

**Intermec**



**User's Guide**

**Intermec<sup>®</sup>  
ImageDemo**

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There are U.S. and foreign patents pending.

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## **Contents**

## Before You Begin

This section provides you with safety information, technical support information, and sources for additional product information.

### Safety Information

Your safety is extremely important. Read and follow all warnings and cautions in this document before handling and operating Intermec equipment. You can be seriously injured, and equipment and data can be damaged if you do not follow the safety warnings and cautions.

The next table explains how to identify and understand dangers, warnings, cautions, and notes that are in this document. You may also see icons that tell you when to follow ESD procedures and when to take special precautions for handling optical parts.



**A warning alerts you of an operating procedure, practice, condition, or statement that must be strictly observed to avoid death or serious injury to the persons working on the equipment.**

**Avertissement: Un avertissement vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour éviter l'occurrence de mort ou de blessures graves aux personnes manipulant l'équipement.**



**A caution alerts you to an operating procedure, practice, condition, or statement that must be strictly observed to prevent equipment damage or destruction, or corruption or loss of data.**

**Attention: Une précaution vous avertit d'une procédure de fonctionnement, d'une méthode, d'un état ou d'un rapport qui doit être strictement respecté pour empêcher l'endommagement ou la destruction de l'équipement, ou l'altération ou la perte de données.**



**Note:** Notes either provide extra information about a topic or contain special instructions for handling a particular condition or set of circumstances.

## Global Services and Support

### Warranty Information

To understand the warranty for your Intermec product, visit the Intermec web site at [www.intermec.com](http://www.intermec.com) and click **Service & Support**. The **Intermec Global Sales & Service** page appears. From the **Service & Support** menu, move your pointer over **Support**, and then click **Warranty**.

Disclaimer of warranties: The sample code included in this document is presented for reference only. The code does not necessarily represent complete, tested programs. The code is provided “as is with all faults.” All war-

## Before You Begin

warranties are expressly disclaimed, including the implied warranties of merchantability and fitness for a particular purpose.

### Web Support

Visit the Intermec web site at [www.intermec.com](http://www.intermec.com) to download our current manuals in PDF format. To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

Visit the Intermec technical knowledge base (Knowledge Central) at [intermec.custhelp.com](http://intermec.custhelp.com) to review technical information or to request technical support for your Intermec product.

### Telephone Support

These services are available from Intermec Technologies Corporation.

<b>Services</b>	<b>Description</b>	<b>In the USA and Canada call 1-800-755-5505 and choose this option</b>
Factory Repair and On-site Repair	Request a return authorization number for authorized service center repair, or request an on-site repair technician.	1
Technical Support	Get technical support on your Intermec product.	2
Service Contract Status	Inquire about an existing contract, renew a contract, or ask invoicing questions.	3
Schedule Site Surveys or Installations	Schedule a site survey, or request product/system installation.	4
Ordering Products	Talk to sales administration, place an order, or check the status of your order.	5

Outside the U.S.A. and Canada, contact your local Intermec representative. To search for your local representative, from the Intermec web site, click **Contact**.

## Related Documents

This table contains a list of related Intermec documents and their part numbers.

Document Title	Part Number
<i>700 Series Color Mobile Computer User's Manual</i>	961-054-031
<i>CK30 Handheld Computer User's Manual</i>	073528
<i>CK31 Handheld Computer User's Manual</i>	073205
<i>CK60 Computer with Windows CE User's Manual</i>	961-054-037
<i>CK60 Computer with Windows Mobile User's Manual</i>	935-000-001
<i>CN2 Mobile Computer User's Manual</i>	074751
<i>CN30 Mobile Computer User's Manual</i>	961-054-039
<i>CV60 Vehicle Mount Computer User's Guide</i>	961-054-033

The Intermec web site contains Intermec documents (in PDF) that you can download for free.

### To download documents

- 1** Browse to [www.intermec.com](http://www.intermec.com).
- 2** Click **Service & Support > Manuals**.
- 3** In the **Select a Product** field, choose the product whose documentation you want to download.

To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor.

***Before You Begin***

## About the ImageDemo Application

This User's Guide is written for version 2.50 of the Intermec® ImageDemo application.

The Intermec® Mobile or Handheld Computer has an optional integrated 2D imager that can capture images at 20 to 100 frames per second. The imager includes both data collection and image acquisition features.

The imager has a decode engine that decodes 2D matrix symbologies, such as Data Matrix or MaxiCode, and traditional 1D and stack symbologies. See your user's manual for information about supported symbologies. Go to "Related Documents" on page vii for a table of related user manuals and their part numbers.

The decode engine can perform omni-directional scanning for these symbologies, with which you can scan the mobile or handheld computer in any orientation. This reduces the time required to orient the mobile or handheld computer horizontally, as required by laser scanners.

The 2D imager also takes black and white photographs for applications such as proof of delivery, market surveys, and field inspections.

The ImageDemo application demonstrates the more common features of the mobile or handheld computer imager.

## Installation Manager

Use the Installation Manager application to download the ImgrDemo.cab file from the Intermec web site at [www.intermec.com](http://www.intermec.com) and install the application in any location on your desktop, such as the "\Temp" folder.

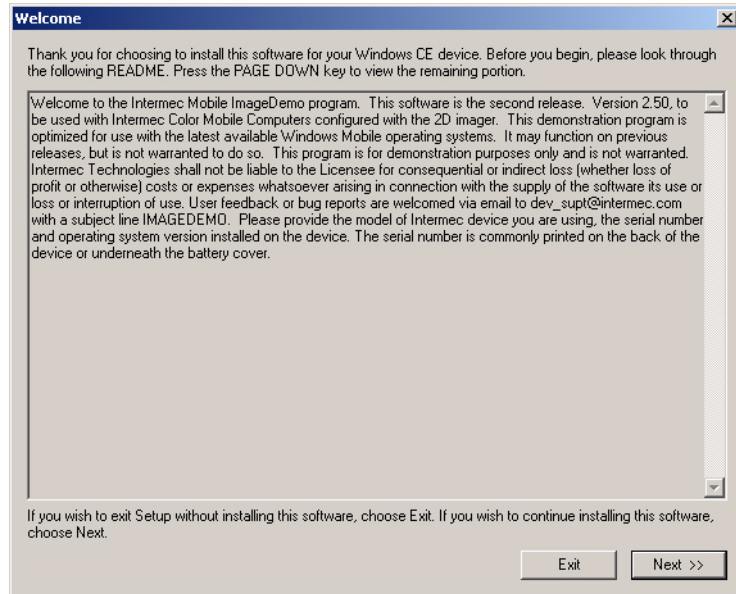
Do the following to run this application:

- 1 Start an ActiveSync connection to your handheld or mobile computer to install the application.

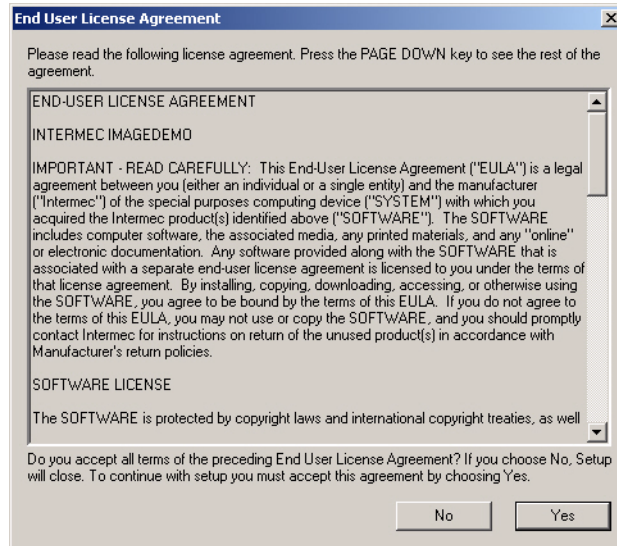


- 2 From your desktop, click the **My Computer** icon, browse to the location where you installed the ImageDemo application, then double-click the ImgrDemo.exe executable file, or select **Start > Run**, enter "ImgrDemo.exe" in the **Open** field, then click **OK**.

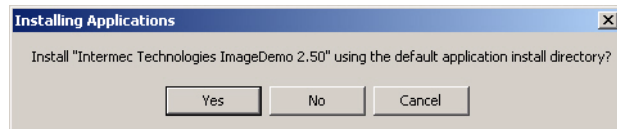
**3** Click **Next** to continue.



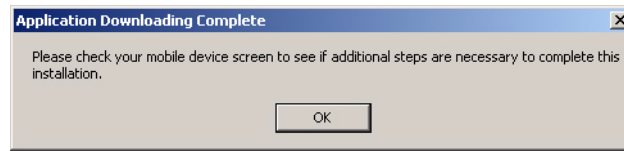
**4** Tap **Yes** to accept the End User License Agreement (EULA) and continue.



**5** Click **Yes** to install the application into the default location.



6 Check OK to confirm the final installation message.

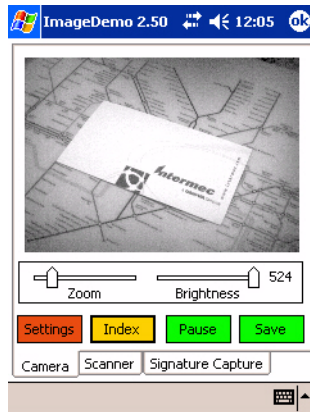


## Operation



ImageDemo

From the handheld or mobile computer, tap **Start > Programs > ImageDemo** to start the ImageDemo application.



## Camera Mode

The ImageDemo defaults to the Camera mode. While in this mode, the ImageDemo application displays real-time images for you to position your imager. Note the imager is at the top of the handheld or mobile computer, above the display.

### Zoom

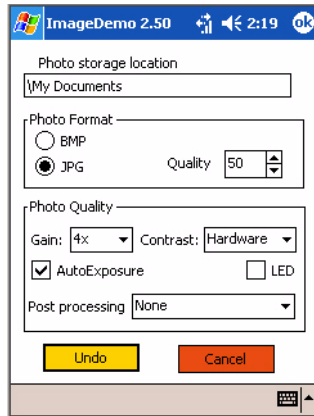
The left-hand slider bar zooms into or away from a live or paused image. A “live” image is not captured or saved in a file. A “paused” image is a captured or “frozen” image that you could save into a file. This feature zooms the following ratios: 1:1 (*default*), 1:25, 1:50, 1:100, and 1:200. Tap (slide) the **Zoom** bar to the left to zoom away from the image or make the image smaller. Tap (slide) the **Zoom** bar to the right to zoom closer to the imager or make the image larger.

### Brightness

The right-hand slider bar adjusts the lighting for the live image (also known as the Lighting Goal). The default brightness is set at 100, with a range between 20 and 200. Slide the **Brightness** bar to the left to darken the image and to the right to lighten the image. *Note that the imager may take a few seconds before responding to the new brightness setting. Depending on the available light in the area, the imager may or may not change the current brightness setting.*

## Settings

Tap **Settings** to view the available configuration options, such as photo storage location and picture file format and quality. These settings are also in the registry for the next time ImageDemo is started.



### Photo storage location

This is any location on the handheld or mobile computer where to store the photos saved. The default location is the “My Documents” folder. Tap this entry to invoke the default input method, normally the keyboard, to change the location if desired.

### Photo Format

This determines which picture format: BMP (Windows bitmaps) or JPG (Joint Picture Group), to store the photo or picture.

JPG (pronounced "jay-peg") is a standardized image compression mechanism and is a derivative of JPEG (Joint Photographic Experts Group), the original name of the committee that wrote the standard. Use JPG to compress either full-color or gray-scale still images of natural, real-world scenes. It works well on photographs, naturalistic artwork, and similar material; not so well on lettering, simple cartoons, or line drawings. More information about the JPEG specification can be found at [www.jpeg.org](http://www.jpeg.org).

### Photo Quality (JPG only)

The photo quality setting applies to JPG only and determines the size and quality of the saved picture. A higher setting increases the quality of the saved picture, but at an increased file size. A good balance between size and quality is 50, which is the program default value.

## Index

Tap **Index** to see the saved pictures. While in the Index mode, you can see the most recent picture with information such as the file name, size, date, and time the picture was recorded. Tap the left or right button at the bottom to move between pictures.

## Pause

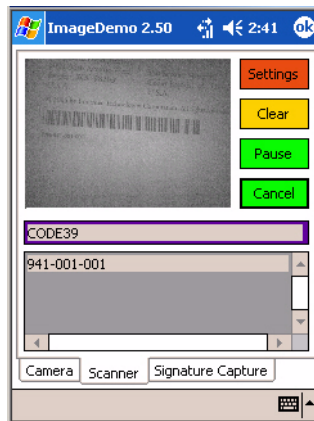
Tap this to pause or “freeze” the live image. Once you pause an image, **Pause** changes into **Resume**, which when tapped, returns the image to live action. You can tap **Save** to save the paused image as a file onto the handheld or mobile computer.

## Save

Tap **Save** to save the picture, live or paused, to the handheld or mobile computer. If you have a scan handle attached to your computer, you can use the left, right or center trigger to save the picture. The computer emits a confirmation sound when saving the captured image.

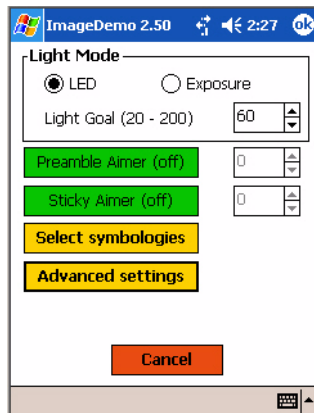
## Scanner Mode

Tap the **Scanner** tab at the bottom of the screen to switch to the scanner mode.



## Settings

Tap **Settings** to view the available configuration options in Scanner mode. These settings are preserved in the registry for the next time the Image-Demo application is started. Tap **ok** to return to the Scanner Mode page with your changes. Tap **Cancel** to return without your changes.



## Light Mode

The two light mode settings, **LED** and **Exposure**, work opposite each other. The **LED** light mode attempts to use LED illumination to achieve the desired light goal (defined below) while keeping the aperture as small as possible. The **Exposure** light mode works by attempting to achieve the desired light goal using the aperture only. This usually means that the aperture is very large but the illumination LEDs are not needed.

In most cases, **LED** is the ideal setting for the light mode because it gives us the best of both worlds: lots of light and small aperture.

It is essential that images sent to the decoder contain complete bar codes. No matter how fast the decoder, if there is not a complete bar code in the image, it will waste time trying to decode something that is not there. One problem with aiming lies in a limitation of the imager itself. The imager is not able to handle the power requirements of both the illumination LEDs and the aimer turned on at the same time. This means that either the aimer is on or the illumination LEDs are on but not both together.

## Light Goal

The **Light Goal** setting is a number that represents the desired “brightness” of an image, which affects the ability to decode a bar code captured within an image. This ranges between 20 and 200, with a default setting of 100 (optimal for typical everyday light) and 140 for darker areas.

If this setting is too low, the images captured by the imager for decoding will be too dark and low contrast. If the setting is too high, the imager aperture is forced to be so large that it is difficult to capture clear, focused images. Ideally, you should set this to have the lowest aperture possible. Too large an aperture causes the imager to be extremely sensitive to movement and leads to out-of-focus images that are difficult to decode.

## Preamble Aimer

This imager setting defines how long the aimer is turned on before the first image is captured for the decoder. Think of this as a delay between the time you press the scan trigger and the first image is fed to the decoder. During this delay, the aimer is on and the illumination LEDs are off. It is better not to use this setting because the negative tradeoff outweighs the benefits. A better solution might be to aim by hand position in relation to the bar code. This is not as difficult as it may seem and with time can be intuitive.

## Sticky Aimer

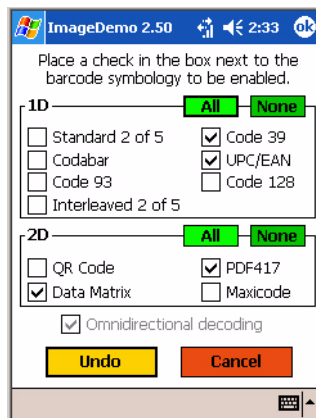
This causes the aimer to stay on after a bar code is decoded or the scan trigger is released. This is very useful if you scan multiple bar codes in a short amount of time. The aimer is fully illuminated for the second and subsequent bar codes even before you press the scan trigger to start decoding. You define the timeout period, which can be fairly long if needed. The tradeoff is battery usage, as the aimer will draw more power if it is left on longer. Default timeout is one second.

## Depth of Field

This refers to the distance between the imager and the bar code at which useable images can be captured. This distance varies depending on the lighting conditions and bar code size. Under good conditions, the depth of field for the imager is about 9” and begins about 3” from the bar code. Optimizing imager performance by depth of field is a training issue since there is no way to adjust this via configuration settings. You need to maintain a fixed distance between the imager and bar code for any given bar code size and lighting condition.

## Select symbologies

Tap this button to open a configuration page and select which symbologies to enable for scanning. Tap **ok** to save your changes and return to the Settings page. Tap **Cancel** to return without your changes.

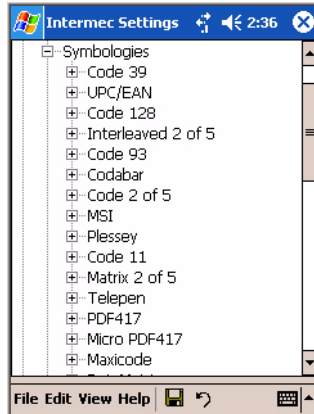


There are two software decoders in the imager. The 1D decoder gets the image first and scans it for any of the 1D bar codes that are currently enabled. If it does not find a good 1D bar code, it passes the image on to the 2D decoder, which searches for any of the enabled 2D bar codes. If it fails, a new image is captured and the process is repeated.

It is important to set up the imager so that only the needed symbologies are enabled. This reduces time the decoders need to spend searching for the appropriate symbology. Secondly, if at all possible, only enable 1D bar codes or 2D bar codes but not both. This also saves time. Tap **All** or **None** above each bar code category to enable or disable all of the symbologies in that category. Tap **Undo** to reset this page to its previous settings. Note that omnidirectional decoding is enabled by default and not changeable at this time.

## Advanced settings

Tap this button to access configuration settings, such as setting bar code length or beep/vibration mode. The Intermec Settings applet opens from within this application. All settings changed while you are in this applet take affect immediately when closed. Tap **ok** to close this applet.



## Clear

Tap this to remove or clear the last scanned bar code data from the screen. This can be useful before demonstrating scanning a new bar code.

## Pause

Tap this to pause or “freeze” the scanned bar code. Once you pause a bar code, **Pause** changes to **Resume**, which when tapped, returns the bar code to live action.

## Scan

Tap this to scan a bar code. If you have an optional scan handle attached to your handheld or mobile computer, you can use the left, right, or center trigger to scan a bar code. Without the scan handle, use the left and right triggers. When a bar code is successfully scanned and decoded, the bar code type is shown in the first display field and the decoded bar code data is displayed in the second display field.

The handheld or mobile computer emits a confirmation beep or triggers a vibration when the bar code data is decoded, depending on your configuration in the Intermec Settings applet mentioned earlier. Tap **Advanced settings** to access this applet.

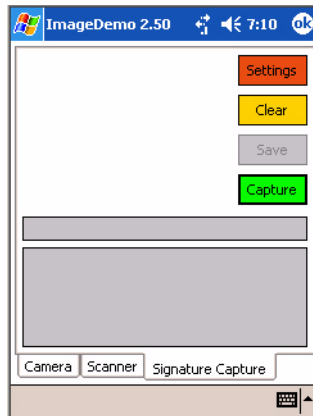
## AutoScan

Tap this to repeatedly scan bar codes and demonstrate the rapid bar code decode rate of this handheld or mobile computer. This is the same as scanning while repeatedly using the trigger button. This is to demonstrate that the handheld or mobile computer can perform repetitive scanning faster than you are capable of pressing the scan trigger.

## Signature Capture Mode

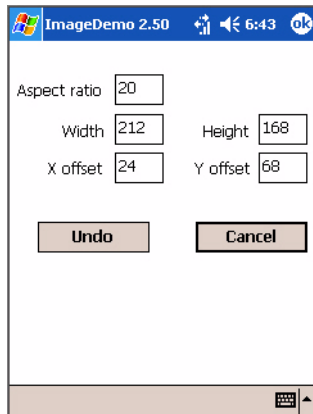
To switch to the Signature Capture mode, tap the **Signature Capture** tab at the bottom of the screen.

Signature Capture allows the application to retrieve an image of the normalized signature. This means the image is always oriented as if the picture were taken at right angles to the signature, at the same distance, and in the center of the image no matter in what orientation the picture was taken.

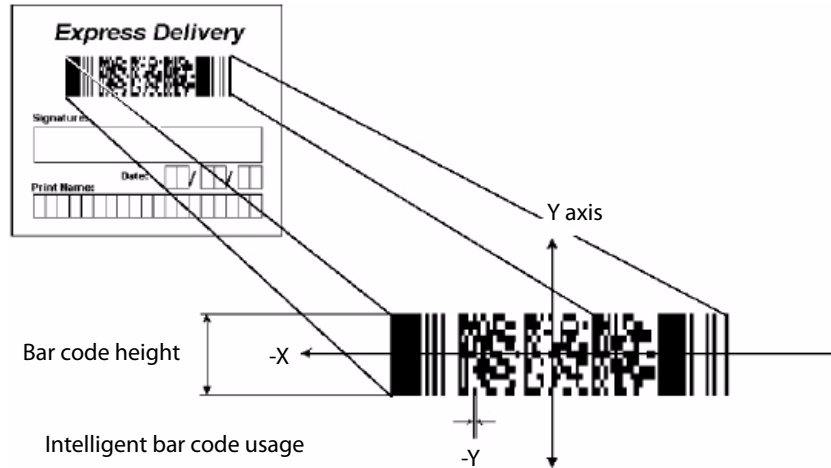


## Settings

The available configuration options in Signature Capture mode are available by tapping **Settings**. Tap **ok** to return to the Signature Capture mode page with your changes. Tap **Cancel** to return without your changes.



The settings configuration page allows the user to modify the default settings required by the application to identify the X and Y offsets relative to the center of the bar code, the X and Y dimensions of the image to be captured, and the aspect ratio of the bar code. Note the units are in terms of the narrow element width of the bar code. See the following example signature capture label and dimensions.



### **Clear**

Tap this to remove or clear the last scanned bar code data from the screen, which can be useful before demonstrating scanning a new bar code.

### **Capture**

Tap this to start scanning via software input and perform the same function as SCAN above.

### **Scan Keys on Handheld or Mobile Computer**

Press a scan key on your handheld or mobile computer to scan a bar code. Start by pressing one of the three available scan triggers: left, right or center. The center trigger is available when you use the optional scan handle accessory. When a signature bar code is successfully scanned and decoded, the bar code type is shown in the first display field and the decoded bar code data is shown in the second display field, as shown in the illustration on the next page. The captured form is also displayed on the screen and Save is enabled.



The handheld or mobile computer emits a confirmation sound or triggers a vibration when the bar code data is decoded, depending on your configuration in the Intermec Settings applet. Tap the **Scanner** tab, then tap **Advanced setting** to access this applet. The handheld or mobile computer emits a failure sound and displays a prompt message for you to retry scanning if the signature capture form was not detected.

### Save

Tap this to save the picture associated with the signature capture to the handheld or mobile computer. The handheld or mobile computer emits a confirmation sound when the picture is saved. Tap the **Camera** tab, then tap **Settings** to view the available configuration options, such as folder location and picture file format and quality.

## Quick Tips

11. Use the LED light mode.
- 2 Set **Light Goal** as low as possible while still getting good decode results.
- 3 Decode in well-lit areas.
- 4 Keep your hand as steady as possible after pressing the scan trigger.
- 5 Make sure **Preamble Aimer** duration setting is set to zero.
- 6 Position the imager as close as possible to the bar code while remaining in focus.
- 7 Enable only those bar codes symbologies that you are using.

## Support

Feedback or bug reports are welcome via email to [dev\\_supt@intermec.com](mailto:dev_supt@intermec.com). Enter IMAGEDEMO in the subject line. Provide the operating system version and the serial number of the handheld or mobile computer (located underneath the battery). Intermec Support is also available by telephone at 1-800-755-5505, option 2 for technical support, then option 2 for mobile.







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P/N 934-002-001