



XEG Dynamic-Link Library Command

User Manual

Original Instruction





NIMIH



Table of Contents

1.	Introduction					
2.	2. Safety Declaration					
3.	Descri	ption of Product	3			
	3.1.	Hardware Outline	3			
	3.2.	Software Outline	6			
	3.3.	HIWIN Electric Gripper Control APIs outline	6			
4.	Progra	am Command Introduction	7			
	4.1.	Command Introduction	7			
	4.2.	Error Code and Specification Setting 1	8			
Ap	pendix.	2	1			
	A1. Visual C++ Environment Setting Process					
	A2. Visual C# Environment Setting Process					
	A3. Visual Basic Environment Setting Process					



1. Introduction

HIWIN Electric Gripper Control APIs (HEGCA) are derived from HIWIN Electric Gripper Software (HEGS) and HEGCA is XEG series electric gripper command list. The command lists allow the user to program the designed part. The dynamic link library of HIWIN electric gripper can perform operations up to 16 (include) at the same time. For example, communication connection, disconnection, initialize electric gripper, control gripper movement, gripping, identification of gripping object, monitoring of gripper status. During communication, API used to return the gripper label value. During the operation, the user can operate the connected circuit gripper of any group according to the value of gripper label.

2. Safety Declaration

Before using the HIWIN XEG series Electric Gripper, be sure you have read this entire manual in detail and strictly follow all rules to ensure your safety during operation. The purpose of this safety declaration is to inform users to be cautious when operating the HIWIN XEG series Electric Gripper. Please use standard safety practices throughout all stages of operation. As an extra safety precaution, users should wear personal protective equipment to prevent against injury and unexpected equipment failure.



3. Description of Product

3.1. Hardware Outline

• Hardware is composed of:

Item	Name	Description
1	Electric Gripper	XEG-Series
2	Electric Gripper Controller	XEG-C1
3	Power Supply	DC24V, 0.5A
4	Actuator Cable	Connector between Controller (CN1) and Electric Gripper
5	Power Cable	Connector between Controller and power supply
6	USB Cable	Connector between Controller (CN2) and PC with USB
7	PC	With USB, need to check Serial comport



Fig.1 Hardware architecture

HIWIN® 2018-11



Fig.2 Electric Gripper controller connectors and functions

I/O connector

Communication terminal

CN2

CN3

HIWIN® 2018-11



Fig.3 Electric Gripper system diagram



3.2. Software Outline

- Software is composed of:
 - ♦ Windows OS, Visual Studio, C++
 - After Electric Gripper controller firmware version 2.0.13.

3.3. HIWIN Electric Gripper Control APIs outline

- The HEGS, which control the Electric Gripper, includes:
 - Connection method
 - Connection fail detect
 - Connection close
 - Firmware version verification
 - Monitor IO Status; Work State; Busy state; Alarm state
 - Monitor Current Position
 - Stop Gripper
 - Reset Gripper
 - ♦ MOVE mode
 - ♦ GRIP mode
 - ♦ EXPERT mode



4. Program Command Introduction

4.1. Command Introduction

The HEGS, which offers 14 command, can directly control and monitor XEG series Electric Gripper for users.



Fig 4 Electric Gripper Operation Software Interface (Main Page)

4.1.1 HEG StartConnect(int SettingComPort, int SelectModelType)

• Description:

Set Comport and gripper model to which USB is connected

- Parameter: SettingComPort is the input value, for example, connected to COM1, the value is entered as 1 and the rest so on. Currently it supports from COM1~COM99; SelectModelType is the gripper model. If the model is XEG16, enter value 16, if the model is XEG32, enter value 32, whereas model XEG64, the value will be 64.
- Return:



HEG is an integer value (Integer) ; <100: Return id gripper label ; >1000: Abnormal, reference 4.2 error code.

• Example: © int id;

id = StartConnect(10, 32);

4.1.2 int DetectConnect(HEG id)

- Description: Detect current disconnection or not.
- Parameter: id is the model label.
- Return:
 0: This setting is connected to ComPort;
 >1000: Abnormal, reference 4.2 error code.
- Example: © int ErrorCode; ErrorCode = DetectConnect(id);

4.1.3 int CloseConnect(HEG id)

- Description: Close the Comport to which the USB is connected.
- Parameter: id is the model label.
- Return:
 0: Successfully closed ;
 >1000: Abnormal, reference 4.2 error code.
- Example: © int ErrorCode; ErrorCode = CloseConnect (id);

4.1.4 int CurFirmwareVersion(HEG id, int &Ver1, int &Ver2, int &Ver3)

- Description:
 - Return to current firmware version.
- Parameter:



id is the model label; If the current version is 2.0.16, Ver1 is 2, Ver2 is 0, and Ver3 is 16. Return: 0: Obtain version value successful; >1000: Abnormal, reference 4.2 error code. • Example: ©

int ErrorCode, Ver1, Ver2, Ver3; ErrorCode = CurFirmwareVersion (id, Ver1, Ver2, Ver3);

4.1.5 int IOStatus(HEG id, unsigned int &InputData, unsigned

int &OutputData)



According to the description of the gripper software, it can be divided into BACK, BUSY and ERROR backhaul applications.

Parameter:

id is the model label;

InputData represents in binary (A8)(A7)(A6)(A5)(A4)(A3)(A2)(A1) ; OutputData represents in binary (B8)(B7)(B6)(B5)(B4)(B3)(B2)(B1) °

Return:

0: Obtain status value successful;

>1000: Abnormal, reference 4.2 error code.

• Remark description:

No.	I/0	Symbol	Function
A1		IN0	Position data bit0
A2		IN1	Position data bit1
A3		IN2	Position data bit2
A4	Input	IN3	Position data bit3
A5		IN4	Position data bit4
A6		START	Command input

A7,A8 no definition



No.	I/O	Symbol	Function
B1		BUSY	Executing command
B2		HOLD	Gripping range check
B3		ALM-CODE1	Encode the surplus
B4	output	ALM-CODE2	Error status number

B5,B6,B7,B8 no definition

CODE1	CODE2	Error status
0	0	-
1	0	Position fault
0	1	Over travel
1	1	Original point fault

• Example: ©

int ErrorCode, InputData, OutputData;

ErrorCode = IOStatus (id, InputData, OutputData);

int sigBusy, sigHold, sigAlarm;

sigBusy = OutputData & 0x01;

sigHold = OutputData & 0x02;

sigAlarm = OutputData & 0x0C;



4.1.6 bool WorkState(HEG id, int &ErrorCode)

• Description:

For the use of ResetMotion (...), RunMove (...), RunGrip (...), RunExpert (...) programs, it is strongly recommended to use this function to decide the completion of the work, and then proceed to the next instruction.

• Parameter:

id is the model label;

- ErrorCode return :
 - 0: Obtain status successful;
 - >1000: Abnormal, reference 4.2 error code

• Return:

true: data setting and operation in progress;

false: data setting and operation complete.

- Example: ©
 - int ErrorCode;

if(WorkState(id, ErrorCode)); // operation in progess else; //Idle state

4.1.7 bool HoldState(HEG id, int &ErrorCode)

• Description:

Use this function to determine whether the object is gripped or not. Note that WorkState() must be used before this function to confirm that the current operating state has stopped.

• Parameter:

id is the model label;

ErrorCode return :

0: Obtain status successful;

>1000: Abnormal, reference 4.2 error code

• Return:

true: Object gripped;

false: No object gripped

• Example: ©

int ErrorCode; if(HoldState (id, ErrorCode)); // object gripped else; //no object gripped



4.1.8 int AlarmState(HEG id)

• Description:

- Use this function to determine whether the gripper is alarmed or not. Note that WorkState() must be used before this function to confirm whether the current operating state has stopped. It is recommended to run the RunMove(...), RunGrip(...), RunExpert(...), and ResetMotion(...) commands. After that, check if the gripper has an abnormal state. If it is abnormal, stop the user program immediately.
- Parameter: id is the model label
- Return:

0: Obtain status successful;

>1000: Abnormal or alarmed, reference 4.2 error code

 Example: © int ErrorCode; ErrorCode = AlarmState(id); if(ErrorCode > 1000); // abnormal or alarmed occur else; //no abnormal or alarmed

4.1.9 double CurrentPos(HEG id, int &ErrorCode)

• Description:

When status is not in BUSY, the current position will be returned.

• Parameter:

id is the model label

ErrorCode return :

0: Gripper position obtained successful

>1000: Abnormal, reference 4.2 error code

• Return:

Data type is double, the current gripper position (unit: mm).

- Example: ©
 - int ErrorCode;

double Position;

Position = CurrentPos (id, ErrorCode)



4.1.10 int StopMotion(HEG id)

- Description: Emergency top the current motion of the gripper.
- Parameter: id is the model label.
- Return:
 0: Command operation successful.
 >1000: Abnormal, reference 4.2 error code.
- Example: © int ErrorCode; ErrorCode = StopMotion (id);

4.1.11 int ResetMotion(HEG id)

• Description:

After the power is re-powered, the gripper is required to use RESET to find the origin position, the Run-Home return mode must be executed first when RunMove(...), RunGrip(...), and RunExpert(...) are executed.

• Parameter:

id is the model label

• Return:

0: Command operation successful;

>1000: Abnormal, reference 4.2 error code.

• Remark:

WorkState(...) can be used to confirm whether action is completed, if it is required.

• Example: ©

int ErrorCode;

ErrorCode = ResetMotion(id);



P						– – X
	Log in	Data Setting	Auto-run	Data table		
	Move	Move position	· D	□ Fill Cell	Reset	Stop
	Grip	Move speed:	L	50 (mm/s)		
	Check				Position -	mm
	Expert	4.1.12			I/O Status O O O A1 A2 A3	 A4 A5 A6
		Run	Save	Clear	$\bigcirc B1 B2 B3 \bigcirc $	B4 B5 B6

Fig. 5 Electric Gripper Operation Software Interface (Move Mode)

4.1.12 int RunMove(HEG id, double MovPosition, int MovSpeed)

• Description:

Operate move mode.

• Parameter:

id is the model label.

MovPosition is the absolute position of the finger movement (unit: mm);

MovSpeed is the speed at which the finger moves (unit: mm).

• Return:

0: Command operation successful;

>1000: Abnormal, reference 4.2 error code.

- Remark:
 - (1) WorkState(...) can be used to confirm whether action is completed, if it is required.
 - (2) Movement speed reference comparison table:

Electric Gripper	Move Speed (mm/s)			
Туре	Min	Max		
XEG-16	1	60		
XEG-32	1	80		
XEG-64	1	100		



 Example: © int ErrorCode; ErrorCode = RunMove (id, 16, 60);

12						X
	Log in	Data Setting	Auto-run	Data table		
	Move	Direction:		4	Reset JOG	Stop
	Grip	Gripping stroke:	-0	— 10 (mm)		
		Gripping speed:	L	2 (mm/s)		
	Check	Gripping force:	L	70 (%)	Position	
	\sim				-	mm
	Expert				I/O Status	
	\sim	4.1.13			$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	○ ○ ○ A4 A5 A6
	Setup	Run	Save	Clear	B1 B2 B3	B4 B5 B6
Ľ						

Fig. 6 Electric Gripper Operation Software Interface (Grip Mode)

4.1.13 int RunGrip(HEG id, char Dir, int Str, char GriSpeed, char

GriForce)

Description:

Operate grip mode with directionality,

- Parameter:
 - id is the model label;

Dir, inward and outward support, set inward to the letter C or c, outward set to the letter O or o;

Str, relative stroke (unit: mm)

GriSpeed, gripper feed rate (ex: L: 2, M: 5, H: 10 mm / s), L input value is low, M input value is medium, H input value is high;

GriForce, the force of gripper (ex: L: 40%, M: 70%, H: 100%), the L input value is low, the M input value is medium, and the H input value is high. Detailed reference to the following notes.

- Return:
 - 0: Command operation successful;
 - >1000: Abnormal, reference 4.2 error code



• Remark:

- (1) WorkState(...) can be used to confirm whether action is completed, if it is required.
 - Grip Force(%) Grip Speed (mm/s) Electric Gripper Type L М Η L Η М 2 5 50 100 XEG-16 10 75 5 XEG-32 2 10 40 70 100 XEG-64 2 8 15 40 70 100
- (2) Comparison table of grip speed and force:

- (3) For example, XEG-16 GripSpeed is L

 GripForce is M, the actual speed is 2mm/s and actual force is 37.5N.
- Example: ©

int ErrorCode;

ErrorCode = RunGrip(id, 'c', 5, 'H', 'M');

10											X
ļ	Log in	Data Setting	Auto-	-run	Data table						
	Move	Direction:	<]		Rese	et		Stop	
		Move stroke:	5.00	(mm)					_		
	Grip	Move speed:	10	(mm/s)							
	Check	Gripping stroke:	15.00	(mm)		Po	sitio	n			
		Gripping speed:	20	(mm/s)				-		mr	n
	Expert	Gripping force:	40 🛓	(%)) Sto				
		4.1.14				$ _{0}$	\circ	\bigcirc	0	\bigcirc	\bigcirc
	Setup	$\overline{}$				A1 B1	A2 82	A3 B3	A4 B4	A5 85	A6 B6
		Run	Save	e	Clear	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc

Fig.7 Electric Gripper Operation Software Interface (Expert Mode)



4.1.14 int RunExpert(HEG id, char Dir, double MovStr, int

MovSpeed, double GriStr, int GriSpeed, int GriForce)

• Description:

Operate expert mode with directionality.

- Parameter:
 - id is the model label;

Dir, inward and outward support, set inward to the letter C or c, outward set to the letter O or o;

MovStr relative position (only the position reaches the orientation), the unit is mm; MovSpeed moving speed (unit: mm/s);

GriStr grip mode displacement (unit: mm);

GriSpeed grip mode speed (unit: mm / s);

GriForce force of the grip mode (%) and refers to the 4.2 grip set specification table.

• Return:

0: Command operation successful;

>1000: Abnormal, reference 4.2 error code.

- Remark:
 - (1) WorkState(...) can be used to confirm whether action is completed, if it is required.
 - (2) Speed and force reference table:

Electric Gripper	Move Speed (mm/s)		Grip Speed (mm/s)		Grip Force(%)		
Туре	Min	Max	Min	Max	Min	Max	
XEG-16	1	60	1	10	50	100	
XEG-32	1	80	1	20	40	100	
XEG-64	1	100	1	20	40	100	

• Example: ©

int ErrorCode;

ErrorCode = RunExpert (id, 'c', 10, 60, 10, 10, 70);



4.2. Error Code and Specification Setting

The following is the process of using the function, if the return value or ErrorCode return value is not 0, it means that an error has occurred. The following shows an error occurred when the electric gripper goes wrong.

Alarm Code	Description	Reason	Solution
1001	Unable to initialize connection	Connection failed, no data returned. Enter firmware update mode by mistake.	Refer to the manual to install the gripper driver. Check that the 24V power supply is properly connected. Check that the USB cable is properly connected. Check that the serial port is set correctly. Confirm that START is OFF, re- power 24V and USB power, you can enter the general mode.
1002		Exceed the connection name limit.	Modify and set connection port be to less than or equal to COM99.
1003		Connection discontinued.	Unplug and reconnect the USB cable.
1004		Gripper serial port unopened.	Close the serial port and reconnect.

4.2.1 Hardware abnormal

4.2.2 Electric Gripper Setting abnormal

Alarm Code	Description	Reason	Solution
2001	Connection abnormal	Gripper type setting error	Check that the gripper type setting is correct
2002	Motion	Id is not a DLL return	Check if user program id is returned by the function StartConnect()
2003	abnormal	Repeat the command in succession	Wait for gripper Busy to end, a new command is issued



2011	Gripper stroke setting is greater than the total stroke.	Check that gripper stroke input is correct.
2012	Position setting is less	Check that the gripper movement
2012	than zero.	position input is correct.
	Movement speed setting	
2013	is greater than the preset	
	range.	Check that the gripper movement
	Movement speed setting	speed input is correct.
2014	is less than the preset	
	range.	
2021	Gripper movement	Check that the gripper movement
2021	direction setting.	direction input is correct.
	The gripping	
2022	displacement setting is	
2022	greater than the range of	Charle that the evidence
	motion.	check that the gripping
	The less displacement	displacement input is correct.
2023	setting is greater than the	
	range of motion,.	
2024	Gripping speed is greater	
2024	than the preset range.	Check that gripping speed input is
2025	Gripping speed is less	correct
2023	than the preset range.	
2026	Gripping force is great	
2020	than the preset range.	Check that the gripping force input
2027	Gripping force is less	is correct.
2027	than the preset range.	

4.2.3 Abnormal Motion

Alarm Code	Description	Reason	Solution			
3001	Position error	There are obstacles in the moving stroke.	Eliminate obstacles during the trip.			
3003	Reset abnormal	Workpiece have not been removed during the trip.	Check that there are no foreign objects in the itinerary.			



	The	finger	design	Modify the finger design
	interfere	es with the	stroke	would y the iniger design.

4.2.4 Electric Gripper Specification Table

Specification	XEG-16	XEG-32	XEG-64
Stroke	16 mm	32 mm	64 mm
Grip Force	25-50 N	60-150 N	180-450 N
Move Speed	1-60 mm/s	1-80 mm/s	1-100 mm/s
Grip Speed	1-10 mm/s	1-20 mm/s	1-20 mm/s



Appendix

The purpose of this catalog is to provide users of the Visual Studio environment to quickly import this dynamic command library into your project, eliminating the hassle of environment settings, including Visual C++, C# and Basic projects:

A1. Visual C++ Environment Setting Process

Step 1. Place the file EG_Control_API.h and EG_Control_API.lib in the project.

😋 🕞 🕶 📔 « XEG_samp	ole_program_C++ • XEG_sample_program_C-	++ • •	4 ₅ / 搜尋 XEG_samp	nle_progra P
組合管理 ▼ 加入至媒體	櫃 ▼ 共用對象 ▼ 新增資料夾		:==	• 🔳 🔞
☆ 我的最愛	名稱 ^	修改日期	類型	大小
🝊 OneDrive 🚺 下載	Debug	2018/9/11 上午 1 2018/9/11 上午 1	檔案資料夾 檔案資料本	
三 桌面 最近的位置	EG_Control_API IIII EG_Control_API	2018/9/3 下午 07 2018/9/10 下午 0	H 檔案 Object File Library	3 KB 5 KB
篇 媒體櫃 局 Subversion	☐ ReadMe *+ stdafx ☐ stdafx	2018/6/13 上午 1 2018/6/13 上午 1 2018/6/13 上午 1	乂子乂任 C++ Source H 檔案	2 KB 1 KB 1 KB
	Targetver 1	2018/6/13 上午 1	日檔室	1 KB

Step 2. Click on Project \rightarrow Add Existing Project \rightarrow Select File(*.h) \rightarrow Add



Samp	leCo	de → C++ → XEG_sample_program_C++	 XEG_sample_program 	m_C++ •	- 4 €	搜尋 XEG_sampi	e_prograr	m 🔎
組合管理 ▼ 新増資	[料夾					8==	•	0
Microsoft Visual S	^	名稱	修改日期	類型	大小			
☆ 我的最爱	L	Debug	2018/9/11 上午 1	檔案資料 <u>次</u>				
ConeDrive		EG_Control_API	2018/9/3 下午 07	H檔案	3 KB			
▶ 下载 ■ 桌面		ReadMe	2018/5/10 FF 0 2018/6/13 上午 1 2018/6/13 上午 1	Object Hie Library 文字文件	2 KB 2 KB			
≥ 胡歸道	=	stdafx	2018/6/13 上午 1 2018/6/13 上午 1	H 檔案 H 檔案	1 KB 1 KB			
a Subversion 副 文件		★ XEG_sample_program_C++ XEG_sample_program_C++	2018/9/10 下午 0 2018/9/3 下午 05	C++ Source VC++ Project	68 KB 5 KB			
● 音樂 ■ 視訊 ■ 圖片		副 XEG_sample_program_C++.vcxproj 刷 XEG_sample_program_C++.vcxproj	2018/9/3 下午 04 2018/9/3 下午 05	VC++ Project Filt Visual Studio Pro	2 KB 1 KB			
19 電腦	-							
檔	案名	稱(N): EG_Control_API			-	新有檔案 (*.*) 加入(A)	取消	



Step 3. Right click on the property and select "Properties".

		方案總管	• 4 ×
		GO(1 To - 2 I To
		搜尋 方案	總管 (Ctrl+;)
		」 方案	'XEG sample program C++' (1 事案)
*	建置(U)		_sample_program_C++
	重建(E)		1011日111111111111111111111111111111111
	清除(N)		rx=n⊈⊥ut≡ + stdafx.cpp
	檢視(W)		XEG_sample_program_C++.cpp
	分析(Z)		1 11月1日日 11月1日 11月1日 11月1日日 11月1日 11月1日 11月1日日 11月1日 11月11日 11月11日 11月11日 11月11日 11月11日 11月11日 11月11日 11月11111111
	僅專案(J)		■ FG Control API h
	將範圍設定在此(S)		stdafx.h
	新増方案總管檢視(N)		1 targetver.h
	特性指引最佳化(P)		⊧ leadMe.txt
	組建相依性(B)		>
	加入(D)		>
₽.*	類別精靈(Z)	Ctrl+Shift+X	
苗	管理 NuGet 套件		
ø	設定為啟始專案(A)		
	偵錯(G)		•
	原始檔控制(S)		>
×	剪下(T)	Ctrl+X	
â	貼上(P)	Ctrl+V	•
×	移除(V)	Del	別檢視
10	重新命名(M)		▼ ‡ ×
	卸載專案(L)		_program_C++ 專案屬性 🔹
	重新掃描方案(S)		
0	在檔案總管中開啟資料夾(X)		
×	屬性(R)	Alt+Enter	XEG_sample_program_C+
		TIC HIP THE	XEG_sample_program_C

Step 4. Select Linker \rightarrow Input \rightarrow Additional Dependencies \rightarrow Enter EG_Control_API.lib \rightarrow OK





Step 5. Include $\lceil EG_Control_API.h \rfloor \rightarrow Start using DLL$



Step 6. Create a project, pay attention to the configuration and the corresponding file of the configuration.

XEG_sample_program_C++ - Microsoft Visual Studio									
檔案(F) 編輯(E) 檢視(V) 專	∮案(P) 建置(B)	偵錯(D) 小組(M)	工具(T)	測試(S)					
0 - 0 📴 - 🖆 💾 	9-9-1	本機 Windows 偵錯工!	l - C -	Release +					
AEG_sample_program_C++.	cpp + ×								

Step 7. Put EG_Control_API.dll into 專案/Release(Debug) path folder→ Direct execute the application

				– – X
🚱 🗢 🚽 🕨 SampleCo	de	Release 👻	↓ 搜尋 Release	٩
組合管理 ▼ 加入至媒體	櫃 ▼ 共用對象 ▼ 新増資料夾		:==	• 🔟 🔞
☆ 我的最愛	名稱	修改日期	類型	大小
🔏 OneDrive	EG_Control_API	2018/9/10 下午 0	DLL 檔案	32 KB
🚺 下載	XEG_sample_program_C++	2018/9/10 下午 0	應用程式	14 KB
■ 桌面	XEG_sample_program_C++	2018/9/10 下午 0	Program Debug	563 KB



A2. Visual C# Environment Setting Process

		EG_Control_API.cs 🛎 🗙 👻	方案總管 💠	→ ‡ ×
e)		-	G O 🏠	`@ - 굳 Q @ @ 분 -
		÷	搜尋 方案總	管 (Ctrl+;) - 오 -
		_	万 方案 'X	(EG sample program CSharp' (1 専)
				G_sample_program_CSharp
	÷	建置(U)		perties
		重建(E)		5 o config
		清陈(N)		Control API.cs
		檢視(₩)		gram.cs
	-	分析(Z)		►
	⊜	發行(B)		
		將範圍設定在此(S)		
		新增方案總管檢視(N)		
🗀 新増項目(W) 📐 Ctrl+Shift+A		加入(D)		►
*☐ 現有項目(G) Shift+Alt+A	ă	管理 NuGet 套件		
* 新增資料夾(D)	¢	設定為啟始專案(A)		
参考(R)		偵錯(G)		>
服務參考(S)		原始檔控制(S)		>
1 Windows Form(F)	ж	剪下(T)	Ctrl+X	
1 使用者控制項(U)	â	貼上(P)	Ctrl+V	
1 元件(N)	X	移除(V)	Del	
❤ 類別(C)	Xο	重新命名(M)		
	-	卸載專案(L)		+4-1E
	0	在檔案總管中開啟資料夾(X)		(双 优
	يو	屬性(R)	Alt+Enter	····· ₽ ×
				Jrogram CSharp 事室屬性 🚽

Step 1. Right click on project \rightarrow Add \rightarrow New Item

Step 2. Select Category \rightarrow Modify Class Name \rightarrow Add









Step 4. Create a project, pay attention to the configuration and the corresponding file of the configuration.



Step 5. Put EG_Control_API.dll into Project/Release(Debug) path folder

				<u> </u>
🚱 💽 🚺 « XEG_sam	ple_program_CSharp 🕨 bin 🕨 Release	•	↓ 搜尋 Release	Q
組合管理 ▼ 加入至媒劇	豊櫃 ▼ 共用對象 ▼ 新増資料夾		EE	• 🔟 🔞
🗙 我的最愛	名稱 ^	修改日期	類型	大小
ConeDrive	EG_Control_API	2018/9/10 下午 0	DLL 檔案	32 KB
🗽 下載	XEG_sample_program_CSharp	2018/9/10 下午 0	應用程式	7 KB
■ 桌面	🖓 XEG_sample_program_CSharp.exe	2018/6/14 上午 1	XML Configurati	1 KB
🗐 最近的位置	🗿 XEG_sample_program_CSharp	2018/9/10 下午 0	Program Debug	14 KB
	XEG_sample_program_CSharp.vshost	2018/9/11 上午 1	應用程式	24 KB
🔚 媒體櫃	🖓 XEG_sample_program_CSharp.vshost	2018/6/14 上午 1	XML Configurati	1 KB
Subversion	XEG_sample_program_CSharp.vshost	2014/1/14 下午 0	MANIFEST 檔案	1 KB



Step 6. Start using DLL

```
⊟namespace XEG_sample_program_CSharp
| {
=
     class Program
     {
         static void Main(string[] args)
É
         {
             int ErrorCode;
             double Position;
             <mark>int</mark> Alarm;
             bool Hold;
             int EGErrorINT = 1000; //All Error Code exceed 1000
             //-----OPEN SERIAL PORT-----
             int id = EG_Control_API.StartConnect(25, 64);
             int id2 = EG_Control_API.StartConnect(19, 32);
             if (id >= EGErrorINT ||
                 id2 >= EGErrorINT)
             {
                 Console.WriteLine("Open fail...");
                     Console.ReadKey();
                     return;
             }
             else
             {
                 Console.WriteLine("Open success...");
             }
```



A3. Visual Basic Environment Setting Process

					*	方案總	管	¥ ×
					*	GG	- ¥ @ © \$ - 0 ₩	
					÷	搜尋方		.م
						ja ₹	方案 'XEG sample program VisualBasic' (1	専案
				神空(1)			XEG_sample_program_VisualBasic	
)注点(U) 香油(E)			My Project	
				主注(L) 注除(N)			VB EG Control API.vb	
				/////////////////////////////////////			VB Module1.vb	
				分析(Z)				
			6	發行(B)				
			-	將範圍設定在此(S)			-	
			Ē	新增方案總管檢視(N)				
8°	新增項目(\M)	Ctrl+Shift+A	Ē	加入(D)		÷.		
ta	現有項目(G)	Shift+Alt+A	ă	管理 NuGet 套件			•	
÷	新增資料夾(D)		ø	設定為啟始專案(A)			-	
	参考(R)			偵錯(G)		Þ		
	服務參考(S)			原始檔控制(S)		Þ	-	
ta	Windows Form(F)		×	剪下(T)	Ctrl	+X	-	
ť	使用者控制項(U)		â	貼上(P)	Ctrl	+V		
5	元件(N)		X	移除(V)	Del			
ta	模組(M)		10	重新命名(M)				
***	類別(C)			卸載專案(L)				•
			0	在檔案總管中開啟資料夾(X)			到加險視	
			÷	屬性(R)	Alt+	Enter		łΧ
								-

Step 1. Right click on project \rightarrow Add \rightarrow New Item

Step 2. Select Category \rightarrow Modify Class Name \rightarrow Add

加入新項目 - XEG_sample_program_Vis	sualBasic	8 23
▲ 已安裝的	排序依據: 預設 🗣 🧱 듣	授尋 已安裝的範本 (Ctrl+E) ・ 🔎 🗸
▲ 一般項目 ▷ Web	【 ● 類別	一般項目 空的語別定美
Windows Forms 一般	模組	一般項目
程式碼 資料	●●● 介面	一般項目
Reporting Workflow	E Windows Form	一般項目
WPF 圖形	• 使用者控制項	一般項目
▷ 線上	元件類別	一般項目
	使用者控制項 (WPF)	一般項目
	●● COM 類別	一般項目
	JavaScript 檔	一般項目
	LINQ to SQL 類別	一般項目
		一般項目
	Of WCF服務	
	請按這裡連線尋找範	<u>54 -</u>
名稱(N): EG_Control_AP	Lvb	新増(A) 取消



Step 3.	Enter the	required	function
1		1	

Module1.vb EG_Control_API.vb +> ×	
888(一般) - 888(宣
Imports System.Text	_
BPublic Class EG Control API	
Public Declare Auto Function StartConnect Lib "EG_Control_API.dll" (ByVal SettingComPort As Integer, ByVal	Se
Public Declare Auto Function DetectConnect Lib EG_Control_AFI.dil (Byvai 1d As integer) As integer	
Public Declare Auto Function CloseConnect Lib "EG_Control_API.dll" (ByVal id As Integer) As Integer	
Public Declare Auto Function CurFirmwareVersion Lib "EG_Control_API.dll" (ByVal id As Integer, ByRef Verl A	s
Public Declare Auto Function CurrentPos Lib "EG_Control_API.dll" (ByVal id As Integer, ByRef ErrorCode As I	n'
Public Declare Auto Function IOStatus Lib "EG_Control_API.dll" (ByVal id As Integer, ByRef InputData As UIr	ite
Public Declare Auto Function WorkState Lib "EG_Control_API.dll" (ByVal id As Integer, ByRef ErrorCode As Ir	ite
Public Declare Auto Function HoldState Lib "EG_Control_API.dll" (ByVal id As Integer, ByRef ErrorCode As Ir	ite
Public Declare Auto Function AlarmState Lib "EG_Control_API.dll" (ByVal id As Integer) As Integer	
Public Declare Auto Function ResetMotion Lib "EG_Control_API.dll" (ByVal id As Integer) As Integer	
Public Declare Auto Function StopMotion Lib "EG_Control_API.dll" (ByVal id As Integer) As Integer	
Public Declare Auto Function RunMove Lib "EG_Control_API.dll" (ByVal id As Integer, ByVal MovPosition As De	աե
Public Declare Auto Function RunGrip Lib "EG_Control_API.dll" (ByVal id As Integer, ByVal Dir As Char, ByVa	.1
Public Declare Auto Function RunExpert Lib "EG_Control_API.dll" (ByVal id As Integer, ByVal Dir As Char, By	N:
End Class	

Step 4. Create a project, pay attention to the configuration and the corresponding file of the configuration.

XEG_sample_program_VisualBasic - <u>Microso</u> ft Visual Studio			
檔案(F) 編輯(E) 檢視(V) 專案(P)	建置(B)	偵錯(D)	小組(M) 工
🖉 🗢 🖸 🖥 = 🚔 💾 🥙 🗇 =	લ - ∣ ►	開始 👻 🖒 🕚	Release +
👜 Module1.vb → 🗙 EG_Control_AF	PI.vb		

Step 5. Put EG_Control_API.dll into 專案/Release(Debug) path folder

🕞 💽 🦷 🕌 « XEG_samı	ole_program_VisualBasic ኑ bin ኑ Release	•	↓ 搜尋 Release	٩
組合管理 ▼ 加入至媒體	1櫃 ▼ 共用對象 ▼ 新増資料夾		:==	• 🔟 🔞
☆ 我的最愛	名稱 ^	修改日期	類型	大小
ConeDrive	EG_Control_API	2018/9/10 下午 0	DLL 檔案	32 KB
📜 下載	XEG_sample_program_VisualBasic	2018/9/11 下午 0	應用程式	24 KB
📃 桌面	🟳 XEG_sample_program_VisualBasic.exe	2018/6/14 下午 0	XML Configurati	1 KB
週 最近的位置	XEG_sample_program_VisualBasic	2018/9/11 下午 0	Program Debug	30 KB
	XEG_sample_program_VisualBasic.vsh	2018/9/11 下午 0	應用程式	24 KB
📜 媒體櫃	🖓 XEG_sample_program_VisualBasic.vsh	2018/6/14 下午 0	XML Configurati	1 KB
Subversion	XEG_sample_program_VisualBasic.vsh	2014/1/14 下午 0	MANIFEST 檔案	1 KB
〕 □ 文件	XEG_sample_program_VisualBasic	2018/9/11 下午 0	XML Document	1 KB



Step 6. Start using DLL

Module Module1

Sub	Main()
	Dim ErrorCode As Integer
	Dim Position As Double
	Dim Alarm As Integer
	Dim Hold As Boolean
	Dim EGErrorINT As Integer = 1000
	'All Error Code exceed 1000
	'OPEN SERIAL PORT
	Dim id As Integer = EG_Control_API.StartConnect(25, 64)
	Dim id2 As Integer = EG_Control_API.StartConnect(19, 32)
	If id >= EGErrorINT Or id2 >= EGErrorINT Then
	Console.WriteLine("Open fail")
	Console.ReadKey()
	Return
	Else
	Console.WriteLine("Open success")
	End If





Subsidiaries / Research Center

HIWIN GmbH OFFENBURG, GERMANY www.hiwin.de www.hiwin.eu info@hiwin.de

HIWIN JAPAN KOBE · TOKYO · NAGOYA · NAGANO · TOHOKU · SHIZUOKA · HOKURIKU · HIROSHIMA · FUKUOKA · KUMAMOTO, JAPAN www.hiwin.co.jp info@hiwin.co.jp

HIWIN USA CHICAGO, U.S.A. www.hiwin.com info@hiwin.com

HIWIN Srl BRUGHERIO, ITALY www.hiwin.it info@hiwin.it HIWIN Schweiz GmbH JONA, SWITZERLAND www.hiwin.ch info@hiwin.ch

HIWIN s.r.o. BRNO, CZECH REPUBLIC www.hiwin.cz info@hiwin.cz

HIWIN SINGAPORE SINGAPORE www.hiwin.sg info@hiwin.sg HIWIN KOREA SUWON · MASAN, KOREA www.hiwin.kr info@hiwin.kr

HIWIN CHINA SUZHOU, CHINA www.hiwin.cn info@hiwin.cn

Mega-Fabs Motion System, Ltd. HAIFA, ISRAEL www.mega-fabs.com info@mega-fabs.com

HIWIN TECHNOLOGIES CORP.

No. 7, Jingke Road, Taichung Precision Machinery Park, Taichung 40852, Taiwan Tel: +886-4-23594510 Fax: +886-4-23594420 www.hiwin.tw business@hiwin.tw

The specifications in this catalog are subject to change without notification.

Copyright © HIWIN Technologies Corp. ©2018 FORM 2018-11 (PRINTED IN TAIWAN)