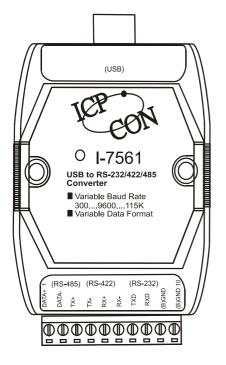
I-7561 Pin Assignment and Specifications



Introduction

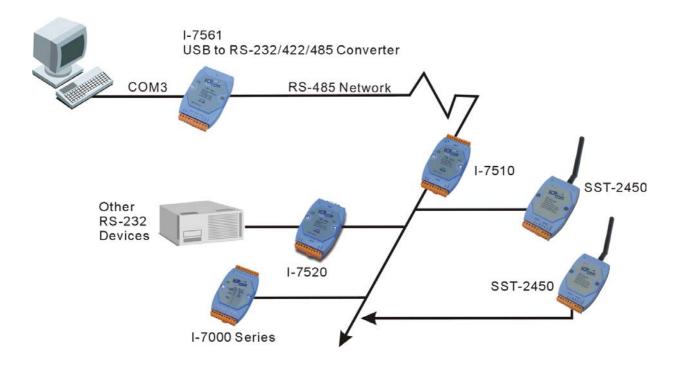
The I-7561 is a cost-effective module for transfer serial data over USB. It allows you to connect your serial devices to systems using a USB interface. Connecting the **I-7561** to a PC, you get one extra high-speed RS-232/422/485 ports. Like our I-7520A, the I-7561 contains "Self Tuner" This chip auto-tunes the baud rate and data format to the RS-485 network. The I-7561 module derives the power from the USB port and doesn't need any power adapter (when you use I-7561, you should connect power ground to other modules). It also features a high-speed 115.2 Kb/s transmission supports various rate, and 0.S. independent RS-232/422/485 Ports.

Specifications

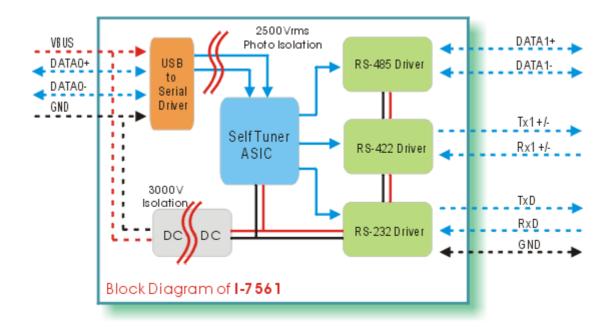
- Compatibility: USB 1.1 standard
- Input port: USB
- •Output port: 3-wire RS-232, RS-422, RS-485.
- Cable: USB type A connector (Type A to Type B cable provided).
- Isolation voltage: 3000VDC
- "Self Tuner" inside, support multiple Baud Rate and multiple Data Format
- Auto switching baud rate, 300~115.2K bps
- ●256 modules max. in one RS-422/485 network without repeater
- Isolation voltage: 3000VDC
- Repeater request: 4,000 feet or over 256 modules
- Communication distance: 1.2Km/9600 Bps, 2.7Km/4800 Bps, 3.6Km/2400 Bps
- Power requirements: Voltage support by USB interface of the host-PC.
 Power consumption: 1.5 W max.
- Operation temperature: -25_{\circ} to $+75_{\circ}$
- Storage temperature: -25_{\circ} to $+80_{\circ}$
- Humidity: 5~ 95%
- Driver Supported: Windows 98/ME/2000, XP, Linux, MacOS

The I-7561 System Network Configuration:

- Multiple Baud Rate
- Multiple Data Format



The I-7561 Block Diagram:



I-7561 has four different output types.

Selecting the I-7561 output type.

NOTE: The RS-232, RS-422 and RS-485 output types couldn't be used simultaneously, which means that you can only select 1 type to output.

Type 1: 1-channel RS-485 output.

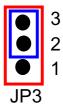
Type 2: 1-channel RS-422 output.

Type 3: 2-channel RS-485 output. (Support star network)

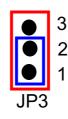
Type 4: 1-channel RS-232 output.

RS422/485 Output Jumpers settings:

For type 1: Set the JP3 jumper to positions 1 and 2. For type 2: Set the JP3 jumper to positions 1 and 2. For type 3: Set the JP3 jumper to positions 2 and 3.

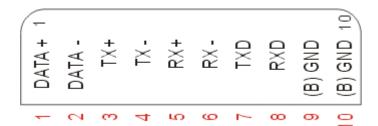


Types 1 and 2: Default setting RS-422 or RS-485



Type 3: 2-channel RS-485

Pin Assignment For type1 and type2:

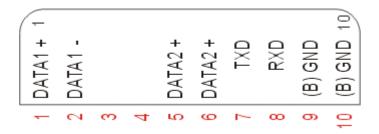


RS-422 Pin define: TX+, TX-, RX+ and RX-

RS-485 Pin define:

DATA+ and DATA-

Pin Assignment For type3:

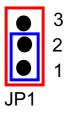


Channel one Pin define: DATA1+ and DATA1-

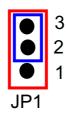
Channel two Pin define: DATA2+ and DATA2The I-7561 is designed with a Termination resistor on board

Enable/Disable the resistor jumper for channel 1:

To disable the resistor: Set the JP1 jumper to positions 1 and 2. To enable the resistor: Set the JP1 jumper to positions 2 and 3.



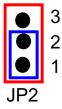
Default setting Resistor Disabled



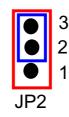
120 Ohm on board

Enable/Disable the resistor jumper for channel 2:

To disable the resistor: Set the JP2 jumper to positions 1 and 2. To enable the resistor: Set the JP2 jumper to positions 2 and 3.



Default setting Resistor Disabled



120 Ohm on board

I-7561 Driver Installation

Installing the Device

This section will guide you on how to install the I-7561 USB to RS-232/422/485 converter under Windows XP, Windows 2000, Windows ME, and Windows 98 operating systems. (No support for WinNT). Download driver files from

1. Package CD, \Napdos\7000\756x\7561

2. ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/7000/756x/7561

The following steps will show how to install the device under Windows 2000. Basically, the procedures are also somewhat the same for other Windows operating systems.

- 1. Power on your computer and boot to Windows.
- 2. Locate the USB port of your computer and plug in the I-7561.
- 3. Windows will detect the new device and will initiate the Found New Hardware Wizard prompting you to install the software for the detected USB Device. Select to install from a list or specific location. Click Next to continue.



4. An "Install Hardware Device Drivers" window is shown. Click "Next" to initiate a search for a suitable driver for your device.

Upgrade Device Driver Wizard
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
This wizard upgrades drivers for the following hardware device:
Upgrading to a newer version of a device driver may add functionality to or improve the performance of this device.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
O Display a list of the known drivers for this device so that I can choose a specific driver
< Back Next > Cancel

5. Select the "Specify a location" optional search locations. If the "CD-ROM drives" checkbox is selected, please insert the driver CD. Click "Next" to start the search.

Upgrade Device Driver Wizard
Locate Driver Files Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
USB Device
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< Back Next > Cancel

6. If the "Specify a location" is selected, you much choose the correct path. Enter E:\Napdos\7000\756x\7561(The 'E' is the Disk that Package CD put in). Click "OK" to start the search.

Found Nev	v Hardware Wizard	×
	Insert the manufacturer's installation disk into the drive selected, and then click OK.	OK Cancel
	Copy manufacturer's files from: E:\NAPDOS\7000\756X\7561\WIN2000	Browse

7. Once Windows finds the correct driver, click "Next" to install the driver.

Found New Hardware Wizard
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
USB Device
Windows found a driver for this device. To install the driver Windows found, click Next.
e:\napdos\7000\756x\7561\win2000\ser2pl.inf
< Back Next > Cancel

8. Windows will then install the driver for the USB-to-RS232/422/485. Once installation is complete, Windows will notify you that it has finished installing the software. Click "Finish" to continue.



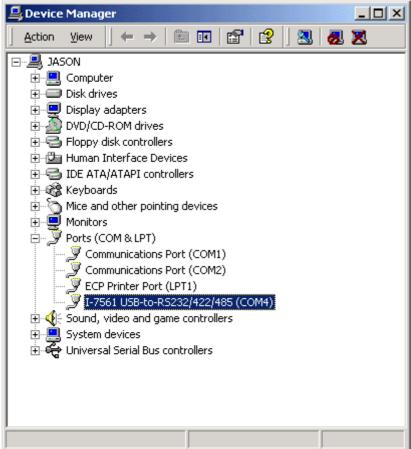
Verifying the Installation:

This section will show you on how to verify whether the I-7561 was properly installed. You will also need to determine the COM port assignment made by Windows for the USB to RS-232/422/485 converter.

Note: Before you connect the I-7561 for the first time, ensure that you do not attach any serial devices to the converter. You must only connect the I-7561 itself.

To verify whether the device is properly installed and determine the COM port assignment for the device:

 Click "Start" → "Settings" → "Control Panel", then double click on the "System" icon. Once the System Properties window is display, click on "Hardware" tab and then click on the "Device Manager" button. Doubleclick on Ports (COM & LPT). If the device was correctly installed, you should now see the I-7561 USB-to-RS232/422/485 (COM4) device listing. This also means that Windows has assigned the device to the COM4 port.



2. If you need to reassign the COM Port name to another Port number, you can double-click on the device (I-7561 USB-to-RS232/422/485) to view the properties.

I-7561 US	B-to-R5232/422	/485 (COM4) Pro	perties	? ×		
General	Port Settings Dri	ver				
Į	I-7561 USB-to-RS232/422/485 (COM4)					
	Device type:	Ports (COM & LP	T)			
	Manufacturer:	ICP DAS				
	Location:	USB Device				
Device status This device is working properly. If you are having problems with this device, click Troubleshooter to start the troubleshooter. Troubleshooter						
Device usage: Use this device (enable)						
			ОК	Cancel		

3. Once the properties window opens click on the Port Settings tab. Then click on the advanced button.

I-7561 USB-to-R5232/422/485 (COM4) Properties
General Port Settings Driver
Bits per second: 9600
Data bits: 8
Parity: None
Stop bits: 1
Flow control: None
Advanced Restore Defaults
OK Cancel

4. The Advanced Settings dialog box will now be displayed. Click on the COM Port Number drop down box to check what other port numbers are available. If, for instance, Windows has assigned COM5 to the device, you may try to reassign it to a lower unused port number. Click OK when finished. Try running HyperTerminal to test whether the new port number is OK.

Advanced Settings for COM3							<u>? ×</u>
Use FIFO buffers (requires 16550 compatible UART) Select lower settings to correct connection problems.						OK Cancel	
Select higher settings I	or faster p	erformance.					Defaults
Receive Buffer: Low (1)	1	,		—Ţ	High (14)	(14)	
Transmit Buffer: Low (1)	1			—Ţ	High (16)	(16)	
COM Port Number: COM3	-L						

Note: Some software programs may only support Ports up to COM4 and may not work if the port is assigned to COM5 or higher.

5. Once you have verified that the device has been properly installed, you may now proceed to use the USB-to-RS232/422/485 Converter to connect to serial devices. Attach the serial device to the serial port of the adapter and then connect the USB connector to the USB port of your computer. Use the supplied driver for the serial device if needed.

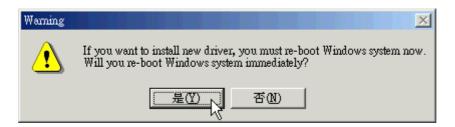
Uninstalling the Device Driver

It is easy to uninstall the USB to Serial device driver:

- 1. Run the DRemover98_2K.exe Uninstall program which can be found on the Package CD, \Napdos\7000\756x\7561 or at
- ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/7000/756x/7561
- 2. The uninstall program will then prompt you whether you want to remove the utility program. Click OK to continue.



3. After the uninstall is complete, the program will prompt you to restart Windows. Click "Yes" to continue.



4. Windows will show a dialog box to notify you that the driver was removed successfully. Wait for Windows to restart your computer.

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