

Technical Note 18

Connecting to Win-Situ with a Serial Card

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Introduction:

In-Situ's instruments connect to computers through a 9-pin serial port. However, many new laptops and notebooks only have USB ports or Type II Expansion Slots. New USB-to-Serial cables, however, will not connect to instruments via Win-Situ 2000 nor Win-Situ 4 software. In such cases, a third-party PCMCIA Serial Card is needed. There are many manufacturers of PCMCIA Serial cards, but only the SIIG Single Serial Card has been verified with Win-Situ software. The Serial Card is accompanied by a disk that contains the necessary Driver to be installed to the computer. The Driver creates a virtual COM Port, which can be used by Win-Situ to establish a serial port connection with an instrument.

There are a few steps required in order for the Serial Card to work correctly. The correct Driver, dictated by the computer's operating system, must be installed **first**, and then the correct COM Port setting must be selected in Win-Situ software.

The following sections contain the basic steps to set up the Serial Card correctly with an explanation of how to use this new COM Port to connect to an instrument through Win-Situ software.

Installation:

1. The first time you plug the Serial Card into the Type II Expansion Slot a "Found New Hardware Wizard" appears.
2. If it asks: "Can Windows connect to Windows Update to search for software?" go to step 3. If not, go to step 4.
3. Select "No, not this time", and click "Next"
4. It will ask: "What do you want the wizard to do?"
5. Select "Search for a suitable driver for my device (recommended)"
6. It will state: "Optional search location" with a series of check boxes. Select any of the appropriate check boxes. If you have a disk, select disk, or if you have a CD, select CD-ROM Drive. If you have the drivers saved in a folder, select Specify Location.
7. Click "Next", and the computer will locate the appropriate driver.
8. Once the Driver is installed, go to Usage with Win-Situ section.

Verify Installation and Port Assignment:

If you are unsure if the driver is installed correctly or if the “Found New Hardware Wizard” doesn’t appear when you first plug the Serial Card to the Type II Expansion Slot, you can check the COM Port settings or update the Serial Card Driver through the Device Manager. It is necessary to know the COM Port assignment for the Serial Card because this Port number is needed when connecting to an instrument via Win-Situ. Follow these steps:

1. Go to the Desktop
2. Right Click on My Computer and select Properties.
3. For Windows 95 and 98, go to the “Device Manager” Tab. For Windows NT, 2000, and XP go to the “Hardware” Tab and click on “Device Manager”.
4. Expand the “Ports” line by selecting “+”.
5. If the Driver was installed properly, there will be a COM port setting stating “PCMCIA RS232-550 (Com #)”. If this message is present, stop and go to Usage with Win-Situ section. If this message is not present, go to the next step.
6. If under Other Devices there is “?PCMCIA RS 232_550”, then you will have to Update the Driver. Go to the next step.
7. Highlight the unknown PCMCIA Device, and right-click to “Properties”
8. Select the Driver Tab, and click on “Update Driver...”
9. Then click “Next”
10. It will state: “What do you want Windows to do?”
11. Now go to step 5 in the Installation section to install the driver. You may, however, choose the more advanced option, but you will need to Browse to the exact folder and choose the correct

driver to install manually. The explanation of installing the driver through this method can be complicated, and it is beyond the scope of this note. Consult with the manufacturer of the Serial Card for additional assistance to install the Driver through the alternate option.

Usage with Win-Situ:

Once the appropriate Driver is installed, the COM port settings need to be changed in Win-Situ.

Follow these steps for Win-Situ 5:

1. Open Win-Situ.
2. Adjust the connection setting at the Win-Situ Communication Settings screen by clicking the Preferences Menu and choosing “Comm Settings.”
3. Select the appropriate COM Port in the pull-down menu, as indicated in the Device Manager. See Verify Installation and Port Assignment section if the COM Port assignment is unknown.
4. Change the baud rate, if needed, by using the pull-down menu.
5. After modifying the settings, click on the checkmark button to accept the current configuration.
6. Connect to the instrument by clicking on the gold-colored connection button in the lower-right corner or by clicking on the File menu and choosing “Connect.”

Follow these steps for Win-Situ 4 and 2000:

1. Open Win-Situ.
2. A new connection setting can be added by highlighting “Home” and clicking “Add”, or the existing connection can be edited by highlighting the “Com #...” line and clicking “Edit.”
3. Click “Next”, if “Direct” and “One” is selected.

4. Select the appropriate COM Port in the pull-down menu, as indicated in the Device Manager. See Verify Installation and Port Assignment section if the COM Port assignment is unknown. Then Click "Next."
5. Change the baud rate, if needed. A baud rate of 19200 is typical. Otherwise select "Next."
6. Change the connection name if needed. Otherwise select "Finish" with a check in the box that states: "Connect and find devices on Finish."
7. Win-Situ will now attempt to connect to the instrument.

Exception:

Win-Situ 2000 can use a Serial Card, but the software only uses COM 1 through COM 4 Ports. Most Serial Cards will register as COM 5 or higher, once the Driver is installed. Legacy instruments such as the Troll 4000 and Hermit 3000 must connect via Win-Situ 2000 software. A Serial Card that registers a COM Port 5 or higher can have the COM Port settings edited in the Device Manager under the Port Settings Tab. These directions only apply for Windows 2000 and Windows XP:

1. Install the Serial Card Driver as directed in either the Installation section or the Verify Installation and Port Assignment section.
2. Go to the Device Manager as explained in the Port Assignment section.
3. In the Device Manager, expand the Ports line by clicking on the "+"
4. The Port list will include PCMCIA RS232_550 (Com)".
5. Highlight "PCMCIA RS232_550 (Com#)". Right click on this line, and select "Properties"
6. Select the "Port Settings" tab
7. Click on "Advanced..."

8. "COM Port Number" will be listed. Select a COM Port from 1 to 4. COM 4 is recommended. If COM Ports 1 through 4 are already assigned to another device, then consult with an IT professional to reassign the COM Port settings.
9. Now go to Section 3 to connect in Win-Situ 2000 software.

Removing the Serial Card:

There is one extra step needed to safely remove the Serial Card from the Laptop. In the lower right hand corner on the Laptop next to the clock (System Tray), there will be PC Card (PCMCIA) Status tool icon. Left click on this icon and "Stop PCMCIA RS 232_550 (Com)" will be listed. Left click on this message, and another message will state, "You may safely remove this device." The user may now safely remove the Serial Card from the Laptop.

Summary:

A Serial Card can be used for any Laptop that has a Type II Expansion Slot. Almost all new Laptops have this Type II Expansion Slot. The two common mistakes are not installing the Driver properly to the computer and not editing the connection settings in Win-Situ. Once these steps are followed, the Serial Card will be able to connect to instruments that use Win-Situ 2000, Win-Situ 4, and Win-Situ 5 software.

The user is advised that many different companies make Serial Cards, however, the SIIG brand Serial Card is the only brand which has been successfully tested by In-Situ.

For more information contact In-Situ Inc.

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