

# DS457 Fixed Mount Imager

Quick Reference Guide



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Zebra Technologies Corporation  
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<http://www.zebra.com>

## **Warranty**

For the complete Zebra hardware product warranty statement, go to:

<http://www.zebra.com/warranty>

***For Australia Only:***

For Australia Only. This warranty is given by Zebra Technologies Asia Pacific Pte. Ltd., 71 Robinson Road, #05-02/03, Singapore 068895, Singapore. Our goods come with guarantees that cannot be excluded under the Australia Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. Zebra Technologies Corporation Australia's limited warranty above is in addition to any rights and remedies you may have under the Australian Consumer Law. If you have any queries, please call Zebra Technologies Corporation at +65 6858 0722. You may also visit our website: <http://www.zebra.com> for the most updated warranty terms.

**Introduction**

The DS457 fixed mount imager is specifically designed for standalone applications, and OEM applications such as kiosks. The imager is extremely compact, provides easy and flexible integration of bar code imaging into a host device, and offers high-performance imaging on 1D and 2D bar codes. The DS457 is ideal for embedded medical diagnostic equipment and for conveyor lines in manufacturing environments. The DS457 can also be used as a zero-footprint 2D array imaging solution in retail POS environments.

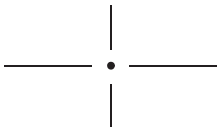
## Connecting the DS457

To connect the DS457 to a host:

1. Plug the 9-pin D-connector with the end marked **SCANNER** into the DS457.
2. If using an external switch and applicable host cable, plug the trigger cable into the female stereo connector on the flying lead of the 9-pin D-connector.
3. Plug the host side connector into the appropriate port on the host.
4. For RS-232 connection, plug the power supply into an AC receptacle, and the output cable from the power supply into the connector near the host end of the interface cable.
5. Check all connections to ensure they are secure.
6. Program the DS457 using the programming bar codes in the *DS457 Imager Integration Guide*.

## Capturing Data

When scanning, the imager projects a red laser aiming pattern which allows positioning the bar code within its field of view.



If necessary, the imager turns on its red LEDs to illuminate the target bar code.

To scan a bar code, center the symbol in any orientation within the aiming pattern. Be sure the entire symbol is within the rectangular area formed by the cross pattern.

1D bar code  
symbol



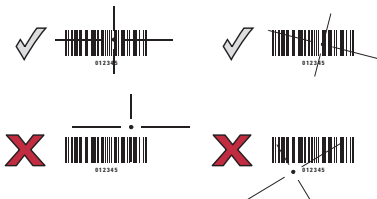
2D bar code  
symbol



2D dot peen  
DPM symbol



The imager can also read a bar code presented within the aiming pattern but not centered. The top examples in the following illustration show acceptable aiming options, while the bottom examples can not be decoded.



Upon successful decode, the DS457 beeps and its LED turns green.

## Programming Bar Codes

Following are some frequently used bar codes for programming the DS457.

### Set Defaults

- **Restore Defaults** - Scan this bar code to reset all default parameters as follows.
  - If you previously set custom defaults by scanning **Write to Custom Defaults** in the *Integration Guide*, scan **Restore Defaults** to retrieve and restore the decoder's custom default settings.
  - If you did not set custom defaults, scan **Restore Defaults** to restore the factory default values.



**Restore Defaults**

- **Set Factory Defaults** - Scan this bar code to restore the factory default values. This deletes any custom defaults set.



**Set Factory Defaults**

**Host Types*****USB Device Type*****HID Keyboard Emulation (Default)****Symbol Native API (SNAPI) with Imaging Interface****Symbol Native API (SNAPI)  
without Imaging Interface**



***USB Device Type (continued)***



**CDC COM Port Emulation**



**SSI over USB CDC**

***Serial Host Type*****SSI Host****Standard RS-232  
(Transmits Only ASCII Data)**

## **Trigger Modes**

### ***Presentation (default)***

When the DS457 detects an object in its field of view, it triggers and attempts to decode. The range of object detection does not vary under normal lighting conditions. This applies to decode mode only. In this mode the unit does not enter Low Power mode.



**Presentation (Default)**

### ***Level Trigger***

Pressing the trigger on top of the imager or an external trigger connected through the host cable activates decode processing, which continues until the trigger is released, a valid decode, or the decode session timeout occurs.



**Level**

## **Host**

A host command issues the triggering signal. The DS457 interprets a trigger press as a level triggering option.



Host

## **Motion Enhancement for Presentation Mode**

Select Disable Motion Enhancement to revert to standard Presentation Mode behavior.



Disable Motion Enhancement (Default)

Select Enable Motion Enhancement to fine-tune engine and decoder behavior for bar codes moving quickly through the imager's field of view.



Enable Motion Enhancement

**Note:** Do not enable Motion Enhancement if scanning bar codes on mobile phones or electronic displays.

***Mobile Phone/Display Mode***

This mode improves bar code reading performance with target bar codes displayed on mobile phones and electronic displays.



**Disable Mobile Phone/Display Mode (Default)**



**Enable Mobile Phone/Display Mode**

## **Beeper and LED Indications**

The beeper and LED indicate imager status as follows:

<b>Indication</b>	<b>Beeper</b>	<b>LED</b>
Imager is on.	N/A	Red
A bar code is successfully decoded.	1 beep	Flash of green
A programming parameter was entered successfully.	Fast warble	Flash of green
Transmission error. Bar code data was not received by the host.	4 beeps	Red

## Troubleshooting

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Solutions</b>
No red LED or nothing happens during a capture attempt.	No power to the imager.	Check the system power. Confirm that the correct host interface cable is used.
		Connect power supply.
		Check for loose cable connections.
Imager cannot read the bar code.	Interface/power cables are loose.	Secure cable connections.
	Imager is not programmed for that bar code type.	Program the imager to read the type of bar code to be scanned.
	Incorrect communication parameters.	Set the correct communication parameters (baud rate, parity, stop bits, etc.)
	Bar code symbol is unreadable.	Ensure the symbol is not defaced. Try scanning similar symbols of the same code type.

## Regulatory Information

This guide applies to Model Number: DS457

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.

## Health and Safety Recommendations



### *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 adjustable workstations



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

## Laser Devices



COMPLIES WITH 21CFR1040.10 & 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 50, DATED JUNE 24, 2007 AND IEC/EN 60825-1:2007 AND/OR IEC/EN 60825-1:2014.

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:



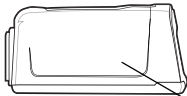
**CAUTION** Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

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.

## LED Devices

Complies with IEC/EN60825-1:2001 & IEC/EN62471:2006  
For devices with Class 1M LED's the following label is used:

### Scanner Labeling



LASER LIGHT - DO NOT STARE INTO BEAM. CLASS 2 LASER/1M LED PRODUCT  
LASERLICHT-NICHT IN DEN STRAHLEN BLICKEN. LASER/1M LED KLASSE 2.  
LUMIERE LASER-NE PAS REGARDER DANS LE FAISCEAU. APPAREIL  
à LASER/1M LED DE CLASSE 2. 020-020000-1000  
激光/LED辐射 勿直视光束 2类激光/1M类LED产品



## Power Supply

Use **ONLY** a LISTED Type no.

PWRS-14000 (5.2Vdc, 850mA), or direct plug-in power supply, marked Class 2 or LPS (IEC60950-1, SELV). Use of alternative Power Supply will invalidate any approvals given to this unit and may be dangerous.

## DS457 Class I, Division 2 Version

This device is open-type and intended to be fully mounted inside of an enclosure suitable for the environment.

This equipment is suitable for use in Class I, Division 2, Groups D or non-hazardous locations only.

**WARNING - EXPLOSION HAZARD -** Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

**WARNING - EXPLOSION HAZARD -** Substitution of any components may impair suitability for Class I, Division 2.

**WARNING - HOT SURFACE**



## **Radio Frequency Interference Requirements - FCC**



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 applicable Directives, 2014/30/EU, 2014/35/EU and 2011/65/EU.

The full text of the EU Declaration of Conformity is available at the following internet address: <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 방송통신기기)	이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

## Ukraine

This equipment corresponds to requirements of the Technical Regulation No. 1057, 2008 on restrictions as to the use of some dangerous substances in electric and electronic devices.

## CMM Disclosure

部件名称 (Parts)	有害物质 					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 (Metal Parts)	X	0	0	0	0	0
电路模块 (Circuit Modules)	X	0	0	0	0	0
电缆及电缆组件 (Cables and Cable Assemblies)	0	0	0	0	0	0
塑料和聚合物部件 (Plastic and Polymeric Parts)	0	0	0	0	0	0
光学和光学组件 (Optics and Optical Components)	0	0	0	0	0	0
电池 (Batteries)	0	0	0	0	0	0

本表格依据SJ/T 11364 的规定编制。

0: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572 规定的限量要求。(企业可在此处, 根据实际情况对上表中打“X”的技术原因进行进一步说明。)

This table was created to comply with China RoHS requirements.



## 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>.

**Български:** 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>.

**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 webové stránce: <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>.

**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>.

**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>.

**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>.

**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>.

**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.

**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>.

**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>.

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

**Magyar:** Az EU-ban vásárlóknak: Minden tönkrement terméket a Zebra vállalatához kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának

módjával kapcsolatos tudnivalókért látogasson el a <http://www.zebra.com/weee> weboldalra.

**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>.

**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 należą zwrócić do firmy Zebra w celu ich utylizacji. Informacje na temat zwrotu produktów znajdują się na stronie internetowej: <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>.

**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>.

**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>.

**Suomi:** Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Zebra-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteiden palauttamisesta on osoitteessa <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>.

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

## 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>



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