

SR SDK

Instruction Manual .Net Framework 4.6.1 supported

Read this manual before using the product.
Keep this manual in a safe place after reading it so that it can be used at any time.

1 Overview

“SR SDK” (SR Software Development Kit) is a development kit for PC applications that control the SR Series.

- **Applicable models**
SR-X/5000/2000/1000 Series
- **DLL files**
 - Keyence.AutoID.SDK.dll
 - VncClientControlCommon.dll
 - Communication.dll
 - VncClientControlCommonLib.dll
- **Help file**
Keyence.AutoID.SDK_Help
- **Sample programs**
SampleApplication folder
 - First StepApp
 - MultiReaderLogger
 - ReaderMaintenance
 - ErrorImageGetter
 - ReadResultAnalyzer

Operating environment (development environment and running environment)	.NET Framework 4.6.1 Visual C++ library runtime component*1
Supported CPUs	x86, x64, AnyCPU
Interface	Ethernet
Supported languages*2	Visual C# 2017 Visual Basic 2017
Application classification	WinForms (Windows Forms application)

*1 In order to use this SDK, you must install the Visual C++ library runtime component.

*2 MultiReaderLogger, ReaderMaintenance and ErrorImageGetter only support Visual C#.

Before Executing Applications

In order to execute applications using SR SDK, you first have to install the “Visual C++ library runtime component”.

Select the necessary file in the “SR_SDK/Runtime” folder, and then perform the installation.

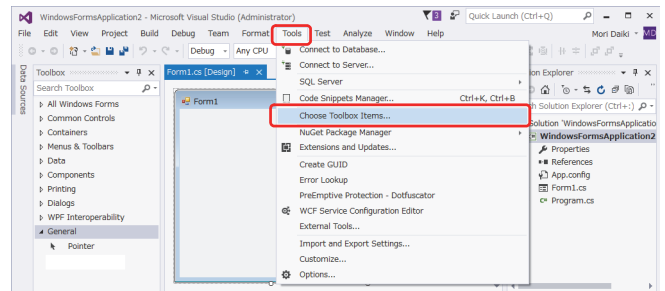
- 64-bit OS: vc_redist.x64.exe
- 32-bit OS: vc_redist.x86.exe

- * **Precautions**
The application will not start if the “Visual C++ library runtime component” is not installed. What’s more, no error message will be displayed.

2 Referencing DLLs

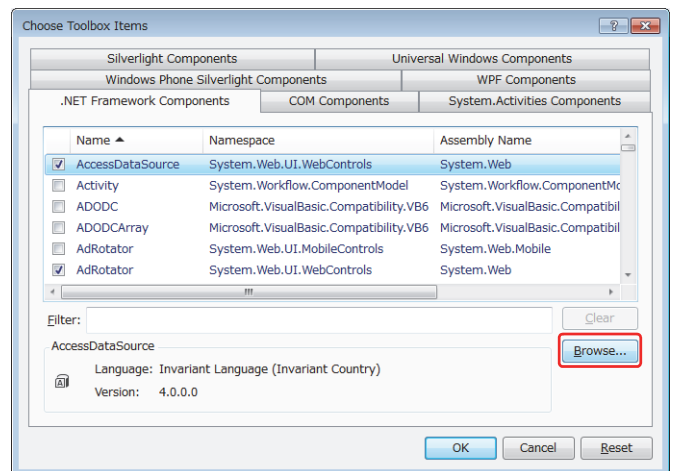
When Using LiveviewForm

1 Click [Tools] - [Choose Toolbox Items].



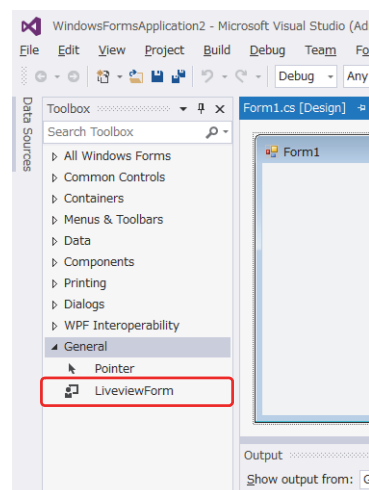
2 Click [Browse].

Select “Keyence.AutoID.SDK.dll”.
Click [OK].



- * When using the designer, specify the x86 DLLs. To build an application with the x64 DLLs, perform step (4) and later in order to change the referenced DLLs to x64 after editing in the designer.

3 [LiveviewForm] is added under [Toolbox] - [General]. If you place this item in an application, you can display the live view of the SR.

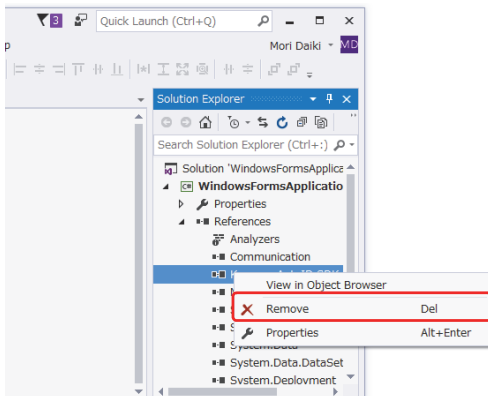


To build an application with the x64 DLLs, perform the following steps.

4 Open [References] in the project's right-hand window (Solution Explorer).

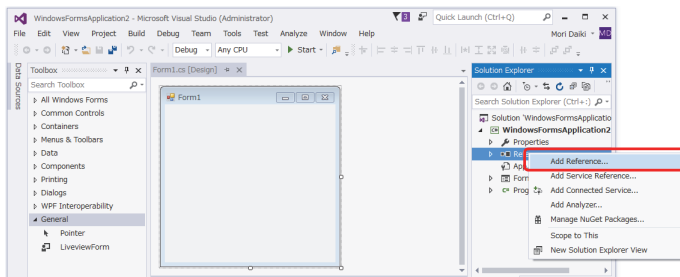
Right-click each of the four files shown below and click [Remove].

- Communication
- Keyence.AutoID.SDK
- VncClientControlCommon
- VncClientControlCommonLib

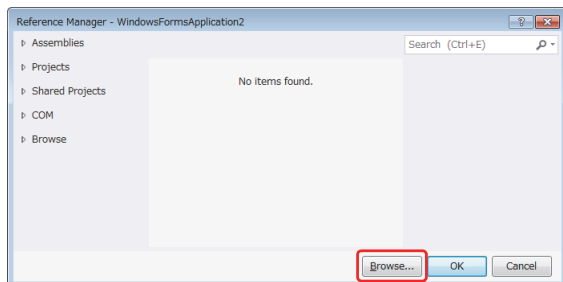


5 Right-click [References] in the project's right-hand window (Solution Explorer).

Click [Add Reference].



6 Click [Browse], and then specify the four x64 DLL files.

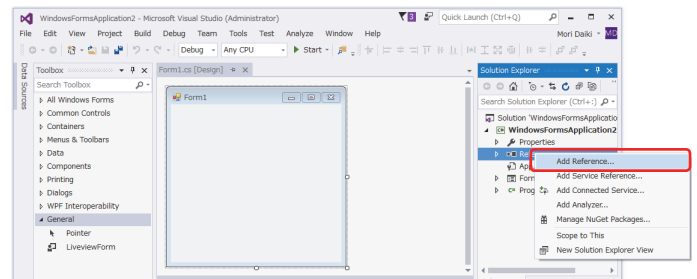


- Keyence.AutoID.SDK.dll
- VncClientControlCommon.dll
- Communication.dll
- VncClientControlCommonLib.dll

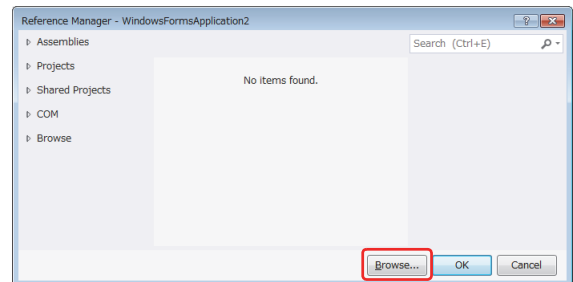
When Not Using LiveviewForm

1 Right-click [References] in a new project's right-hand window (Solution Explorer).

Click [Add Reference].



2 Click [Browse], and then specify the four DLL files.



- Keyence.AutoID.SDK.dll
- VncClientControlCommon.dll
- Communication.dll
- VncClientControlCommonLib.dll

Building Applications With the Any CPU Setting

For applications built with the Any CPU setting, it is necessary to select DLL files to match the operating environment. Place the following DLL files in the same folder as the application.

● When the operating environment is a 64-bit OS

- SR_SDK/SDK/AnyCPU/Communication.dll
- SR_SDK/SDK/AnyCPU/Keyence.AutoID.SDK.dll
- SR_SDK/SDK/AnyCPU/VncClientControlCommon.dll
- SR_SDK/SDK/x64/VncClientControlCommonLib.dll

● When the operating environment is a 32-bit OS

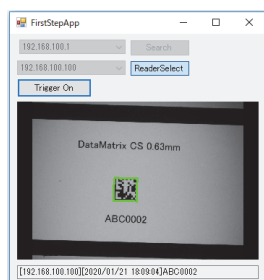
- SR_SDK/SDK/AnyCPU/Communication.dll
- SR_SDK/SDK/AnyCPU/Keyence.AutoID.SDK.dll
- SR_SDK/SDK/AnyCPU/VncClientControlCommon.dll
- SR_SDK/SDK/x86/VncClientControlCommonLib.dll

3 Sample Programs

- The sample programs set the SR Series communication settings and commands to the default settings.
- The sample programs have been built for x86 CPUs. Rebuild the programs when using them with x64 or AnyCPU CPUs.
- The referenced DLLs of these sample programs are fixed according to the supplied folder configuration. To use the sample programs as-is, copy all the folders.
- For details on each function, see the help file stored in the “SR_SDK/Manual” folder.

(1) FirstStepApp

This is a sample program that only uses the basic functions of the DLL files.

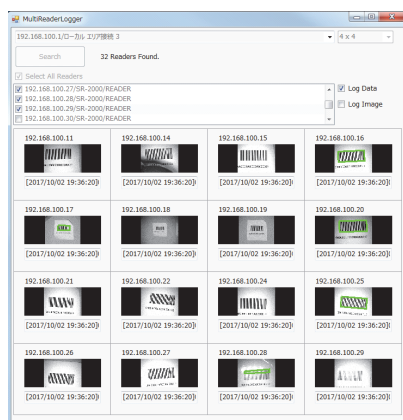


■ Functions

- Live view display
- Trigger on/off
- IP address setting
- Read data display

(2) MultiReaderLogger

This sample program assumes that it will be used to monitor the operation of multiple SR Series units.

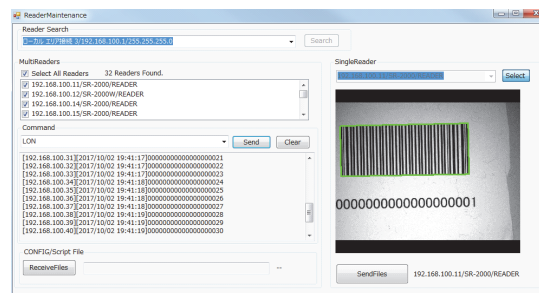


■ Functions

- Layout selection
- SR Series search and list display
- Live view display for multiple SR Series units
- Read data display for multiple SR Series units
- Log output start/stop
- Reading result log output (CSV format)
- Captured image logging (acquiring images stored within the SR)

(3) ReaderMaintenance

This sample program assumes that it will be used to perform maintenance, such as executing commands and adjusting banks, on multiple SR Series units.

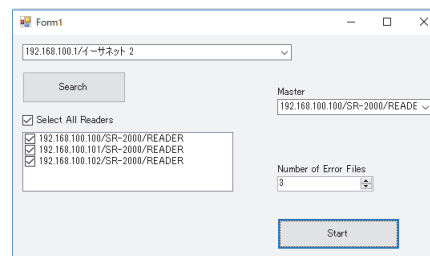


■ Functions

- SR Series search and list display
- Command transmission to multiple SR Series units
- Display of results from multiple SR Series units
- Settings file reception/transmission
- Live view display

(4) ErrorImageGetter

This is a sample program for the SR-X/5000/2000 Series. When reading errors occur on multiple SR Series units (advanced multi-head mode), this sample program acquires the reading error images from all the SR Series units.



■ Functions

- SR Series search and list display
- Reading error detection
- Acquisition of reading error images from SR Series units

* For details on the basic functions of the advanced multi-head mode, see the user's manual of the applicable model.

(5) ReadResultAnalyzer

This is a sample program for the SR-X/5000 Series.

This program refers to the historical data file (.json) sent from the SR-X/5000 Series via FTP communication acquiring the reading results and any additional information.



■ Functions

- Historical data file referencing
- Read data and date/time display
- Frame display for read codes

* An FTP server is required to use this application.
 * The FTP server included with SR Management Tool can be used.
 * Do not register the reader in SR Management Tool. Doing so will cause the historical data file to be used by SR Management Tool, preventing referencing from being performed correctly by ReadResultAnalyzer.

Command Execution Example

```
ReaderAccesor m_reader = new ReaderAccessor ();
m_reader.IpAddress = "192.168.100.100";
m_reader.Connect();
m_reader.ExecCommand("LON");
```

You can execute other commands by changing "LON" to a different SR Series command character string.

For other information, see the help file.

4 Disclaimer

These sample programs are designed for checking the operation of connecting with a code reader, so KEYENCE Corporation ("KEYENCE") does not guarantee the operation of these sample programs. Furthermore, even if there are problems with these programs, KEYENCE is not obligated to correct these problems or to provide any other kind of maintenance. KEYENCE does not guarantee the results or products generated with these programs. Also, regardless of legal foundation, KEYENCE bears no responsibility for damages arising from the use of these programs or for direct or indirect damages suffered by third parties due to the use of these programs, and you promise not to apply any charges to KEYENCE.

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Specifications are subject to change without notice.

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