



RICOH Stereo Camera Software

R-Stereo-GigE-SDK

User's Guide

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1. Function Overview

R-Stereo-GigE-SDK contains the programs and documents required to develop software for the stereo camera and lighting.

2. Operating Conditions

The recommended operating conditions for the SDK are as follows.

OS	Windows® 7 Professional (32-bit/64-bit)*
CPU	Intel Core i5 2.7 GHz or faster
Memory	4 GB or more
HDD	At least 1 GB of free space
Development environment	Microsoft Visual Studio 2013 Professional or later
Development language	C++

* Windows is a trademark or registered trademark of Microsoft Corporation in the United States.

3. Configuration

For the details on the configuration of the SDK, read the user's guide.

To display the SDK instruction manual, select "Start" - "All Programs" - "R-Stereo-GigE-Package X.X.X.XX" - "Doc" - "SDK C++ Doc."

4. Sample Programs

Sample programs created with Visual Studio 2013 and the image processing software HALCON are available so please use them as a reference when developing your desired software.

Before using the sample programs, set the IP address of the camera from R-Stereo-GigE-Player.

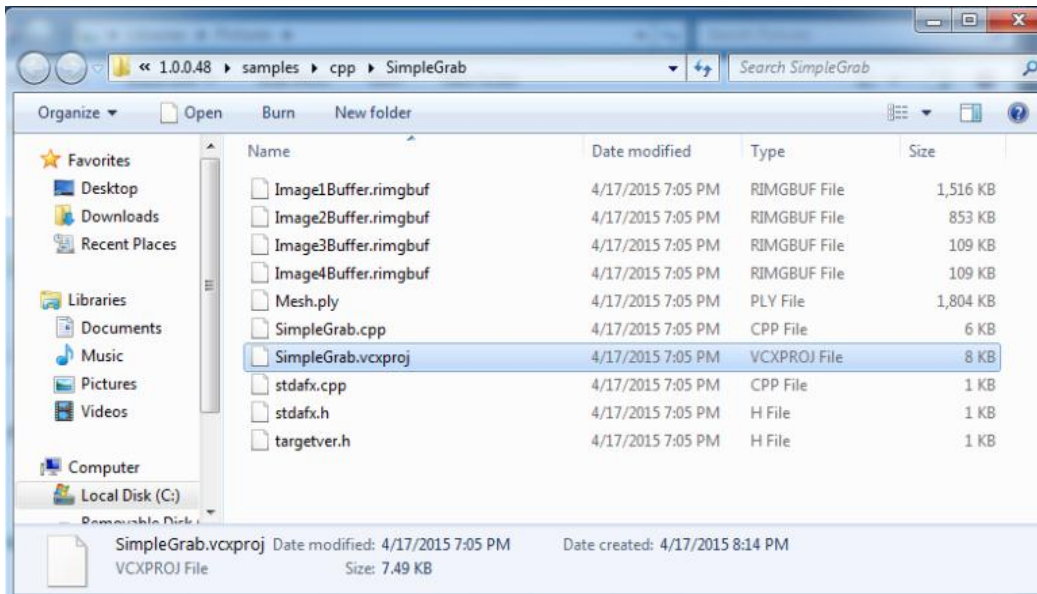
* For details on the setting procedure, refer to "R-Stereo-GigE-Player User's Guide."

4.1 Visual Studio 2013

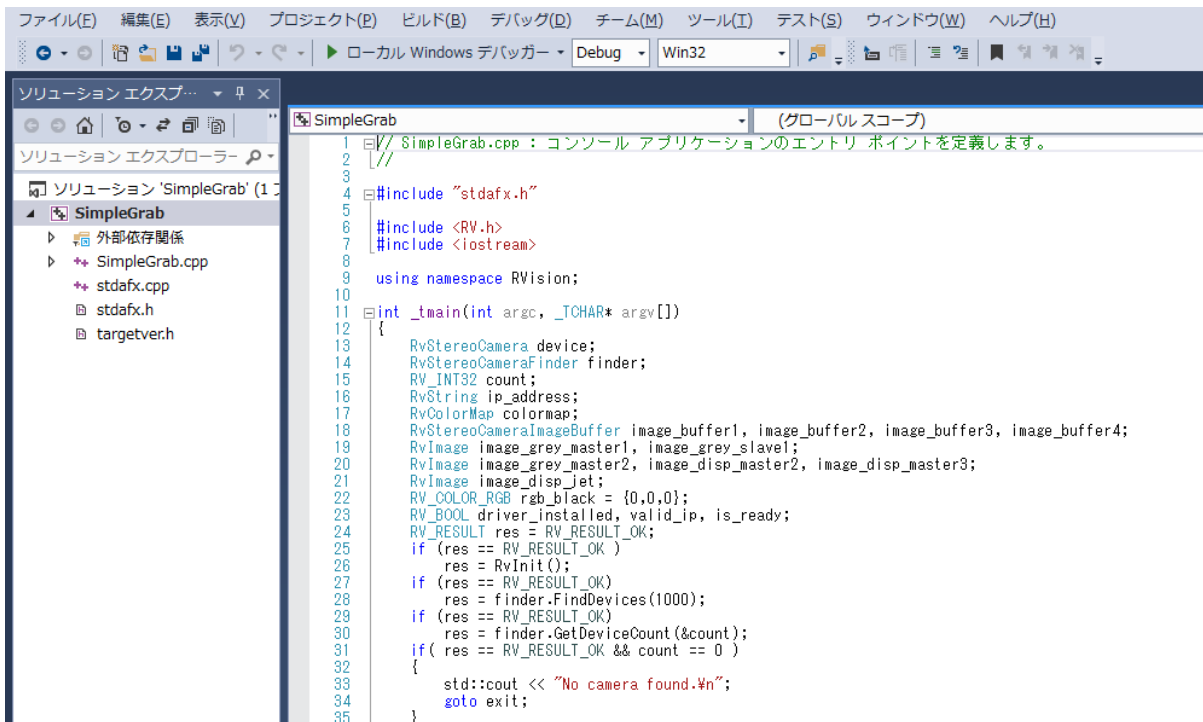
The sample programs implement the following functions.

- Connecting to and disconnecting from camera
- Acquiring images
- Saving images

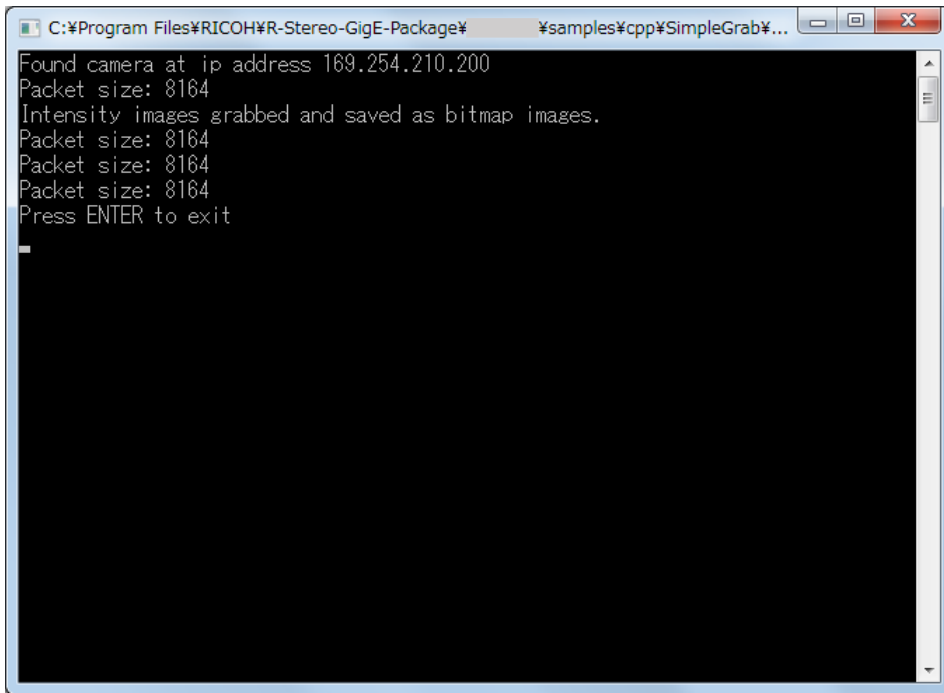
1. Select "Start" - "All Programs" - "R-Stereo-GigE-Package X.X.X.XX" "Samples" - "C++" "SimpleGrab." to open Explorer.



2. Double-click the project file SimpleGrab.vcxproj to start it in Visual Studio 2013.



3. Run "Start Debugging" to open the Command Prompt screen.



4 The following image files are saved to C:\Program Files\RICOH\R-Stereo-GigE-Package***\samples\cpp\SimpleGrab.

Capture Mode		Image Classification	File Name
Free run	Intensity image	Image buffer Comparison camera intensity Reference camera intensity	Image1Buffer.rimgbuf Image1SlaveGrey.bmp Image1MasterGrey.bmp
	Reference + Parallax images	Image buffer Reference camera parallax Reference camera intensity Reference camera parallax (color map display)	Image2Buffer.rimgbuf Image2MasterDisp.tiff Image2MasterGrey.png Image2MasterDisp.bmp
	Parallax image	Image buffer Reference camera parallax	Image3Buffer.rimgbuf Image3MasterDisp.tiff
Software trigger	Parallax image	Image buffer 3D point cloud	Image4Buffer.rimgbuf Mesh.ply

4.2 HALCON

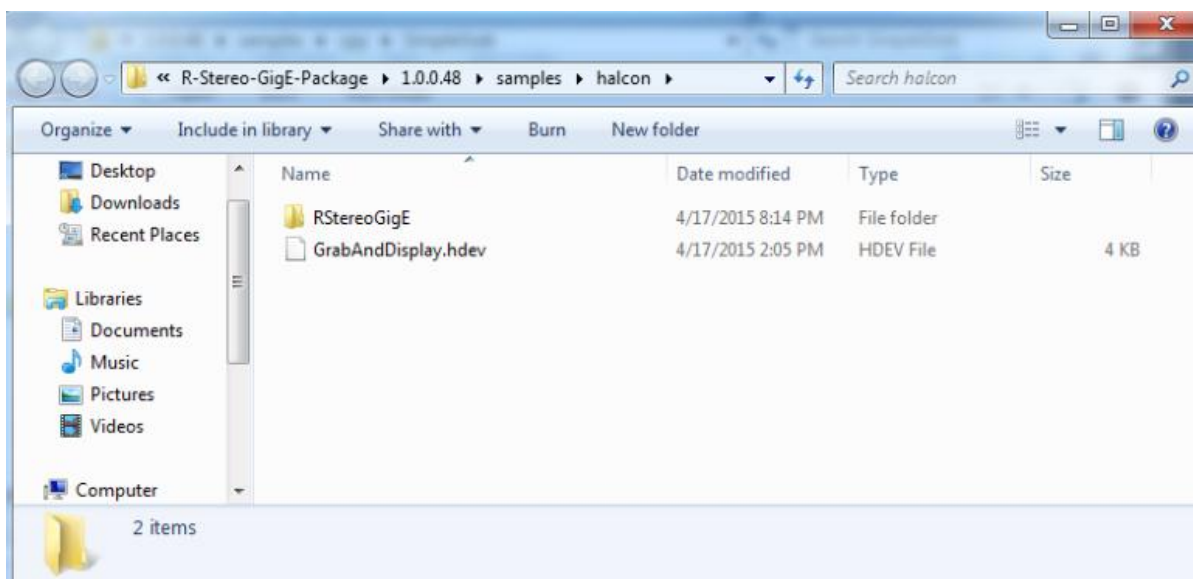
The sample programs implement the following functions.

* Compatible with HALCON 11 and 12

- Connecting to and disconnecting from camera
- Displaying images
- Adjusting exposure time

1. Select "Start" - "All Programs" - "R-Stereo-GigE-Package X.X.X.XX" - "Samples" - "Halcon."

2. When Explorer opens, double-click the GrabAndDisplay.hdev file to run it.



3. Click the Run button to display "Reference + parallax images."

Revision History

Rev.	Date	Changes	Note
1.00	March 24, 2015	● Newly issued	