DS457 Fixed Mount Imager
Quick Reference Guide
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Lincolnshire, IL U.S.A.
http://www.zebra.com

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

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

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**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.
**Host**

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

**Motion Enhancement for Presentation Mode**

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

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

**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:

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

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

• 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-

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


For devices with Class 1M LED’s the following label is used:

Scanner Labeling

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.
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

<table>
<thead>
<tr>
<th>기 준 별</th>
<th>사용 자 안 내 문</th>
</tr>
</thead>
<tbody>
<tr>
<td>B급 기기 (가정용 방송통신기기)</td>
<td>이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.</td>
</tr>
</tbody>
</table>

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

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

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中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 “×” 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.


Dansk: Til kunder i EU: Alle produkter skal returneres til Zebra til recirkulering, når de er udtjent. Læs


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.


Magyar: Az EU-ban vásárlóknak: Minden tönkrement terméket a Zebra vállalathoz kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának
módjával kapcsolatos tudnivalókért látogasson el a http:/
/www.zebra.com/weee weboldalra.
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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