IMAQ Vision OCR

Optical character recognition (OCR) is the process of extracting textual information from a digital image. IMAQ Vision OCR software is for industrial vision application developers using IMAQ Vision for G who need reliable and accurate OCR capabilities. You can use IMAQ Vision OCR software in applications such as identifying serial numbers on CD-ROMs, automotive parts, electronic packaging, disk heads, and other parts.

Introduction

IMAQ Vision OCR software is a PC-based industrial character recognition tool for use with IMAQ Vision for G. IMAQ Vision OCR is designed for high-speed and reliable reading performance, even with poor image quality resulting from varying lighting conditions and print quality. The software recognizes text in one of four recognition modes to optimize accuracy and/or speed, and can apply a variety of automatic correction methods to improve the recognition quality.

IMAQ Vision OCR recognizes characters produced by conventional typesetting, printing, and stamping techniques. In addition, the software recognizes common fonts used in electronics, semiconductor, automotive, and pharmaceutical identification applications. Furthermore, the software includes advanced functions for reading mixed fonts, characters not written on a straight line, and numbers and letters on the same line.

IMAQ Vision OCR Highlights

The following are some of the IMAQ Vision OCR highlights:

- Reads a text image acquired directly from an image acquisition board
- Reads all commonly used fonts
- Unwraps functions for characters not written on a line
- Performs preprocessing for noise filtering and line removal
- Reads characters even in poor lighting conditions
- Automatically detects and inverts image background color

- Automatically detects and adjusts image orientation
- Includes user-defined dictionary verification
- Produces an OCR report describing the recognized character, alternate characters, and confidence values
- Performs automatic correction for occluded characters
- Recognizes English, Spanish, and French characters

Installation

System Requirements

To run IMAQ Vision OCR, your computer must meet the following minimum system requirements:

- Microsoft Windows NT version 4.0 or Windows 98/95
- 18 MB or more of free hard disk space
- One of the following application software packages:
  - LabVIEW 5.0 or higher
  - BridgeVIEW 2.0 or higher
- IMAQ Vision 4.1.1 or higher (Base or Advanced version)

Installation Instructions

Note To install IMAQ Vision OCR on a Windows NT system, you must be logged in with administrator privileges.

Perform the following steps to install IMAQ Vision OCR:

1. Insert the IMAQ Vision OCR CD into your computer. If the CD startup screen does not appear, use Windows Explorer to run the `Setup.exe` program located in the `\Setup` folder on the CD.

2. Follow the setup instructions you see on your screen.

Installed Files

IMAQ Vision OCR Setup installs the following files in your Windows system folder (usually `C:\Windows\System` or `C:\Winnt\System32`):

```
Imaqocr.dll
Kitres.dll
Neurokit.dll
```

The following files are installed in the LabVIEW or BridgeVIEW folder you selected during setup:

- OCR VIs—Installed in the `<LabVIEW>\Vi.lib\Vision\addons` folder. You can access all OCR functions from the LabVIEW/BridgeVIEW function palette. The OCR functions are located in the OCR subpalette of the IMAQ Vision palette.

- OCR examples—Installed in the `<LabVIEW>\Examples\Vision\OCR` folder. The example VIs provided demonstrate the use of all IMAQ Vision OCR functions.

- OCR online help—Installed in the `<LabVIEW>\Help` folder. You can access IMAQ Vision OCR online help from the **Help** menu in LabVIEW or BridgeVIEW. Use this online help to learn more about IMAQ Vision OCR and the functions of the OCR VIs.

IMAQ Vision 4.1.1 Information

When you install IMAQ Vision OCR for use with IMAQ Vision 4.1.1 for LabVIEW/BridgeVIEW, a new palette replaces the IMAQ Vision palette. This new palette is identical to the default IMAQ Vision 4.1.1 palette except that it includes the OCR subpalette. If you did not previously customize your IMAQ Vision function palette, you do not need to make any further changes to use IMAQ Vision OCR.

If you did customize your IMAQ Vision function palette prior to installing IMAQ Vision OCR, you can restore your changes after installation. IMAQ Vision OCR Setup copies the previous `Dir.mnu` file in the `<LabVIEW>\Vi.lib\Vision` folder to the file `Dir.old`. Follow these steps to restore your changes to the IMAQ Vision palette:

1. Delete the `Dir.mnu` file installed in your `<LabVIEW>\Vi.lib\Vision` folder.

2. Rename the file `Dir.old` to `Dir.mnu`.

3. Launch LabVIEW or BridgeVIEW and select **Edit Control & Function Palettes** from the **Edit** menu.

4. Right-click on the IMAQ Vision palette and select **Synchronize with Directory**.

5. When prompted, browse to the folder `<LabVIEW>\Vi.lib\Vision\addons` and click **Select Cur Dir**.

6. Save your changes. The OCR subpalette should now appear in your IMAQ Vision function palette.

Uninstallation Information

To uninstall IMAQ Vision OCR, open the **Add/Remove Programs** dialog box from the **Control Panel**. Select **NI IMAQ Vision OCR** and click **Add/Remove**.

Technical Support Resources

NI Web Support

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Israel 03 6120092, Italy 02 413091, Japan 03 5472 2970,
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Norway 32 27 73 00, Singapore 2265886, Spain (Madrid) 91 640 0085,
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