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 cannot be decoded.

Upon successful decode, the DS457 beeps and its LED turns green.
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**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](barcode)

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

  ![Set Factory Defaults](barcode)
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
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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.

**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
**Beepers 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 device is approved under the Symbol Technologies, Inc. brand. Symbol Technologies, Inc., is a wholly owned subsidiary of Motorola Solutions, Inc. ("Motorola").

This guide applies to Model Number: DS457

All Motorola/Symbol 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://supportcentral.motorola.com

Any changes or modifications to Motorola/Symbol Technologies equipment, not expressly approved by Motorola/Symbol Technologies, 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
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- 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

![Attention]


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:

![Attention]

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 Motorola, 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.
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
Motorola/Symbol hereby declares that this device is in compliance with all the applicable Directives, 2004/108/EC and 2006/95/EC. A Declaration of Conformity may be obtained from http://www.motorola.com/doc.

Japan (VCCI) - Voluntary Control Council for Interference

Class B ITE

Korea Warning Statement for Class B ITE
**Waste Electrical and Electronic Equipment (WEEE)**

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

**Български:** За клиенти от ЕС: След края на полезния им живот всички продукти трябва да се връщат на Motorola за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: http://www.motorola.com/recycling/weee.

**Dansk:** Til kunder i EU: Alle produkter skal returneres til Motorola til racirkulering, når de er utdøet. Læs oplysningerne om retur og afhentning af produkter på: http://www.motorola.com/recycling/weee.


**Eesti:** EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Motorola’le. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: http://www.motorola.com/recycling/weee.

**Español:** Para clientes en la Unión Europea: todos los productos deberán entregarse a Motorola al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: http://www.motorola.com/recycling/weee.
Français : Clients de l'Union Européenne : Tous les produits en fin de cycle de vie doivent être retournés à Motorola pour recyclage. Pour de plus amples informations sur le retour de produits, consultez :

Italiano: per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Motorola al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web:

Magyar: Az EU-ban vásárlóknak: Minden tönkrement terméket a Motorola vállalathoz kell eljuttatni újrahasznosítás céljaiból. A termék visszajuttatásának módjával kapcsolatos tudnivalókért látogasson el a

Nederlands: Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Motorola te worden terugzonden voor recycling. Raadpleeg

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Românesc: Pentru clienii din UE: Toate produsele, la sfârșitul duratei lor de funcționare, trebuie returnate la Motorola pentru reciclare. Pentru informații despre returnarea produsului, accesați:

Slovenskí: Za kupce v EU: všetky výrobky musia po skončení ich životnosti vrátiť podniku Motorola za recyklovanie. Informácie o vrátení výrobku nájdete na:

Suomi: Asiakkaiden Euroopan alueella: Kaikilla tuotteilla on täytyy palauttaa kansallisesti Motorola-yhtiölle, kun tuote ei enää ole käytössä. Lisätietoja palauttamisesta on osoitteessa:

Svenska: För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Motorola för återvinning. Information om hur du returnerar produkten finns på:

Türkçe: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Motorola'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için şu adrese gidin:
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 Motorola Solutions Support at:
http://supportcentral.motorola.com
For the latest version of this guide go to:
http://supportcentral.motorola.com