How do I write a com port communicate program of XPAC

Applies to:

Platform	*OS version*	*XPAC utility version*
XPAC series	*All versions (WinCE6)*	*All versions*

The XPAC SDKs provides a complete solution to integrate with XPAC and compatible with Visual C#, Visual Basic .net and C++.

This example using MFC、C# and VB.Net demonstrates how to control COM port to communicate with the other device. please perform the following steps to build program.

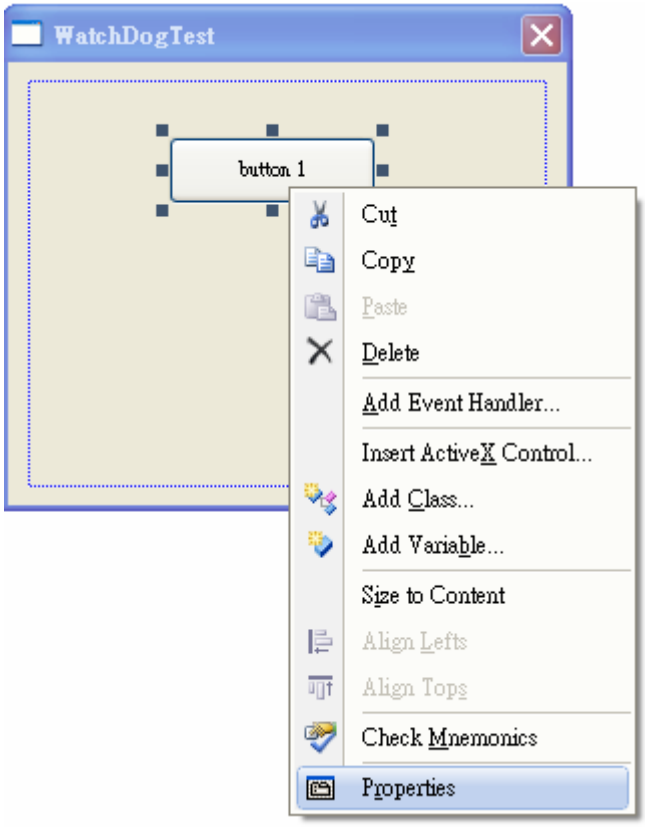
Using MFC to control COM port communicate

Step 1: From the Toolbox, drag a Button control onto the form

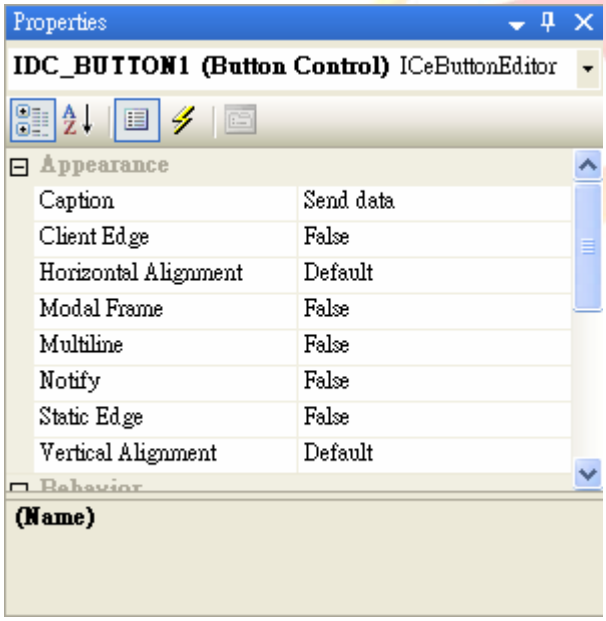


Step 2: Right-click the Button control, and then click Properties

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Step 3: In the Properties window, type ”Send data”, and press ENTER to set the Caption property..



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Step 4: Add “#include "XPacSDK_CE.h" in main file.

```
#include "stdafx.h"
#include "WatchDogTest.h"
#include "WatchDogTestDlg.h"
#include "XPacSDK_CE.h"
```

Step 5: Double-click “Send data” button on the form.



Step 6: Inserting the following code

Insert following code in “Send data” button click event.

```
void CSendCOMDlg::OnBnClickedButton1()
{
    // TODO: Add your control notification handler code here
    HANDLE hPort = uart_Open("COM3:,115200,N,8,1");
    char data[20]={0};
    BOOL iret = uart_SendCmd(hPort,"$01M",data);
    printf("recive data %s\n",data);
    uart_Close(hPort);
}
```

Using “uart_Open” open com port, 1st parameter of this function is a string, format is “COMx:,baudrate, parity bits,data bits,stop bits”. For example if you open com port 1, set to baudrate is 115200,parity bit is None, data bit is 8, stop bit is 1, so the parameter is “COM1:,115200,N,8,1”.

“uart_Open” Syntax

```
HANDLE uart_Open(LPCSTR ConnectionString);
```

Using “uart_SendCmd” send data, 1st parameter of the function is HANDLE to the open COM, 2nd parameter is command string, 3rd parameter is buffer of receives the data.

“uart_ SendCmd” Syntax

```
HANDLE uart_ SendCmd (HANDLE hPort, LPCSTR cmd, LPSTR szResult);
```


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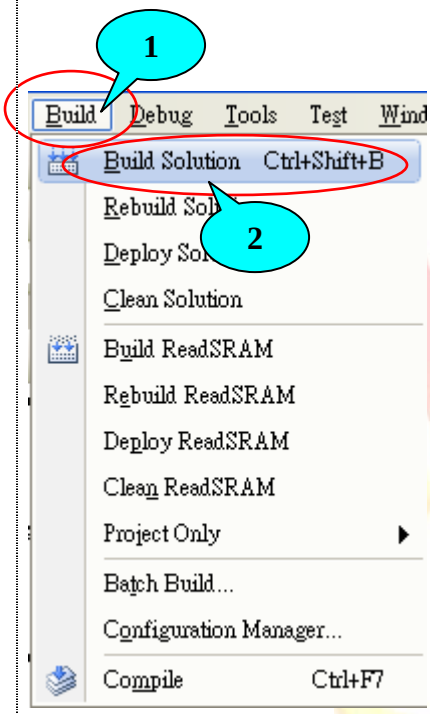
Using “uart_Close” close com port, this function parameter is com port HANDLE.

“uart_Close” Syntax

```
HANDLE uart_Close(HANDLE hPort);
```

Step 7: Build and execute

Click “Build”->”Build Solution” build execute file after perform above step. This execute file is building in your project folder. Put this execute file in your XPAC.



If your COM3 connect to I-7044D and the module baud rate is 115200, then this program results the following picture.



Tips & Warnings

Refer to the FAQ documents below to upload the execute file to XPAC.

- X5-02_How_to_debug_XPAC_programs_in_Visual_Studio_2005(2008)_online_through_the_TCPIP_english
- X5-27_How to write a MFC application with XPAC SDK in visual studio 2005
- X5-30_How to write a MFC application with XPAC SDK in visual studio 2008

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Using C# to control COM port communicate

Step 1: From the Toolbox, drag a button control onto the form. The properties of this buttons text is ”Send data”.

Step 2: Get the XPacNet.dll and copy it to the project folder. The XPacNet.dll can be obtained from any C# demo program that has been provided on the CD or by downloading the latest version from ICP DAS web site.

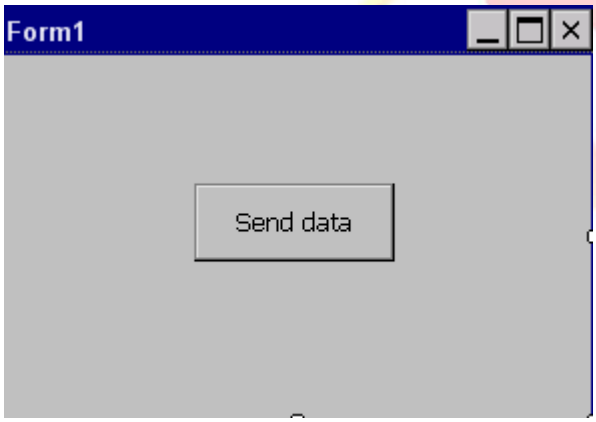
1. CD:\SDK\XPacNET
2. ftp://ftp.icpdas.com/pub/cd/xp-8000-ce6/sdk/xpacnet/
3. ftp://ftp.icpdas.com/pub/cd/xpac-atom-ce6/sdk/xpacnet/

Tips & Warnings

Refer to the FAQ documents below to add XPacNet.dll to the project.

- X5-28_How to write a C#.net application with XPAC SDK in visual studio 2005
- X5-31_How to write a C#.net application with XPAC SDK in visual studio 2008

Step 3: Double-click “Send data” button on the form.



Step 4: Inserting the following code

Insert following code in the click event of “Send data” button.

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```
private void button1_Click(object sender, EventArgs e)
{
    IntPtr hPort = XPacNET.XPac.uart_Open("COM3:,N,8,1");
    byte[] data = new byte[20];
    byte[] buffer = new byte[20];
    data = System.Text.Encoding.Default.GetBytes("$01M");
    XPacNET.XPac.uart_SendCmd(hPort, data, buffer);
    string result = System.Text.Encoding.Default.GetString(buffer, 0, 20);
    MessageBox.Show("recive data : " + result);
    XPacNET.XPac.uart_Close(hPort);

}
```

Using “uart_Open” open com port, 1st parameter of this function is a string, format is “COMx:, baudrate, parity bits, data bits, stop bits”. For example if you open com port 1, set to baud rate is 115200,parity bit is None, data bit is 8, stop bit is 1, so the parameter is “COM1:,115200,N,8,1”.

“uart_Open” Syntax

```
IntPtr uart_Open(string ConnectionString);
```

Using “uart_SendCmd” send data, 1st parameter of thiss function is IntPtr to the open COM, 2nd parameter is command string, 3rd parameter is buffer of receives the data.

“uart_ SendCmd” Syntax

```
Bool uart_ SendCmd (IntPtr hPort, byte[] cmd, byte[] szResult);
```

Using “uart_Close” close com port, this function parameter is com port IntPtr.

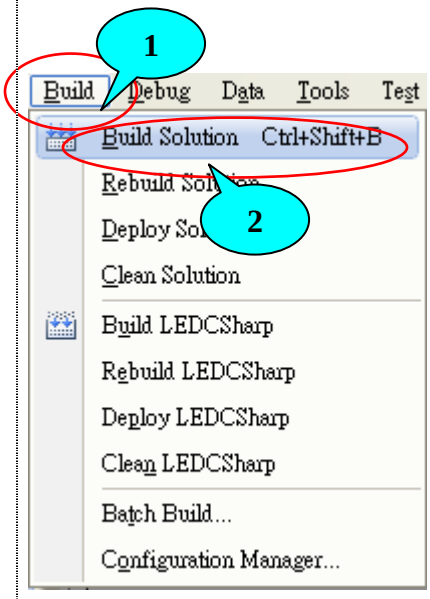
“uart_Close” Syntax

```
Bool uart_Close(IntPtr hPort);
```

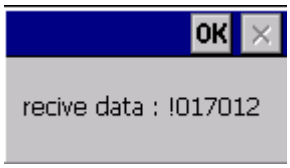
Step 5: Build and execute

Click “Build”->”Build Solution” to build the project, and a execute file will be obtained in the project folder. Put this execute file in your XPAC and execute it.

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If your COM3 connect to I-7012D and the module baud rate is 115200, then this program results the following picture.



Tips & Warnings

Refer to the FAQ documents below to upload the execute file to XPAC.

- X5-02_How_to_debug_XPAC_programs_in_Visual_Studio_2005(2008)_online_through_the_TCPIP_english
- X5-28_How to write a C#.net application with XPAC SDK in visual studio 2005
- X5-31_How to write a C#.net application with XPAC SDK in visual studio 2008

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Using VB.Net to control COM port communicate

Step 1: From the Toolbox, drag a button control onto the form. The properties of this buttons text is ”Send data”.

Step 2: Get the XPacNet.dll and copy it to the project folder. The XPacNet.dll can be obtained from any C# demo program that has been provided on the CD or by downloading the latest version from ICP DAS web site.

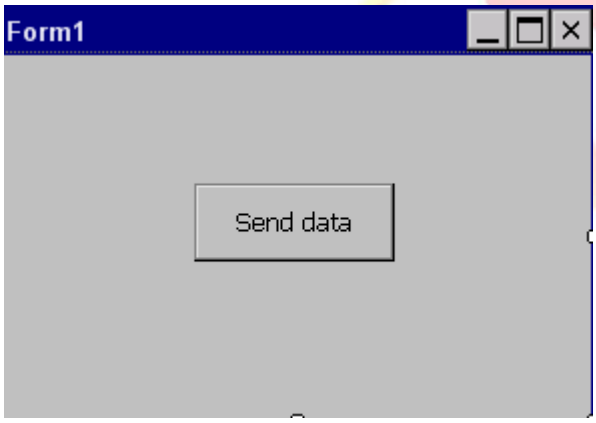
1. CD:\SDK\XPacNET
2. ftp://ftp.icpdas.com/pub/cd/xp-8000-ce6/sdk/xpacnet/
3. ftp://ftp.icpdas.com/pub/cd/xpac-atom-ce6/sdk/xpacnet/

Tips & Warnings

Refer to the FAQ documents below to add XPacNet.dll to the project.

- X5-29_ How to write a VB.net application with XPAC SDK in visual studio 2005
- X5-32_How to write a VB.net application with XPAC SDK in visual studio 2008

Step 3: Double-click “Send data” button on the form.



Step 4: Inserting the following code

Insert following code in “Send data” button click event.

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```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
    Dim hPort As IntPtr = XPacNET.XPac.uart_Open("COM3:,115200,N,8,1")
    Dim command(20) As Byte
    Dim recive(20) As Byte
    Dim strRec As String
    Dim encoding As New System.Text.UTF8Encoding()
    command = encoding.GetBytes("$01M")
    XPacNET.XPac.uart_SendCmd(hPort, command, recive)
    strRec = encoding.GetString(recive, 0, 20)
    XPacNET.XPac.uart_Close(hPort)
    MsgBox("read data:" + strRec)
End Sub
```

Using “uart_Open” open com port, 1st parameter of this function is a string, format is “COMx: baudrate, parity bits, data bits, stop bits”. For example if you open com port 1, set to baud rate is 115200,parity bit is None, data bit is 8, stop bit is 1, so the parameter is “COM1:,115200,N,8,1”.

“uart_Open” Syntax

```
IntPtr uart_Open(string ConnectionString);
```

Using “uart_SendCmd” send data, 1st parameter of this function is IntPtr to the open COM, 2nd parameter is command string, 3rd parameter is buffer of receives the data.

“uart_ SendCmd” Syntax

```
HANDLE uart_ SendCmd (IntPtr hPort, byte[] cmd, byte[] szResult);
```

Using “uart_Close” close com port, this function parameter is com port IntPtr.

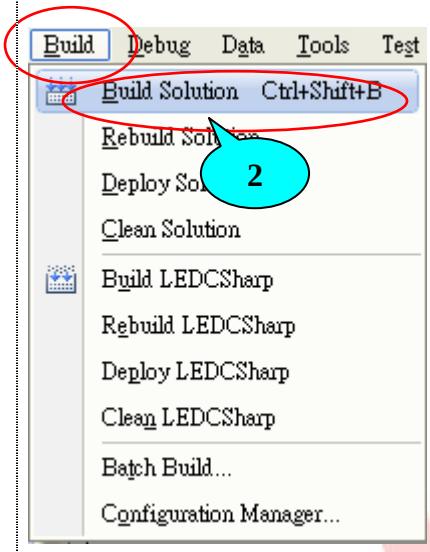
“uart_Close” Syntax

```
HANDLE uart_Close(IntPtr hPort);
```


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Step 5: Build and execute

Click “Build”->”Build Solution” to build the project, and a execute file will be obtained in the project folder. Put this execute file in your XPAC and execute it.



If your COM3 connect to I-7044D and the module baud rate is 115200, then this program results the following picture.



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