

# **SDK Instruction Manual**

## **(for SHRC-203／SBIS)**

## Instruction

This SDK is a software development kit for Sigma Koki's controller SHRC-203 and SBIS, and it is available for VB.NET, C#, and C++ (CLI).

You can make your programming easier by referring to this SDK or including it in any project.

You can use the SDK freely, but please understand that we are not responsible for the content or operation of your program.

## 1. Environment

VisualStudio : 2015 and above.

.NET Framework : 4.6.1 or higher.

Development Language : VB.NET/C#/C++ (CLI)

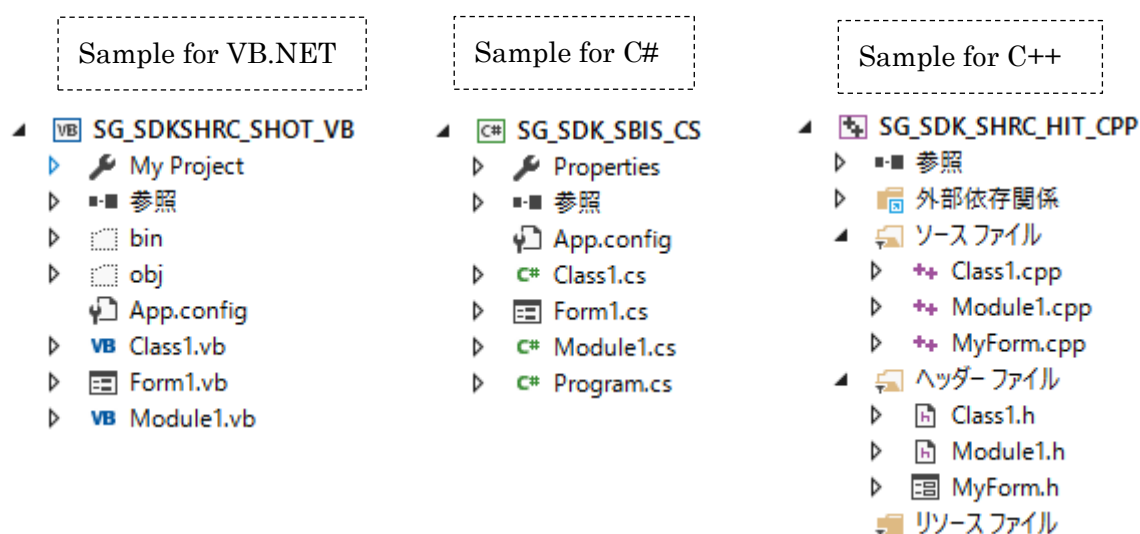
※If you are using in an environment other than the above, please set the operation according to your environment.

## 2. How to use

Open the solution file for the language used in Visual Studio.

Each language project consists of Form1 (MyForm) for the operation screen, Module1 for common use, and Class1 for each function.

Please refer to the contents of the SDK and use it for your own programming.



When you run the program, the operation screen of Form1 (MyForm) is displayed.

The screenshot shows a Windows form titled 'Form1' with a light blue border. The form contains three main sections for Axis1, Axis2, and Axis3. Each section has an 'Enable' checkbox (checked), a 'Speed' label, and a text box containing 'S2000F20000R2000'. Below each speed text box are 'CurrentPosition' and 'Distance' labels, each followed by a text box containing '0' and the unit 'pulse'. At the bottom of the form, there is a 'Speed' section with three text boxes labeled 'S', 'F', and 'R' containing '2000', '20000', and '200' respectively, followed by a 'Set' button. To the right of the 'Set' button is a 'TravelMode' section with four radio buttons: 'Relative' (selected), 'Absolutely', 'Jog(+)', and 'Jog(-)'. Below these are several buttons: 'Comm' (with 'OFF' text next to it), 'Go', 'Stop', 'Home', 'Reset', and 'Exit'. Dashed blue boxes with labels point to various controls: 'Target Axis' points to the 'Axis1' section; 'Speed' points to the 'Speed' label in the 'Axis1' section; 'Travel Mode' points to the 'TravelMode' section; 'Current Position' points to the 'CurrentPosition' label in the 'Axis1' section; 'Distance' points to the 'Distance' label in the 'Axis1' section; 'Communication' points to the 'Comm' button; 'Set Speed' points to the 'Set' button; 'Go' points to the 'Go' button; 'Stop' points to the 'Stop' button; 'Home' points to the 'Home' button; 'Reset' points to the 'Reset' button; and 'Exit' points to the 'Exit' button.

※Communication conditions can be set/changed in the Class1 module constructor.

```

SerialPort1.PortName = "COM1"
SerialPort1.BaudRate = 38400
SerialPort1.Parity = IO.Ports.Parity.None
SerialPort1.DataBits = 8
SerialPort1.StopBits = 1
SerialPort1.Handshake = IO.Ports.Handshake.None
SerialPort1.NewLine = vbCrLf

```

### 3. Function

The Class1 module contains the controller's main control functions.

Function Name	Function	Contents
Constructor	Initial setting	Set communication conditions
Connect	Communication connection	Connect communication and perform initial settings of the controller.
Disconnect	Disconnect communication	Disconnect communication
GetAxisCnt	Get axis information	Get axis information (for SHRC-203)
GetSpeed	Get speed	Get the set speed
SetSpeed	Speed setting	Set the speed
Wait_Ready	Ready check	Get status and location information to check ready state
GetValue	Get axis information	Get device information (for SBIS)
ReturnOrigen	Mechanical origin return	Performs mechanical origin return.
Move	Relative position move	Performs relative position move
MoveAbs	Absolute position move	Performs absolute position move
JOG	JOG movement	Performs JOG movement.
StopStage	Stop	Stop the stage
StopStageEmergency	Immediate stop	Immediate stop the stage
ResetPosition	Logical origin setting	Set the logical origin
GetBR	Get status	Get Busy/Ready status.
GetPosition	Get current position	Get the current position.