Machine Vision Camera SDK Plugin (DirectShow)

User Manual

User Manual

About this Manual

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

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 1
Chapter 2 Configuration 2
2.1 **Configure Camera Parameters** 2
2.2 **Register and Unregister Plugin** 2
2.3 **Plugin Usage** 3
2.3.1 **Use graphedit.exe to acquire and display image** 3
2.3.2 **Adjust camera parameter** 3
Chapter 3 Example 5

Chapter 1 Overview

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

Chapter 2 Configuration

2.1 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 acquire images from MVS.

2.2 Register and Unregister Plugin

Purpose:

When installing the MVS client, the plugin will not be registered by default. You can perform the following steps to register and unregister the plugin manually.

Steps:

1. Run the script register.bat as administrator to register the plugin.

   Note:

   The plugin is in the directory: *Development\ThirdPartyPlatformAdapter\DirectShow*

   MvDDS directory contains the old plugin register, MvDDS2 contains the new plugin register.

2. (Optional) Run the program graphedt.exe to check if the plugin is registered.

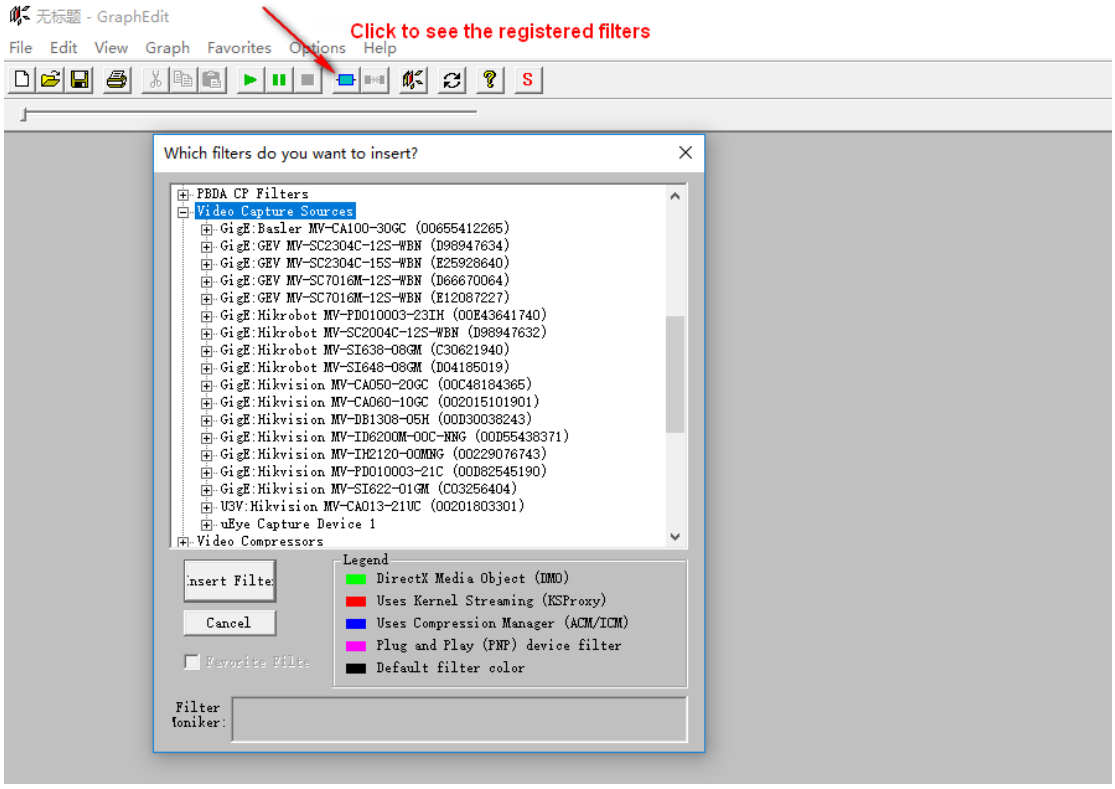

Figure 1-1: The result of plugin successfully registered.

Note:

The registered plugin is in the item Video Capture Sources.

Naming rule: Device Type: Manufacturer Model (Serial Number)

The device list updates every 3 seconds.

3. **(Optional) Run the script unregister.bat as administrator to unregister the registered plugin.**

2.3 Plugin Usage

2.3.1 Use graphedit.exe to acquire and display image

Steps:

1. **Run graphedt.exe software.**
2. **Click Graph and click Insert Filters...**
3. **Double-click Camera under the Video Capture Source to add the camera to the panel.**
4. **Right-click MvCamera DirectShow Source and select Filter Properties... to see the camera filter information. There are two tabs including CameraInfo and ParameterTree.**
5. **Select Video Renderer under the Directshow Filters, connect Video Out with Video Renderer Input. Directshow will automatically load the appropriate Filter to render the camera Filter.**

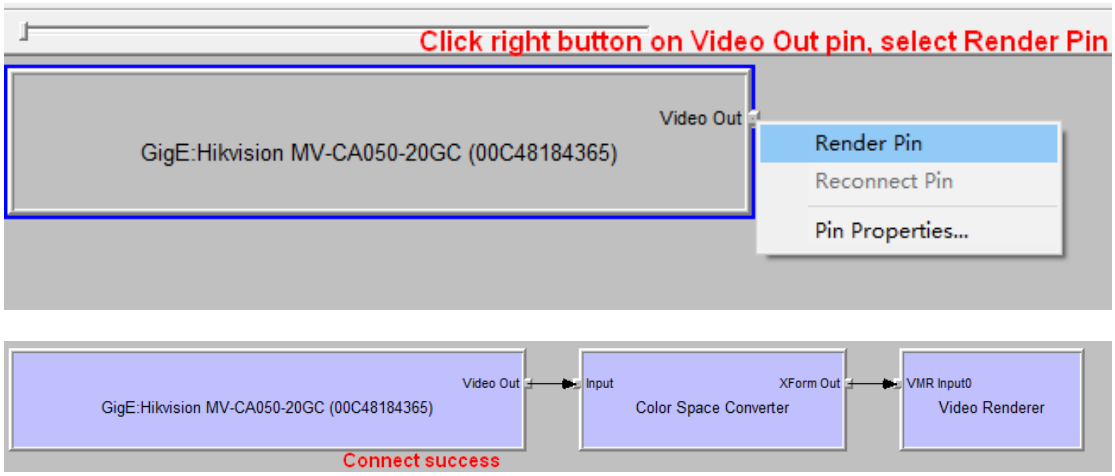

Figure2-3: Add rendering filter

6. **Click Graph and click Play to start live view.**

2.3.2 Adjust camera parameter

The filter property includes the CameraInfo tab (Figure2-1) and the ParameterTree tab (Figure2-2). CameraInfo shows the camera information and image configuration information. ParameterTree shows all the supported parameters of the camera for users to view and adjust.

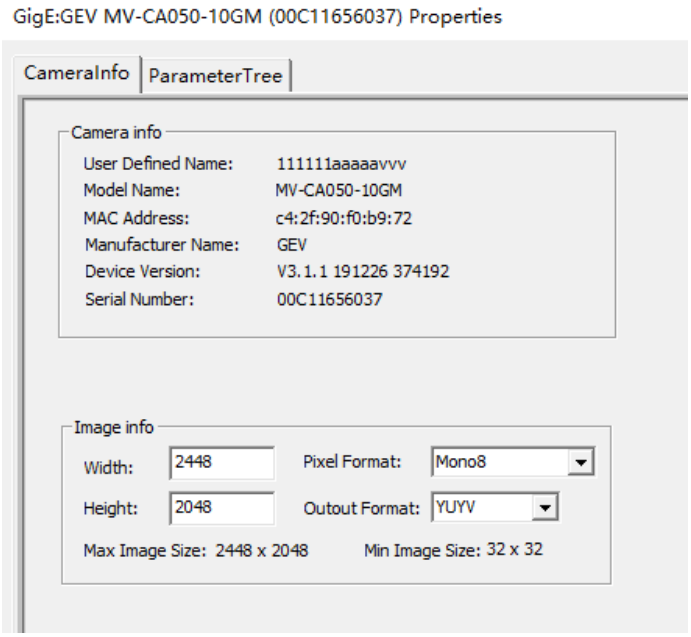

Figure2-1: CameraInfo tab.

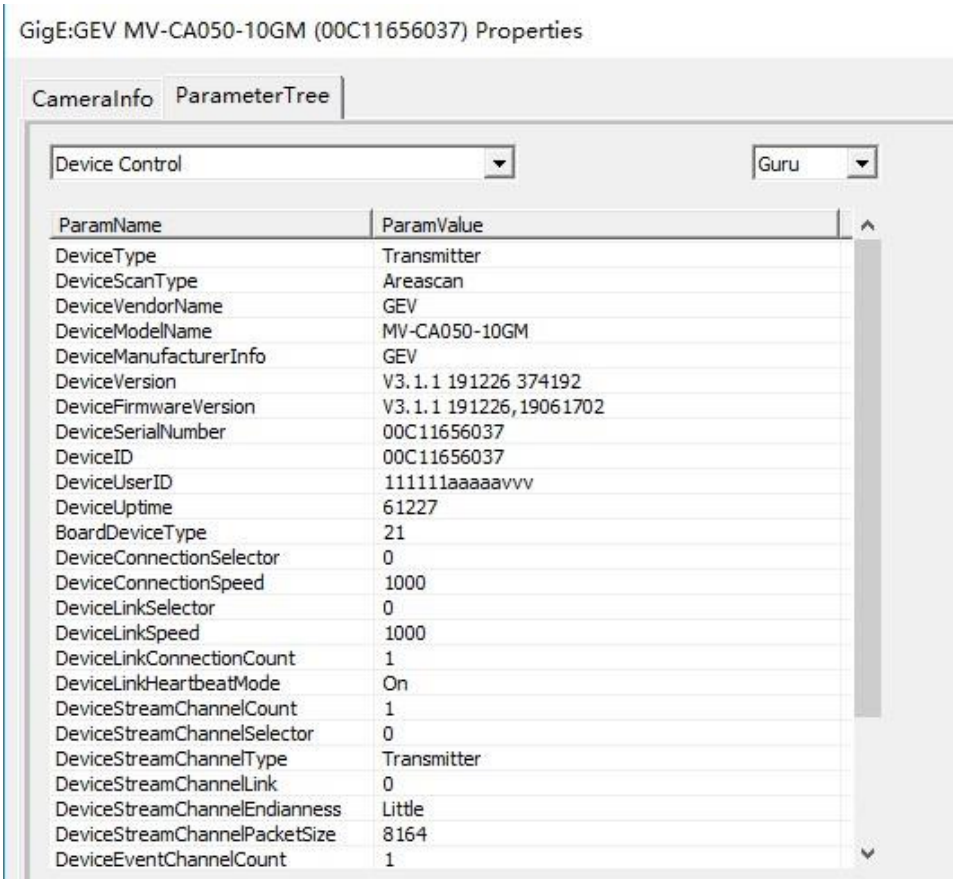

Figure2-2: ParameterTree tab.

Property display:

In the property window, camera property can be filtered by selecting different Feature or the user level. The user level has Beginner, Expert and Guru from low to high. The higher the user level, the more camera parameters displayed.

Change property:

Double-click the value of the column of ParamValue to enter the editable state. And user can modify the parameter value. The properties of the enumeration type parameter are in the form of the drop-down box for the user to choose. The properties of the command type property is displayed as an execution button. Properties of type parameter are in the form of strings for the user to edit.

Chapter 3 Example

The sample program DirectShowDisplay is provided for reference. You can get it in the path: Development\Samples\DirectShow\DirectShowDisplay.
DirectShowDisplay is a console program, and supports playing by Render. And the APIs of getting camera list, getting parameters, and setting parameters are listed in the header file MvDSSource.h for external calling. The sample program can compile version x86 and x64, corresponding to the plugin version.