продукти трябва да се връщат на Zebra за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: <http://www.zebra.com/weee>.

**Deutsch:** Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebensdauer zum Recycling an Zebra zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter <http://www.zebra.com/weee>.

**Italiano:** per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Zebra al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web: <http://www.zebra.com/weee>.

**Português:** Para clientes da UE: todos os produtos no fim de vida devem ser devolvidos à Zebra para reciclagem. Para obter informações sobre como devolver o produto, visite: <http://www.zebra.com/weee>.

**Nederlands:** Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Zebra te worden teruggezonden voor recycling. Raadpleeg <http://www.zebra.com/weee> voor meer informatie over het terugzenden van producten.

**Polski:** Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji naleŹy zwrócić do firmy Zebra w celu ich utylizacji. Informacje na temat zwrotu produktów znajduj¹ siê na stronie internetowej <http://www.zebra.com/weee>.

**Čeština:** Pro zákazníky z EU: Všechny produkty je nutné po skončení jejich životnosti vrátit společnosti Zebra k recyklaci. Informace o způsobu vrácení produktu najdete na webových stránkách: <http://www.zebra.com/weee>.

**Eesti:** EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Zebra'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: <http://www.zebra.com/weee>.

**Magyar:** Az EU-ban vásárlóknak: Minden tönkrement termékét a Zebra vállalathoz kell eljuttatni újrhasználtság céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalóként látogasson el a <http://www.zebra.com/weee> weboldalra.

**Slovenski:** Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Zebra za reciklažo. Za informacije o vračilu izdelka obiščite: <http://www.zebra.com/weee>.

**Svenska:** För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Zebra för återvinning. Information om hur du returnerar produkten finns på <http://www.zebra.com/weee>.

**Suomi:** Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Zebra-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamisesta on osoitteessa <http://www.zebra.com/weee>.

**Dansk:** Til kunder i EU: Alle produkter skal returneres til Zebra til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: <http://www.zebra.com/weee>.

**Ελληνικά:** Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρέφονται στην Zebra για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση <http://www.zebra.com/weee> στο Διαδίκτυο.

**Malti:** Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-ħajja ta' l-użu tagħhom, iridu jiġu rritornati għand Zebra għar-riċiklaġġ. Għal aktar tagħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok żur: <http://www.zebra.com/weee>.

**Românesc:** Pentru clienții din UE: Toate produsele, la sfârșitul duratei lor de funcționare, trebuie returnate la Zebra pentru reciclare. Pentru informații despre returnarea produsului, accesați: <http://www.zebra.com/weee>.

**Slovenčina:** Pre zákazníkov z krajín EU: Všetky výrobky musia byť po uplynutí doby ich životnosti vrátené spoločnosti Zebra na recykláciu. Bližšie informácie o vrátení výrobkov nájdete na: <http://www.zebra.com/weee>.

**Lietuvių:** ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti gražinti utilizuoti į kompaniją „Zebra“. Daugiau informacijos, kaip gražinti gaminį, rasite: <http://www.zebra.com/weee>.

**Latviešu:** ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Zebra otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu Zebra, lūdzu, skatiet: <http://www.zebra.com/weee>.

**Türkçe:** AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Zebra'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin:  
<http://www.zebra.com/weee>.

## **TURKISH WEEE Statement of Compliance**

EEE Yönetmeliğine Uygundur



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Lincolnshire, IL U.S.A.  
<http://www.zebra.com>

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