Machine Vision Camera SDK Plugin (Halcon)

User Manual

User Manual

About this Manual

This Manual is applicable to Machine Vision Camera SDK Plugin (Halcon).

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website.

Please use this user manual under the guidance of professionals.

Legal Disclaimer

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. OUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, OUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

Contents

Chapter 1 Overview

This manual mainly introduces the used plugin of connecting machine vision camera based on Halcon system.

Chapter 2 Configuration

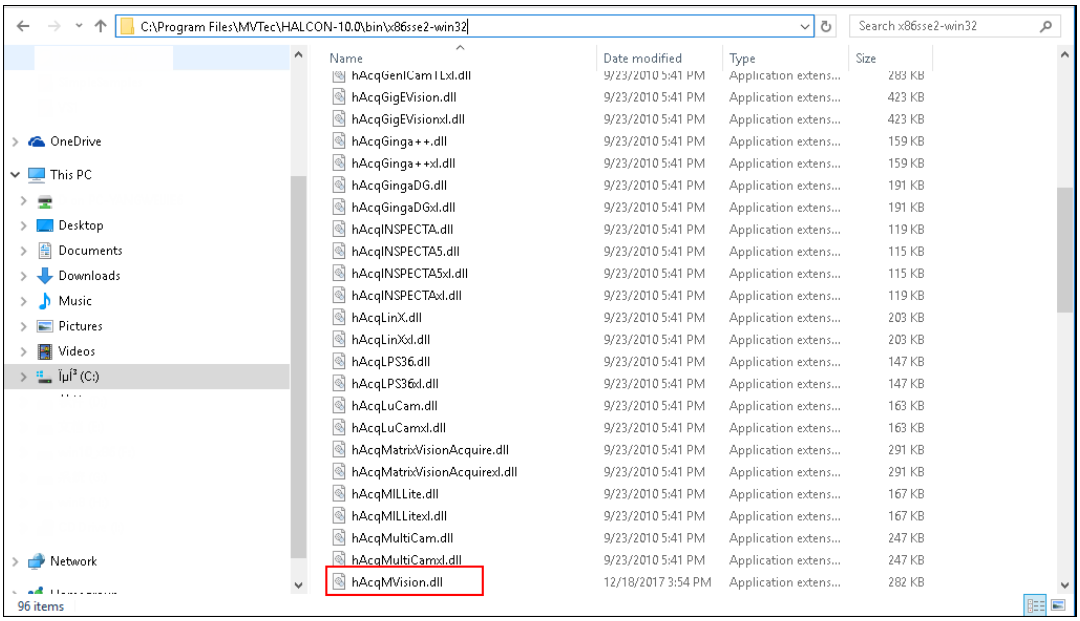
2.1 Copy Dynamic Link Library

Steps:

1. Copy the file hAcqMVision.dll to corresponding directory: C:\Program Files\MVTec\HALCON-10.0\bin\x86sse2-win32.

   Note:

   - The path of file hAcqMVision.dll is: Development\ThirdPartyPlatformAdapter\HalconHDevelop, which is under the MVS installation directory.
   - If the system is 64-bit, copy the file to: C:\Program Files\MVTec\HALCON-10.0\bin\x86sse2-win64.



2.2 Configure Camera Parameters

Steps:

1. Open MVS, and configure the IP address and parameters of machine vision camera.

   Note:

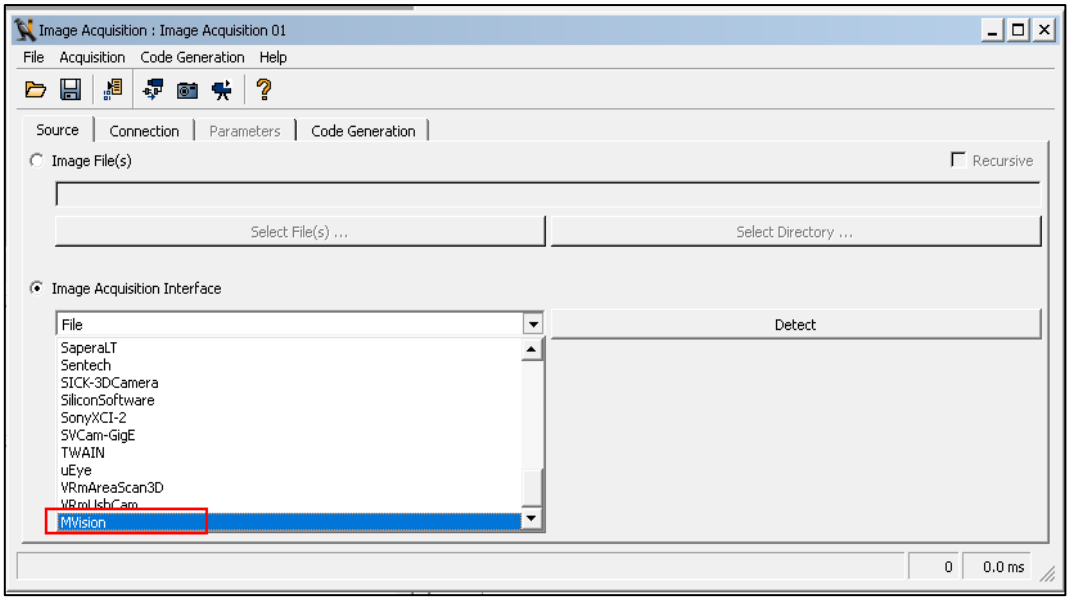
   Ensure that PC and camera are on the same network segment, and camera can get stream from MVS.

2.3 Configure Camera Connection

Steps:

1. Select driver.

   1) Run Halcon system.



2) Click **Help** and **Image Acquisition** to open Image Acquisition window.

3) Select **Image Acquisition Interface.**

4) Select **MVision** in the drop-down list.

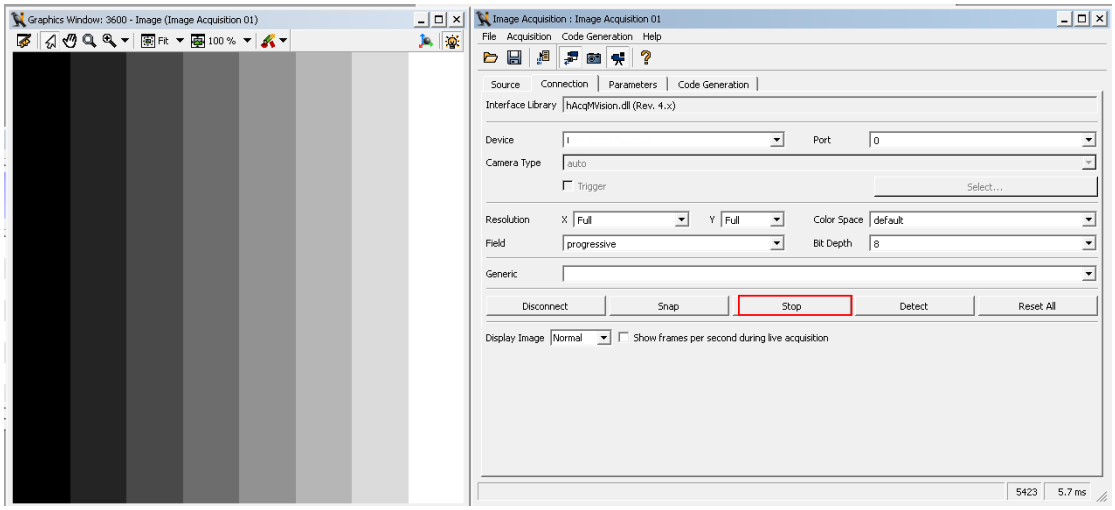
2. Select device.

1) Click **Connection** tab to open connection page.

2) Select device in the device list as you desired.

3) Click **Connect**.

3. Set image acquisition.



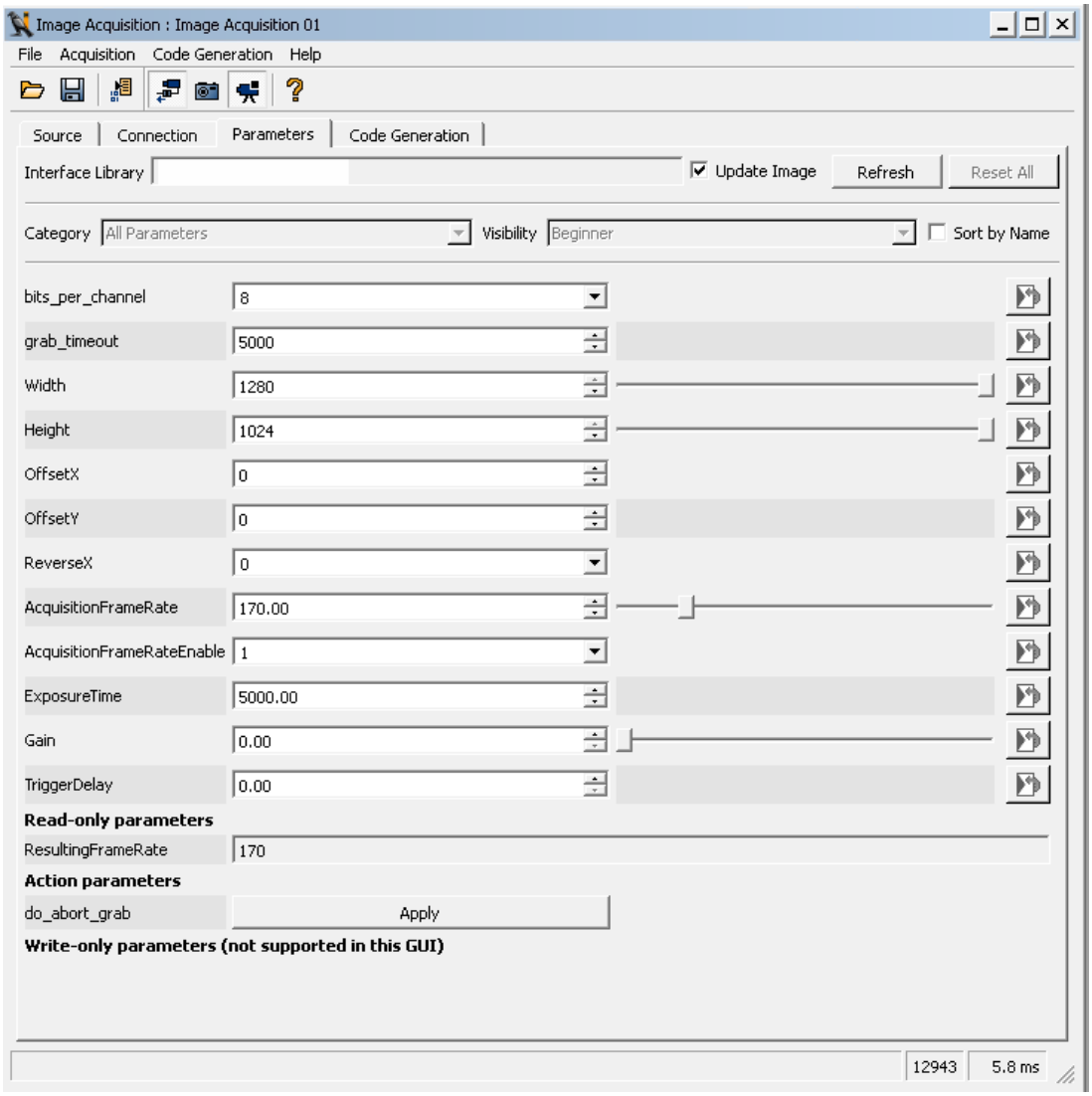
4. Click **Live** to start live view.

You can view the image in Graphics Window.

Note:

If the Graphics Window is not open, click **Visualization** and **Open Graphics Window** to open it.

5. Configure parameters.



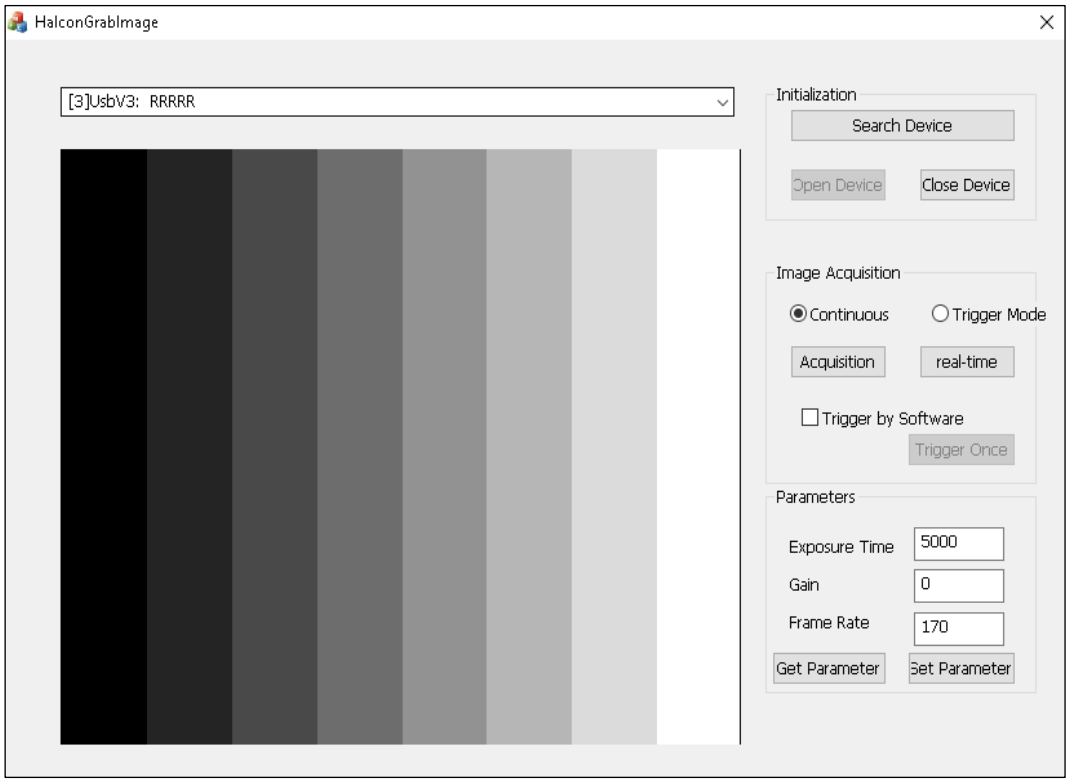
1) Click **Parameters** tab of Image Acquisition window.
2) Configure the common attributes parameters of machine vision camera.

Notes:

- You can rename the dll file, but the prefix “hAcq” should be reserved.
  For example, if the dll file is renamed as hAcqABCRobot.dll, you should select the ABCRobot driver in the drop-down list.
- The nodes of appendix are supported by the plugin. Refer to Appendix 1 for details.
- The Demo based on Halcon language of getting streams is provided in the Halcon directory of MVS installation folder.

2.4 Interface Overview

This is a MFC project, and the interface is as following.


HalconGrabImage
[3]UsbV3: RRRRR
Initialization
Search Device
Open Device
Close Device
Image Acquisition
Continuous
Trigger Mode
Acquisition
real-time
Trigger by Software
Trigger Once
Parameters
Exposure Time
5000
Gain
0
Frame Rate
170
Get Parameter
Set Parameter

Appendix 1

API of Getting Parameters (get_framegrabber_param)	API of Setting Parameters (set_framegrabber_param)
AcquisitionFrameRate	AcquisitionFrameRate
AcquisitionFrameRate	AcquisitionFrameRateEnable
AcquisitionFrameRateEnable	AcquisitionMode
AcquisitionFrameRateEnable	AcquisitionStart
AcquisitionMode	AcquisitionStop
ADCGainEnable	ADCGainEnable
BalanceWhiteAuto	BalanceWhiteAuto
Brightness	Brightness
DeviceReset	DeviceReset
DeviceUserID	DeviceUserID
DigitalShiftEnable	DigitalShiftEnable
ExposureAuto	ExposureAuto
ExposureMode	ExposureMode
ExposureTime	ExposureTime
Gain	Gain
GainAuto	GainAuto
GammaEnable	GammaEnable
GevGVCPHeartbeatDisable	GevGVCPHeartbeatDisable
GevHeartbeatTimeout	GevHeartbeatTimeout
Height	Height
HueEnable	HueEnable
LineMode	LineMode
LineSelector	LineSelector
LineSource	LineSource
OffsetX	OffsetX
OffsetY	OffsetY
ResultingFrameRate	ReverseX
ReverseX	ReverseY
ReverseY	StrobeEnable
StrobeEnable	TriggerCacheEnable
TriggerCacheEnable	TriggerDelay
TriggerDelay	TriggerMode
TriggerMode	TriggerSelector
TriggerSelector	TriggerSoftware
TriggerSource	TriggerSource
Width	Width