User Manual

Advantech LogixView (WinCE)

ADVANTECH
eAutomation

Copyright

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Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.
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5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Edition 1

Printed in Taiwan January 2008

Technical Support and Assistance

1. Visit the Advantech web site at www.advantech.com/support where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
   - Product name and serial number
   - Description of your peripheral attachments
   - Description of your software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wording of any error messages

Warnings, Cautions and Notes

Warning! *Warnings indicate conditions, which if not observed, can cause personal injury!*

Caution! *Cautions are included to help you avoid damaging hardware or losing data. e.g.*

There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Note! *Notes provide optional additional information.*

Document Feedback

To assist us in making improvements to this manual, we would welcome comments and constructive criticism. Please send all such - in writing to: support@advantech.com

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
15. The power cord or plug is damaged.
16. Liquid has penetrated into the equipment.
17. The equipment has been exposed to moisture.
18. The equipment does not work well, or you cannot get it to work according to the user's manual.
19. The equipment has been dropped and damaged.
20. The equipment has obvious signs of breakage.
21. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.
22. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
23. The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Contents

Chapter 1

Introduction & Installation

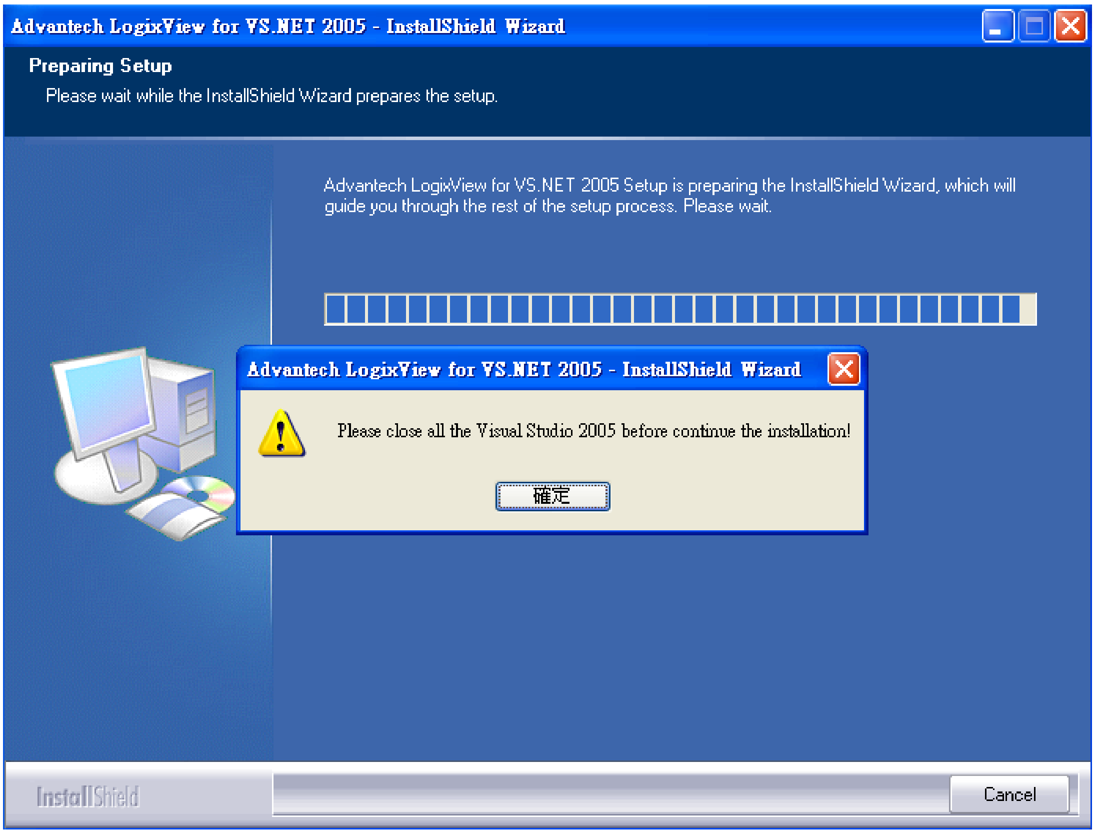
1.1 Introduction

The LogixView is newest software package for developing the graphic user interface for monitoring and controlling Advantech eAutomation products on WindowsCE based devices. This package is based on Microsoft .NET technology, and used in Visual Studio 2005 environment. The previous solution for Advantech .NET solution is the Adam.NET class library, and it supplies several class libraries for accessing ADAM series product. For those who want to use the Adam.NET class library still have to write more code to make their programs run. The LogixView is based on the Adam.NET technology, and offers more components for data acquisition. Users can simply drag and drop the components into Visual Studio .NET project and change the properties of the components to make their programs run as demands. In other word, users who use the LogixView no longer need to write code line by line for the data acquisition, but concentrate on program logic and event handling. In next few sections, this document is going to introduce installation process, the LogixView DAQ (Data Acquisition) components, the graphic controls, the working theory of the components and controls, and examples for applying LogixView package for building your programs in details.

1.2 Installing LogixView

Before install the Advantech LogixView, please make sure the Microsoft Visual Studio 2005 is installed in the target machine.

To run the installation, double click the installation file named “LogixView for VS.NET 2005.exe”. You will see the following window.



Advantech LogixView for VS.NET 2005 - InstallShield Wizard

Preparing Setup

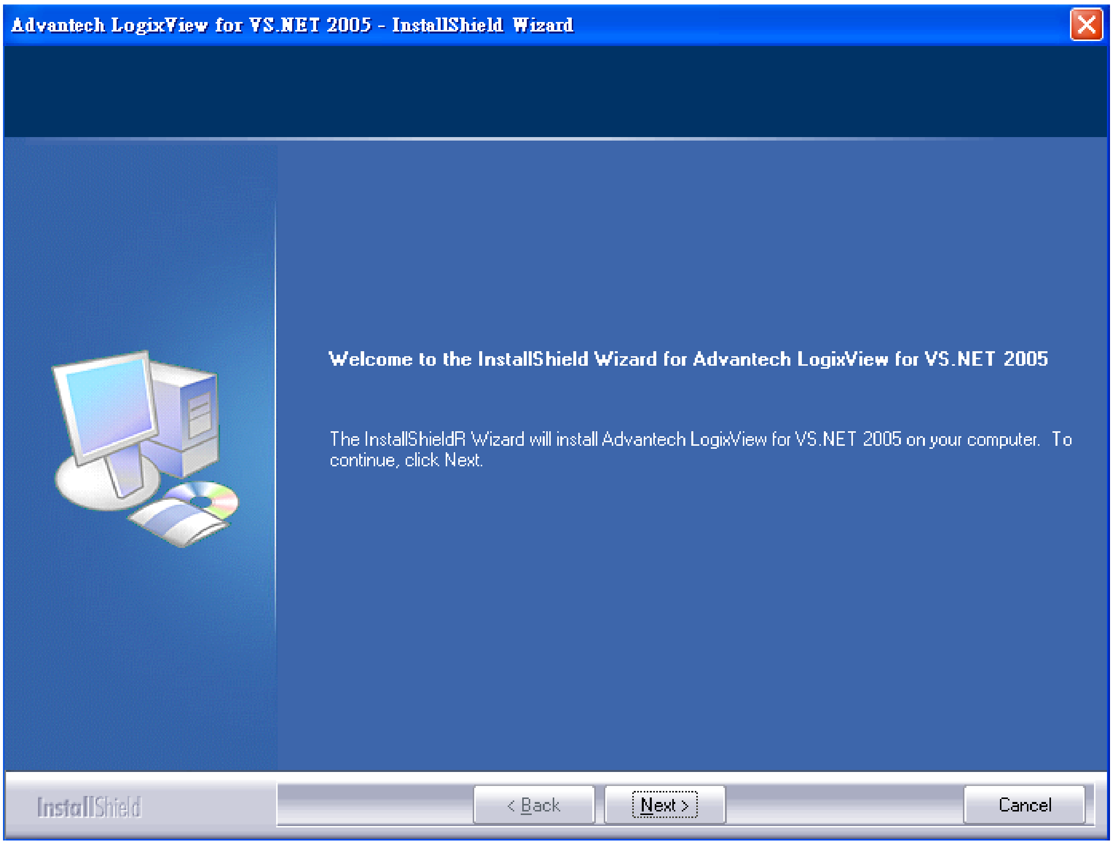
Please wait while the InstallShield Wizard prepares the setup.

Advantech LogixView for VS.NET 2005 Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.

Advantech LogixView for VS.NET 2005 - InstallShield Wizard

Please close all the Visual Studio 2005 before continue the installation!

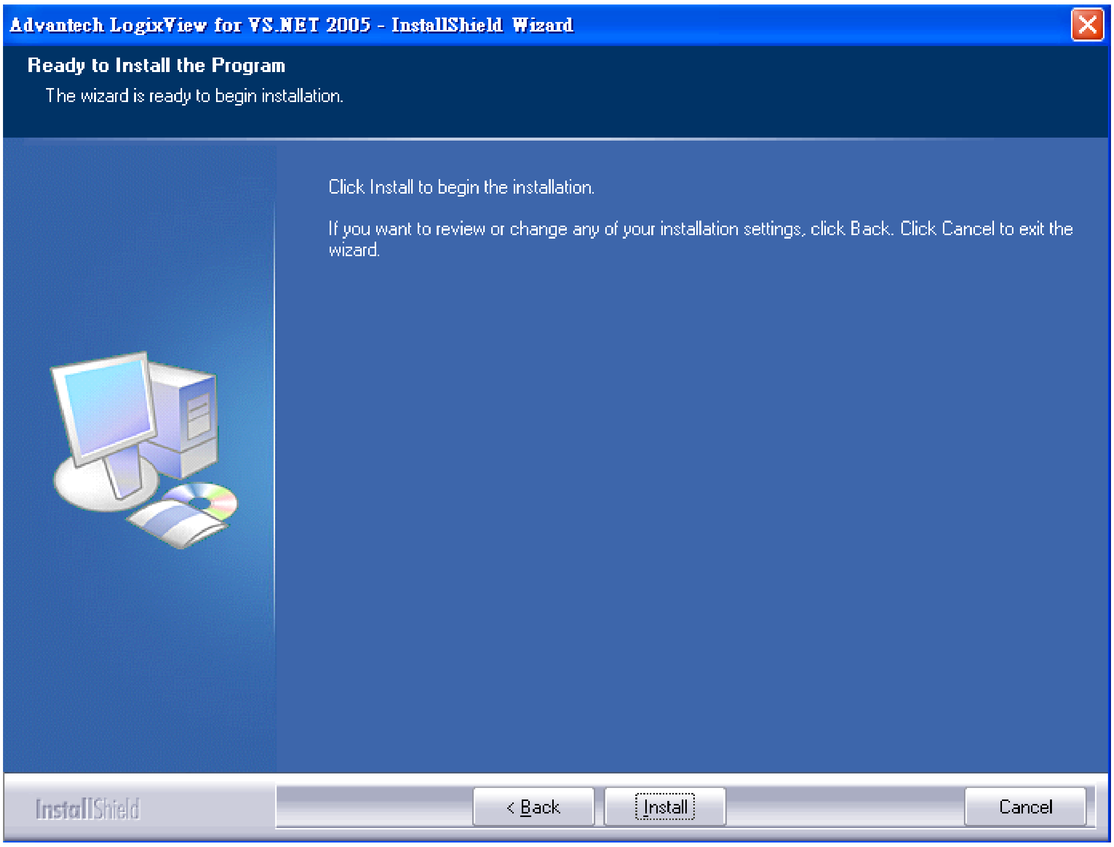
The above message remind you shutdown all the instance of Visual Studio 2005 before continue the installation. Please do so, and then click “OK” to continue.



Welcome to the InstallShield Wizard for Advantech LogixView for VS.NET 2005

The InstallShieldR Wizard will install Advantech LogixView for VS.NET 2005 on your computer. To continue, click Next.

Just click the "Next" to continue.



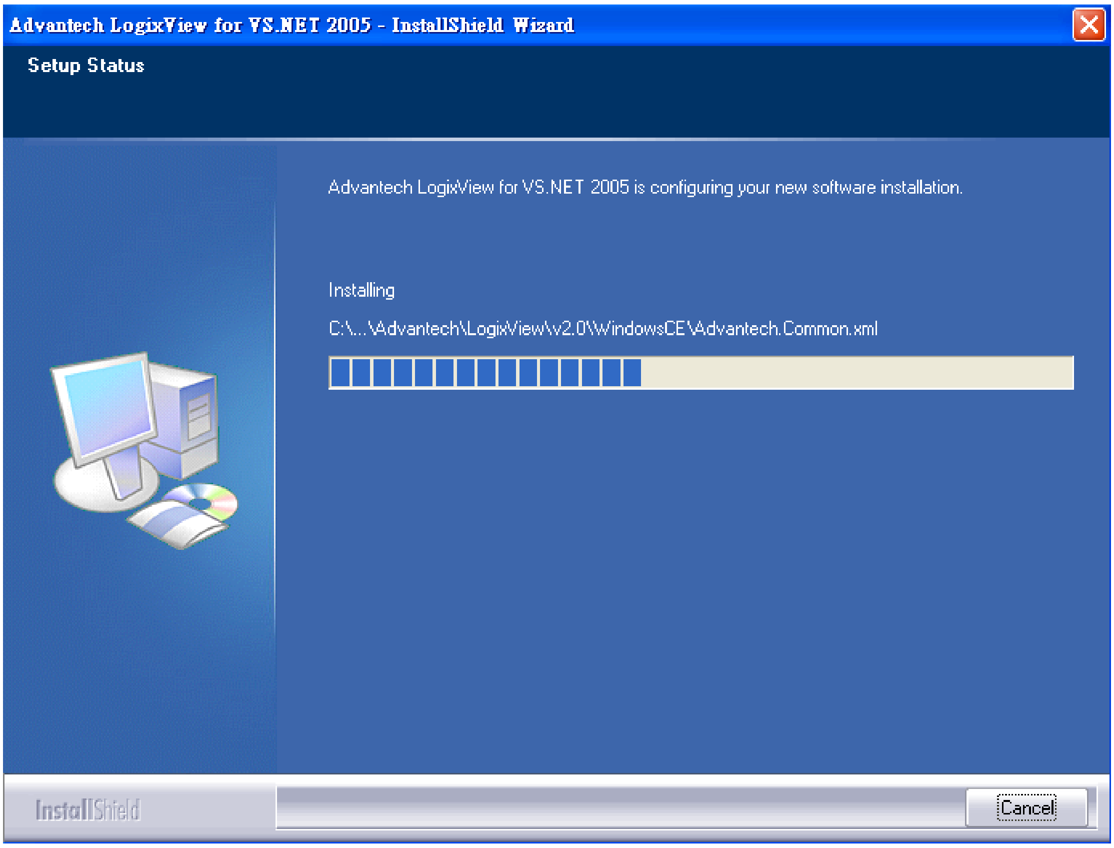
Ready to Install the Program

The wizard is ready to begin installation.

Click Install to begin the installation.

If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

Click "Install" to start the installation.



Advantech LogixView for VS.NET 2005 - InstallShield Wizard

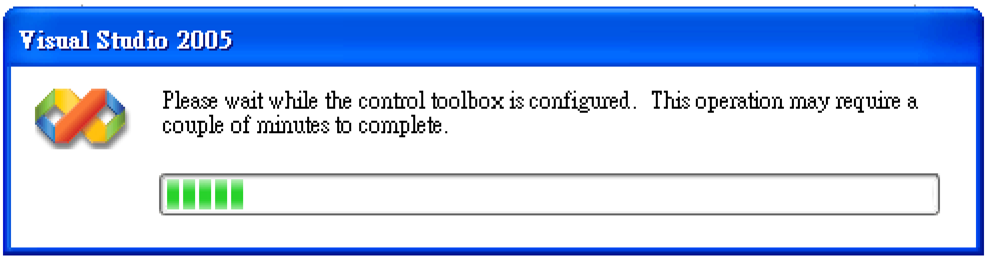
Setup Status

Advantech LogixView for VS.NET 2005 is configuring your new software installation.

Installing

C:\...\Advantech\LogixView\v2.0\WindowsCE\Advantech.Common.xml

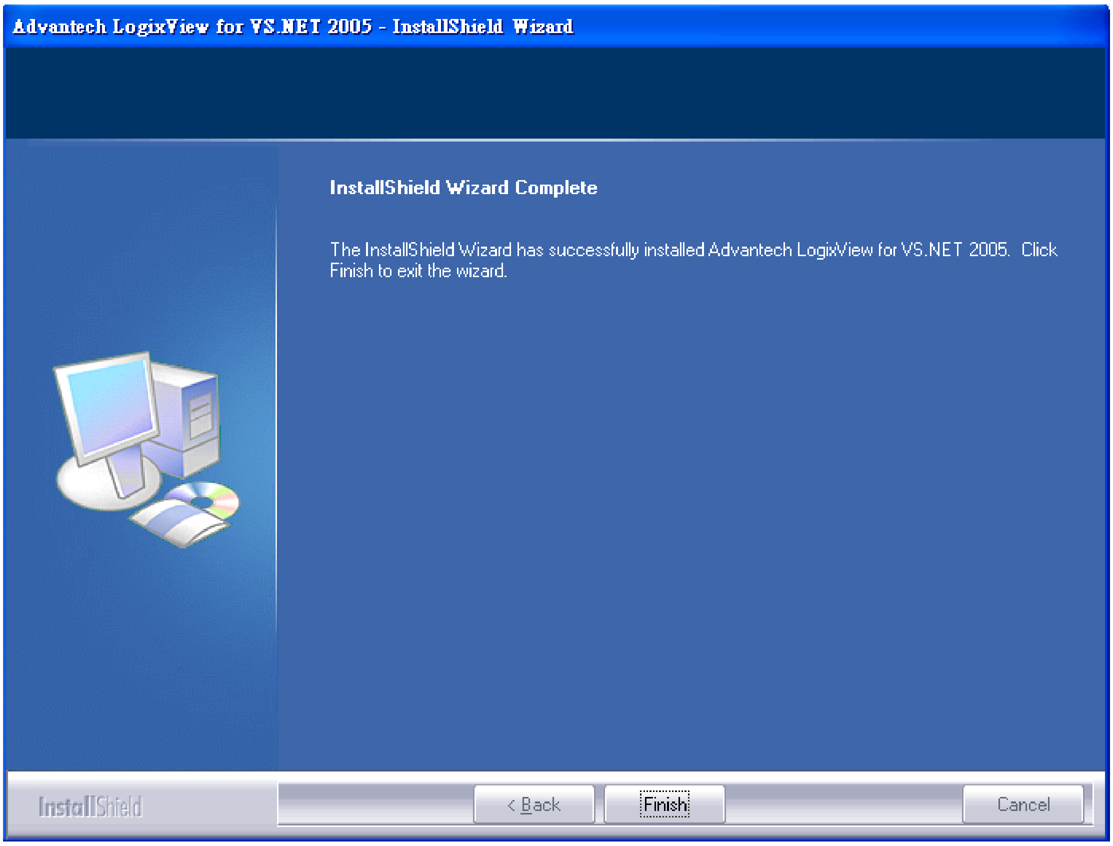
The installation then starts.



Visual Studio 2005

Please wait while the control toolbox is configured. This operation may require a couple of minutes to complete.

After the installation finished, you will the above window. Now the installation is trying to register the LogixView controls and components into the Visual Studio 2005. The process of this registration takes longer time to finish. Please be patient to wait for the process done.



Advantech LogixView for VS.NET 2005 - InstallShield Wizard

InstallShield Wizard Complete

The InstallShield Wizard has successfully installed Advantech LogixView for VS.NET 2005. Click Finish to exit the wizard.

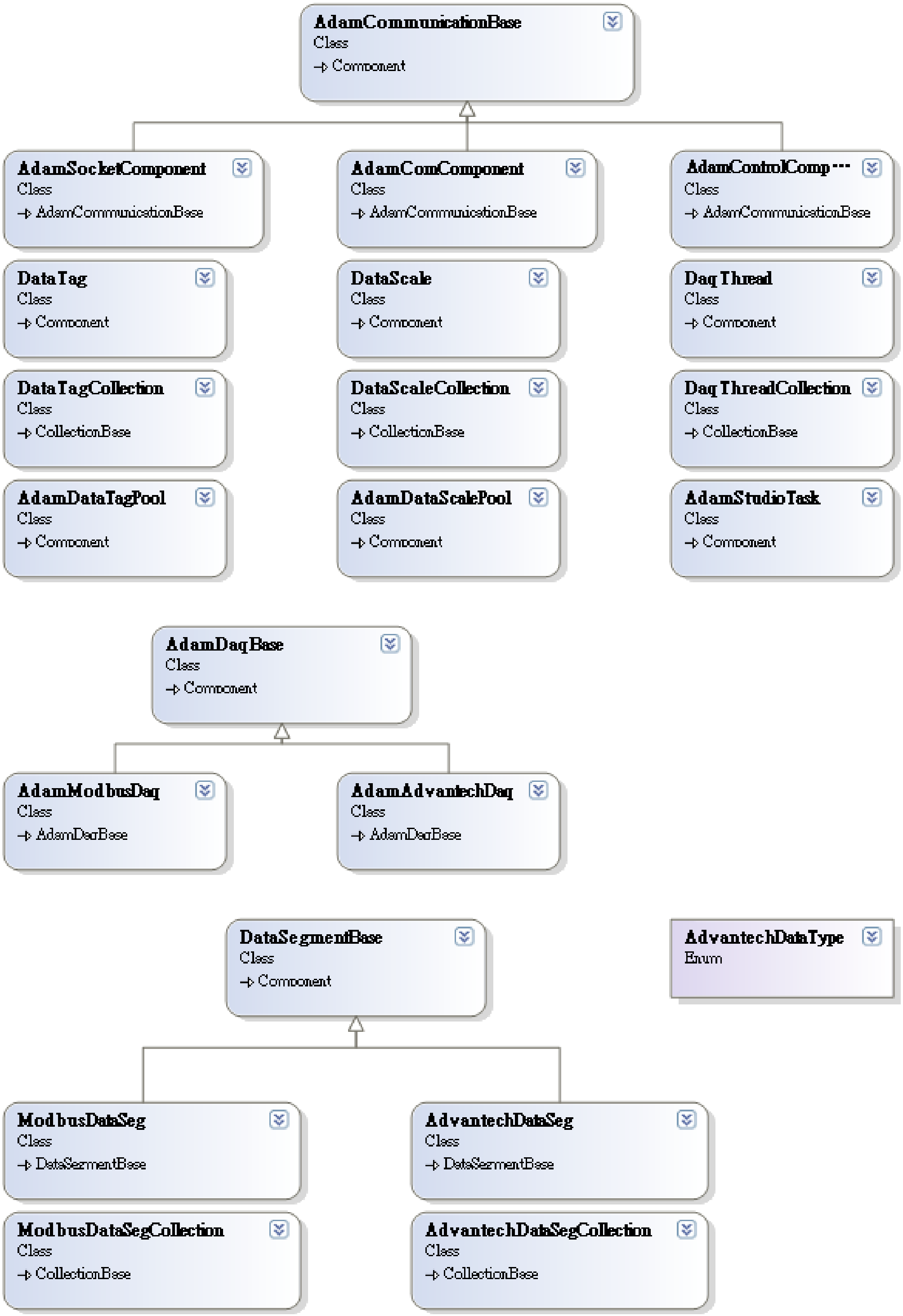
Now the installation and registration have been done. Click “Finish” to finish the installation.

Chapter 2

DAQ Components & Classes

2.1 Introduction

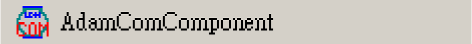
The LogixView offers several components for communication, data acquisition and scale, and task arrangement. This section will describe each component in details. The following picture shows the components and the relationship.



2.2 AdamCommunicationBase Component

The AdamCommunicationBase component is the base component for all communication components in the LogixView. Basically, users will not use this component directly.

2.3 AdamCom Component

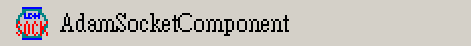

AdamComComponent

The AdamCom Component is used for serial port communication. Users who want to use ADAM-4000/4100/5000 series needs to use this component for serial communication. The protocol used for communication depends on the DAQ component. If users want to use MODBUS/RTU protocol for ADAM-4000 series, they have to choose the AdamModbusDaq component for data acquisition and AdamComComponent for communication. If the Advantech ASCII protocol is used for the ADAM-4000 series, they have to choose AdamAdvantechDaq component instead, but still use the AdamComComponent for communication.

The following table is the properties for AdamComComponent.

Property	Remark
Baudrate	The baud rate for the serial communication: l Baud_110 for 110 bps l Baud_300 for 300 bps l Baud_600 for 600 bps l Baud_1200 for 1200 bps l Baud_2400 for 2400 bps l Baud_4800 for 4800 bps l Baud_9600 for 9600 bps l Baud_14400 for 14400 bps l Baud_19200 for 19200 bps l Baud_38400 for 38400 bps l Baud_56000 for 56000 bps l Baud_57600 for 57600 bps l Baud_115200 for 115200 bps l Baud_128000 for 128000 bps l Baud_256000 for 256000 bps
Checksum	This property is special for Advantech ASCII protocol. Set to true if the checksum is using. Otherwise, set it to false.
Databits	The data bits for the serial communication: l Five for 5 data bits l Six for 6 data bits l Seven for 7 data bits l Eight for 8 data bits
Parity	The parity for the serial communication: l None if characters do not have a parity bit. l Odd if there are an odd number of 1s in the character. l Even if there are an even number of 1s in the character. l Mark if the parity bit is always 1. l Space if the parity bit is always 0.
Port	The port number for the serial communication.
Stopbits	The stop bits for the serial communication. The supported stop bits are: l One for 1 bit duration l OneAndHalf for 1.5 bit duration l Two for 2 bit duration
Timeout	The timeout for COM port reading and writing.

2.4 AdamSocket Component


AdamSocketComponent

The AdamSocketComponent is used for Ethernet communication. Users who want to use ADAM-5000TCP or ADAM-6000 series for data acquisition need to use this component for ethernet communication. The protocol used for the communication depends on the DAQ component is using. If users want to use MODBUS/TCP protocol for ADAM-6000 series, they have to choose the AdamModbusDaq component for data acquisition and the AdamSocketComponent for communication. The following table is the properties for AdamComComponent.

Property	**Remark**
AdamProtocolType	The Ethernet protocol that is used for the communication. The supported protocols are: l Tcp for connection oriented data communication l Udp for connectionless data communication
AdamSeriesType	The ADAM series type for the communication. Basically, this property is used for ADAM series configuration. For normal data acquisition, this field has no effect.
ConnectTimeout	The time to wait when connects to remote device. The unit is millisecond.
IPAddress	The IP address of the remote device. Currently, only the Ipv4 is supported.
RecvTimeout	The time to wait when receives data from remote device. The unit is millisecond.
SendTimeout	The time to wait when sends data from remote device. The unit is millisecond.

2.5 AdamControlComponent Component

AdamControlComponent

The AdamControlComponent is used for PAC devices. Users who want to use ADAM-55550 series for data acquisition need to use this component.

2.6 DataSegmentBase Component

The DataSegmentBase component is the base component for all data segment components in the LogixView. Basically, users will not use this component directly.

2.7 ModbusDataSeg Component

The ModbusDataSeg component is used to tell the AdamModbusDaq component the details of MODBUS data to exchange.

Property	Remark
ModbusDataType	The MODBUS data type for query data: l CoilStatus for reading or writing coil status. l InputStatus for reading input status. l InputRegister for reading input register. l HoldingRegister for reading or writing holding register.
SlaveAddress	The slave address used in the MODBUS packet.
StartAddress	The starting address of data used in the MODBUS packet.
TotalPoint	The total point of data used in the MODBUS packet.

2.8 ModbusDataSegCollection Class

The ModbusDataSegCollection class is a collection of ModbusDataSeg component. Basically, users will not use this class directly.

2.9 AdvantechDataSeg Component

The AdvantechDataSeg component is used to tell the AdamAdvantechDaq component the details of Advantech protocol data to exchange..

Property	Remark
Adam4000Type	The ADAM-4000 module type for query data. You can choose either ADAM-4000 type or ADAM-5000 type for data acquisition, but not both.
Adam5000Type	The ADAM-5000 module type for query data. You can choose either ADAM-4000 type or ADAM-5000 type for data acquisition, but not both.
AdvantechDataType	The Advantech data type for query data. The supported types are: l AnalogInput. l AnalogOutput. l DigitalInput l DigitalOutput. l Counter
SlaveAddress	The slave address used in the Advantech protocol. This property works when the AdamComComponent is using.
SlotIndex	The slot index for ADAM-5000 and ADAM-5550 series.
StartAddress	The starting address of data used in the Advantech protocol. This value is based ‘0’.
TotalPoint	The total point of data used in the Advantech protocol. The property is readonly.

2.10 AdvantechDataSegCollection Class

The AdvantechDataSegCollection class is a collection of AdvantechDataSeg component. Basically, users will not use this class directly.

2.11 AdamDaqBase

The AdamDaqBase component is the base component for all data acquisition components in the LogixView. Basically, users will not use this component directly.

2.12 AdamModbusDaq

AdamModbusDaq

The AdamModbusDaq is used for MODBUS protocol data acquisition. The following table is the properties for AdamModbusDaq.

Property	**Remark**
AdamCommunication	A reference of communication component used for MODBUS data acquisition. The supported communication components are: l AdamComComponent for MODBUS/RTU on serial communication. l AdamSocketComponent for MODBUS/TCP on Ethernet communication.
MaxFailForReconnect	The maximum continuous failures before reconnecting. Any success of communication will reset the failure count.
ModbusDataSegs	A reference of ModbusDataSegCollection. This is a collection of ModbusDataSeg component. The AdamModbusDaq component will continuously scan every ModbusDataSeg that is in this collection.
SegScanInterval	The interval from the end of this scanning to the start of next scanning.
WithDebugWindow	Set to true to enable the debug window popup at runtime. Otherwise, set to false.
DataTagPool	A reference of AdamDataTagPool component. The AdamDataTagPool component contains a property DataTags that is a collection of DataTag component. The AdamModbusDaq component uses ModbusDataSegs to collect data from devices. After the data is received, the DataTagPool will be applied to see which DataTag belongs to the current ModbusDataSeg. Then the data will be dispatched to all DataTags related to the ModbusDataSeg.

2.13 AdamAdvantechDaq

AdamAdvantechDaq

The AdamAdvantechDaq is used for Advantech protocol data acquisition. The following table is the properties for AdamAdvantechDaq.

Property	Remark
AdamCommunication	A reference of communication component used for MODBUS data acquisition. The supported communication components are: l AdamComComponent for MODBUS/RTU on serial communication. l AdamSocketComponent for MODBUS/TCP on Ethernet communication.
AdvantechDataSegs	A reference of AdvantechDataSegCollection. This is a collection of AdvantechDataSeg component. The AdamAdvantechDaq component will continuously scan every AdvantechDataSeg that is in this collection.
SegScanInterval	The interval from the end of this scanning to the start of next scanning.
WithDebugWindow	Set to true to enable the debug window popup at runtime. Otherwise, set to false.
DataTagPool	A reference of AdamDataTagPool component. The AdamDataTagPool component contains a property DataTags that is a collection of DataTag component. The AdamModbusDaq component uses ModbusDataSegs to collect data from devices. After the data is received, the DataTagPool will be applied to see which DataTag belongs to the current ModbusDataSeg. Then the data will be dispatched to all DataTags related to the ModbusDataSeg.

2.14 DataTag Component

The DataTag component deals with the data between the DAQ components and graphic controls. The following table is the properties for DataTag.

Property	Remark
DataSegment	A reference of data segment component that is inherited from DataSegmentBase. This property indicates the data exchange target to deal with.
DataMode	The data exchange mode. The supported modes are: l DataRead for only reading data from DataSegment. l DataWrite for only writing data to DataSegment. l DataReadWrite for reading or writing data from or to the DataSegment.
DataScale	A reference of DataScale component. If the data type in the DataSegment is single or integer, this property will be applied for data scaling. If this property is not assigned, then raw data will not be scaled.
StartIndex	The start index for retrieving data from DataSegment. This property is based 1.
TotalPoint	The total data point to get from the DataSegment.
DisplayDecimalPoint	The decimal point to display if the data is going to be assigned into a text related control.
WinControl	A reference of windows control. The data received will be applied into the windows control depending on the character of the control. If the DataTag is in DataWrite mode, the value changed in the windows control will be sent to the related DataSegment.

If you intend to use a tag to read data without the relation to a window control, you can use following event to handle it.

Event	Remark
OnDataTagUpdated	When data segment updates the data tag, this event will be trigger. You can use one of the following properties to get the values depending on the data type of the data segment. l Use “RawBoolData” to get Boolean data array. l Use “RawFloatData” to get float data array. l Use “ScaledFloatData” to get scaled data array.

If you intend to use the tag to write data without the relation to a window control, you can use following method.

Method	Remark
ForceWriteData	Call this function to pass a Boolean value or float value to the tag’s output buffer. If data scaling is applied for this tag and the passed in data is float, the value be scaled and then store in buffer. The data segment will fetch the data and output it to the device.

2.15 DataTagCollection Class

The DataTagCollection class is a collection of DataTag component. Basically, users will not use this class directly.

2.16 AdamDataTagPool Component

AdamDataTagPool

The AdamDataTagPool contains a property called DataTags that is a collection of DataTag component. The pool has no information about the data segment. In other word, the pool can contain DataTags that belong to different data segments. The following table is the properties for AdamDataTagPool.

Property	**Remark**
DataTags	The collection of DataTag component.

2.17 DataScale Component

The DataScale component deals with the data scaling..

Property	**Remark**
SourceMax	The maximum value of the data source from DataSegment.
SourceMin	The minimum value of the data source from DataSegment.
TargetMax	The maximum value of the target data to be assigned in DataTag.
TargetMin	The maximum value of the minimum data to be assigned in DataTag.

2.18 DataScaleCollection Class

The DataScaleCollection class is a collection of DataScale component. Basically, users will not use this class directly.

2.19 AdamDataScalePool Component

AdamDataScalePool

The AdamScalePool contains a property called DataScales that is a collection of DataScale component. In the DataTag component, there is a property called DataScale that is a reference of DataTag component from this pool. The following table is the properties for AdamDataScalePool.

Property	**Remark**
DataScales	The collection of DataScale component.

2.20 DaqThread Component

The DataThread component deals with the thread of data acquisition component. Basically, each data acquisition will has one DaqThread referring to it.

Property	Remark
AdamDaq	A reference of the data acquisition component. If this property is set, the thread associates with this DAQ will be created at run time.
ThreadPriority	The working priority of the thread.

2.21 DaqThreadCollection Class

The DaqThreadCollection class is a collection of DaqThread component. Basically, users will not use this class directly.

2.1. AdamStudioTask Component

AdamStudioTask

The AdamStudioTask contains a property called DaqThreads that is a collection of DaqThread component. In the DaqThread component, there is a property called AdamDaq that is a reference of the DAQ component that is inherited from AdamDaqBase. Each DaqThread will create a thread at run time to perform the routine defined in the DAQ component. The following table is the properties for AdamStudioTask.

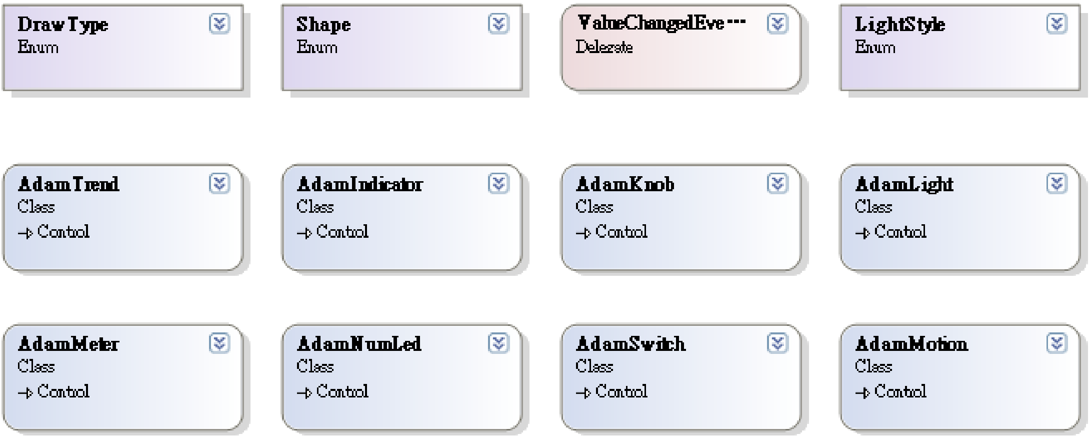
Property	Remark
DaqThreads	The collection of the DAQ component that is inherited from AdamDaqBase.

Chapter 3

Graphic Controls

3.1 Introduction

The LogixView offers several graphic controls for user to develop the GUI (graphic user interface). This section will describe each control in details. The following picture shows the controls and some enumeration used for the controls.



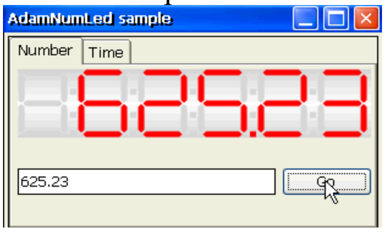
3.2 AdamNumLed

88 AdamNumLed

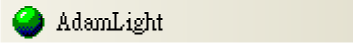
The AdamNumLed is used to display a LED like number. The acceptable characters that can be displayed is number (0~9), minus sign (-), dot (.) and colon (:). So the data can be displayed will be integer, floating number, and time. The following table is the properties for AdamNumLed.

Property	Remarks
BackDarkColor	The dark color used to form the back color. The color is applied from the top and bottom of the control.
BackLightColor	The light color used to form the back color. The color is applied from the horizontal center line of the control.
DigitCount	The digit total for the control. The number is between 1 and 10. Only the number character is counted. The dot and colon are displayed between the digits and not counted.
LedOffColor	The digit color when nothing display.
LedOnColor	The digit color when digit display.
LineWidth	The line width, in pixel, used to draw the digit.
Registration	The registration code for the control.
Value	The value to display. This property is a string. If any character in the string is not acceptable, the character will be skipped. For example, if the value is “23A56”, only “2356” will be displayed.

You can find a sample on
VB sample: “WindowsCE\VB\GraphicControl\AdamNumLedSample”.
VC# sample: “WindowsCE\VC#\GraphicControl\AdamNumLedSample”.



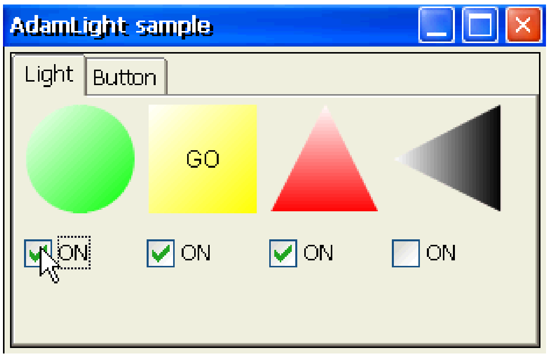
3.3 AdamLight



The AdamLight is used to display different colors to indicate ON or OFF status. The following table is the properties for is the properties for AdamLight.

Property	Remarks
Clickable	Set to true, the control will accept mouse click event and switch the light from ON to OFF, or from OFF to ON.
LightOffColor	The light color when the value is false.
LightOffString	The light string when the value is false.
LightOnColor	The light color when the value is true.
LightOnString	The light string when the value is true.
Registration	The registration code for the control.
Style	The outlook of the light. The supported styles are: Round Rectangle TriangleUp TriangleDown TriangleLeft TriangleRight
Value	The Boolean value indicates the light is ON or OFF.

You can find a sample on
VB sample: “WindowsCE\VB\GraphicControl\AdamLightSample”.
VC# sample: “WindowsCE\VC#\GraphicControl\AdamLightSample”..

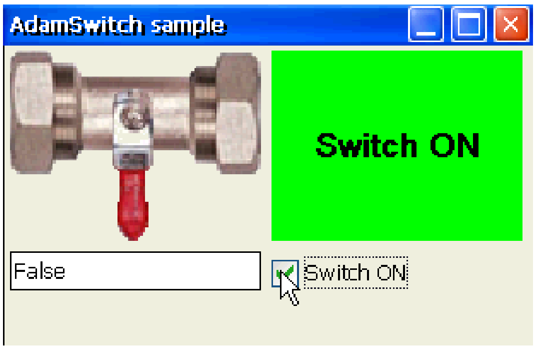


3.4 AdamSwitch

The AdamSwitch is used to display different images and strings to indicate ON or OFF status. The following table is the properties for AdamSwitch.

Property	Remarks
Clickable	Set to true, the control will accept mouse click event and switch the control from ON to OFF, or from OFF to ON.
Registration	The registration code for the control.
StretchImage	Set to true, the image will be stretched into the whole control.
SwitchOffImage	The image to be displayed when the switch is set to false.
SwitchOffString	The string to be displayed when the switch is set to false.
SwitchOnImage	The image to be displayed when the switch is set to true.
SwitchOnString	The string to be displayed when the switch is set to true.
Value	The Boolean value indicates the switch is ON or OFF.

You can find a sample on
VB sample: “WindowsCE\VB\GraphicControl\AdamSwitchSample”
VC# sample: “WindowsCE\VC#\GraphicControl\AdamSwitchSample”



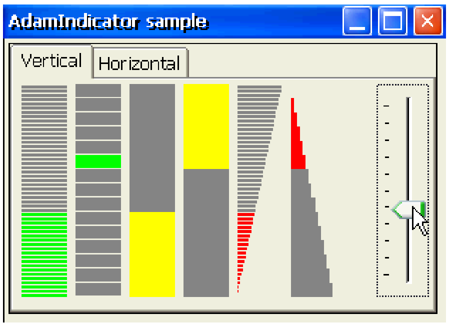
3.5 AdamIndicator

AdamIndicator

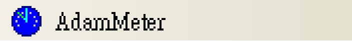
The AdamIndicator is used to display the progress or quantity percentage. The following table is the properties for AdamIndicator.

Property	Remarks
GapWidth	The gap in pixel between indicator bars.
IndicateType	The bar type of the indicator. The supported values are: Continuous Indicative
IndicatorOffColor	The bar color when nothing display.
IndicatorOnColor	The bar color when bar display.
LineWidth	The width of the bar line if the orientation is vertical.
Maximum	The maximum number of the indicator.
Minimum	The minimum number of the indicator.
MinimumBase	The base that minimum value start from. The supported values are: BottomLeft TopRight
Orientation	The orientation of the indicator. The supported values are: Vertical Horizontal
Registration	The registration code for the control.
Shape	The shape of the indicator. The supported values are: Rectangle Triangle
Value	The floating number indicates the progress or quantity of the indicator. The value is between the Maximum and Minimum values.

You can find a sample on
VB sample: “WindowsCE\VB\GraphicControl\AdamIndicatorSample"
VC# sample: "WindowsCE\VC#\GraphicControl\AdamIndicatorSample”



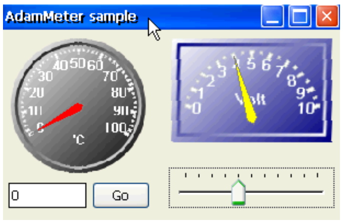
3.6 AdamMeter


AdamMeter

The AdamMeter is used to display the analog value by the needle. The following table is the properties for AdamMeter.

Property	Remarks
BackDarkColor	The dark color used to form the back color. The color is applied from the bottom-right corner of the control.
BackLightColor	The light color used to form the back color. The color is applied from the top-left of the control.
CenterColor	The color center circle. This property has no effect in WinCE version.
CenterWidth	The radius of the center circle. This property has no effect in WinCE version.
DecimalPoint	The minimum decimal value change that will cause the control to redraw. For example, if the value is set to 1, the meter redraws the needle only when the difference between the previous value and current assign value is greater than or equal to 0.1.
MajorTickCount	The major tick count of the meter. The starting tick is not counted. The value label only show at the major ticks.
Maximum	The maximum number of the indicator.
Minimum	The minimum number of the indicator.
MinorTickCount	The minor tick count of the meter. The starting tick is not counted.
MeedleColor	The color of the needle.
Registration	The registration code for the control.
Style	The style of the meter.
TickColor	The color of the tick label and value.
Unit	The unit string to be shown under the center of the needle.
Value	The floating number indicates the needle value. The value is between the Maximum and Minimum values.

You can find a sample on:
VB sample: “WindowsCE\VB\GraphicControl\AdamMeterSample”.
VC# sample: “WindowsCE\VC#\GraphicControl\AdamMeterSample”..



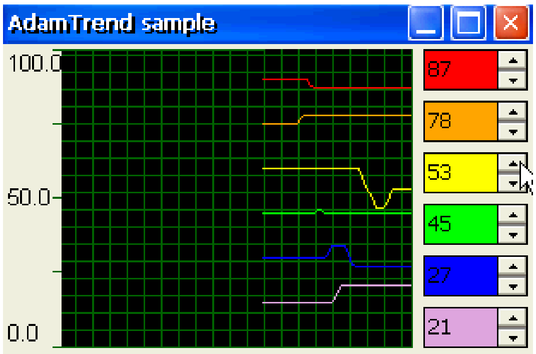
3.7 AdamTrend

AdamTrend

The AdamMeter is used to display the analog value by the needle. The following table is the properties for AdamMeter.

Property	Remarks
DrawType	The drawing type of the line. The supported values are: Analog Digital
GridBackColor	The back color of the grid line surface.
GridColor	The color of the grid line.
GridLineSize	The gap between grid lines. The unit is pixel.
MaximumY	The maximum value of Y-axis
MinimumY	The minimum value of Y-axis
Pen0Color	The color of Pen-0.
Pen1Color	The color of Pen-1.
Pen2Color	The color of Pen-2.
Pen3Color	The color of Pen-3.
Pen4Color	The color of Pen-4.
Pen5Color	The color of Pen-5.
Pen6Color	The color of Pen-6.
Pen7Color	The color of Pen-7.
Registration	The registration code for the control.
StepSize	The X-axis movement on each update. The unit is pixel.
HoriLabelOrientation	The horizontal label orientation.
HoriLabelType	The horizontal label type.
VertLabelOrientation	The vertical label orientation.
VertLabelUnit	The unit caption of the vertical label.

You can find a sample on:
VB sample: “WindowsCE\VB\GraphicControl\AdamTrendSample”.
VC# sample: “WindowsCE\VC#\GraphicControl\AdamTrendSample”.


AdamTrend sample

87
78
53
45
27
21

3.8 AdamKnob

AdamKnob

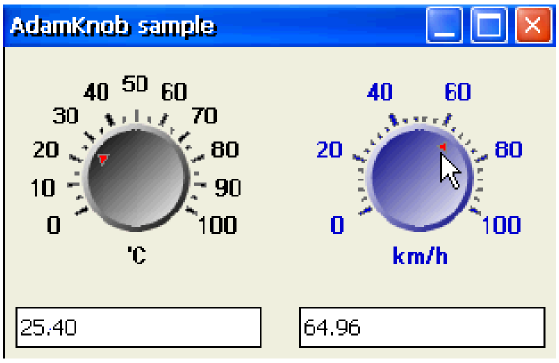
The AdamKnob is used to generate analog value by adjusting the needle. The following table is the properties for AdamKnob.

Property	**Remarks**
BackDarkColor	The dark color used to form the back color. The color is applied from the top-left corner of the control.
BackLightColor	The light color used to form the back color. The color is applied from the bottom-right of the control.
DecimalPoint	The minimum decimal value change that will cause the control to fire event. For example, if the value is set to 1, the knob fires the ValueChanged event only when the difference between the previous value and current value is greater than or equal to 0.1. The supported value is between 0 and 3.
MajorTickCount	The major tick count of the meter. The starting tick is not counted. The value label only show at the major ticks.
Maximum	The maximum number of the indicator.
Minimum	The minimum number of the indicator.
MinorTickCount	The minor tick count of the meter. The starting tick is not counted.
MeedleColor	The color of the needle.
Registration	The registration code for the control.
TickColor	The color of the tick label and value.
Unit	The unit string to be shown under the knob.
Value	The floating number indicates the needle value. The value is between the Maximum and Minimum values.

You can find a sample on

VB sample: “WindowsCE\VB\GraphicControl\AdamKnobSample”.

VC# sample: “WindowsCE\VC#\GraphicControl\AdamKnobSample”..



25.40

64.96

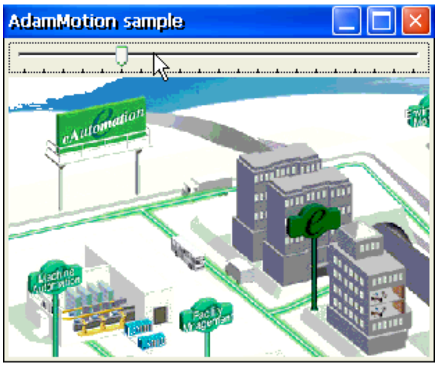
3.9 AdamMotion

The AdamMotion is used to display a moving object on the background image. The following table is the properties for AdamMotion.

Property	Remarks
BackgroundImage	The background image of the control.
DecimalPoint	The minimum decimal value change that will cause the control to redraw. For example, if the value is set to 1, the motion redraws the object only when the difference between the previous value and current assign value is greater than or equal to 0.1. The supported value is between 0 and 3.
Maximum	The maximum number of the control.
Minimum	The minimum number of the control.
MotionImage	The image of the moving object.
MotionImageSize	The size of the moving object. The MotionImage will be stretched to the size.
MotionMaximum	The location of the moving object when the Value equals to the Maximum.
MotionMinimum	The location of the moving object when the Value equals to theMinimum.
Registration	The registration code for the control.
StretchImage	Set to true, the background image will be stretched into the whole control.
Value	The floating value is used to calculate the moving object location between the MotionMaximum and MotionMinimum.

AdamStudioTask

You can find a sample on
VB sample: “WindowsCE\VB\GraphicControl\AdamMotionSample”.
VC# sample: “WindowsCE\VC#\GraphicControl\AdamMotionSample”.



3.10 Other Supported Visual Studio Controls

1. TextBox (DataRead)
2. Label (DataRead)
3. ProgressBar (DataRead)
4. RadioButton (DataReadWrite)
5. CheckBox (DataReadWrite)
6. TrackBar (DataReadWrite)

Chapter 4

Working Theory

4.1 Introdcution

The following sequence diagram shows the working flow of all the LogixView controls and components.

4.1.1 Working Sequence Diagrams

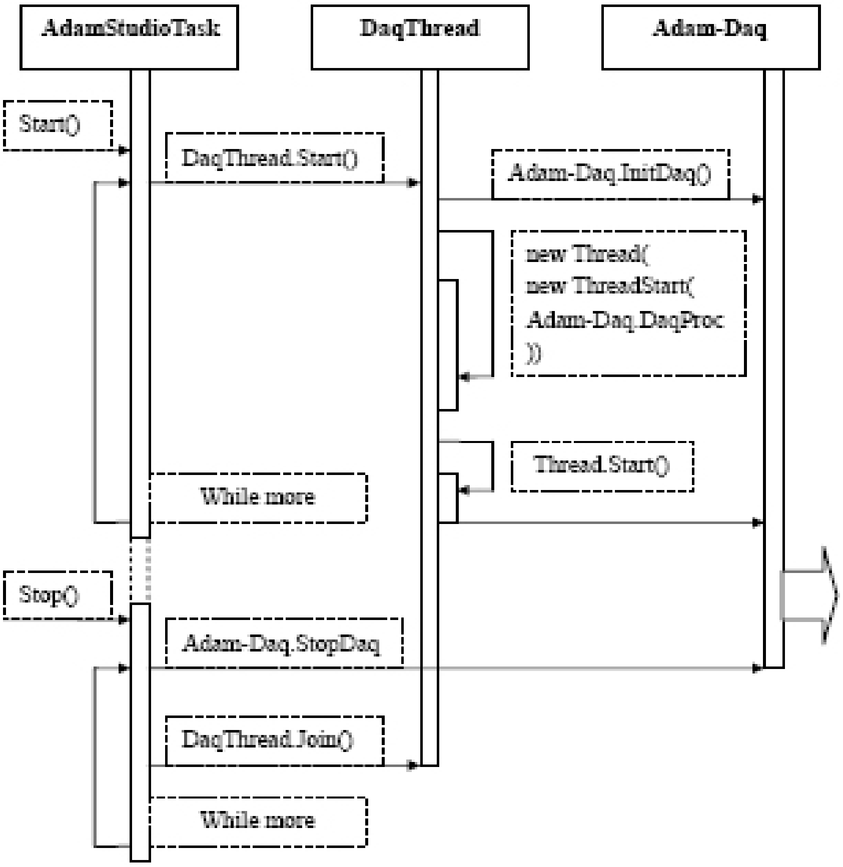


Figure 4.1 Diagram 1-1

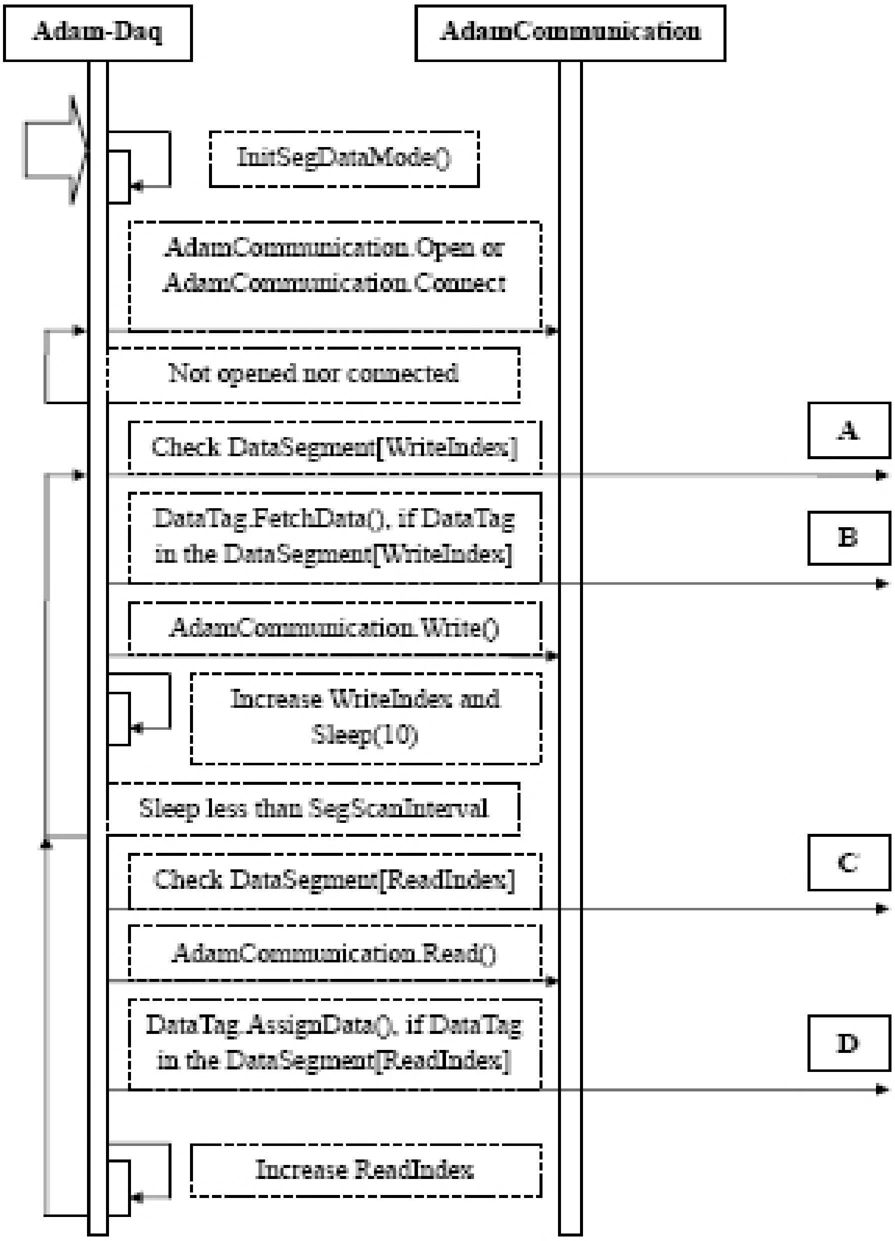

Adam-Daq
AdamCommunication
InitSegDataMode()
AdamCommunication.Open or
AdamCommunication.Connect
Not opened nor connected
Check DataSegment[WriteIndex]
A
DataTag.FetchData(), if DataTag
in the DataSegment[WriteIndex]
B
AdamCommunication.Write()
Increase WriteIndex and
Sleep(10)
Sleep less than SegScanInterval
Check DataSegment[ReadIndex]
C
AdamCommunication.Read()
DataTag.AssignData(), if DataTag
in the DataSegment[ReadIndex]
D
Increase ReadIndex

Figure 4.2 Diagram 1-2

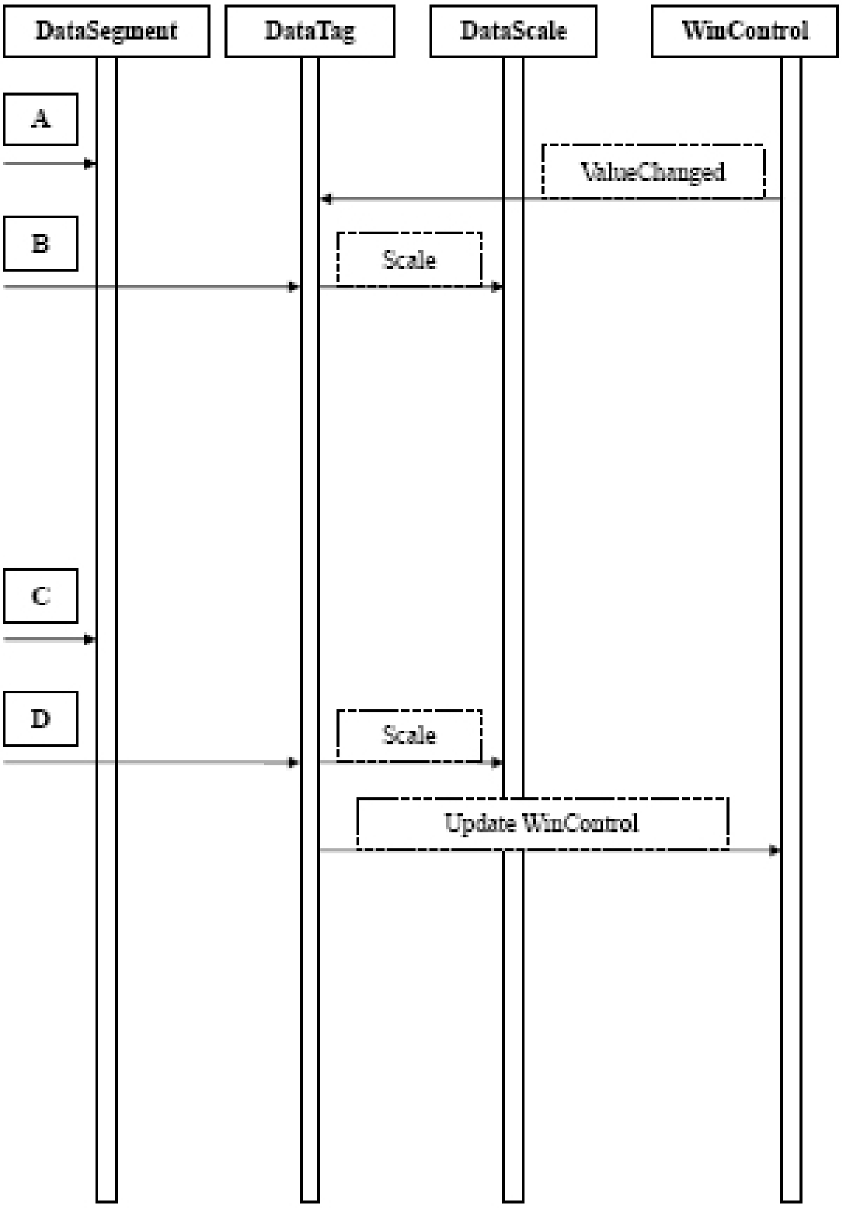


Figure 4.3 Diagram 1-3

4.2 Reaction Timing

The following pseudo code shows the process for a single DAQThread. The words with red color are the main time consumption points. This will help the programmer to predict the activity of each DAQ.

4.2.1 Pseudo Code (DaqThread with ADAMComComponent)

```
FUNCTION DaqProcess
BEGIN
SET readIndex to zero
SET writeIndex to zero
SET sleepTotal to zero
WHILE true
    IF isRunning is false THEN
        IF COM port is opened THEN
            CALL CloseComPort
        ENDIF
        EXIT
    ENDIF
    IF COM port is opened THEN
        IF dataSegment[writeIndex] has dataTags with write mode THEN
            FOR each dataTag that has write mode in current daraSegment
                CALL FetchData with dataTag
                IF FetchData is true THEN
                    CALL SetValue to write segment value to device
                ENDIF
            ENDFOR
        ENDIF
        IF writeIndex equals to the total of dataSegment
            SET writeIndex to zero
        ELSE
            INCREMENT writeIndex
        ENDIF
        sleep 10 milliseconds
        INCREMENT sleepTotal by 10
        IF dataSegment[readIndex] has dataTags with read mode THEN
        IF sleepTotal is greater or equals to segScanInterval
        SET sleepTotal to zero
            CALL GetValue to read segment values from device
                IF GetValue success THEN
                    FOR each dataTag has read mode in current dataSegment
                        CALL AssignData to pass data into the dataTag
                    ENDFOR
                ENDIF
                IF readIndex equals to the total of dataSegment
                    SET readIndex to zero
                ELSE
                    INCREMENT readIndex
                ENDIF
            ENDIF
        ELSE
            IF readIndex equals to the total of dataSegment
                SET readIndex to zero
                ELSE
                    INCREMENT readIndex
                ENDIF
            ENDIF
        ELSE
            CALL OpenComPort
            IF OpenComPort failed THEN
                sleep 1 second
            ENDIF
        ENDIF
END WHILE
END
```

4.0.1. **Pseudo code (DaqThread with AdamSocketComponent)**

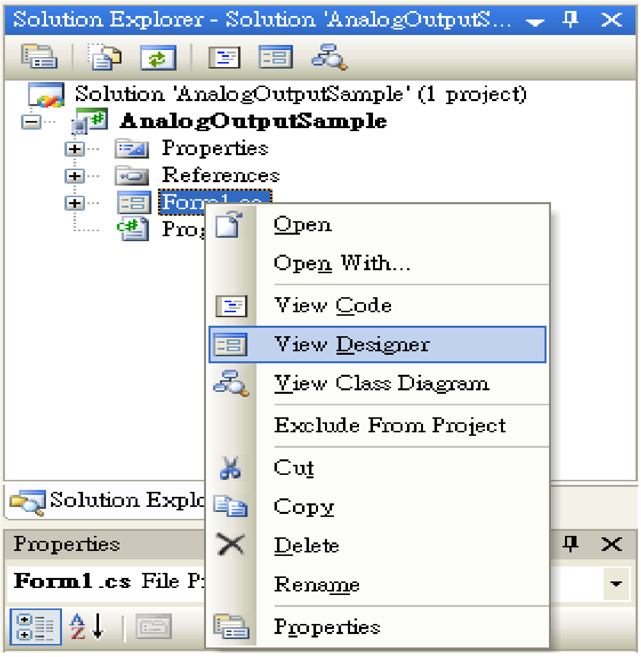
```
FUNCTION DaqProcess
BEGIN
SET readIndex to zero
SET writeIndex to zero
SET sleepTotal to zero
SET failTotal to zero
WHILE true
    IF isRunning is false THEN
        IF Socket is connected THEN
            CALL Disconnect
        ENDIF
        EXIT
    ENDIF
    IF Socket is connected THEN
        IF dataSegment[writeIndex] has dataTags with write mode THEN
            FOR each dataTag that has write mode in current daraSegment
                CALL FetchData with dataTag
                IF FetchData is true THEN
                    CALL SetValue to write segment value to device
                    IF SetValue success THEN
                        SET failTotal to zero
                    ELSE
                        INCREMENT failTotal
                    ENDIF
                ENDIF
                IF failTotal is greater than or equal to MaxFail THEN
                BREAK
                ENDIF
            ENDFOR
            IF failTotal is greater than or equal to MaxFail THEN
            CALL Disconnect
            CONTINUE
            ENDIF
        ENDIF
        IF writeIndex equals to the total of dataSegment
            SET writeIndex to zero
        ELSE
            INCREMENT writeIndex
        ENDIF
        sleep 10 milliseconds
        INCREMENT sleepTotal by 10
        IF dataSegment[readIndex] has dataTags with read mode THEN
        IF sleepTotal is greater or equals to segScanInterval
        SET sleepTotal to zero
            CALL GetValue to read segment values from device
                IF GetValue success THEN
                    FOR each dataTag has read mode in current dataSegment
                        CALL AssignData to pass data into the dataTag
                    ENDFOR
                ELSE
                    INCREMENT failTotal
                    IF failTotal is greater than or equal to MaxFail THEN
                    CALL Disconnect
                    CONTINUE
                    ENDIF
                ENDIF
                IF readIndex equals to the total of dataSegment
                    SET readIndex to zero
                ELSE
                    INCREMENT readIndex
                ENDIF
            ENDIF
        ELSE
            IF readIndex equals to the total of dataSegment
                SET readIndex to zero
            ELSE
                INCREMENT readIndex
            ENDIF
        ENDIF
    ELSE
        CALL Connect
        IF Connect failed THEN
            sleep 1 second
        ENDIF
    ENDIF
END WHILE
END
```

Chapter 5

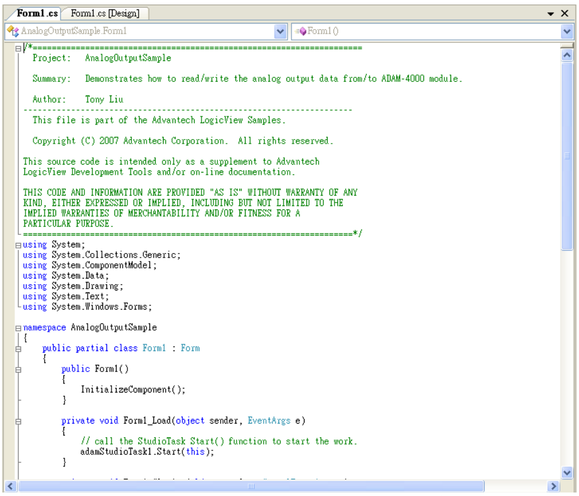
Tutorials

5.1 Visual Studio 2005 Introduction

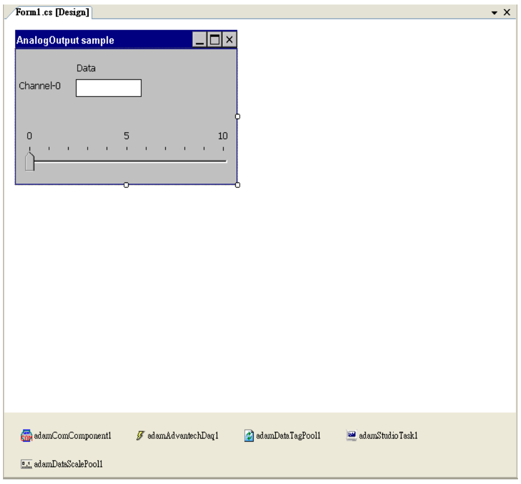
From the windows menu, go to “Start->Programs->Advantech Automation->Logix-View->VS2005->Samples”, you will find all the samples. Before go on the samples, the following sections are few hints to use the Visual Studio 2005. First of all, find out the solution file for Visual Studio 2005 under the sample directory with the extention “sln”. Double click on the file, the Visual Studio 2005 will be launched. On the IDE, find the “Solution Explorer”. On the “Form1.cs”, right click the mouse and you will see a popup menu as below.



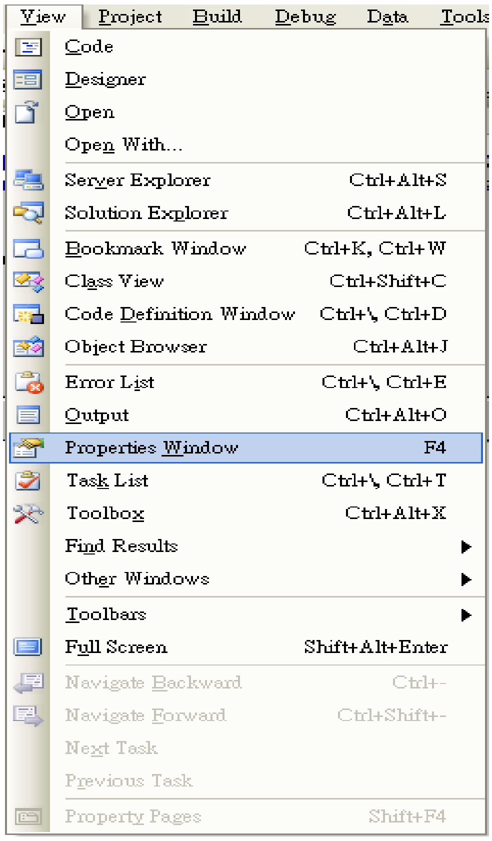
If you want to see the source code of the form, click on the “View Code”. If you want to see the form outlook, click on the “View Designer”, then you will see the form design window.

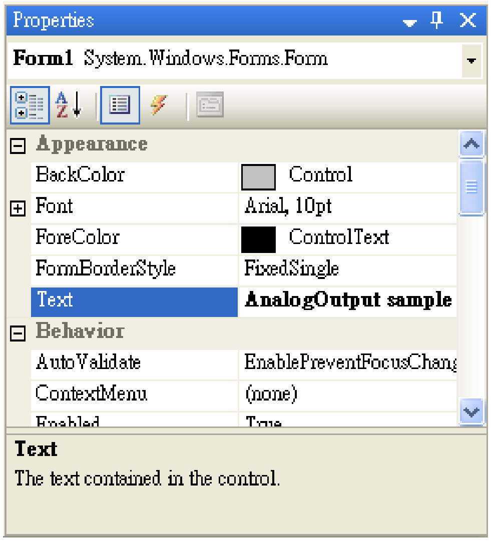


```
/*=====================================================================
  Project:   AnalogOutputSample

  Summary:   Demonstrates how to read/write the analog output data from/to ADAM-4000 module.

  Author:    Tony Liu
----------------------------------------------------------------------
  This file is part of the Advantech LogicView Samples.

  Copyright (C) 2007 Advantech Corporation.  All rights reserved.

This source code is intended only as a supplement to Advantech
LogicView Development Tools and/or on-line documentation.

THIS CODE AND INFORMATION ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A
PARTICULAR PURPOSE.
=====================================================================*/
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

namespace AnalogOutputSample
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void Form1_Load(object sender, EventArgs e)
        {
            // call the StudioTask Start() function to start the work.
            adamStudioTask1.Start(this);
        }
```



You can click any controls on the form, or any component on the bottom. Go to View->Properties Window, you will see the properties and event for the control or component.




Properties

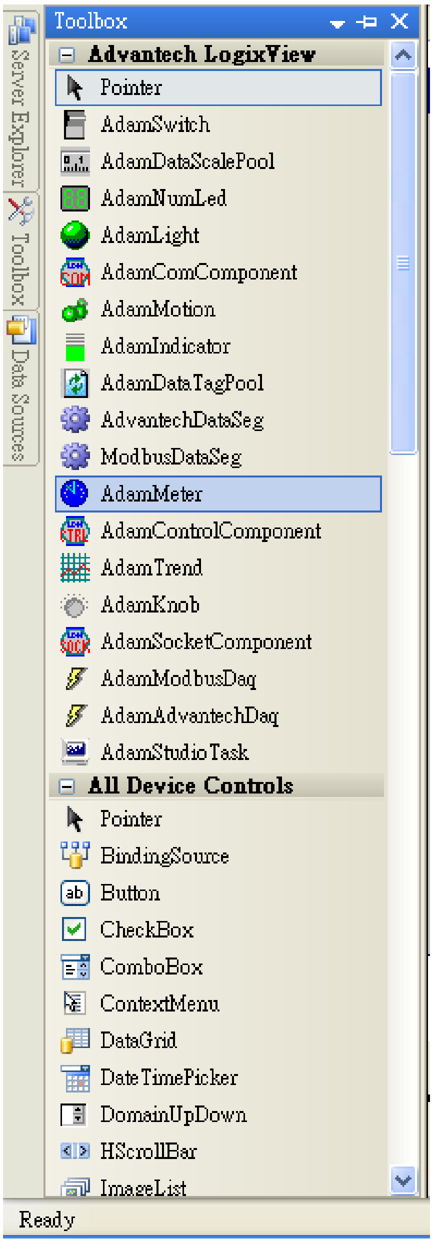
Form1 System.Windows.Forms.Form

Appearance	
BackColor	Control
Font	Arial, 10pt
ForeColor	ControlText
FormBorderStyle	FixedSingle
Text	**AnalogOutput sample**
Behavior	
AutoValidate	EnablePreventFocusChang
ContextMenu	(none)
Enabled	True

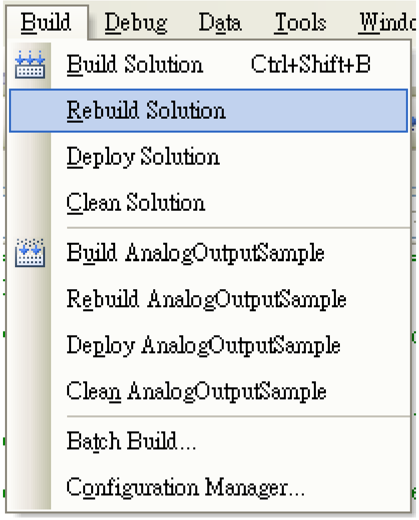
Text
The text contained in the control.

When the form design window is shown, on the menu, go to View->Toolbox.

Then you will see the Toolbox. On the “Advantech LogixView” tab, you can see the LogixView related controls and components. To use the controls or component, simply just drag it and drop into the form.



To build the sample, go to Build->Rebuild Solution, then the executable file will be generated into the "bin" directory under the sample.

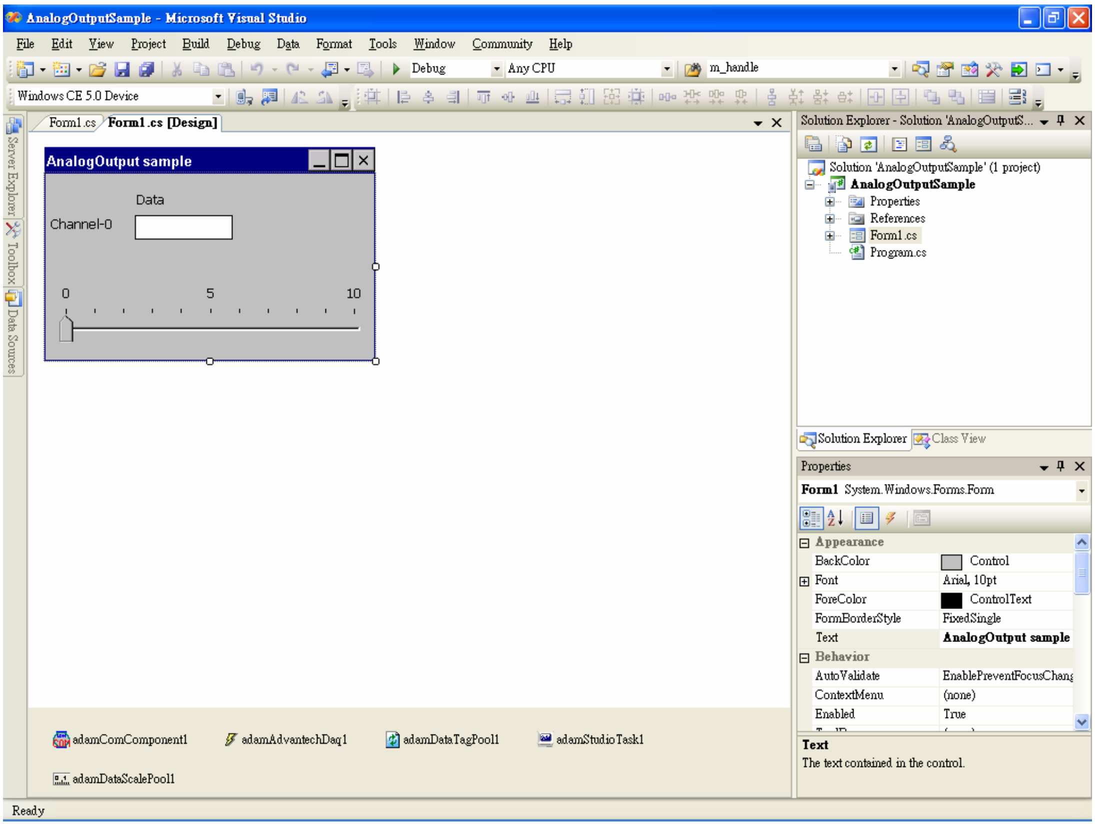


If you want to run the sample, you have to deploy all the “DLL” files and “EXE” file under the “bin” directory onto target machine. The ways to deploy programs onto target machine are listed below:

1. Use “Null Modem” cable to connect your machine’s COM with the target machine’s COM port. Setup the “ActiveSync” to connect to target device. Go to Build->Deploy Solution and click on it. Then the programs will be transferred onto target machine.
2. Use “Null Modem” cable to connect your machine’s COM with the target machine’s COM port. Setup the “ActiveSync” to connect to target device. Go to windows explorer and click on the “Mobile Device” under “My Computer”. Simply copy file onto target machine.
3. If your machine and target machine are connected via LAN, you can use “Advantech DiagAnywhere” utility to transfer files from your machine to target machine if it is an Advantech eAutomation product.

5.2 AdamAdvantechDaq Walkthrough

Open “WindowsCE\VC#\AdvantechASCII\AnalogOutputSample\AnalogOutputSample.sln” under “Samples” directory using the Visual Studio 2005. Open the form designer of the “Form1.cs”.



Form1 System.Windows.Forms.Form

Appearance

BackColor	Control
Font	Arial, 10pt
ForeColor	ControlText
FormBorderStyle	FixedSingle
Text	AnalogOutput sample

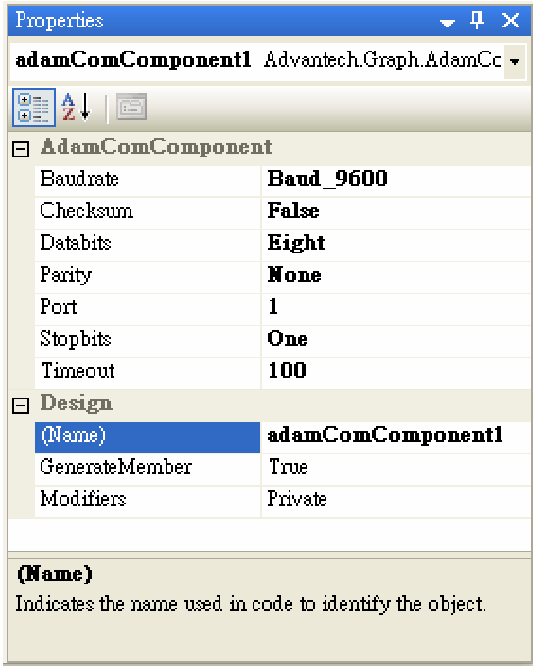
Behavior

AutoValidate	EnablePreventFocusChang
ContextMenu	(none)
Enabled	True

Text
The text contained in the control.

5.2.1 AdamCommunication

Click the “adamComComponent1” on the bottom, and check the “Properties” window. You can see the COM port setting for this sample. If you have different setting for your target device, modify them here.



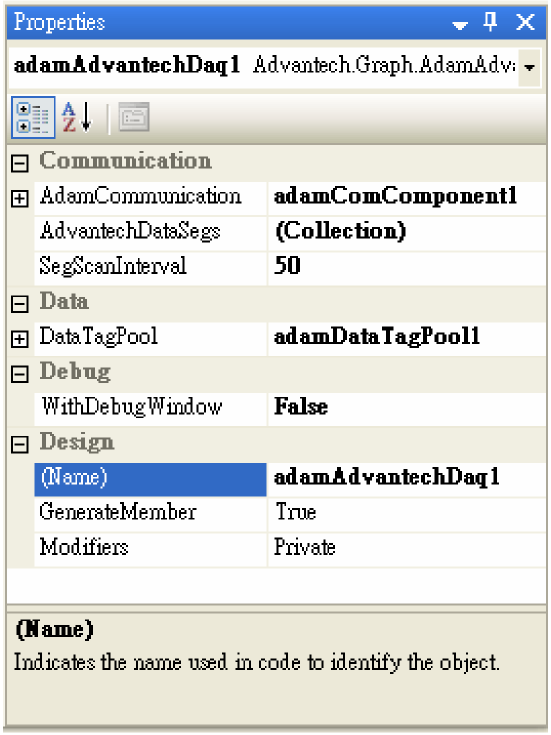
adamComComponent1 Advantech.Graph.AdamCc

AdamComComponent	
Baudrate	Baud_9600
Checksum	False
Databits	Eight
Parity	None
Port	1
Stopbits	One
Timeout	100
Design	
(Name)	adamComComponent1
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

5.2.2 AdamAdvantechDaq

Click the “adamAdvantechDaq1” on the bottom, and check the “Properties” window. You can see the properties of the data acquisition task for this sample.

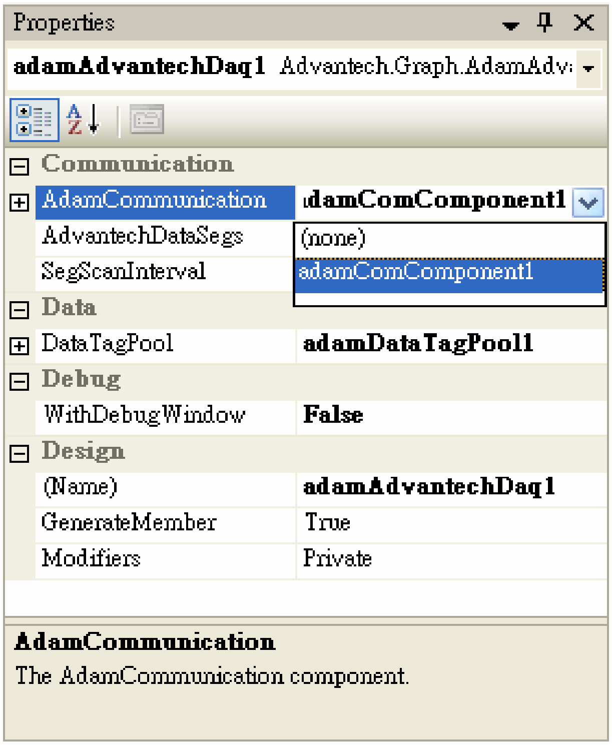


adamAdvantechDaq1 Advantech.Graph.AdamAdv:

Communication	
AdamCommunication	adamComComponent1
AdvantechDataSegs	(Collection)
SegScanInterval	50
Data	
DataTagPool	adamDataTagPool1
Debug	
WithDebugWindow	False
Design	
(Name)	adamAdvantechDaq1
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

Click on the right arrow button of the “AdamCommunication” property, you will see following window. If there are more than one “AdamCommunication” components, you can choose which component your DAQ needs. In the sample, the “adamComComponent1” is using.



Properties

adamAdvantechDaq1 Advantech.Graph.AdamAdv

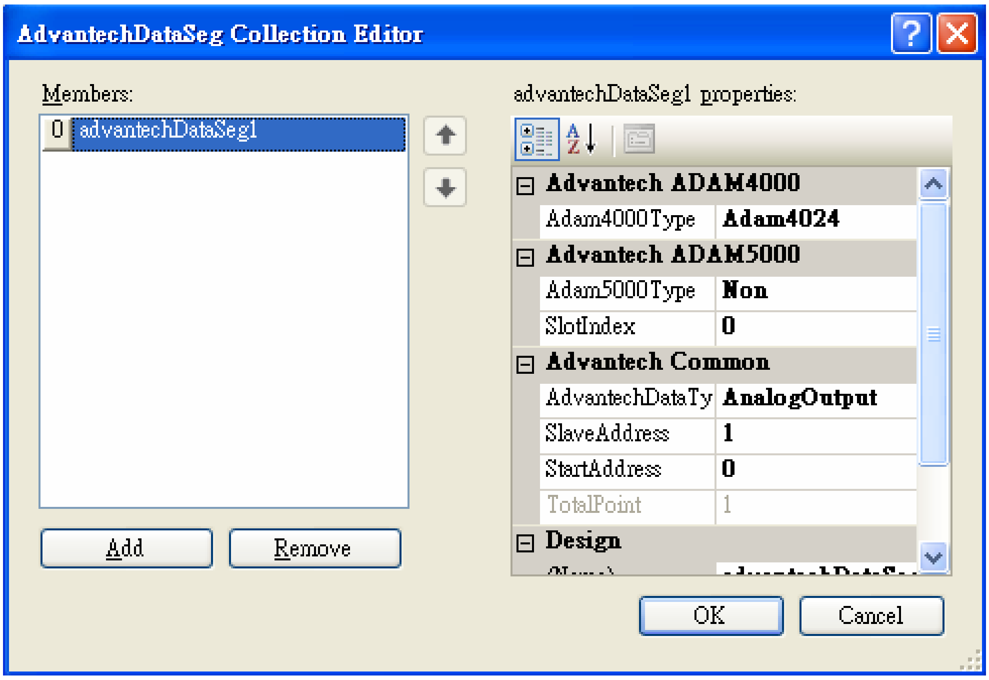
⊟ Communication	
⊞ AdamCommunication	adamComComponent1
AdvantechDataSegs	(none) adamComComponent1
SegScanInterval	
⊟ Data	
⊞ DataTagPool	adamDataTagPool1
⊟ Debug	
WithDebugWindow	False
⊟ Design	
(Name)	adamAdvantechDaq1
GenerateMember	True
Modifiers	Private

AdamCommunication

The AdamCommunication component.

Click on the right button of the “AdvantechDataSegs”, you will see following window.

1. The property “Adam4000Type” is set to “Adam4024” as we use ADAM-4024 as the analog output device. If you want to use other analog output device, such as ADAM-5024 on ADAM-5000E, you have to set the “Adam4000Type” to “Non”, and then select the “Adam5000Type” to “Adam5024”, and the “SlotIndex” set to the slot index, which is zero based, that the ADAM-5024 plug into.
2. The property “AdvantechDataType” is set to “AnalogOutput” for this sample. If other data type is select for the analog output device, the data acquisition will fail in the run time.
3. The property “SlaveAddress” is set to “1” for this sample. If the slave address of the device you are using is set to other number, just change the value here to match the real device ID.
4. The property “StartAddress” is set to “0”. This value sets the starting address of all queried data to buffer. In the “AdvantechDataSeg”, this value can only be “0” for “AnalogOutput” data type.
5. The property “TotalPoint” is automatically set to a value depends on the device type and data type you choose. For “AnalogOutput” data type, this value is always “1” because the Advantech protocol for “AnalogOutput” only supports one channel data query at a time.

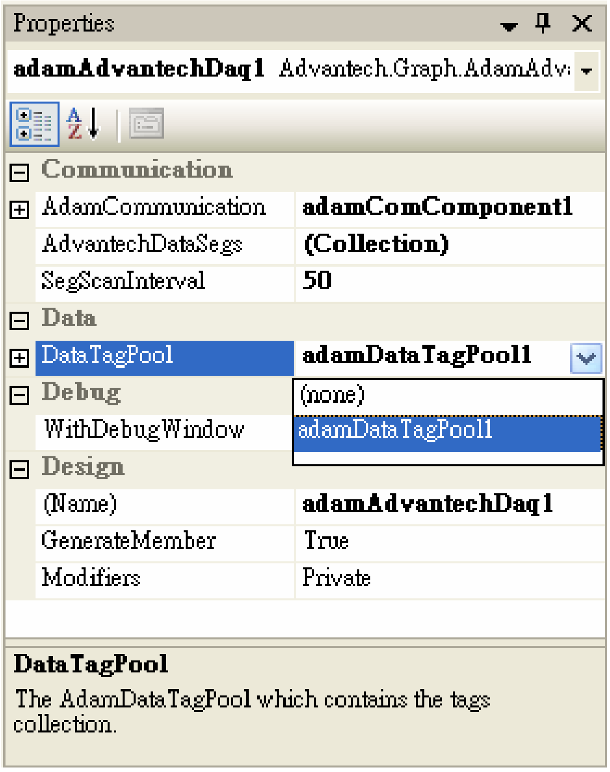

AdvantechDataSeg Collection Editor
Members:
advantechDataSeg1 properties:
Add
Remove
OK
Cancel

0 advantechDataSeg1

Advantech ADAM4000	
Adam4000Type	**Adam4024**
Advantech ADAM5000	
Adam5000Type	**Non**
SlotIndex	**0**
Advantech Common	
AdvantechDataTy	**AnalogOutput**
SlaveAddress	**1**
StartAddress	**0**
TotalPoint	1
Design	

Click on “SegScanInterval” to modify the interval between each data segment.

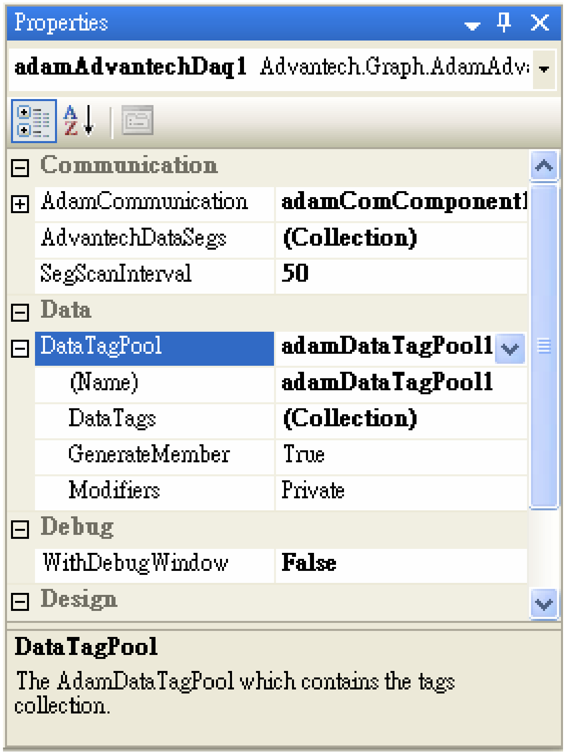
Click on the right arrow button of the “DataTagPool” property, you will see following window. In this sample, the “adamDataTagPool1” is using.



Communication	
AdamCommunication	**adamComComponent1**
AdvantechDataSegs	**(Collection)**
SegScanInterval	**50**
Data	
DataTagPool	**adamDataTagPool1**
Debug	(none) adamDataTagPool1
WithDebugWindow	
Design	
(Name)	**adamAdvantechDaq1**
GenerateMember	True
Modifiers	Private

DataTagPool
The AdamDataTagPool which contains the tags collection.

Click on the left plus button of the “DataTagPool” property, you will see following window. The extended properties are for “adamDataTagPool1”.



adamAdvantechDaq1 Advantech.Graph.AdamAdv:

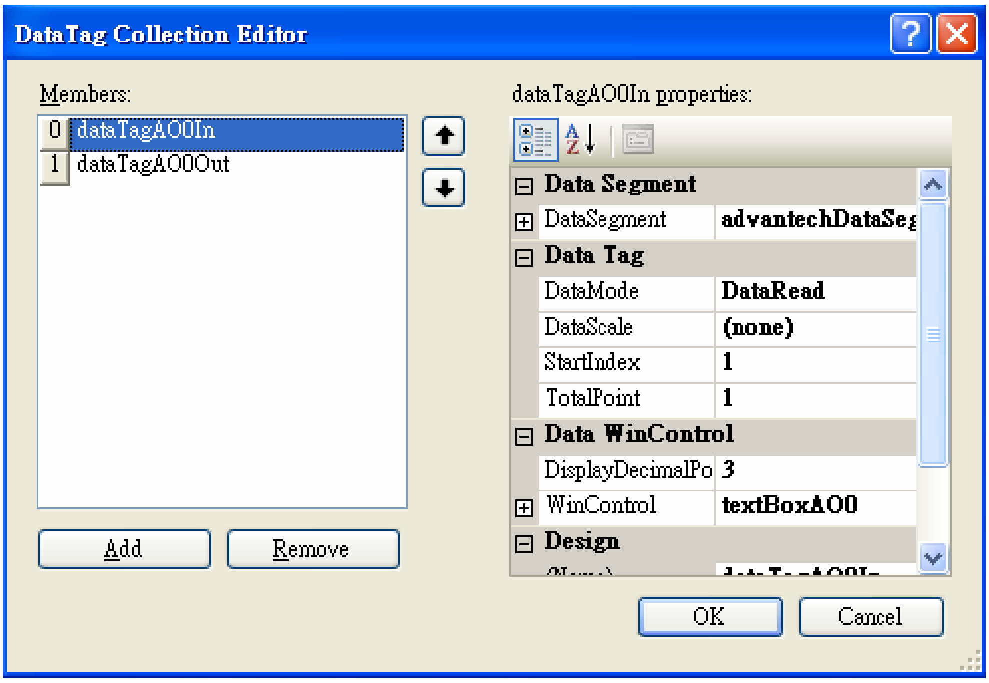
⊟ Communication	
⊞ AdamCommunication	adamComComponent1
AdvantechDataSegs	(Collection)
SegScanInterval	50
⊟ Data	
⊟ DataTagPool	adamDataTagPool1
(Name)	adamDataTagPool1
DataTags	(Collection)
GenerateMember	True
Modifiers	Private
⊟ Debug	
WithDebugWindow	False
⊟ Design	

DataTagPool

The AdamDataTagPool which contains the tags collection.

Click on the right dots button of the “DataTags” property, you will see following window. On the left side, there are two data tags. On the right side are the properties for the “dataTagAO0In” data tag.

1. The property “DataSegment” is set to “advantechDataSeg1”. This value will tell the “advantechDataSeg1” to dispatch data to this tag when data is queried.
2. The property “DataMode” is set to “DataRead” for this tag. This means the tag will only “read” data from data segment.
3. The property “DataScale” is set to “(none)”, which means no scaling is applied.
4. The property “StartIndex” is set to “1”, which is 1 based. This means to “read” data from the first value of the data segment.
5. The property “TotalPoint” is set to “1”. This means to read total 1 point from data segment starting from “StartIndex”.
6. The property “DisplayDecimalPoint” is set to “3”. This means the value will be displayed with three decimal points.
7. The property “WinControl” is set to “textBoxAO0”. This means the value “read” from data segment will be displayed in the “textBoxAO0” control.


DataTag Collection Editor

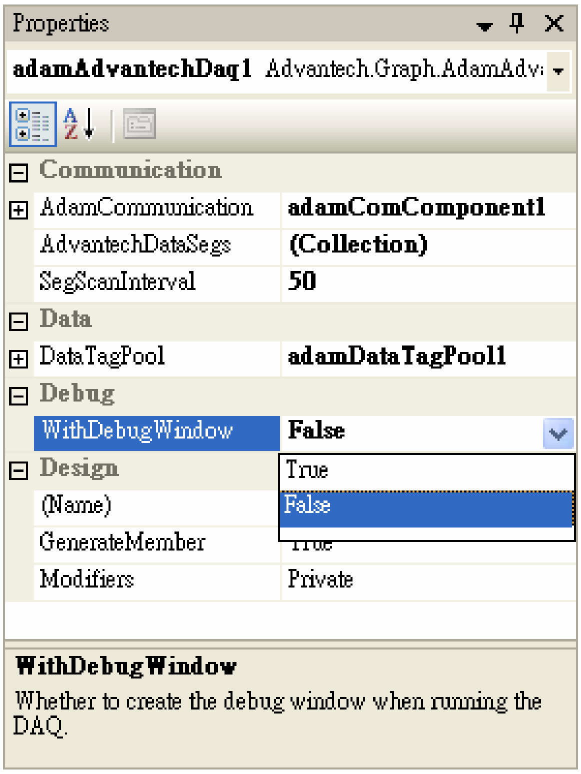
Members:

0	dataTagAO0In
1	dataTagAO0Out

dataTagAO0In properties:

Data Segment	
DataSegment	advantechDataSeg
Data Tag	
DataMode	DataRead
DataScale	(none)
StartIndex	1
TotalPoint	1
Data WinControl	
DisplayDecimalPo	3
WinControl	textBoxAO0
Design	
(Name)	dataTagAO0In

Click on the right arrow button of the “WithDebugWindow” property, you will see following window. The value is set to “False” for this sample. You can change this value to “True”, then a debug window will popup during run time.


Properties

adamAdvantechDaq1 Advantech.Graph.AdamAdv

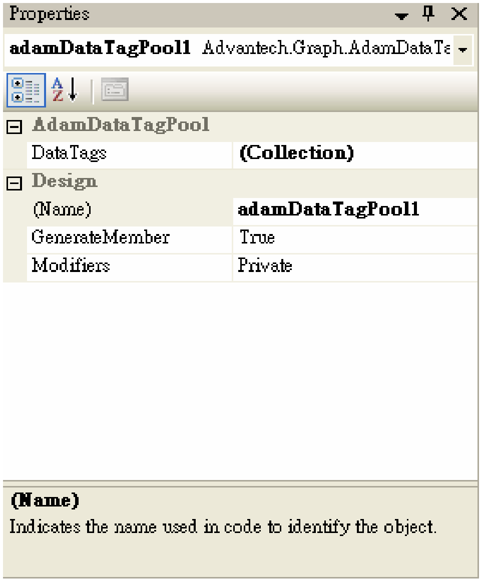
Communication	
AdamCommunication	adamComComponent1
AdvantechDataSegs	(Collection)
SegScanInterval	50
Data	
DataTagPool	adamDataTagPool1
Debug	
WithDebugWindow	False
Design	
(Name)	
GenerateMember	True
Modifiers	Private

WithDebugWindow

Whether to create the debug window when running the DAQ.

5.2.3 AdamDataTagPool

Click the “adamDataTagPool1” on the bottom, and check the “Properties” window. You can see the properties of the data tag pool for this sample. Click on the right dots button of the “DataTags” property, you will see exactly the same window in previous section. They are actually the same thing.



Properties

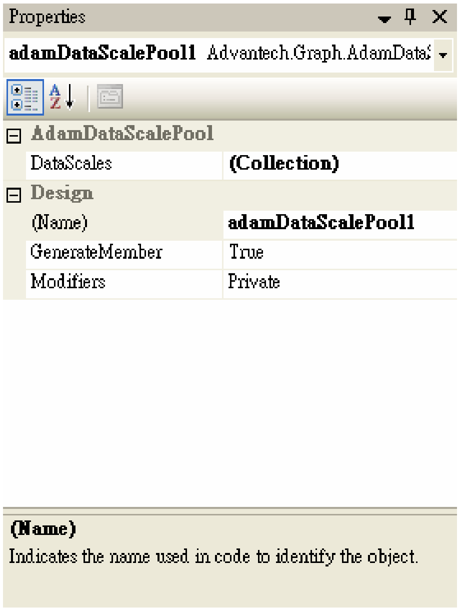
adamDataTagPool1 Advantech.Graph.AdamDataTa

AdamDataTagPool	
DataTags	**(Collection)**
Design	
(Name)	**adamDataTagPool1**
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

5.2.4 AdamDataScalePool

Click the “adamDataScalePool1” on the bottom, and check the “Properties” window. You can see the properties of the data tag pool for this sample.



Properties

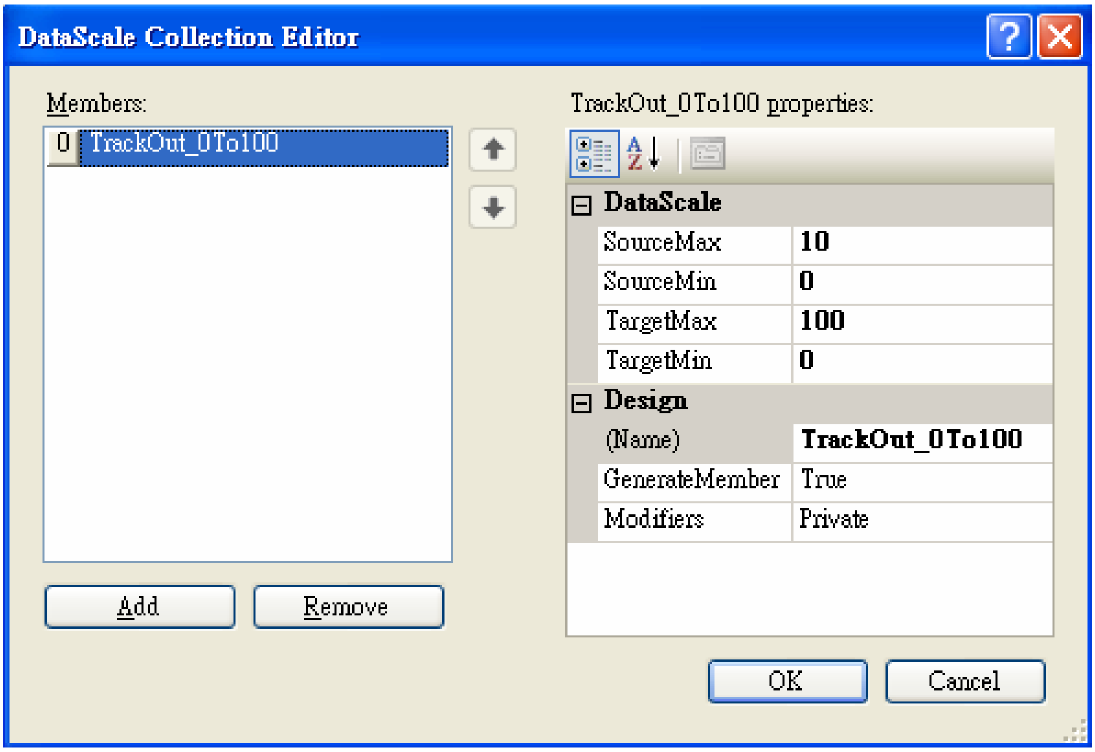
adamDataScalePool1 Advantech.Graph.AdamDataS

AdamDataScalePool	
DataScales	**(Collection)**
Design	
(Name)	**adamDataScalePool1**
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

Click on the right dots button of the “DataScales” property.

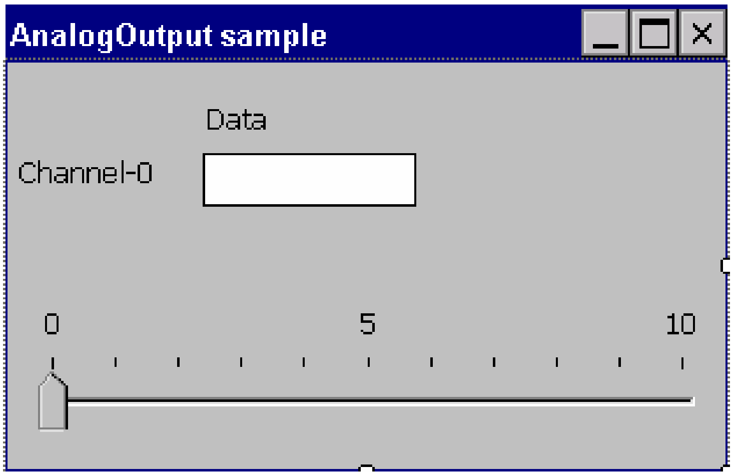
1. The property “SourceMax” is set to “10”. This means the maximum value of the device (data source) is 10.
2. The property “SourceMin” is set to “0”. This means the minimum value of the device (data source) is 0.
3. The property “TargetMax” is set to “100”. This means the maximum value of the window control (data target) is 100.
4. The property “TargetMin” is set to “0”. This means the minimum value of the window control (data target) is 0.



TrackOut_0To100 properties:

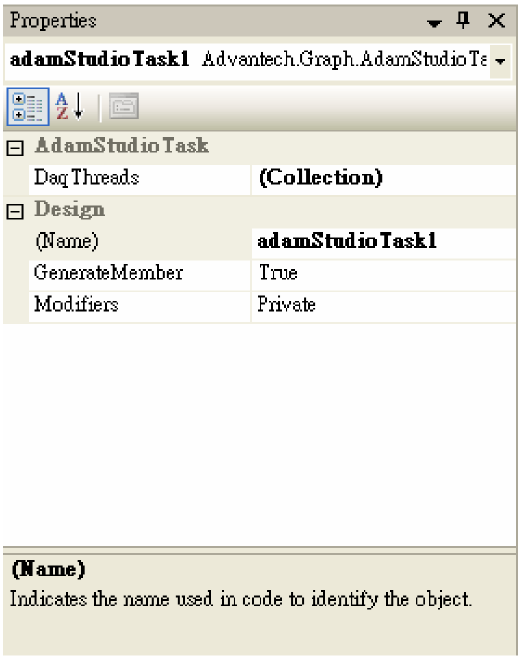
DataScale	
SourceMax	**10**
SourceMin	**0**
TargetMax	**100**
TargetMin	**0**
Design	
(Name)	**TrackOut_0To100**
GenerateMember	True
Modifiers	Private

The reason for above setting is, the “TrackBar” acts from 0 to 100. The moving of the trackbar will be converted to 0 to 10 volt for the analog output.



5.2.5 AdamStudioTask

Click the “AdamStudioTask1” on the bottom, and check the “Properties” window.

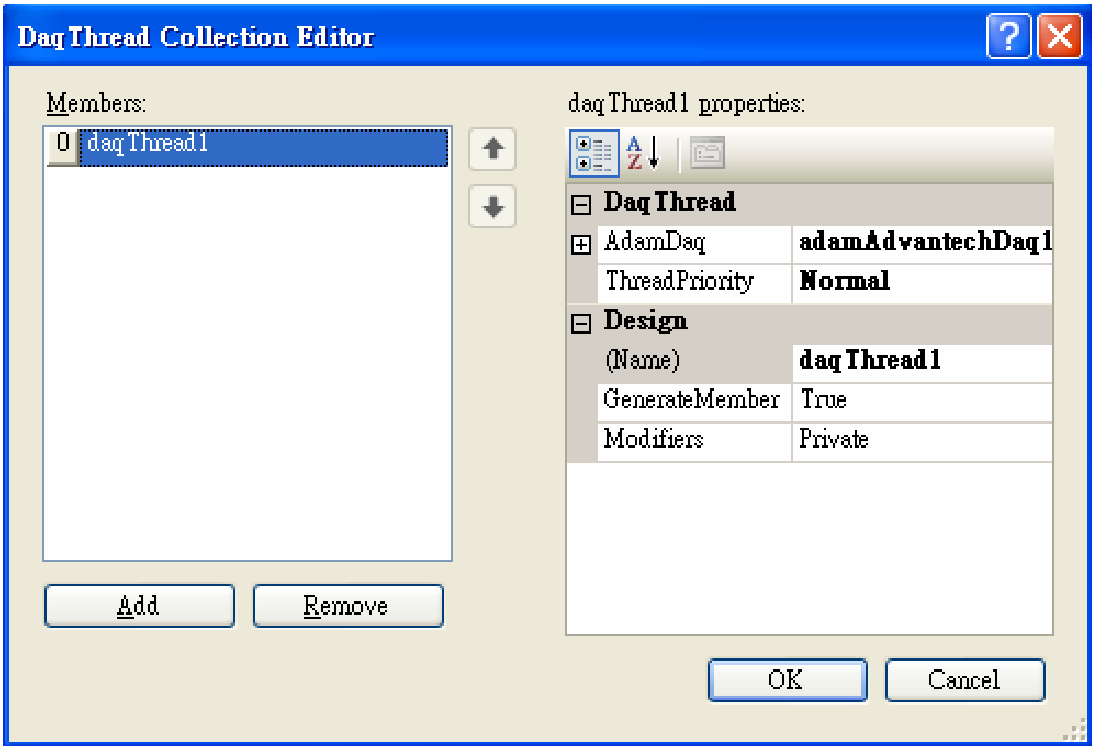


adamStudioTask1 Advantech.Graph.AdamStudioTa

AdamStudioTask	
DaqThreads	(Collection)
Design	
(Name)	adamStudioTask1
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

Click on the right dots button of the “DataThreads” property, you will see following window. The property “AdamDaq” is set to “adamAdvantechDaq1”. This mean the studio task will create a thread for handling the “adamAdvantechDaq1”. The property “ThreadPriority” is set to “Normal”. You can change this value to let the thread has higher or lower priority.



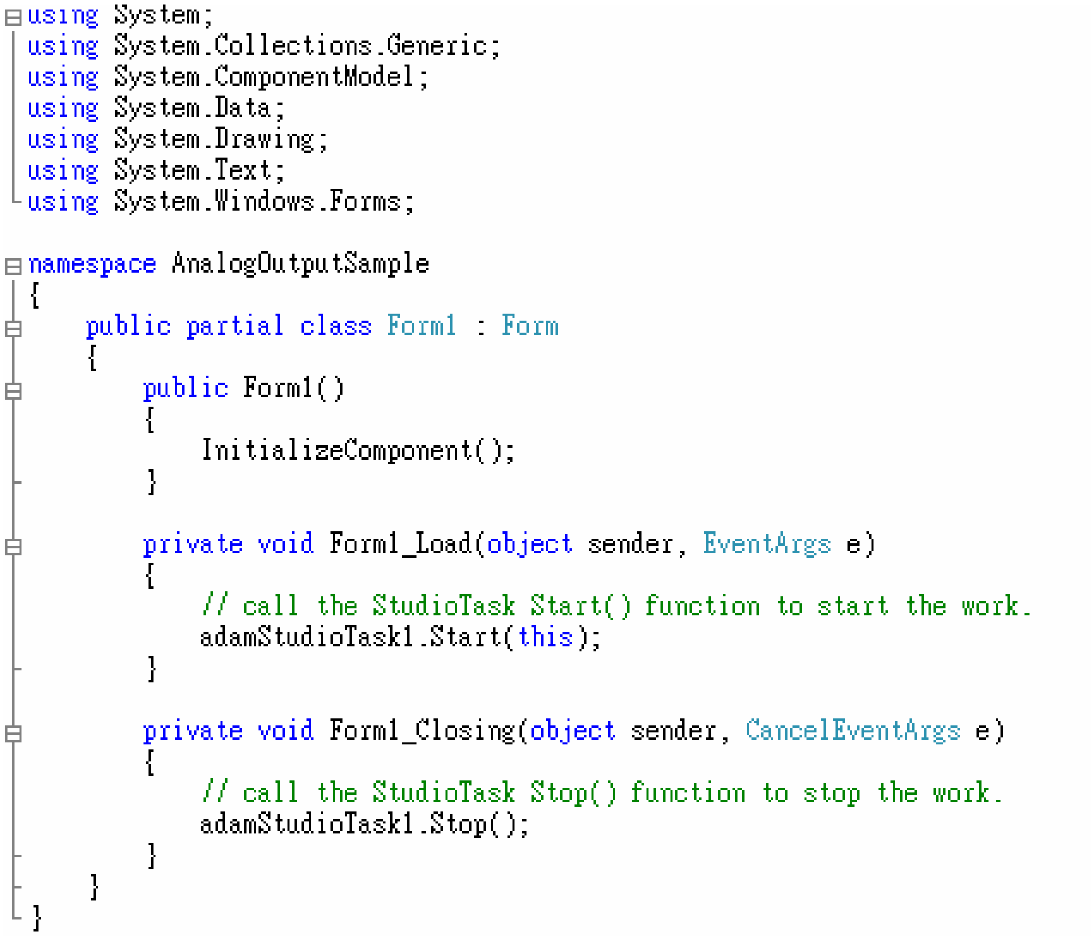
0 daqThread1

daqThread1 properties:

DaqThread	
AdamDaq	adamAdvantechDaq1
ThreadPriority	Normal
Design	
(Name)	daqThread1
GenerateMember	True
Modifiers	Private

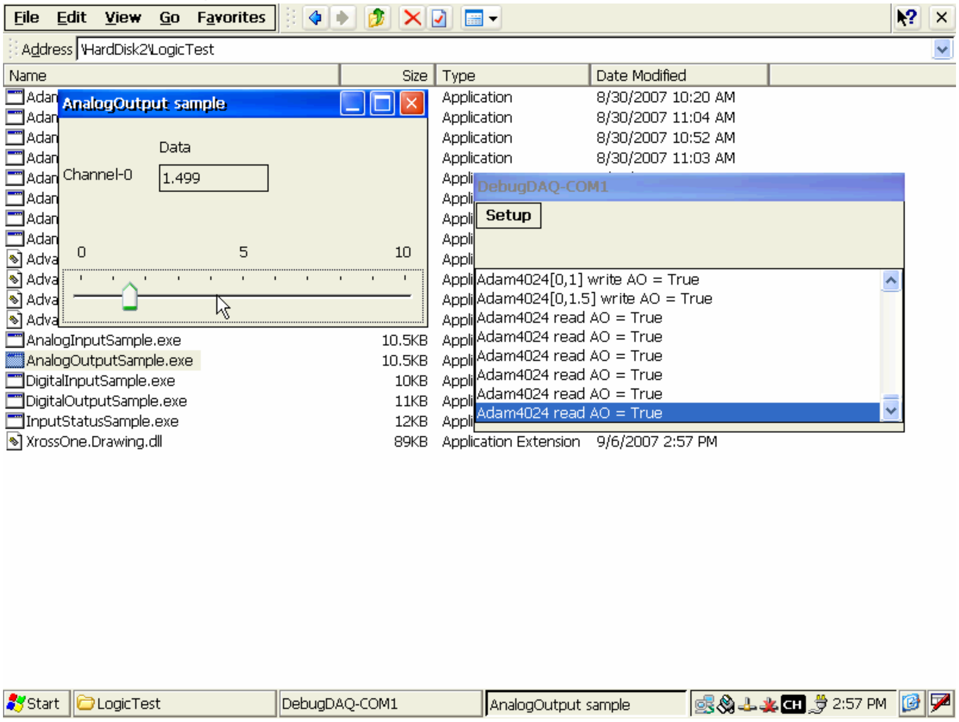
5.2.6 How toStart the AdamStudioTask

To start the “AdamStudioTask”, you have to write the code to start the task. Simply just call “adamStudioTask.Start(this)” for CSharp, or “adamStudioTask.Start(Me) for VB.NET on an event handler. If you want to stop the task, just call “adamStudio.Stop()” to terminate the task.



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

namespace AnalogOutputSample
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void Form1_Load(object sender, EventArgs e)
        {
            // call the StudioTask Start() function to start the work.
            adamStudioTask1.Start(this);
        }

        private void Form1_Closing(object sender, CancelEventArgs e)
        {
            // call the StudioTask Stop() function to stop the work.
            adamStudioTask1.Stop();
        }
    }
}
```

Now, you can try to run this sample on your target machine if you have prepared your devices and the program has been built without error.

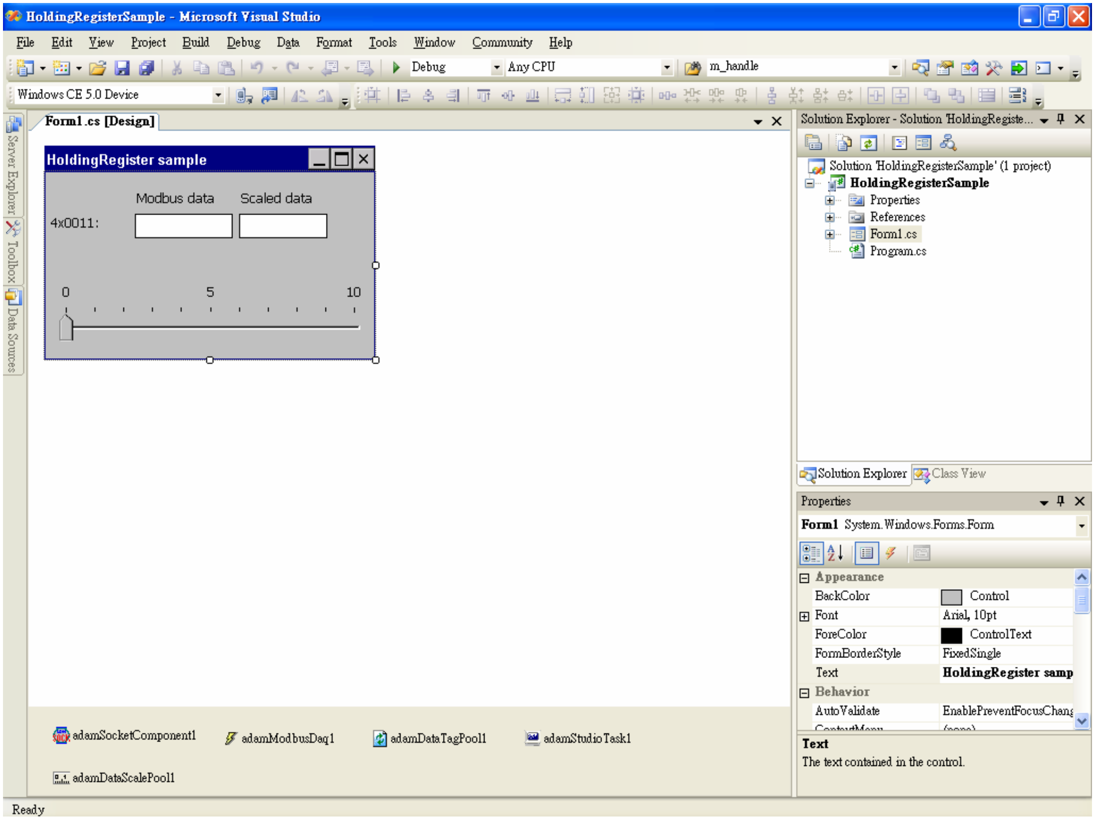


```
Adan...        Application        8/30/2007 10:20 AM
Adan...        Application        8/30/2007 11:04 AM
Adan...        Application        8/30/2007 10:52 AM
Adan...        Application        8/30/2007 11:03 AM
AnalogInputSample.exe     10.5KB  Appli...
AnalogOutputSample.exe    10.5KB  Appli...
DigitalInputSample.exe      10KB  Appli...
DigitalOutputSample.exe     11KB  Appli...
InputStatusSample.exe       12KB  Appli...
XrossOne.Drawing.dll        89KB  Application Extension   9/6/2007 2:57 PM
```

```
Adam4024[0,1] write AO = True
Adam4024[0,1.5] write AO = True
Adam4024 read AO = True
Adam4024 read AO = True
Adam4024 read AO = True
Adam4024 read AO = True
Adam4024 read AO = True
Adam4024 read AO = True
```

5.3 AdamModbusDaq Walkthrough

Open “WindowsCE\VC#\ModbusTCP\HoldingRegisterSample\HoldingRegisterSample.sln” under “Samples” directory using the Visual Studio 2005. Open the form designer of the “Form1.cs”..



Properties

Form1 System.Windows.Forms.Form

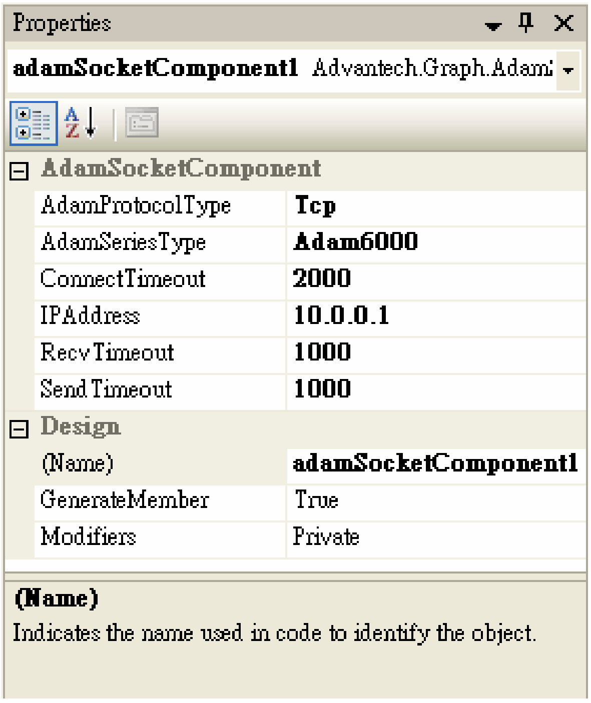
Appearance	
BackColor	Control
Font	Arial, 10pt
ForeColor	ControlText
FormBorderStyle	FixedSingle
Text	HoldingRegister samp
Behavior	
AutoValidate	EnablePreventFocusChang

Text

The text contained in the control.

5.3.1 AdamCommunication

Click the “AdamSocketComponent1” on the bottom, and check the “Properties” window. You can see the scoket setting for this sample. If you have different setting for your target device, modify them here.



Properties

adamSocketComponent1 Advantech.Graph.Adam:

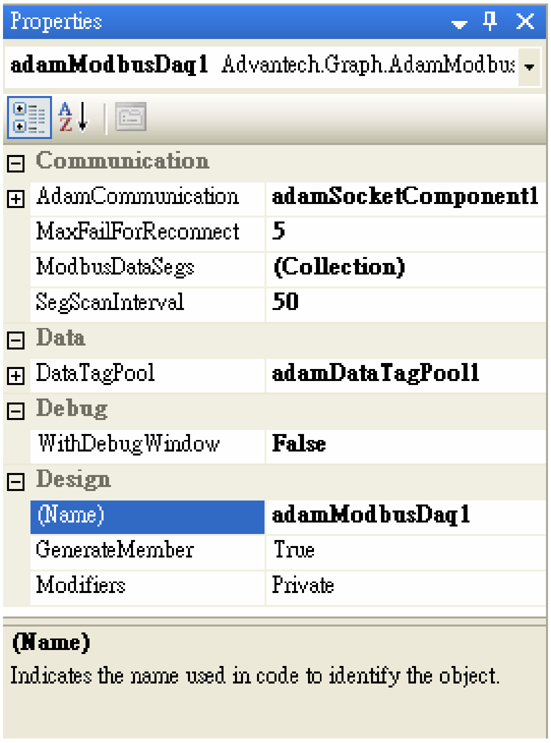
AdamSocketComponent	
AdamProtocolType	Tcp
AdamSeriesType	Adam6000
ConnectTimeout	2000
IPAddress	10.0.0.1
RecvTimeout	1000
SendTimeout	1000
Design	
(Name)	adamSocketComponent1
GenerateMember	True
Modifiers	Private

(Name)

Indicates the name used in code to identify the object.

5.3.2 AdamModbusDaq

Click the “adamModbusDaq1” on the bottom, and check the “Properties” window. You can see the properties of the data acquisition task for this sample.

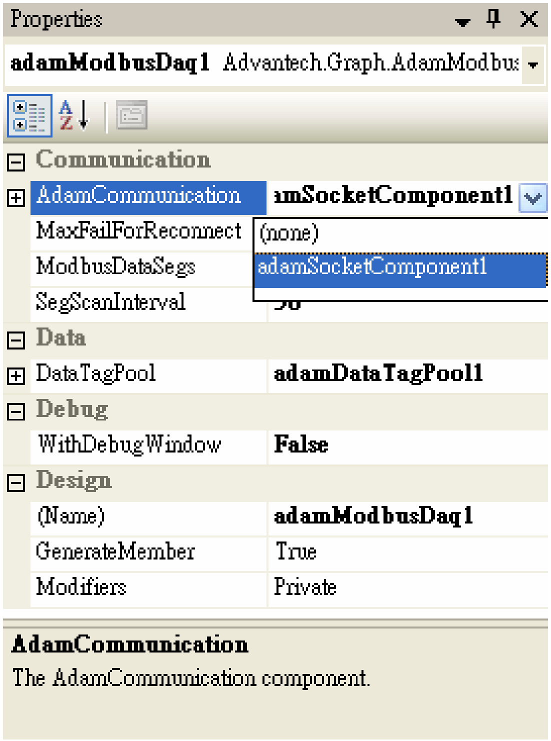


adamModbusDaq1 Advantech.Graph.AdamModbus

⊟ **Communication**	
⊞ AdamCommunication	**adamSocketComponent1**
MaxFailForReconnect	**5**
ModbusDataSegs	**(Collection)**
SegScanInterval	**50**
⊟ **Data**	
⊞ DataTagPool	**adamDataTagPool1**
⊟ **Debug**	
WithDebugWindow	**False**
⊟ **Design**	
(Name)	**adamModbusDaq1**
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

Click on the right arrow button of the “AdamCommunication” property, you will see following window. If there are more than one “AdamCommunication” components, you can choose which component your DAQ needs. In the sample, the “adamSocketComponent1” is using.



adamModbusDaq1 Advantech.Graph.AdamModbus

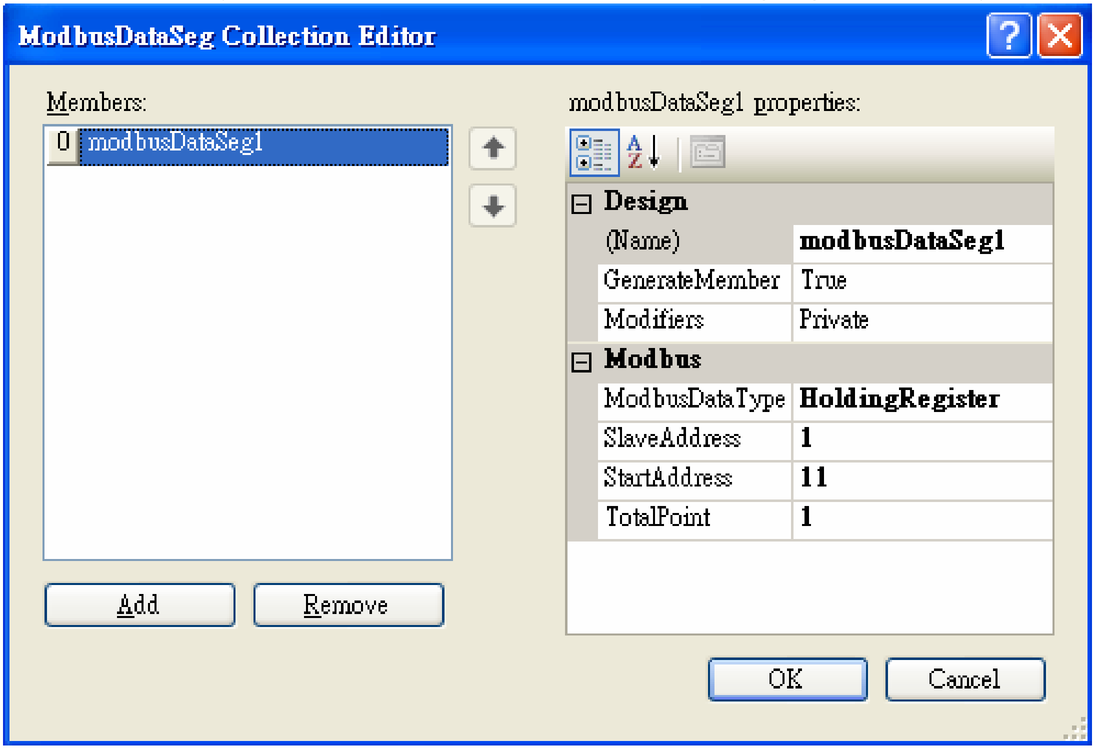
⊟ **Communication**	
⊞ AdamCommunication	**amSocketComponent1**
MaxFailForReconnect	(none)
ModbusDataSegs	adamSocketComponent1
SegScanInterval	
⊟ **Data**	
⊞ DataTagPool	**adamDataTagPool1**
⊟ **Debug**	
WithDebugWindow	**False**
⊟ **Design**	
(Name)	**adamModbusDaq1**
GenerateMember	True
Modifiers	Private

AdamCommunication
The AdamCommunication component.

Click on “MaxFailForReconnect” to modify maximum continue failure to make a reconnect.

Click on the right dots button of the "ModbusDataSegs" property, you will see following window.

1. The property "ModbusType" is set to "HoldingRegister" as we use ADAM-6024 as the analog output device.
2. The property "SlaveAddress" is set to "1" for this sample. If the slave address of the device you are using is set to other number, just change the value here to match the real device ID.
3. The property "StartAddress" is set to "11". This value sets the starting address of MODBUS query data. The value is based 1.
4. The property "TotalPoint" is the total amount of holding register to query.



ModbusDataSeg Collection Editor

Members:

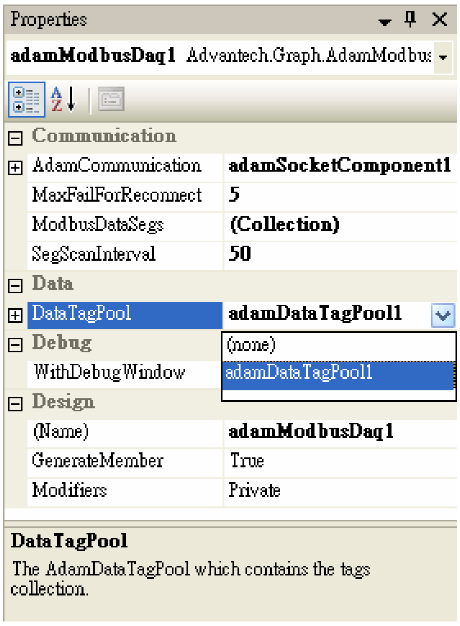
0 modbusDataSeg1

modbusDataSeg1 properties:

Design	
(Name)	modbusDataSeg1
GenerateMember	True
Modifiers	Private
Modbus	
ModbusDataType	HoldingRegister
SlaveAddress	1
StartAddress	11
TotalPoint	1

Click on "SegScanInterval" to modify the interval between each data segment.

Click on the right arrow button of the "DataTagPool" property, you will see following window. In this sample, the "adamDataTagPool1" is using.



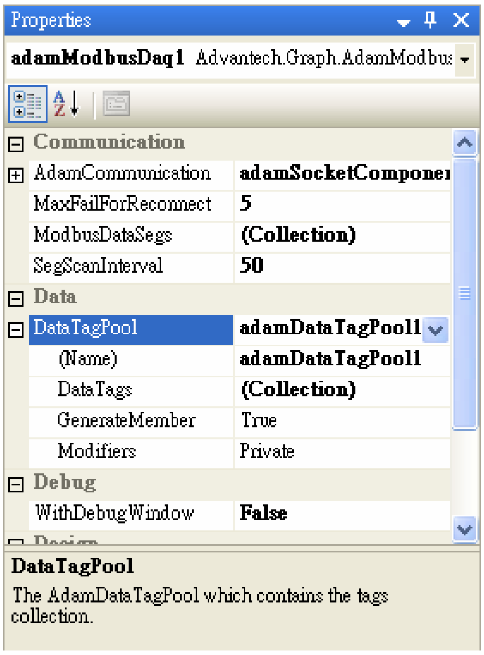
Properties

adamModbusDaq1 Advantech.Graph.AdamModbus

Communication	
AdamCommunication	adamSocketComponent1
MaxFailForReconnect	5
ModbusDataSegs	(Collection)
SegScanInterval	50
Data	
DataTagPool	adamDataTagPool1
Debug	(none)
WithDebugWindow	adamDataTagPool1
Design	
(Name)	adamModbusDaq1
GenerateMember	True
Modifiers	Private

DataTagPool
The AdamDataTagPool which contains the tags collection.

Click on the left plus button of the “DataTagPool” property, you will see following window. The extended properties are for “adamDataTagPool1”.



adamModbusDaq1 Advantech.Graph.AdamModbu:

Communication	
AdamCommunication	**adamSocketCompone**
MaxFailForReconnect	**5**
ModbusDataSegs	**(Collection)**
SegScanInterval	**50**
Data	
DataTagPool	**adamDataTagPool1**
(Name)	**adamDataTagPool1**
DataTags	**(Collection)**
GenerateMember	True
Modifiers	Private
Debug	
WithDebugWindow	**False**

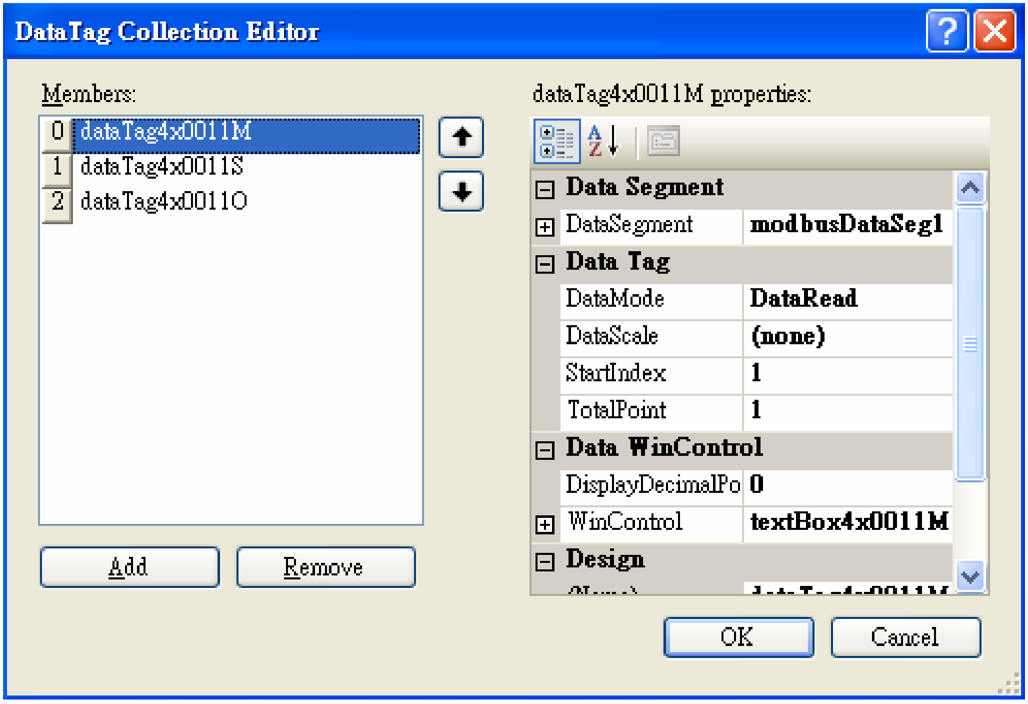
DataTagPool

The AdamDataTagPool which contains the tags collection.

Click on the right dots button of the “DataTags” property, you will see following window. On the left side, there are three data tags. On the right side are the properties for the “dataTag4x0011M” data tag.

1. The property “DataSegment” is set to “modbusDataSeg1”. This value will tell the “modbusDataSeg1” to dispatch data to this tag when data is queried.
2. The property “DataMode” is set to “DataRead” for this tag. This means the tag will only “read” data from data segment.
3. The property “DataScale” is set to “(none)”, which means no scaling is applied.
4. The property “StartIndex” is set to “1”, which is 1 based. This means to “read” data from the first value of the data segment.
5. The property “TotalPoint” is set to “1”. This means to read total 1 point from data segment starting from “StartIndex”.
6. The property “DisplayDecimalPoint” is set to “0”. This means the value will be displayed with no decimal points.

7. The property “WinControl” is set to “textBox4x0011M”. This means the value “read” from data segment will be displayed in the “textBox4x0011M” control.



DataTag Collection Editor

Members:

0 dataTag4x0011M
1 dataTag4x0011S
2 dataTag4x0011O

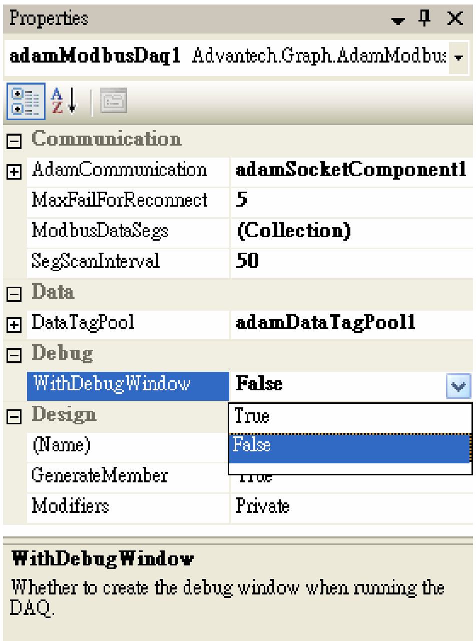
dataTag4x0011M properties:

Data Segment	
DataSegment	**modbusDataSeg1**
Data Tag	
DataMode	**DataRead**
DataScale	**(none)**
StartIndex	**1**
TotalPoint	**1**
Data WinControl	
DisplayDecimalPo	**0**
WinControl	**textBox4x0011M**
Design	
(Name)	dataTag4x0011M

In the sample:

1. The “dataTag4x0011M” is related to the “textBox4x0011M” to display the MODBUS data.
2. The “dataTag4x001S” is related to the “textBox4x0011S” to display the scaled data.
3. The “dataTag4x0011O” is related to the “trackBar4x0011O” to output data to device.

Click on the right arrow button of the “WithDebugWindow” property, you will see following window. The value is set to “False” for this sample. You can change this value to “True”, then a debug window will popup during run time.



Properties

adamModbusDaq1 Advantech.Graph.AdamModbu:

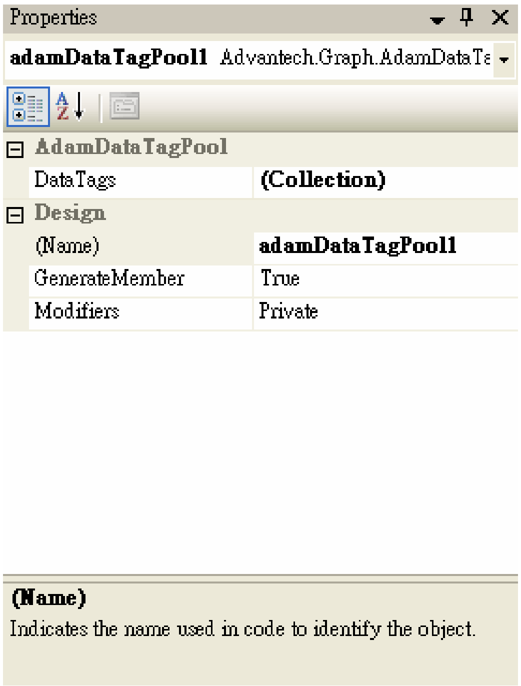
Communication	
AdamCommunication	**adamSocketComponent1**
MaxFailForReconnect	**5**
ModbusDataSegs	**(Collection)**
SegScanInterval	**50**
Data	
DataTagPool	**adamDataTagPool1**
Debug	
WithDebugWindow	**False**
Design	True False
(Name)	
GenerateMember	True
Modifiers	Private

WithDebugWindow

Whether to create the debug window when running the DAQ.

5.3.3 AdamDataTagPool

Click the “adamDataTagPool1” on the bottom, and check the “Properties” window. You can see the properties of the data tag pool for this sample. Click on the right dots button of the “DataTags” property, you will see exactly the same window in previous section. They are actually the same thing.



Properties

adamDataTagPool1 Advantech.Graph.AdamDataTa

AdamDataTagPool

DataTags	(Collection)

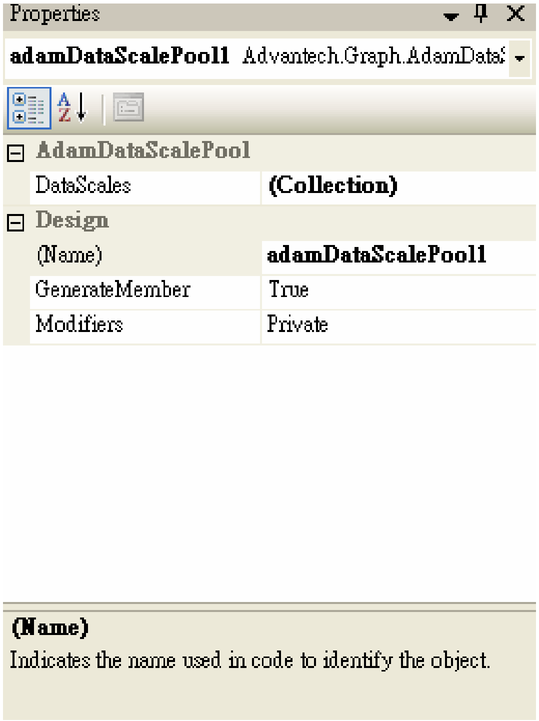
Design

(Name)	adamDataTagPool1
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

5.3.4 AdamDataScalePool

Click the “adamDataScalePool1” on the bottom, and check the “Properties” window. You can see the properties of the data tag pool for this sample.



Properties

adamDataScalePool1 Advantech.Graph.AdamDataS

AdamDataScalePool

DataScales	(Collection)

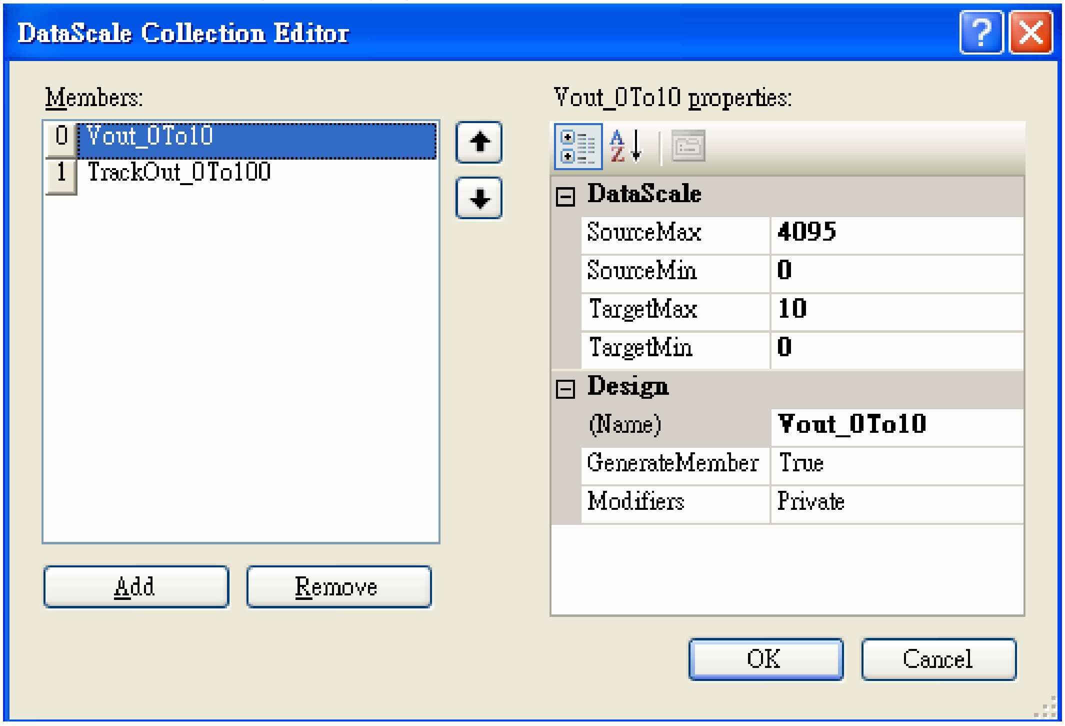
Design

(Name)	adamDataScalePool1
GenerateMember	True
Modifiers	Private

(Name)
Indicates the name used in code to identify the object.

Click on the right dots button of the “DataScales” property, you will see following window.

1. The property “SourceMax” is set to “4095”. This means the maximum MODBUS value of the device (data source) is 4095.
2. The property “SourceMin” is set to “0”. This means the minimum MODBUS value of the device (data source) is 0.
3. The property “TargetMax” is set to “10”. This means the maximum value of the window control (data target) is 10.
4. The property “TargetMin” is set to “0”. This means the minimum value of the window control (data target) is 0.


DataScale Collection Editor

Members:

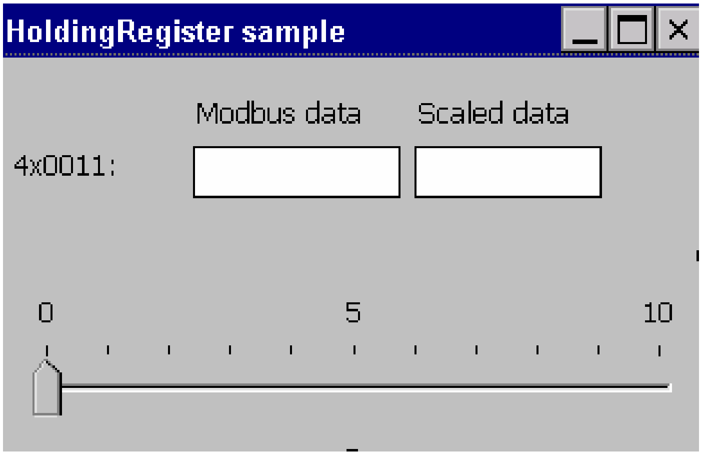
0 Vout_0To10
1 TrackOut_0To100

Vout_0To10 properties:

DataScale	
SourceMax	4095
SourceMin	0
TargetMax	10
TargetMin	0
Design	
(Name)	Vout_0To10
GenerateMember	True
Modifiers	Private

In the sample:

1. The “Vout_0To10” is related to the “textBox4x0011S” to scale the MODBUS data to 0~10 volt.
2. The “TrackOut_0To100” is related to the “trackBar4x0011O” to scale the trackbar value from 0~100 to 0~4095 for output.

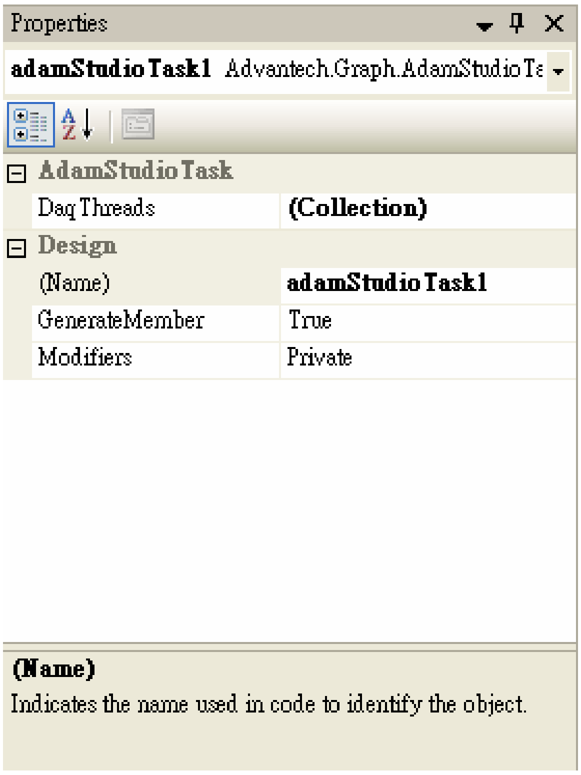

HoldingRegister sample

Modbus data Scaled data

4x0011:

5.3.5 AdamStudioTask

Click the “adamStudioTask1” on the bottom, and check the “Properties” window.



Properties

adamStudioTask1 Advantech.Graph.AdamStudioTa

AdamStudioTask

DaqThreads	(Collection)

Design

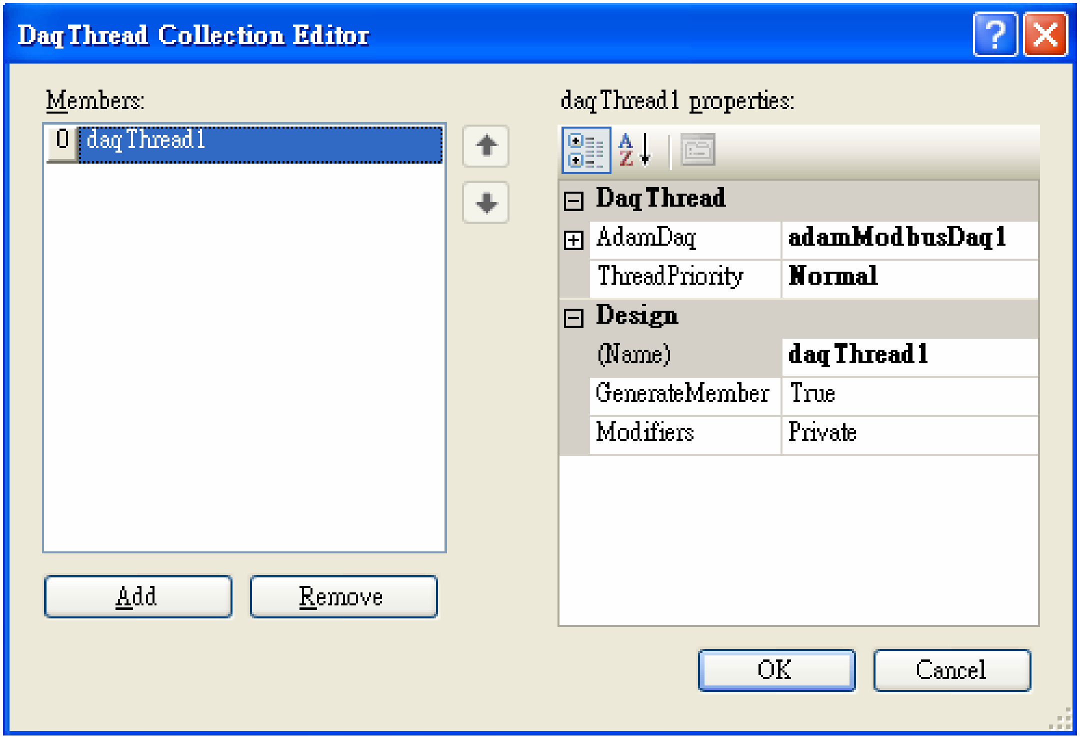
(Name)	adamStudioTask1
GenerateMember	True
Modifiers	Private

(Name)

Indicates the name used in code to identify the object.

Click on the right dots button of the “DataThreads” property, you will see following window. The property “AdamDaq” is set to “adamModbusDaq1”. This mean the studio task will create a thread for handling the “adamModbusDaq1”.

The property “ThreadPriority” is set to “Normal”. You can change this value to let the thread has higher or lower priority.



DaqThread Collection Editor

Members:

0 daqThread1

daqThread1 properties:

DaqThread

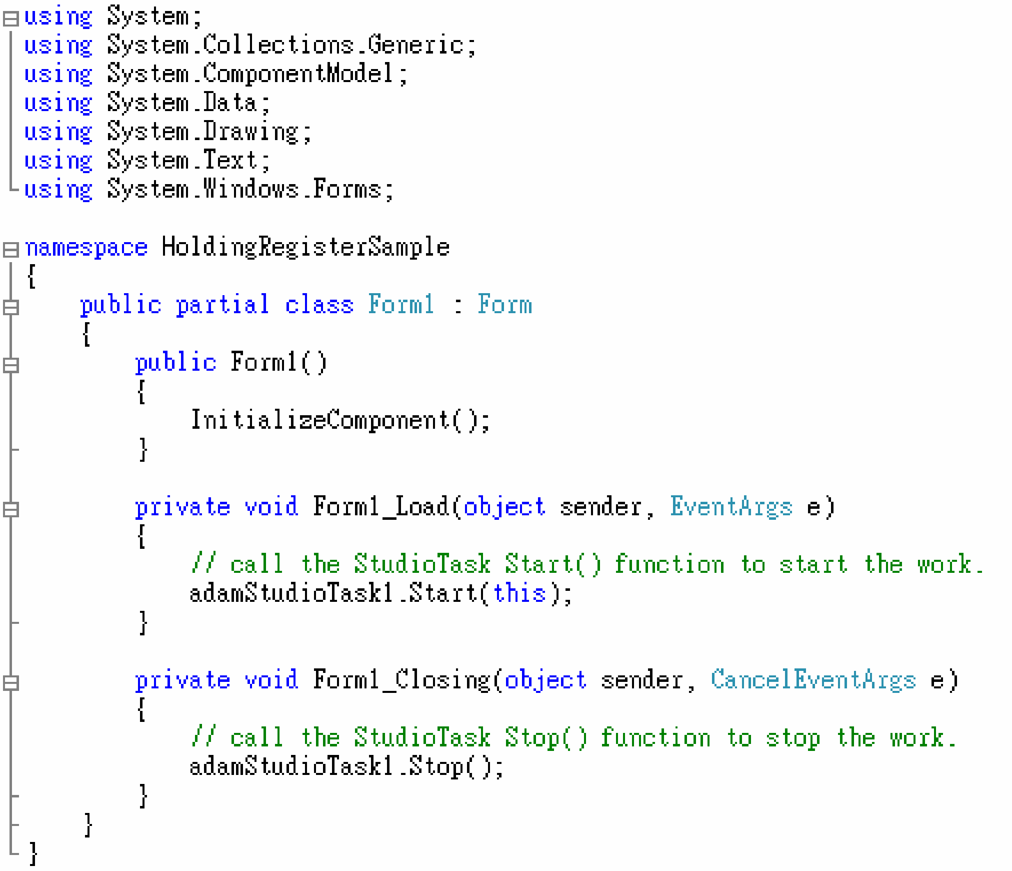
AdamDaq	adamModbusDaq1
ThreadPriority	Normal

Design

(Name)	daqThread1
GenerateMember	True
Modifiers	Private

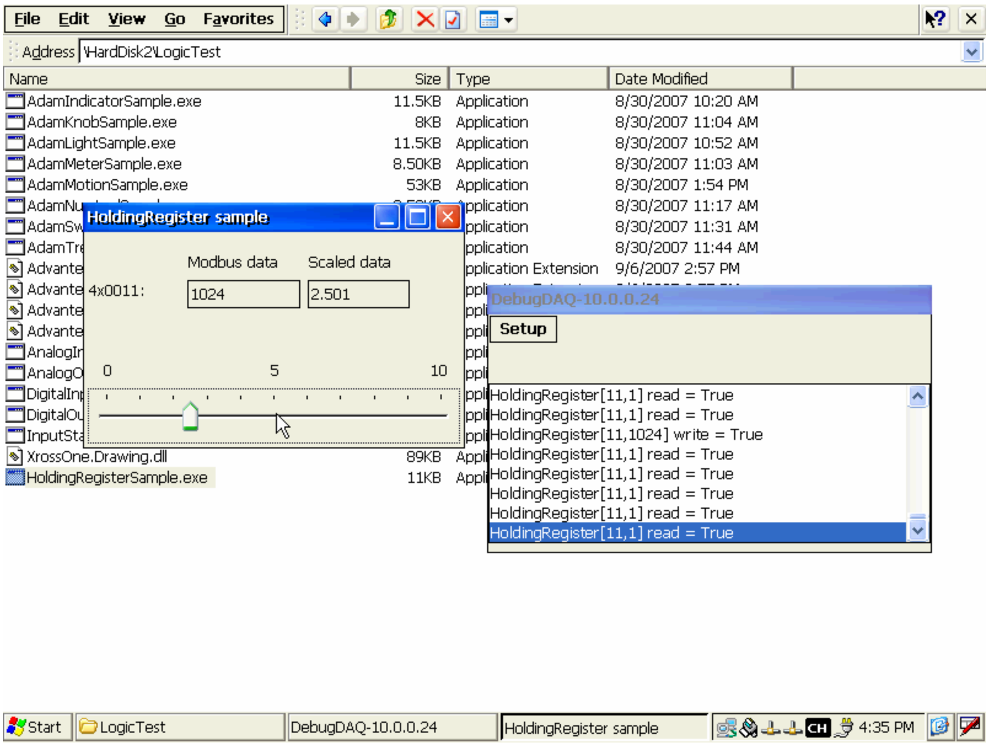
5.3.6 How to Start the AdamStudioTask

To start the “AdamStudioTask”, you have to write the code to start the task. Simply just call “adamStudioTask.Start(this)” for CSharp, or “adamStudioTask.Start(Me) for VB.NET on an event handler. If you want to stop the task, just call “adamStudio.Stop()” to terminate the task.



```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Text;
using System.Windows.Forms;

namespace HoldingRegisterSample
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void Form1_Load(object sender, EventArgs e)
        {
            // call the StudioTask Start() function to start the work.
            adamStudioTask1.Start(this);
        }

        private void Form1_Closing(object sender, CancelEventArgs e)
        {
            // call the StudioTask Stop() function to stop the work.
            adamStudioTask1.Stop();
        }
    }
}
```

Now, you can try to run this sample on your target machine if you have prepared your devices and the program has been built without error.



Address \HardDisk2\LogicTest

Name	Size	Type	Date Modified
AdamIndicatorSample.exe	11.5KB	Application	8/30/2007 10:20 AM
AdamKnobSample.exe	8KB	Application	8/30/2007 11:04 AM
AdamLightSample.exe	11.5KB	Application	8/30/2007 10:52 AM
AdamMeterSample.exe	8.50KB	Application	8/30/2007 11:03 AM
AdamMotionSample.exe	53KB	Application	8/30/2007 1:54 PM
AdamNu		pplication	8/30/2007 11:17 AM
AdamSw		pplication	8/30/2007 11:31 AM
AdamTr		pplication	8/30/2007 11:44 AM
Advante		pplication Extension	9/6/2007 2:57 PM
Advante		ppl	
Advante		ppl	
Advante		ppl	
AnalogIr		ppl	
AnalogO		ppl	
DigitalInp		ppl	
DigitalOu		ppl	
InputSta		ppl	
XrossOne.Drawing.dll	89KB	Appl	
HoldingRegisterSample.exe	11KB	Appl	

HoldingRegister sample

	Modbus data	Scaled data
4x0011:	1024	2.501

DebugDAQ-10.0.0.24

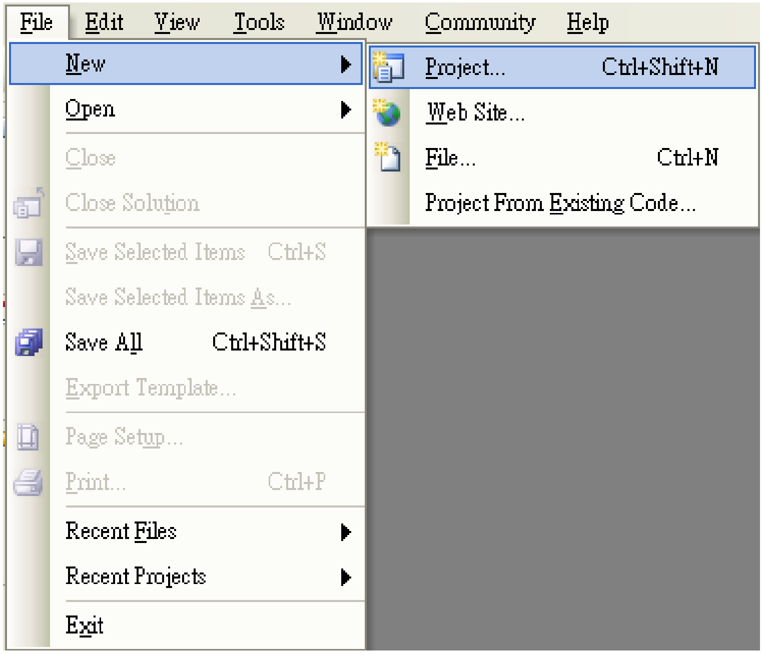
```
HoldingRegister[11,1] read = True
HoldingRegister[11,1] read = True
HoldingRegister[11,1024] write = True
HoldingRegister[11,1] read = True
HoldingRegister[11,1] read = True
HoldingRegister[11,1] read = True
HoldingRegister[11,1] read = True
HoldingRegister[11,1] read = True
```

5.4 Creating a LogixView Solution

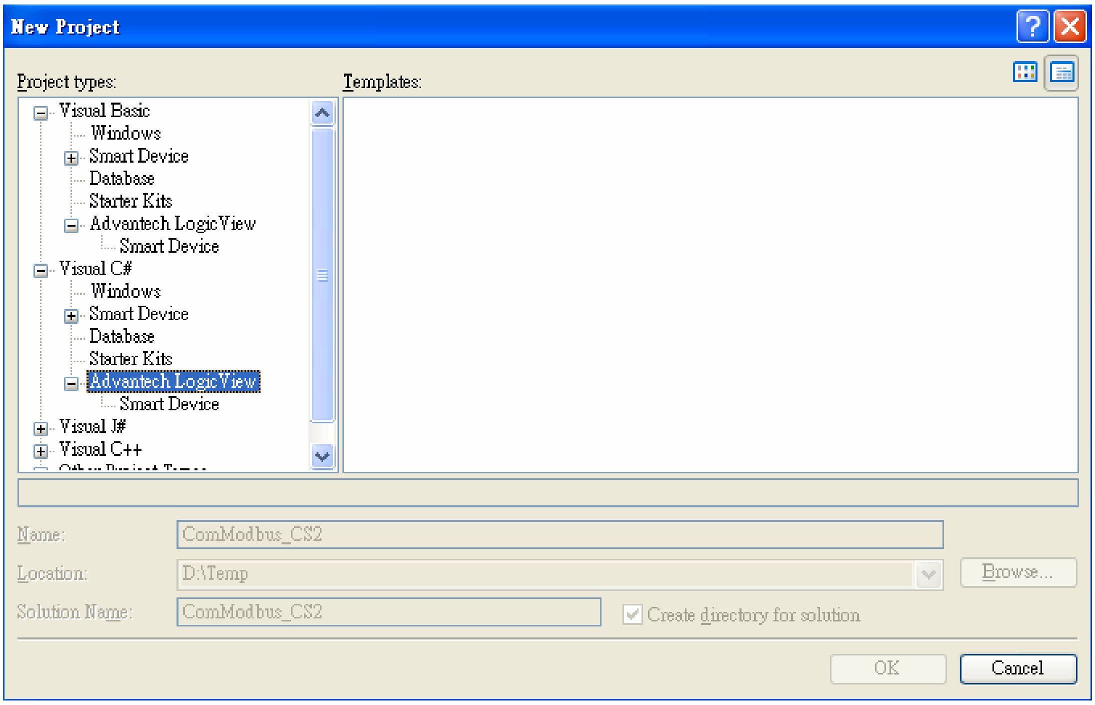
You can go through following steps to create your own solution by using the Visual Studio 2005 with Advantech LogixView.

5.4.1 Create project by template

On the Visual Studio 2005 menu, go to File->New->Project and click it.



You will see the following dialog:



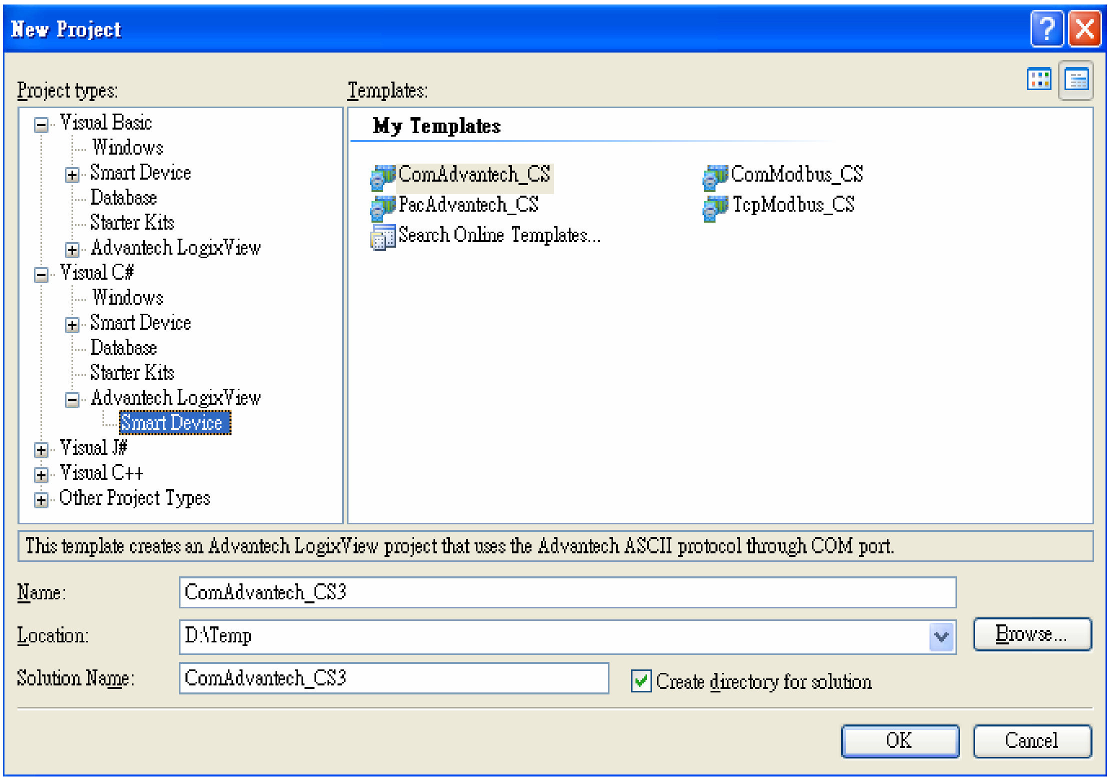
Name: ComModbus_CS2

Location: D:\Temp

Solution Name: ComModbus_CS2

☑ Create directory for solution

Go to the Visual C#->Advantech LogixView->Smart Device and click on it, you will see the following window:



This template creates an Advantech LogixView project that uses the Advantech ASCII protocol through COM port.

Name: ComAdvantech_CS3

Location: D:\Temp

Solution Name: ComAdvantech_CS3

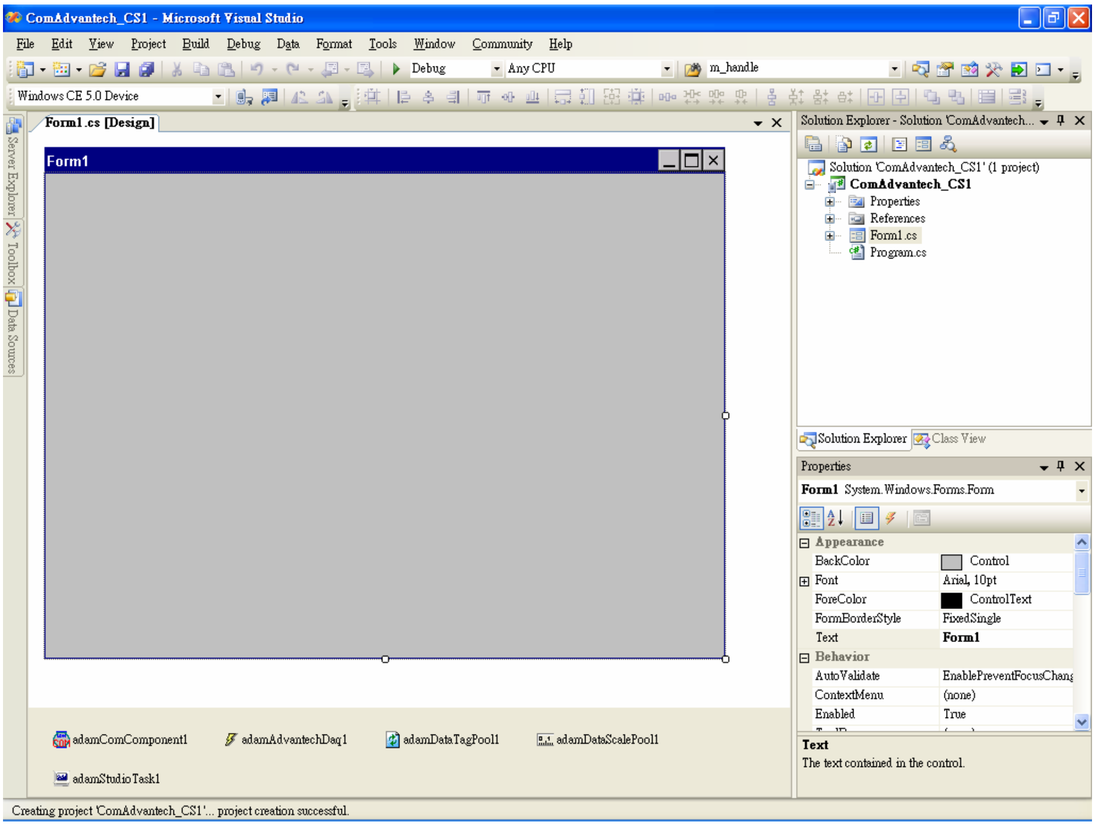
☑ Create directory for solution

You choose one of the following template to create your own project:

1. **ComAdvantech_CS**: The project will create a form with AdamComComponent, AdamAdvantechDaq, AdamDataTagPool, AdamDataScalePool and AdamStudioTask components. This template is suitable for the using with ADAM-4000 and ADAM-5000 series running the Advantech ASCII protocol.
2. **ComModbus_CS**: The project will create a form with AdamComComponent, AdamModbusDaq, AdamDataTagPool, AdamDataScalePool and AdamStudioTask components. This template is suitable for the using with ADAM-4000 and ADAM-5000 series running the MODBUS protocol.
3. **PacAdvantech_CS**: The project will create a form with AdamControlComponent, AdamAdvantechDaq, AdamDataTagPool, AdamDataScalePool and AdamStudioTask components. This template is suitable for the using on Advantech PAC series, such as ADAM-5550.
4. **TcpModbus_CS**: The project will create a form with AdamSocketComponent, AdamModbusDaq, AdamDataTagPool, AdamDataScalePool and AdamStudioTask components. This template is suitable for the using with ADAM-5000TCP and ADAM-6000 series running the MODBUS protocol.

If you are familiar with Visual Basic rather than the Visual C#, you can go to Visual Basic->Advantech LogixView->Smart Device, and then do the same step as above.

After you select one of the templates, the project will be created as following:



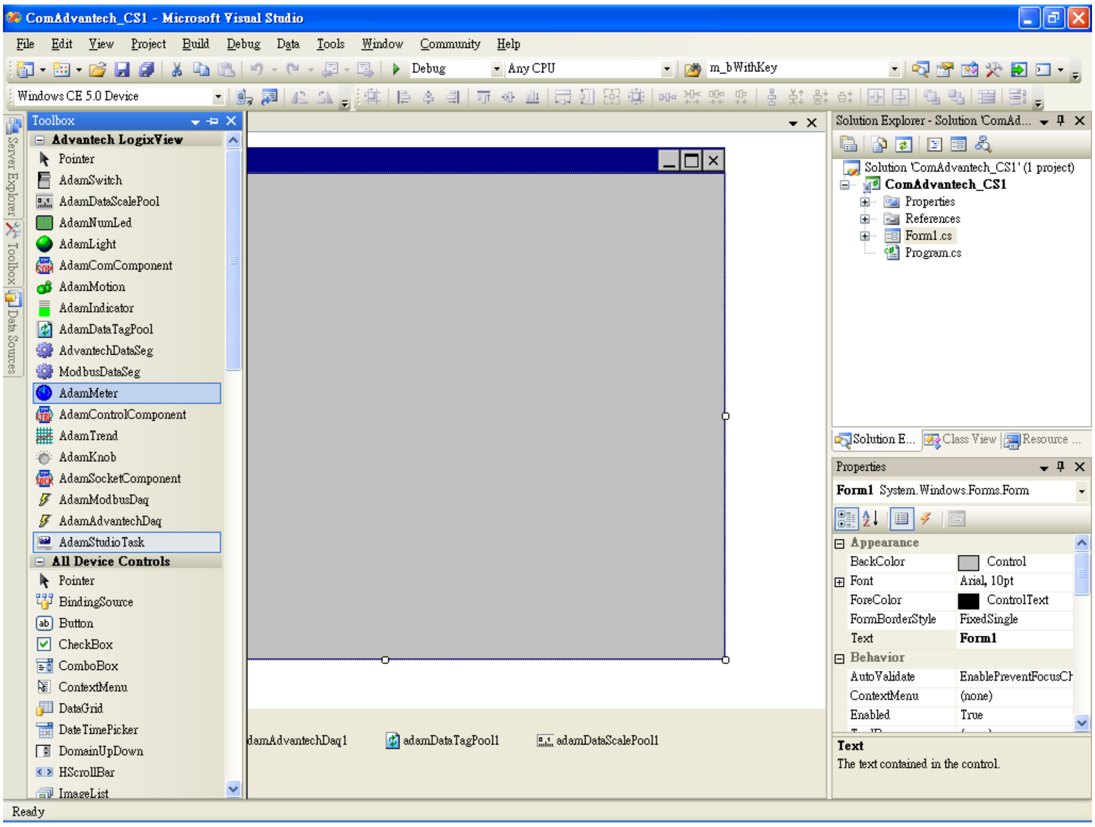
Form1 System.Windows.Forms.Form

Appearance	
BackColor	Control
Font	Arial, 10pt
ForeColor	ControlText
FormBorderStyle	FixedSingle
Text	Form1
Behavior	
AutoValidate	EnablePreventFocusChang
ContextMenu	(none)
Enabled	True

Text
The text contained in the control.

Creating project 'ComAdvantech_CS1'... project creation successful.

Go to the View->Toolbox and click on it to bring up the toolbox.



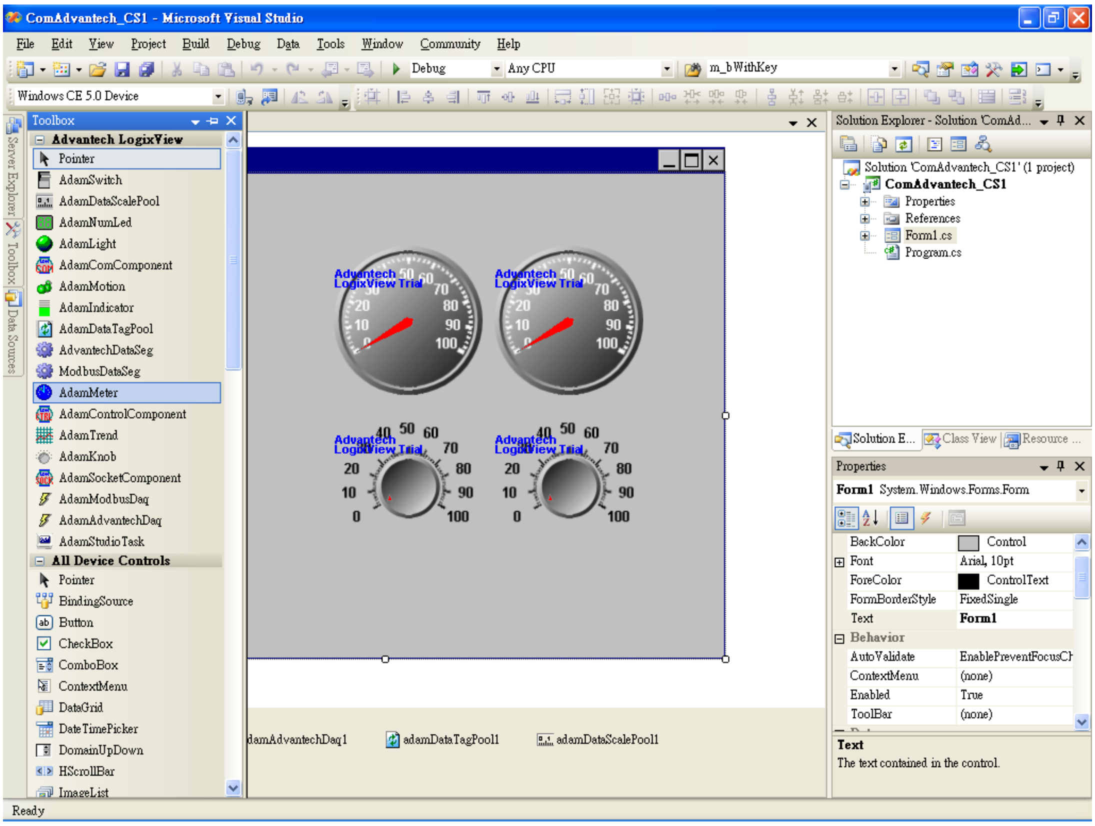
Form1 System.Windows.Forms.Form

Appearance	
BackColor	Control
Font	Arial, 10pt
ForeColor	ControlText
FormBorderStyle	FixedSingle
Text	Form1
Behavior	
AutoValidate	EnablePreventFocusCh
ContextMenu	(none)
Enabled	True

Text
The text contained in the control.

Ready

Just drag and drop the controls into the form. Click on the control and change the properties to match your need.



Form1 System.Windows.Forms.Form

BackColor	Control
Font	Arial, 10pt
ForeColor	ControlText
FormBorderStyle	FixedSingle
Text	Form1
Behavior	
AutoValidate	EnablePreventFocusCh
ContextMenu	(none)
Enabled	True
ToolBar	(none)

Text
The text contained in the control.

Actually, the basic relations of all the components have been assigned when the project created. So, you can follow the step described in section 6.2 or section 6.3 to setup the components.

If you have another protocol rather than the one created to use, you can drag and drop another set of AdamCommunication and AdamDaq components.

When every thing has been done, go to Build->Rebuild Solution to build up the files. Now, you can deploy your program with related DLL files into target machine to run it.

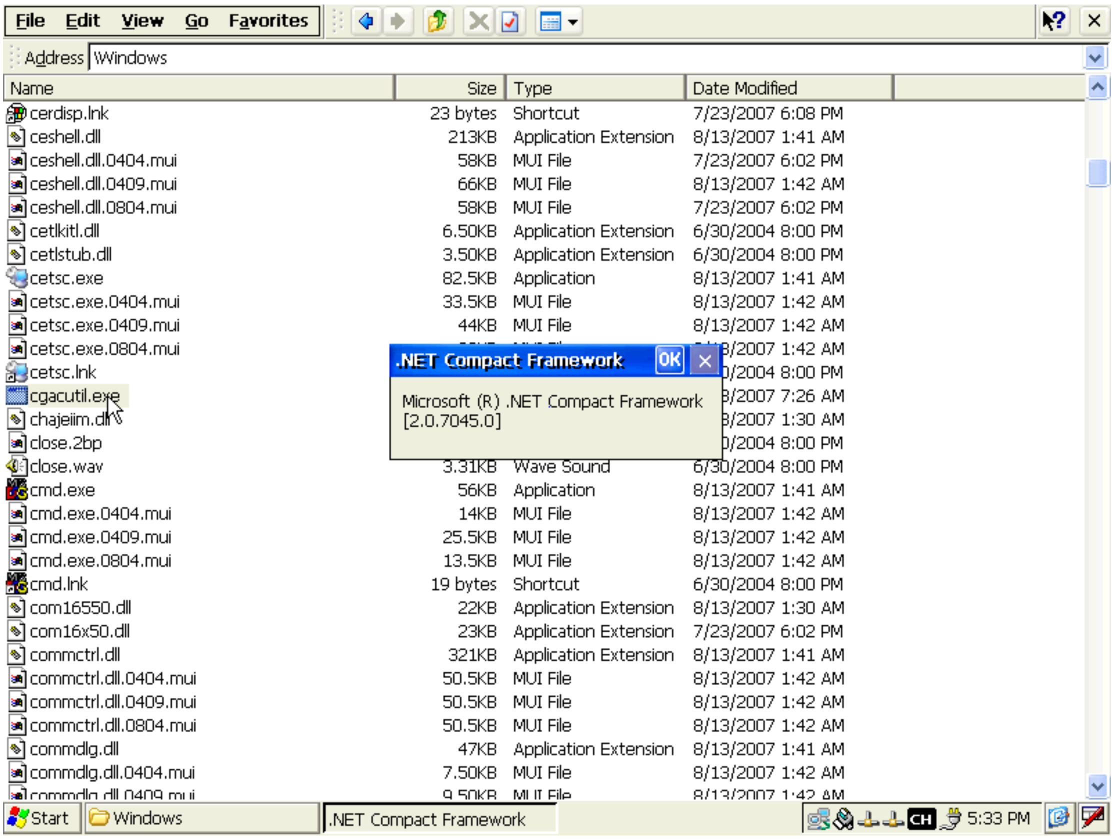
Chapter 6

Troubleshooting

6.1 Troubleshooting

Can my Advantech device run the program built with LogixView?

The LogixView is based on Visual Studio 2005. So the Microsoft .NET Compact Framework must be version 2.0 or later. The way to check the version of the Compact Framework on your target device is to run the “cgacutil.exe” under “Windows” directory. You will see the version as following:



Name	Size	Type	Date Modified
cerdisp.lnk	23 bytes	Shortcut	7/23/2007 6:08 PM
ceshell.dll	213KB	Application Extension	8/13/2007 1:41 AM
ceshell.dll.0404.mui	58KB	MUI File	7/23/2007 6:02 PM
ceshell.dll.0409.mui	66KB	MUI File	8/13/2007 1:42 AM
ceshell.dll.0804.mui	58KB	MUI File	7/23/2007 6:02 PM
cetlkitl.dll	6.50KB	Application Extension	6/30/2004 8:00 PM
cetlstub.dll	3.50KB	Application Extension	6/30/2004 8:00 PM
cetsc.exe	82.5KB	Application	8/13/2007 1:41 AM
cetsc.exe.0404.mui	33.5KB	MUI File	8/13/2007 1:42 AM
cetsc.exe.0409.mui	44KB	MUI File	8/13/2007 1:42 AM
cetsc.exe.0804.mui			3/2007 1:42 AM
cetsc.lnk			0/2004 8:00 PM
cgacutil.exe			3/2007 7:26 AM
chajeiim.dll			3/2007 1:30 AM
close.2bp			0/2004 8:00 PM
close.wav	3.31KB	Wave Sound	6/30/2004 8:00 PM
cmd.exe	56KB	Application	8/13/2007 1:41 AM
cmd.exe.0404.mui	14KB	MUI File	8/13/2007 1:42 AM
cmd.exe.0409.mui	25.5KB	MUI File	8/13/2007 1:42 AM
cmd.exe.0804.mui	13.5KB	MUI File	8/13/2007 1:42 AM
cmd.lnk	19 bytes	Shortcut	6/30/2004 8:00 PM
com16550.dll	22KB	Application Extension	8/13/2007 1:30 AM
com16x50.dll	23KB	Application Extension	7/23/2007 6:02 PM
commctrl.dll	321KB	Application Extension	8/13/2007 1:41 AM
commctrl.dll.0404.mui	50.5KB	MUI File	8/13/2007 1:42 AM
commctrl.dll.0409.mui	50.5KB	MUI File	8/13/2007 1:42 AM
commctrl.dll.0804.mui	50.5KB	MUI File	8/13/2007 1:42 AM
commdlg.dll	47KB	Application Extension	8/13/2007 1:41 AM
commdlg.dll.0404.mui	7.50KB	MUI File	8/13/2007 1:42 AM
commdlg.dll.0409.mui	9.50KB	MUI File	8/13/2007 1:42 AM

.NET Compact Framework

Microsoft (R) .NET Compact Framework
[2.0.7045.0]

Why does my program get an exception when OnDataTagUpdated is applied?

For example, there are two tags named dataTag1 and dataTag2, and you want to sum up these two values and show the result on a TextBox control name textBox1. Normally, you will write the code as below:

```
[C#]
private void dataTag2_DataTagUpdated(object sender, EventArgs e)
{
   float fVal;
   fVal = dataTag1.RawFloatData[0] + dataTag2.RawFloatData[0];
   this.textBox1.Text = fVal.ToString();
}

[VB.NET]
Private Sub DataTag2_DataTagUpdated(_
ByVal sender As System.Object, _
ByVal e As System.EventArgs) Handles DataTag2.DataTagUpdated
   Dim fVal As Single
   fVal = DataTag1.RawFloatData(0) + DataTag2.RawFloatData(0)
   Me.TextBox1.Text = fVal.ToString()
End Sub
```

However, the OnDataTagUdated event is trigger in the DaqThread, and the windows form control updating is not thread safe by using above code. Alternatively, you have to use a Delegate and the BeginInvoke method to update the control in the safe way.

```
[C#]
delegate void SafeUpdateCallback(string text);

private void dataTag2_DataTagUpdated(object sender, EventArgs e)
{
   float fVal;
   fVal = dataTag1.RawFloatData[0] + dataTag2.RawFloatData[0];
   this.SafeUpdate(fVal.ToString());
}

private void SafeUpdate(string text)
{
   if (this.textBox1.InvokeRequired)
   {
      SafeUpdateCallback d = new SafeUpdateCallback(SafeUpdate);
      this.BeginInvoke(d, new object[] { text });
   }
   else
   {
      this. textBox1.Text = text;
   }
}

[VB.NET]
Delegate Sub SafeUpdateCallback(ByVal [text] As String)

Private Sub DataTag2_DataTagUpdated(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles DataTag2.DataTagUpdated
   Dim fVal As Single
   fVal = DataTag1.RawFloatData(0) + DataTag2.RawFloatData(0)
   Me.SafeUpdate(fVal.ToString())
End Sub

Private Sub SafeUpdate(ByVal [text] As String)
   If Me.TextBox1.InvokeRequired Then
      Dim d As New SafeUpdateCallback(AddressOf SafeUpdate)
      Me.BeginInvoke(d, New Object() {[text]})
   Else
      Me.TextBox1.Text = [text]
   End If
End Sub
```

Why can’t I find LogixView controls in the VS2005 toolbox?

For some reason, you may not see the LogixView controls in the VS2005 toolbox. First of all, make sure you have installed the LogixView properly. You can check the following path:

“\Program Files\Advantech\LogixView\v2.0\WindowsCE”

There should be five DLL files under the directory.

Advantech.Adam.dll

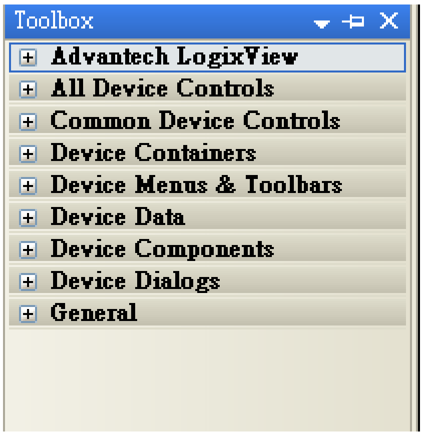
Advantech.Common.dll

Advantech.Graph.dll

Advantech.Protocol.dll

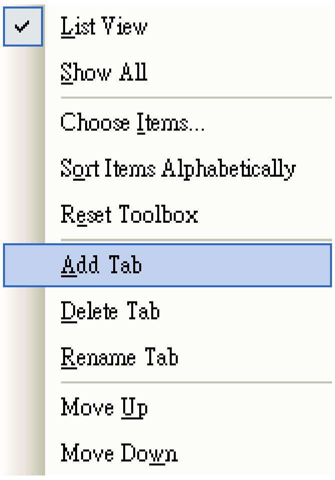
XrossOne.Drawing.dll

Please follow the **section 6.1** content to open an example solution and remain in the “Designer” page and make the toolbox shown.

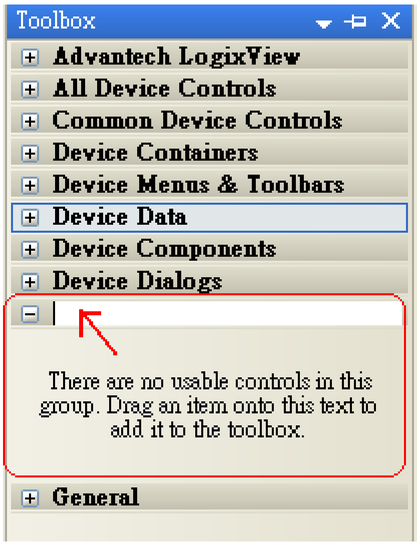


You should see the “tabs” as above picture. If you cannot find a tab named “Advantech LogixView”, you may have missed the setting. You still can add the LogixView controls manually.

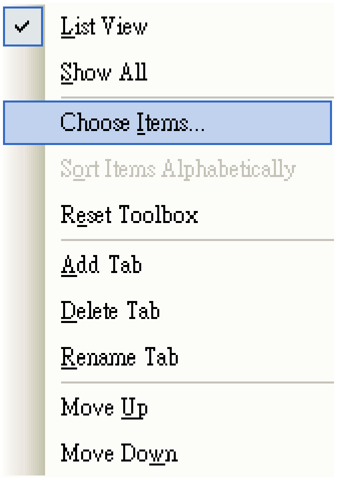
Mouse right click on the toolbox, you will see a popup menu as below.



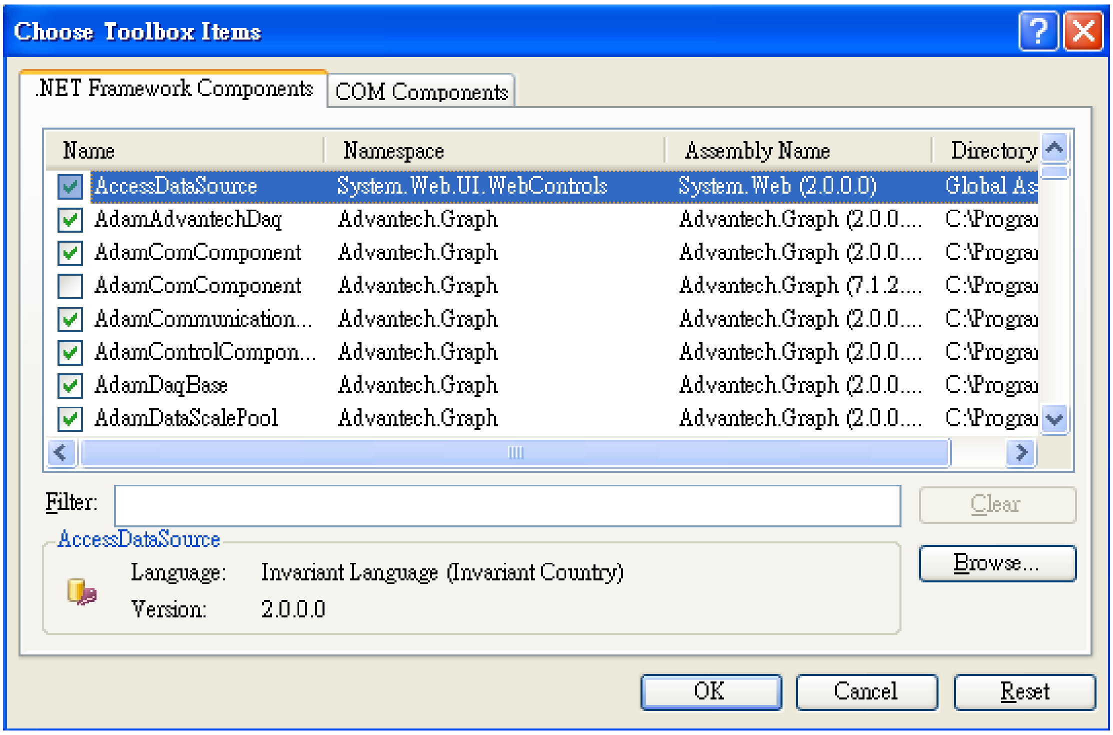
Mouse left click on the “Add Tab”, you will see a new tab is created with an empty title and waits for your input (See the red arrow in the picture). You must type the name, such as “Advantech LogixView”, in the title.



Mouse right click on that tab, you will the popup menu. Mouse left click on the "Choose Items", then it may takes several second to load the dialog box.



The popup dialog will show the .NET component in a list as below. Click on the "Browse…" button.



Choose Toolbox Items

.NET Framework Components | COM Components

	Name	Namespace	Assembly Name	Directory
☑	AccessDataSource	System.Web.UI.WebControls	System.Web (2.0.0.0)	Global As
☑	AdamAdvantechDaq	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamComComponent	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
□	AdamComComponent	Advantech.Graph	Advantech.Graph (7.1.2....	C:\Progra
☑	AdamCommunication...	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamControlCompon...	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamDaqBase	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamDataScalePool	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra

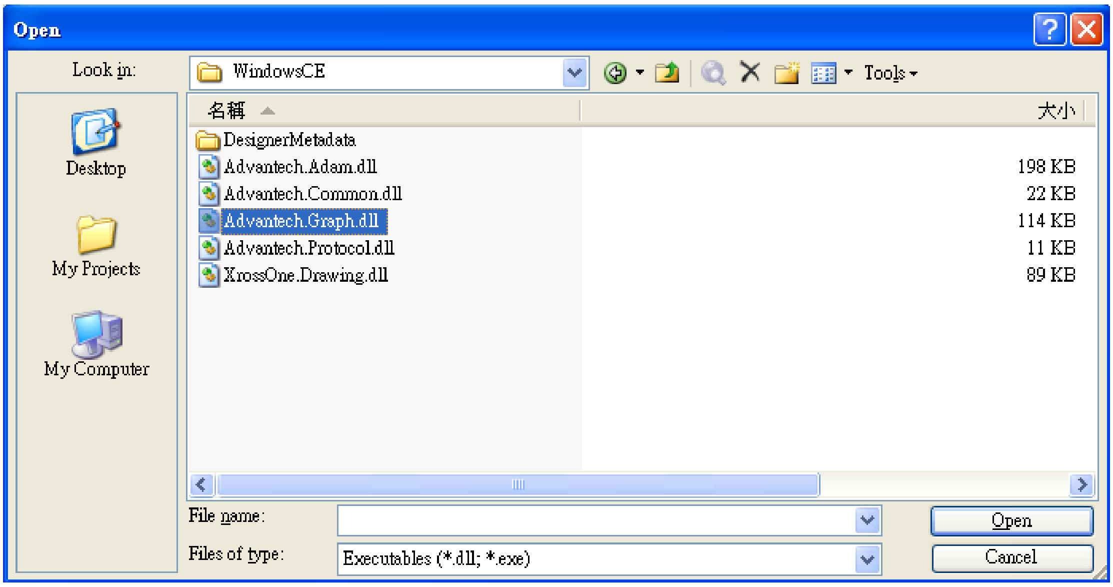
Filter:

AccessDataSource

Language: Invariant Language (Invariant Country)

Version: 2.0.0.0

In the dialog box, you must select the file “Advantech.Graph.dll” under “\Program Files\Advantech\LogixView\v2.0\WindowsCE”, then click “Open”.



Open

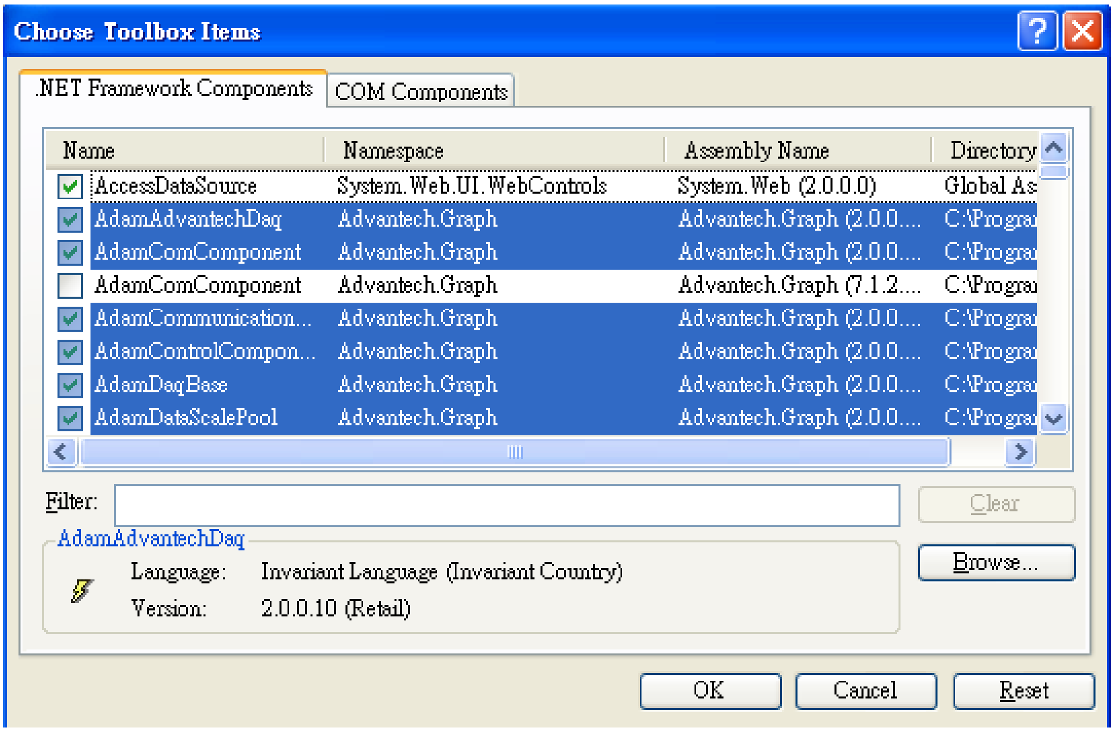
Look in: WindowsCE

名稱	大小
DesignerMetadata	
Advantech.Adam.dll	198 KB
Advantech.Common.dll	22 KB
Advantech.Graph.dll	114 KB
Advantech.Protocol.dll	11 KB
XrossOne.Drawing.dll	89 KB

File name:

Files of type: Executables (*.dll; *.exe)

You will see the LogixView controls and components are inserted into the list and highlighted. Just click the “OK” button.



Choose Toolbox Items

.NET Framework Components | COM Components

	Name	Namespace	Assembly Name	Directory
☑	AccessDataSource	System.Web.UI.WebControls	System.Web (2.0.0.0)	Global As
☑	AdamAdvantechDaq	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamComComponent	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
□	AdamComComponent	Advantech.Graph	Advantech.Graph (7.1.2....	C:\Progra
☑	AdamCommunication...	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamControlCompon...	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamDaqBase	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra
☑	AdamDataScalePool	Advantech.Graph	Advantech.Graph (2.0.0....	C:\Progra

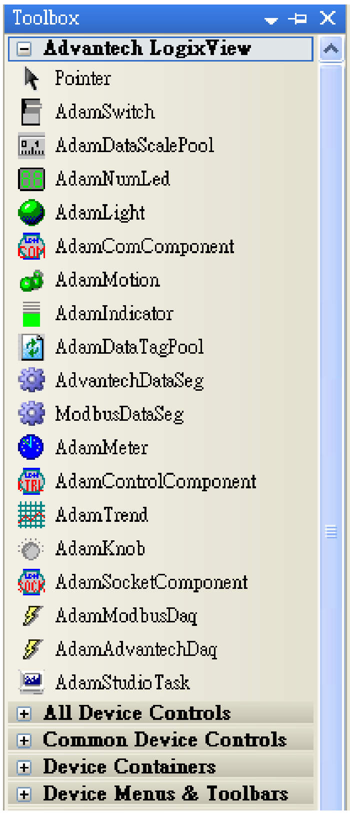
Filter:

AdamAdvantechDaq

Language: Invariant Language (Invariant Country)

Version: 2.0.0.10 (Retail)

You will see the LogixView controls and components are added into the toolbox. Now, you can drag and drop the controls or component into your form designer.



Toolbox

⊟ Advantech LogixView

- Pointer
- AdamSwitch
- AdamDataScalePool
- AdamNumLed
- AdamLight
- AdamComComponent
- AdamMotion
- AdamIndicator
- AdamDataTagPool
- AdvantechDataSeg
- ModbusDataSeg
- AdamMeter
- AdamControlComponent
- AdamTrend
- AdamKnob
- AdamSocketComponent
- AdamModbusDaq
- AdamAdvantechDaq
- AdamStudioTask

⊞ All Device Controls

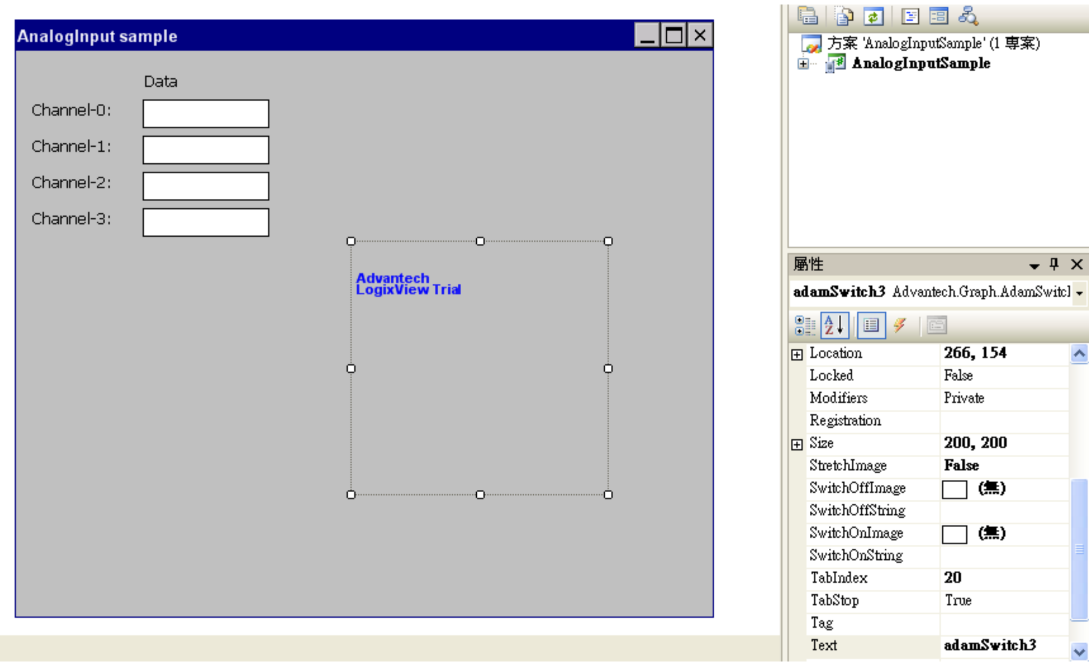
⊞ Common Device Controls

⊞ Device Containers

⊞ Device Menus & Toolbars

Why do I have a "Trial" word on my components?

Please check the below picture. You can find the "Registration" attribute on the attribute dialog. Please key in your serial number into the field. The trial limitation will be released.



Location	266, 154
Locked	False
Modifiers	Private
Registration	
Size	200, 200
StretchImage	False
SwitchOffImage	□ (無)
SwitchOffString	
SwitchOnImage	□ (無)
SwitchOnString	
TabIndex	20
TabStop	True
Tag	
Text	adamSwitch3

ADVANTECH

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Please verify specifications before quoting. This guide is intended for reference purposes only.

All product specifications are subject to change without notice.