

Image Capture

User's Guide

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Contents

About Image Capture	5
Downloading Image Capture	5
Installing Image Capture	5
Installing Image Capture Using Microsoft ActiveSync	6
Installing Image Capture Using SmartSystems Foundation	6
Capturing Images	7
Configuring the Image Capture Settings	9
Transferring Images To Your Desktop PC	10
Integrating Image Capture	10
Calling Image Capture from Your Application	11
Creating and Editing the Image Capture XML File	11
Image Capture XML Example	14

About Image Capture

Image Capture is an application that lets you capture high quality grayscale images with using the imager on your Intermec mobile computer.

Image Capture is currently supported by the:

- CN3 Series Mobile Computer using the EA21 imager
- CN4 Series Mobile Computer using the EA11 imager
- 70 Series Mobile Computer using the EA30 imager



Note: The screen captures used in this document are of the Microsoft Windows Mobile® 6.1 operating system. If you are using Windows Mobile 6.5, your screen may look different.

Downloading Image Capture

If Image Capture is not on your computer, you can download it from the Intermec web site.

To download Image Capture

- 1 Go to www.intermec.com and select **Support > Downloads**. The Downloads page appears.
- 2 In the **Product Category** field, select **Computers**.
- 3 In the **Product Family** field, select **Handheld Computers**.
- 4 In the **Product** field, select your computer and click the **Submit** button. The Software Downloads page appears.
- 5 Search for and download the Image Capture application.

Installing Image Capture

You can install Image Capture using:

- Microsoft ActiveSync
- SmartSystems™ Foundation

Installing Image Capture Using Microsoft ActiveSync

You can install Image Capture to your desktop PC by using Microsoft ActiveSync. For more information on how to connect your computer to a desktop PC, see your computer user's manual.

To install Image Capture using Microsoft ActiveSync

- 1 Download the application to your PC. For more information, go to **“Downloading Image Capture” on page 5**.
- 2 Double-click the application to install it to your PC.
- 3 Dock your computer into a communications dock.
- 4 Transfer the Image Capture .cab file from your desktop PC to your computer.
- 5 On your computer, tap the .cab file that you transferred in Step 4. The Image Capture application is installed onto your computer.

Installing Image Capture Using SmartSystems Foundation

Your computer is SmartSystems-enabled, which lets you use the SmartSystems console to install Intermecc applications on your computer. For more information, go to the Intermecc web site at www.intermec.com/SmartSystems or see the SmartSystems Foundation Help.

To install Image Capture using the SmartSystems console

- 1 Download the application to your PC. For more information, go to **“Downloading Image Capture” on page 5**.
- 2 Double-click the application. Follow the installation wizard to load the application onto the SmartSystems console.
- 3 Drag the application to each computer in your network or to a group of computers in a folder.

Capturing Images

After you have installed Image Capture on your computer, you can capture images using the Imager on your mobile computer.

To capture an image

- 1 Tap **Start > Programs > Image Capture**.



The Image Capture main screen shows streaming video from the imager.

- 2 (Optional) Adjust the Contrast slider for the best image:
 - For brightly lit environments, move the slider to the right.
 - For dark areas, move the slider to the left.



Note: For best results, move the slider a little at a time until you see a change in the onscreen image.

- 3 Point the imager at the subject for the image and press **Enter**. The image appears.



- 4 Tap-and-drag to scroll the image.
- Tap to zoom in, or tap to zoom out.
 - To save the image, tap .
 - To discard the image, tap .

By default, images are saved to the My Documents\ImageCapture directory on the computer, with the filename Image_<image_number>. After you save or discard an image, the main screen appears and the computer is ready to capture another image.

- 5 To view saved images, tap **Options** and choose **Gallery**.
- Tap and to view the images one at a time.
 - Tap to zoom in, or tap to zoom out.
 - To discard the image, tap . To discard all saved images, tap **Options** and choose **Delete All Files**.

To exit the Gallery, tap **Options** and choose **Exit Gallery**.

- 6 To close the application, tap **ok**.

Configuring the Image Capture Settings

The default Image Capture settings apply to most situations where the ambient lighting is adequate for office work. However, you may need to change those settings depending on the conditions in which images will be captured, such as outdoors in bright sunlight or inside a darkened warehouse.

To configure Image Capture settings

- 1 Tap **Options** and choose **Settings**.
- 2 Change settings as needed. For help, see the next table.

Image Capture Settings Descriptions

Setting	Description
Edge Enhancement	Adjusts contrast to enhance the edges of objects. Default is Medium. Too high a setting for the environment adds noise to the image.
Lighting Correction	Corrects for inconsistent lighting; for example, if the edges of the image are much darker than the center, this feature lightens the edges to match the center. Default is Disabled.
Noise Reduction	Reduces noise resulting from edge enhancement. Range is 0 (default) to 9. Too high a value can cause banding.
Subsampling	Sets the resolution of the image by choosing a ratio. A ratio of 1:4 means that the processed image will contain 1 pixel for every 4 pixels in the original image. The lower the ratio, the larger and more detailed the image. Range is 1:2 to 1:8. Default is None.
Rotation	Rotates the processed image clockwise in 90° increments. Default is 0 (no rotation).
File Format	File type for saved images. Choose either BMP (default) or JPEG format.
Compression Quality	Sets JPEG compression quality. Range is 0 to 100%. Default is 60.

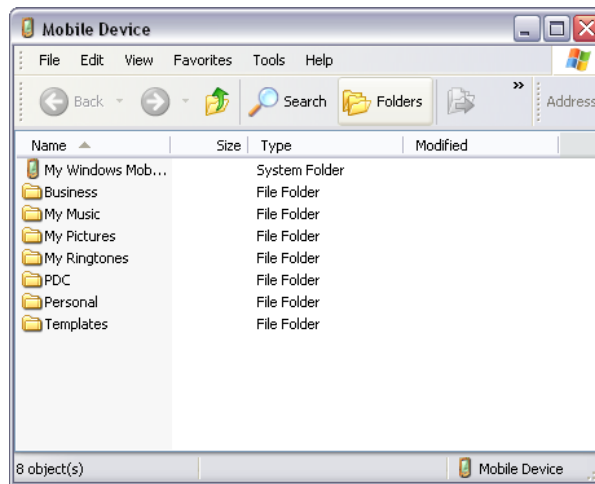
- 3 Tap **Options** and choose **Save Changes and Exit**, or choose **Discard Changes and Exit** to abandon your changes.

Transferring Images To Your Desktop PC

You can transfer document images to your desktop PC by using Microsoft ActiveSync. For more information, see your computer user's manual.

To transfer Images Using Microsoft ActiveSync

- 1 Create an ActiveSync connection between your desktop PC and your computer.
- 2 In the Microsoft ActiveSync application on your desktop PC, click **Explore**. The File Explorer screen appears.



- 3 Click **My Windows Mobile Device > My Documents > ImageCapture**.
- 4 Select the images you want to transfer and drag them to a folder on your desktop PC.

Integrating Image Capture

You can integrate Image Capture into your own application by calling it from your application. You can also customize Image Capture settings by creating and editing the Image Capture configuration .xml file.

Calling Image Capture from Your Application

To integrate Image Capture features into your existing mobile application, you need to specify two parameters:

- Path to and name of the Image Capture application. Default is “\\Program Files\\Intermec\\ImageCapture\\ImageCapture.exe”.
- Path to and name of the .xml configuration file that Image Capture should use when called by your application. This way you can use a custom .xml configuration file based on your needs. If no .xml file is specified, Image Capture uses its default settings, or looks for an .xml file in its local directory.

This sample code calls Image Capture from its default location and specifies “ImageCapture_Config.xml” as the custom .xml configuration file to use:

```
try
{
System.Diagnostics.Process.Start ("\\ProgramFiles\\ImageCapture
\\ImageCapture.exe", "\\Program Files\\MyApp\\ImageCapture_
Config.xml");
}

catch (Exception exception)

{
MessageBox.Show("Failed to execute \\ProgramFiles\\ImageCapture
\\ImageCapture.exe" + "\r\n" + exception.ToString());
}
```

Creating and Editing the Image Capture XML File

To further customize Image Capture features for use in your application, you can create or edit the Image Capture .xml file. This section lists Image Capture field names, valid values, and descriptions.



Note: The current Image Capture .xml file can still be used, but is deprecated for future versions of Image Capture.

Field Definitions for ImageCapture_Config.xml

Field Name	Valid Values	Description
Settings		
allowChanges	True or false	Default is true. When set to false, user cannot change any settings.
allowGallery	True or false	Default is true. When set to false, user cannot go to the Gallery screen.
Conditioning Settings		
allowChanges	True or false	Default is true. When set to false, user cannot change settings in the Conditioning tab.
Edge Enhancement		
allowChanges	True or false	Default is true. When set to false, user cannot change the edge enhancement setting.
edgeEnhancement	None, low, medium, or high	Default is None. If no value is provided, the edge enhancement value is unchanged.
Lighting Correction		
allowChanges	True or false	Default is true. When set to false, user cannot change the lighting correction setting.
lightingCorrection	True or false	Default is true. If no value is provided, the application cannot change the lighting correction value.
Noise Reduction		
allowChanges	True or false	Default is true. When set to false, user cannot change the noise reduction setting.
noiseReduction	0 to 9	Default is no value. If no value is provided, the application does not change the noise reduction setting.
Image Rotation		
allowChanges	True or false	Default is true. When set to false, user cannot change the rotation setting.
imageRotation	None, 90, 180, 270	Default is no value. If no value is provided, the application does not change the rotation value.
Subsampling		
allowChanges	True or false	Default is true. When set to false, user cannot change the subsampling rate.
subSampling	None, 1:2, 1:3, 1:4, 1:5, 1:6, 1:7, 1:8	Default is no value. If no value is provided, the application does not change the subsampling rate.

Field Definitions for ImageCapture_Config.xml (continued)

Field Name	Valid Values	Description
Storage Settings		
allowChanges	True or false	Default is false. If set to true, user can change settings in the Storage tab.
Image Location		
allowChanges	True or false	Default is false. If set to true, user can change the directory where saved images are stored.
imageLocation	File path	Default is no value. If no value is provided, the application does not change the directory where saved images are stored (My Documents\ ImageCapture).
File Name		
allowChanges	True or false	Default is false. When set to true, user can change the filename template setting.
fileName	String of up to 200 characters	Name to be used for saved image files. If the name is identical to a file already saved, Image Capture adds a numeric character to the end of the file name.
Output Compression		
allowChanges	True or false	Default is false. When set to true, user can change the file format type.
fileFormat	BMP, JPEG	Default is no value. If no value is provided, Image Capture does not change the file format setting. If no format is selected, the file is saved as a .bmp.
Compression Quality		
allowChanges	True or false	Default is false. When set to true, user can change the compression quality setting.
compressionQuality	0% to 100%	Default is no value. If no value is provided, the application does not change the compression quality setting. The higher the value, the better the quality, and the larger the file size will be. If fileFormat is set to BMP, this setting is not used.

Image Capture XML Example

This XML demonstrates how to use the fields as defined in the previous section.

```
<?xml version="1.0" encoding="utf-8" ?>
<ImageCapture xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Settings allowChanges="true" allowGallery="true">
    <Conditioning allowChanges="true">
      <edgeEnhancement allowChanges="true">None</edgeEnhancement>
      <lightingCorrection allowChanges="true">Enabled</lightingCorrection>
      <noiseReduction allowChanges="true">0</noiseReduction>
      <imageRotation allowChanges="true">90</imageRotation>
      <subsampling allowChanges="true">None</subsampling>
    </Conditioning>
    <Storage allowChanges="true">
      <imageLocation allowChanges="false">\My Documents\ImageCapture
</imageLocation>
      <fileName allowChanges="false">
Image_$(num)</fileName>
    </Storage>
  </Settings>
</ImageCapture>
```




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