

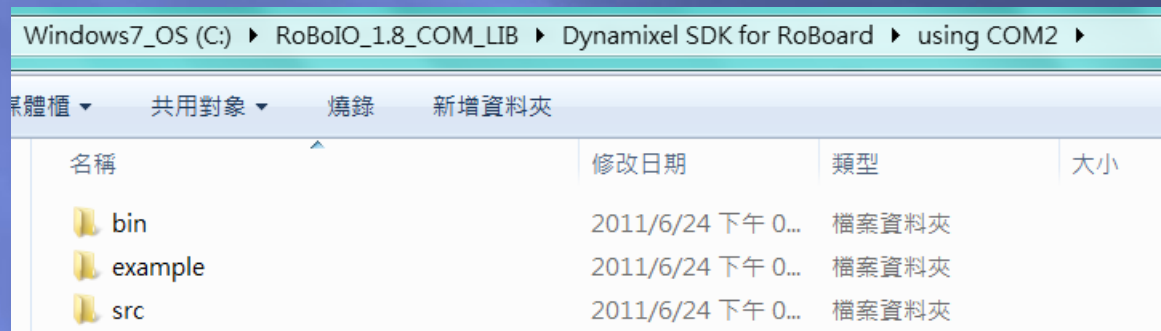
Dynamixel SDK for RoBoard's COM2

DMP Electronics Inc
Robotic Division
June 2011

Installation for VS2008

Installation

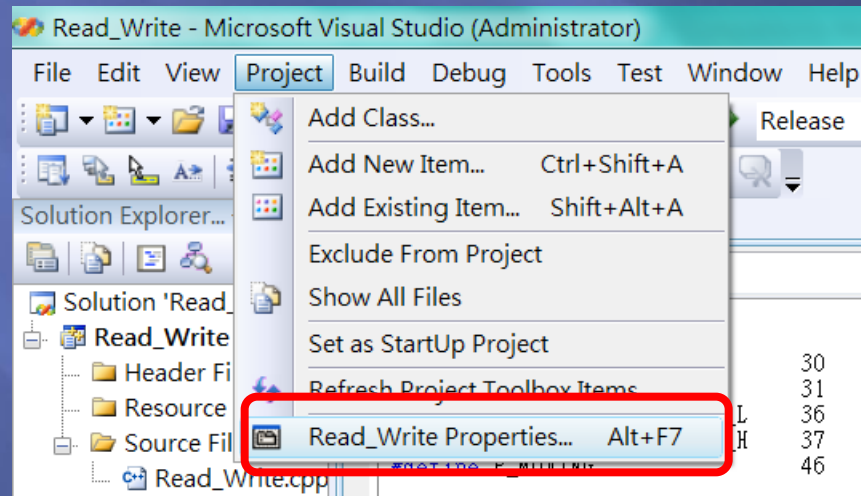
- ▣ Decompose **Dynamixel SDK for RoBoard** zip-file to your PC.



- ▣ In the “**using COM2**” folder, it contains:
 - **bin**: Binary files of the SDK (for COM2);
 - **example**: Sample codes from the original Dynamixel SDK;
 - **src**: Source code of the SDK.

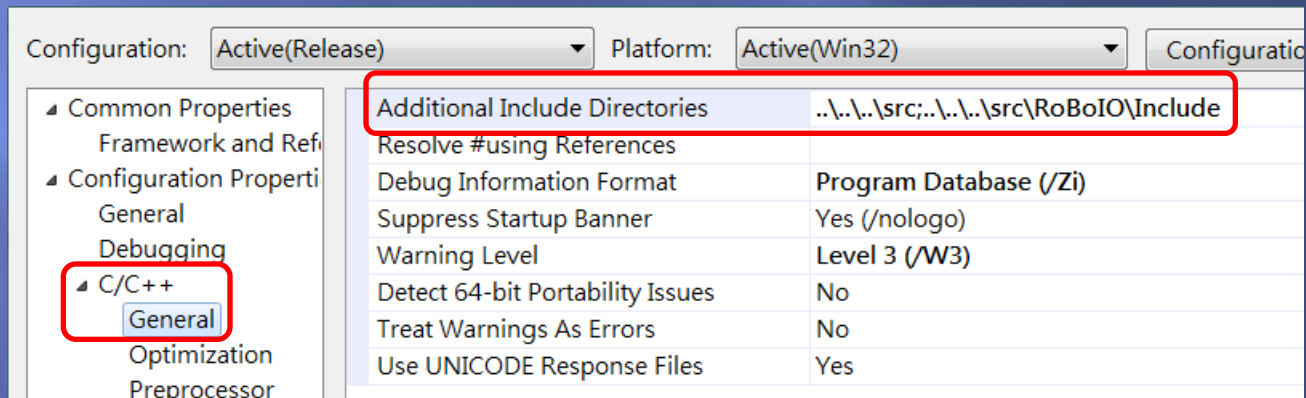
Setting in VS2008 Projects

- ▣ Before using the SDK in your project, you need to set it in VS2008.
- ▣ Open the **Properties** window:



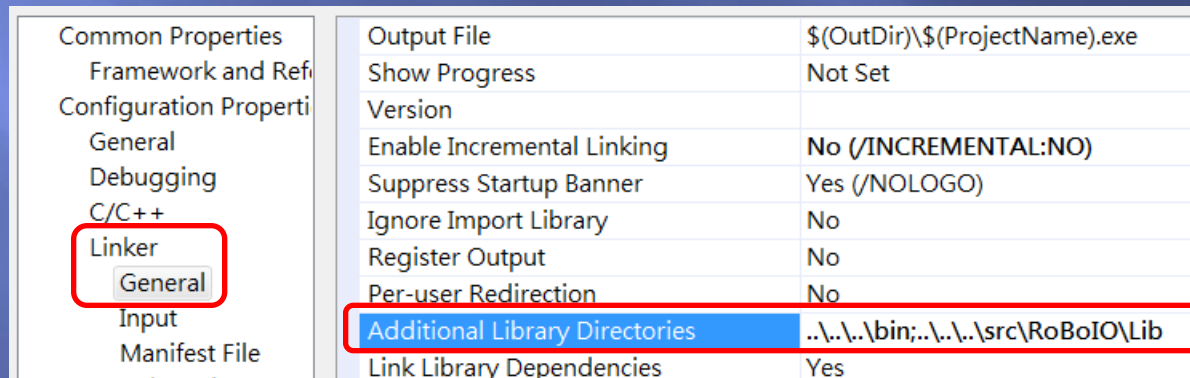
Setting in VS2008 Projects

- ▣ Set **Additional Include Directories**.
 - ▣ Path1: Set to “**src**” in the “**using COM2**” folder;
 - ▣ Path2: Set to the “**Include**” path of RoBoIO library.



Setting in VS2008 Projects

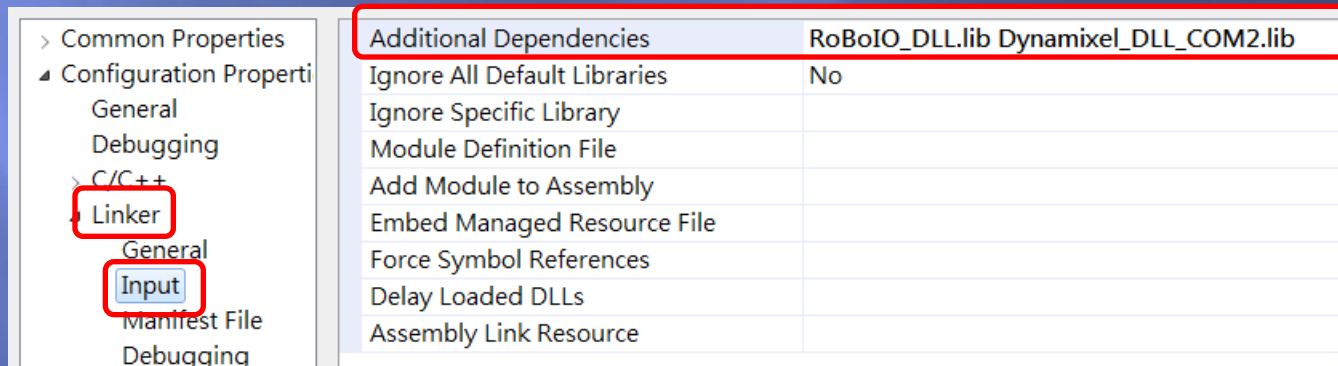
- ▣ Set **Additional Library Directories**.
 - ▣ Path1: Set to “**bin**” in the “**using COM2**” folder;
 - ▣ Path2: Set to the “**Lib**” path of RoBoIO library.



Setting in VS2008 Projects

▣ Set **Additional Dependencies**.

- ▣ File1: Add **Dynamixel_DLL_COM2.lib**;
- ▣ File2: Add **RoBoIO_DLL.lib**.



Usage Overview

Usage

- ▣ Should include
 - **dynamixel.h** and
 - **roboard_dll.h**in your code.
- ▣ Before using the SDK, should first call **roboio_SetRBVer(...)** to set the correct model of your RoBoard.
 - See also RoBoIO introduction slide for reference.

```
.....  
#include "dynamixel.h"  
#include "roboard_dll.h"  
.....  
  
int main()  
{  
  
    roboio_SetRBVer(...);  
  
    .....  
    // use API of  
    // Dynamixel SDK here  
    .....  
}
```

Remarks

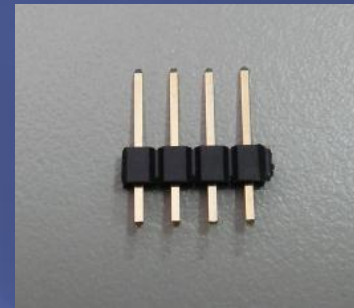
- ▣ For API manual of Dynamixel SDK, see the website of Robotis:
 - <http://support.robotis.com/en/software/dynamixel/sdk.htm>
- ▣ When calling **dxl_set_baud(...)**, only standard baudrates (e.g., 115200, 9600,) are allowed in the SDK for RoBoard.

DIY RoBoard \leftrightarrow RX-28 Connection Line

Preparation



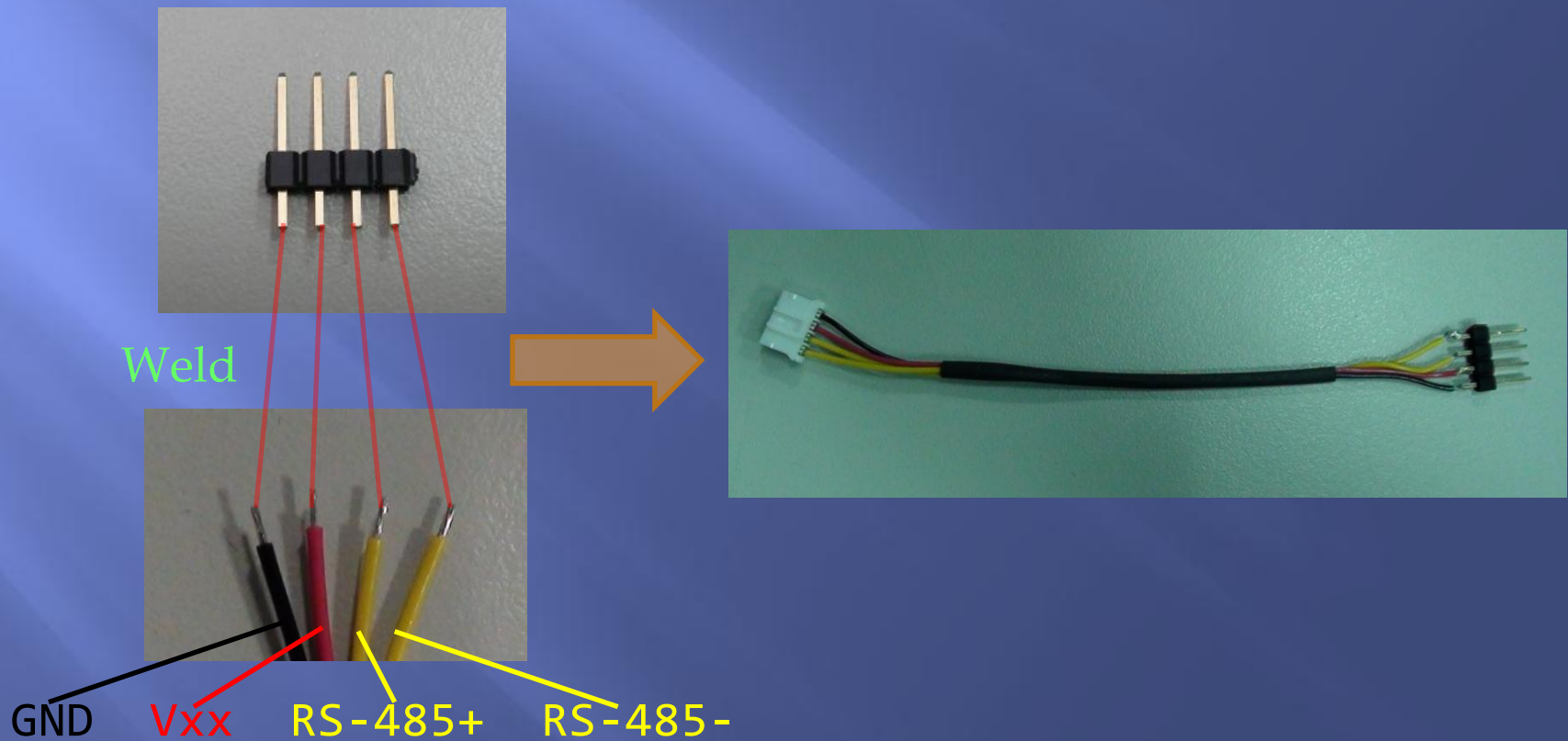
COM2 line in RoBoard Cable set



4-pin header of
2.54mm pitch

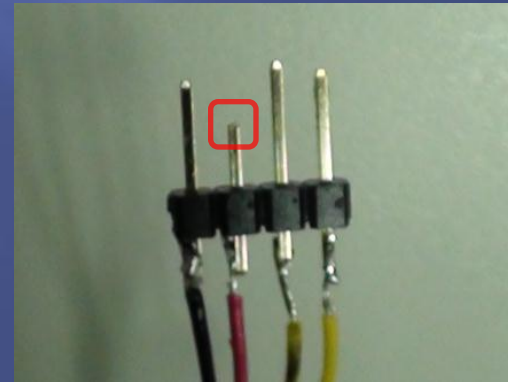
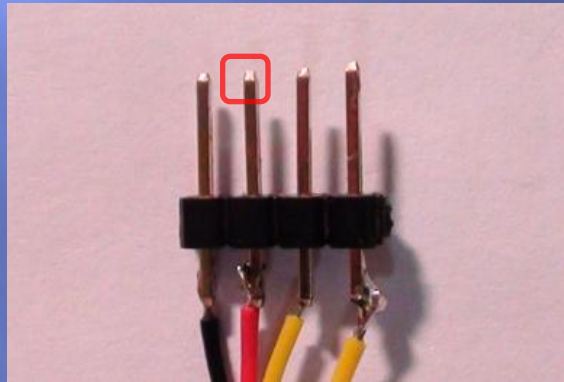
Step 1

- Solder the COM2 line and the pin header together.



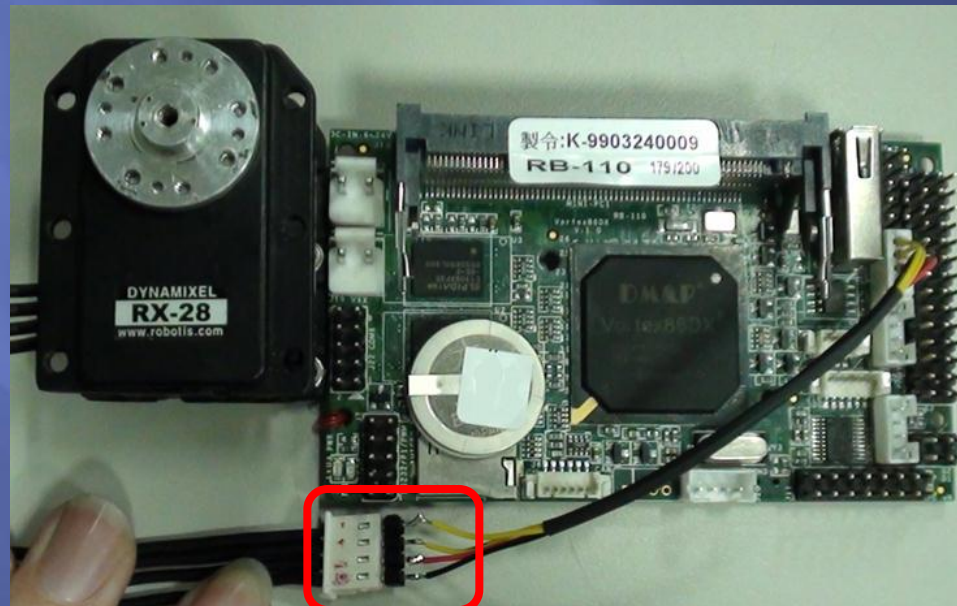
Step 2

- Shorten the V_{xx} pin (useful for hot-plugging RX-28).



Step 3

- ▣ Now you can connect RX-28 to RoBoard's COM2 using the connection line.
- Note: don't plug the connector in wrong direction.



The heart of Robotics

Thank You

tech@roboard.com
<http://www.roboard.com>