MOSCHIP
SEMICONDUCTOR

MCS9900
PCIe to Multi IO Controller

Windows Driver User Manual

Revision History

Revision	Revision History	Date
1.0		30th Oct 2009

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Table of Contents

1   Introduction

This document describes the software driver installation procedure for MosChip MCS9900 PCIe to Serial on Windows operating system.
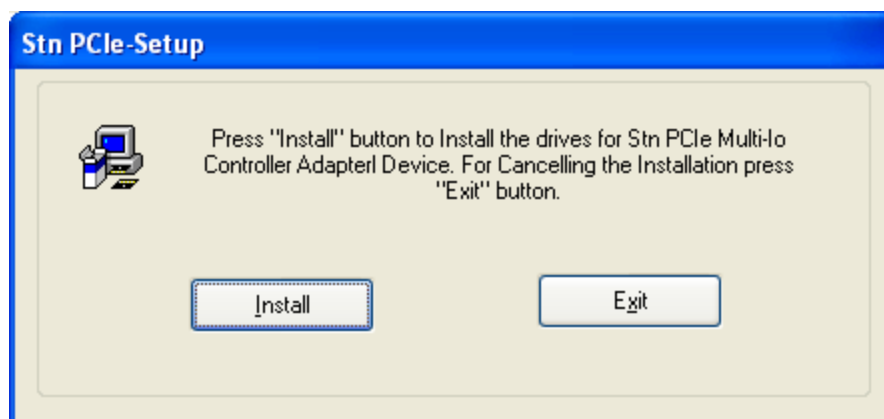
2   Obtaining Driver

MCS9900 software drivers can be downloadable from www.moschip.com. The driver disk contains VISTA and Windows folders for Windows Vista and Windows XP/2K operating systems respectively.

3   Windows XP Driver Installation

Installing drivers for the first time:
Run "StnSetup.exe" file from the driver disk folder. PCIe Setup window will be popped up as shown below
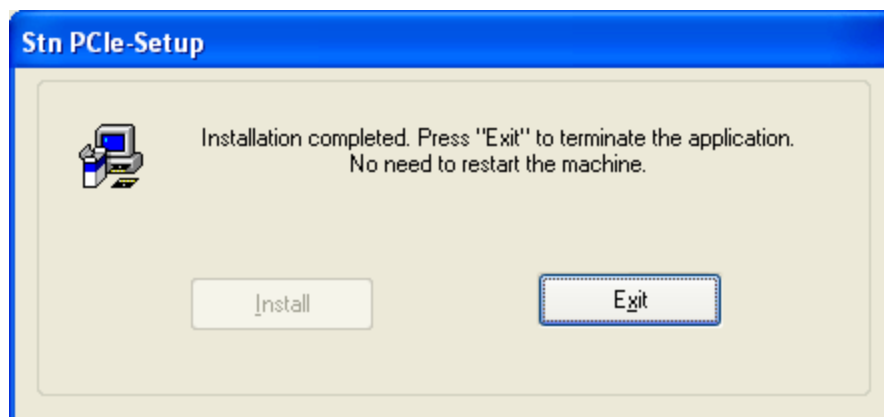

Click on "Install" button to install the MCS9900 drivers automatically.

While installation is in process, "Software Installation" warning message pops up for Windows XP compatibility, this message appears for two times. Ignore the warning message by clicking on "Continue Anyway" button. This warning message does not appear if customer uses a WHQL certified driver.

On successful driver installation, the utility will display "Installation Completed" message, click on "Exit" button to complete the driver installation.
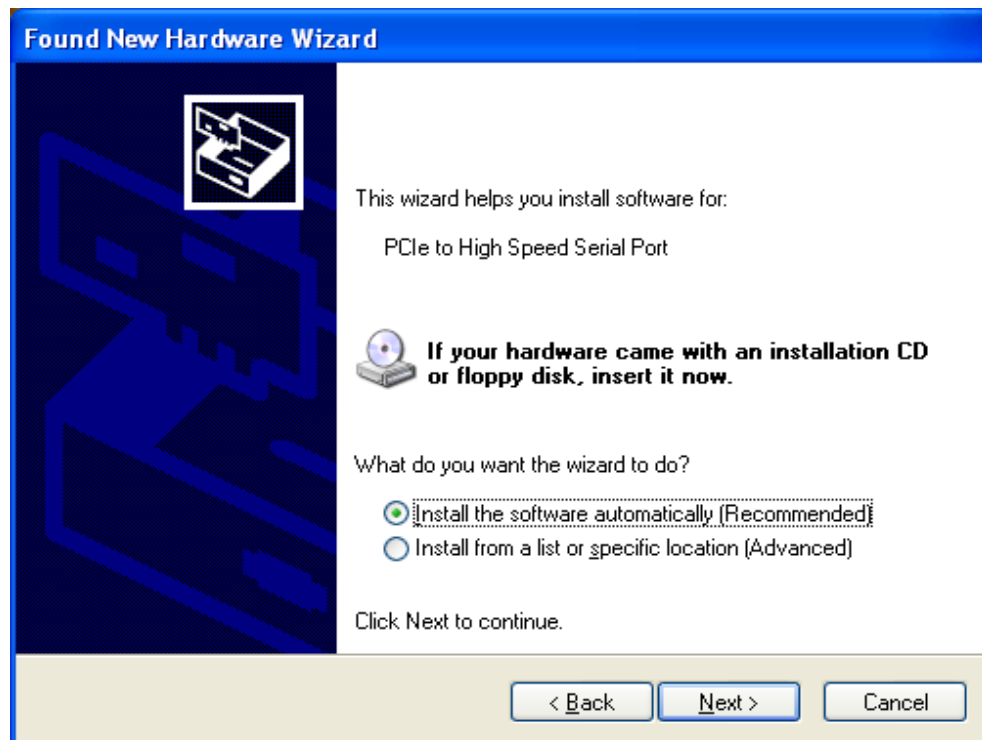

Shutdown the PC and insert the MCS9900 based PCIe card into PCIe slot and then turn ON the PC.

For the first time windows will bring up the "Found New Hardware Wizard" window to guide through the initial configuration process. Select "No, not this time" option and click on "Next" button to continue driver installation.

Select "Install the software automatically (Recommended)" option and click "Next" button.

If the "Hardware Installation" wizard pops for Windows XP compatibility, click on "Continue Anyway" button to ignore the warning message.

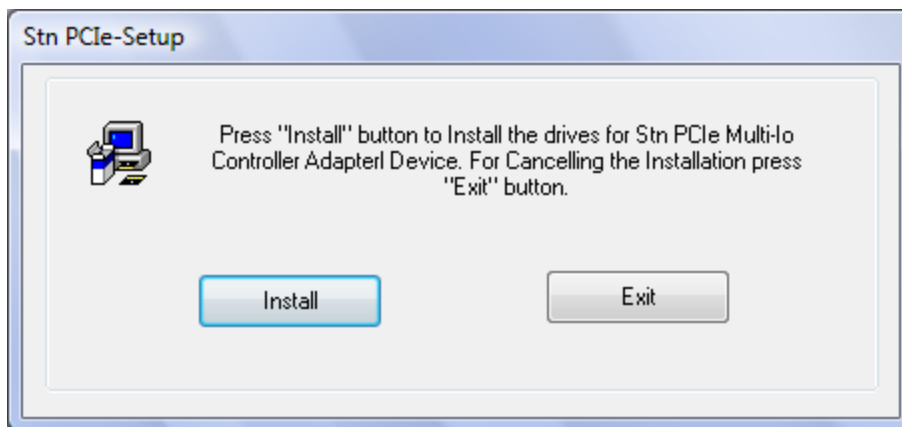Click on "Finish" button to complete the MosChip MCS9900 Peripheral Port installation.

Note: Above procedure shall be followed to install the remaining ports of MCS9900 peripheral.
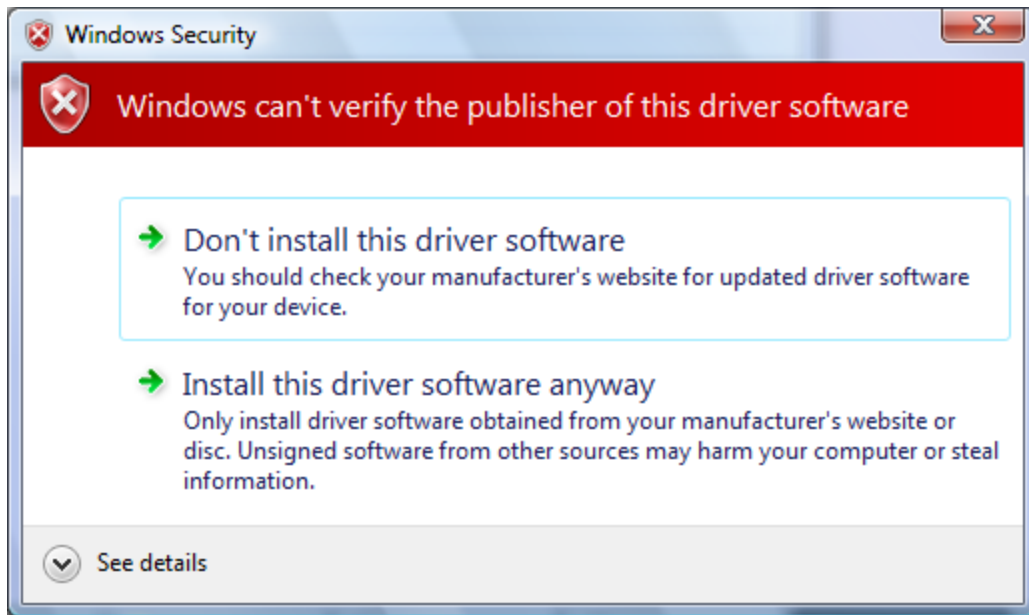
4 Windows Vista Driver Installation

4.1 Installing drivers for the first time:

Run "StnSetup.exe" file from the driver disk. PCIeSetup window will be popped up as shown below.
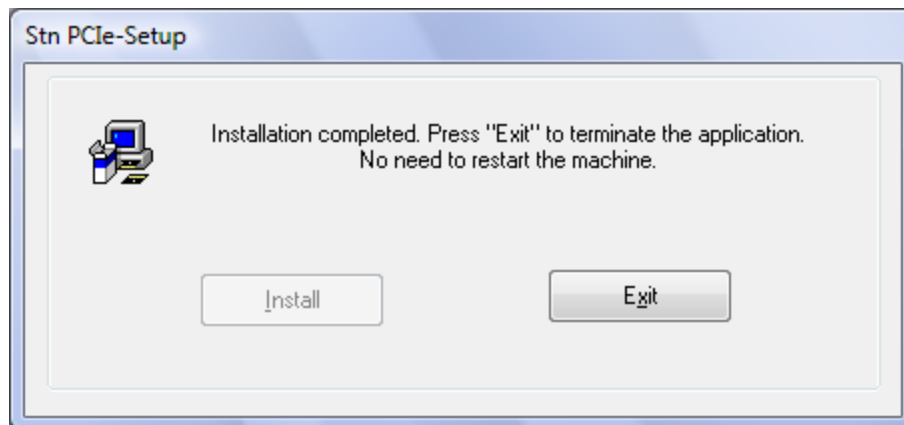

Click on "Install" button to install the MCS9900 drivers automatically.

While installation is in process, "Windows Security" warning message pops up for Windows Vista compatibility, this message appears for three times. Ignore the warning message by clicking on "Install this driver software anyway" button.
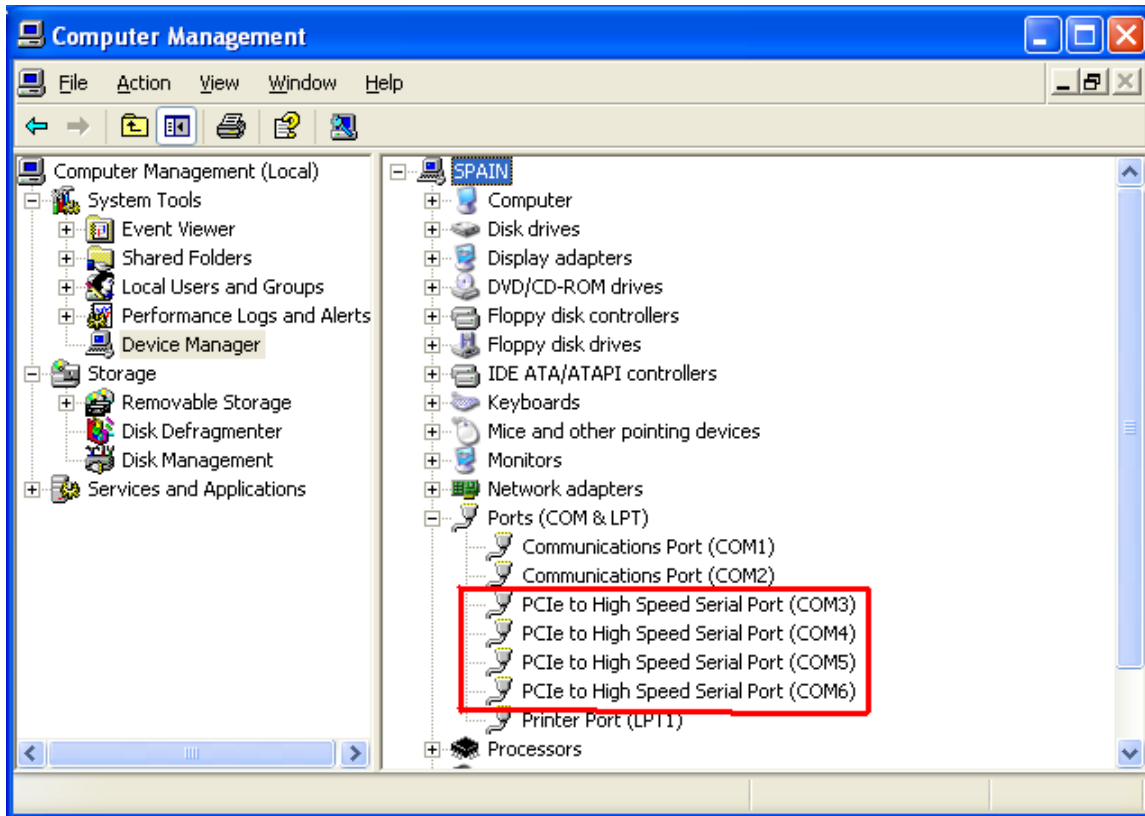
On successful driver installation, the utility will display "Installation Completed" message. Click on "Exit" button to complete the driver installation.

Shutdown the PC and insert the MCS9900 based PCIe card into PCIe slot and then turn ON the PC.
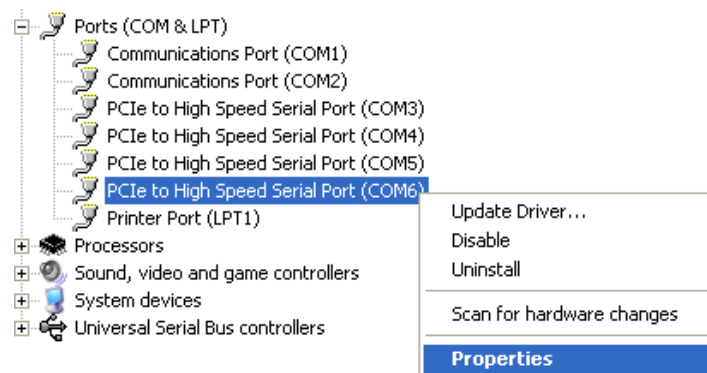
5   Verifying Driver Installation

MCS9900 device detection and driver installation can be confirmed from Device Manager. For Example proper detection of the MCS9900 PCIe Card (4 Serial) can be confirmed by viewing the Device manager as shown below:
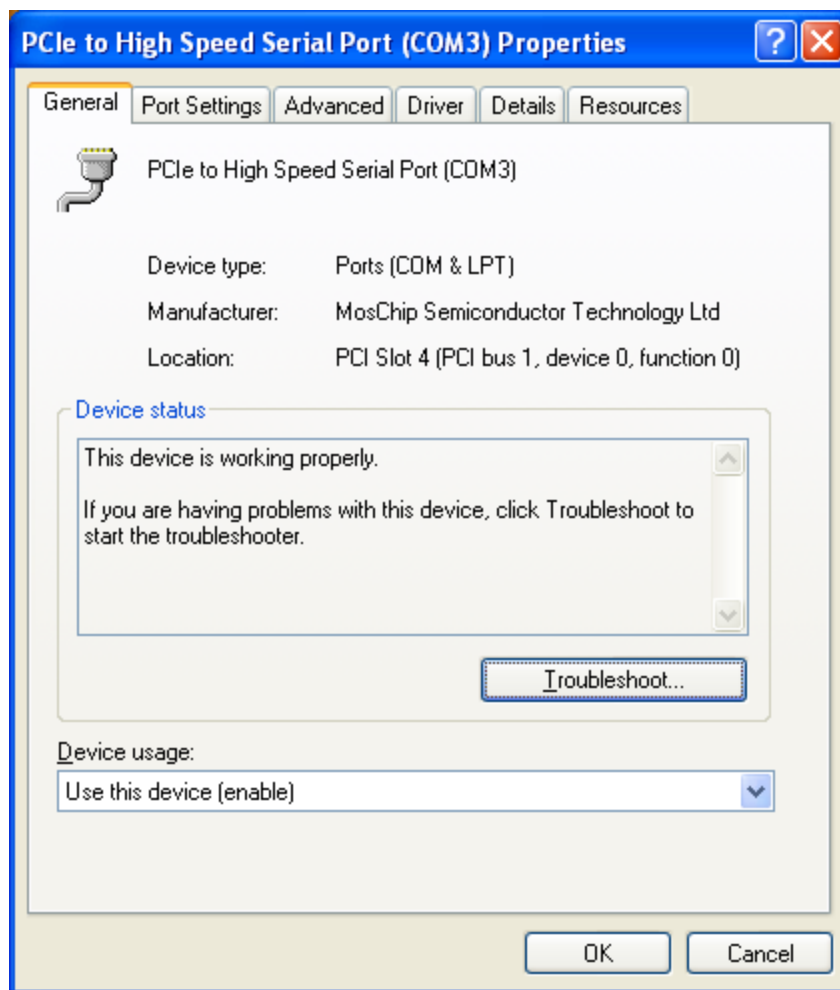

6   Serial Port Properties Sheet:

In the Device Manager window, right click on required Port and then click on "Properties" to open the Properties page of the serial port.
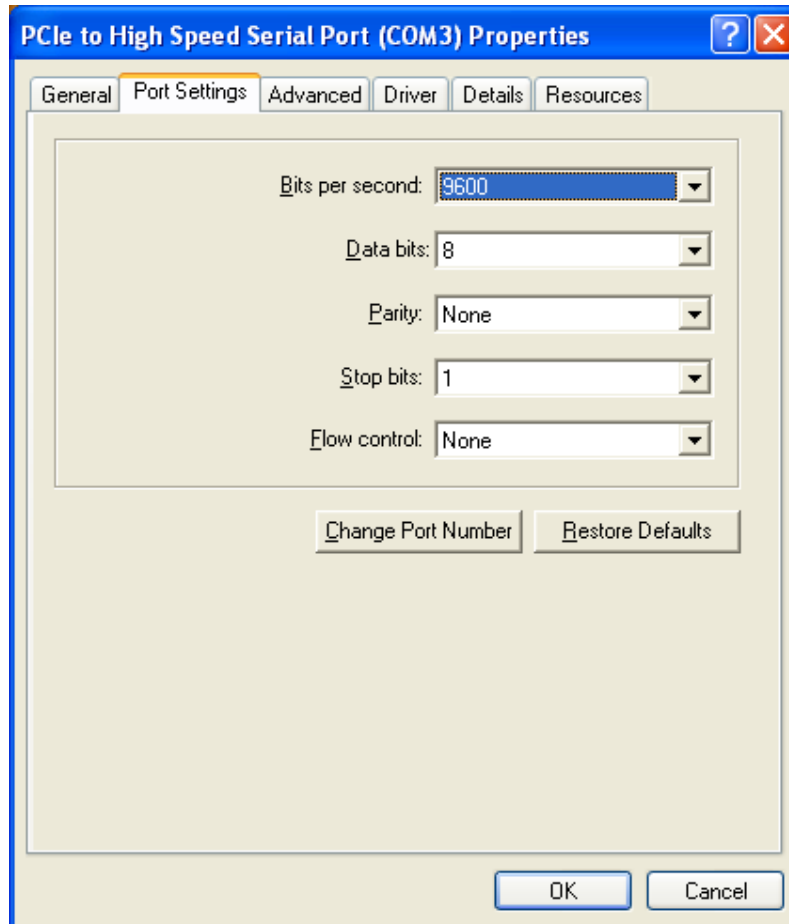
6.1 General Tab:

The "General" Tab provides the details about "Device Type", "Manufacturer" and "Device Status".

6.2 Port Settings Tab:

The "Port Settings" Tab is used to configure parameters of the Serial Port. These settings will be overridden by the settings configured in the serial port application.

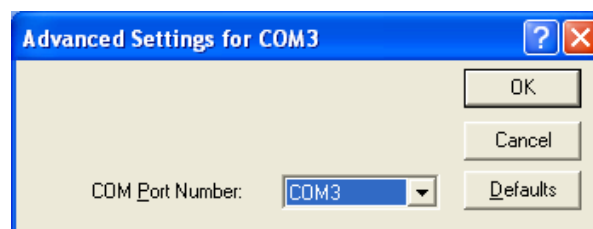Bits per Second selection is used to set the default Baud rate settings.
Data bits selection will have options 4,5,6,7 and 8 data bits.
Parity selection will have Even, Odd, None, Mark and Space parity settings.
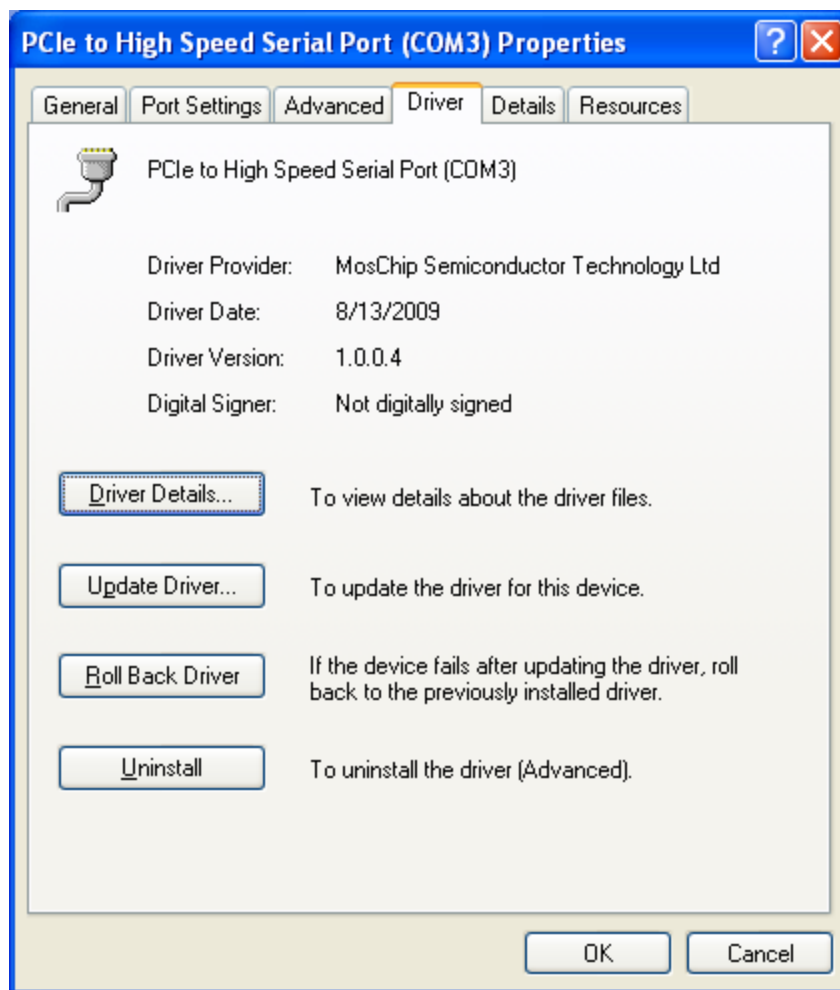Stop bits selection will have 1, 1.5 and 2 selections.
Flow Control selection will have Xon/Xoff, Hardware and None settings.

To change the Port Number click on "Change Port Number" and select the required Port Number as shown below:
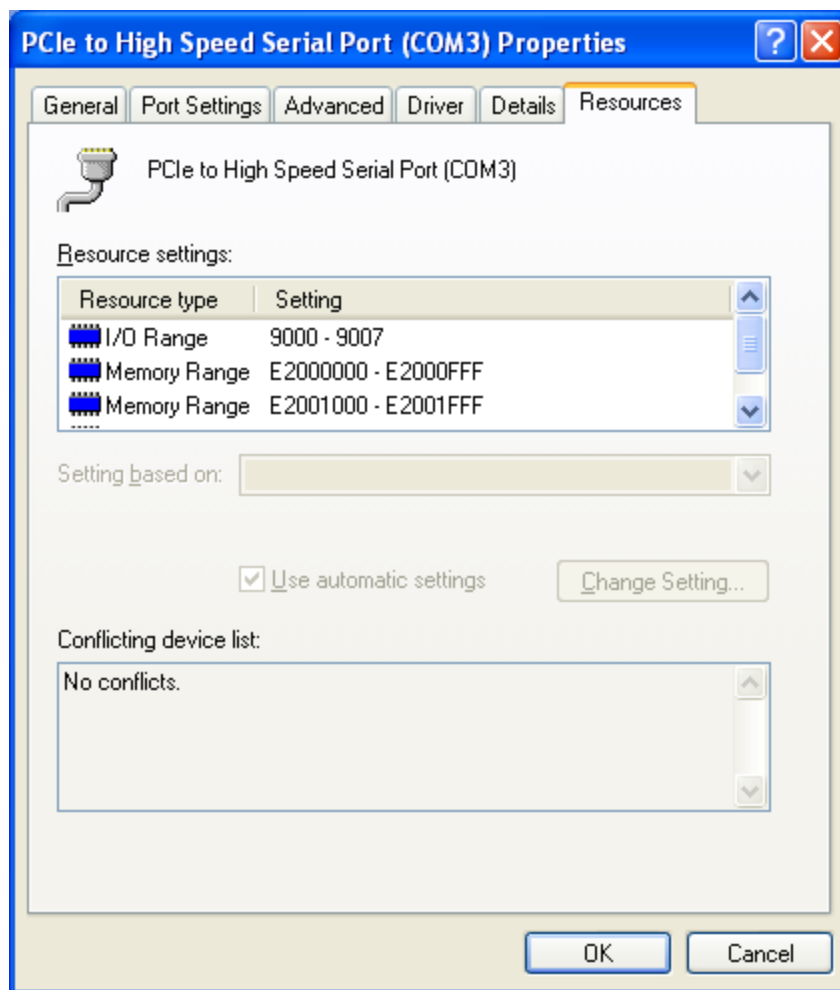
6.3 Driver Tab:

The Driver Tab shows the details of Driver Provider, Driver Release Date, Driver version installed on your PC and Digital Signer details as shown above.
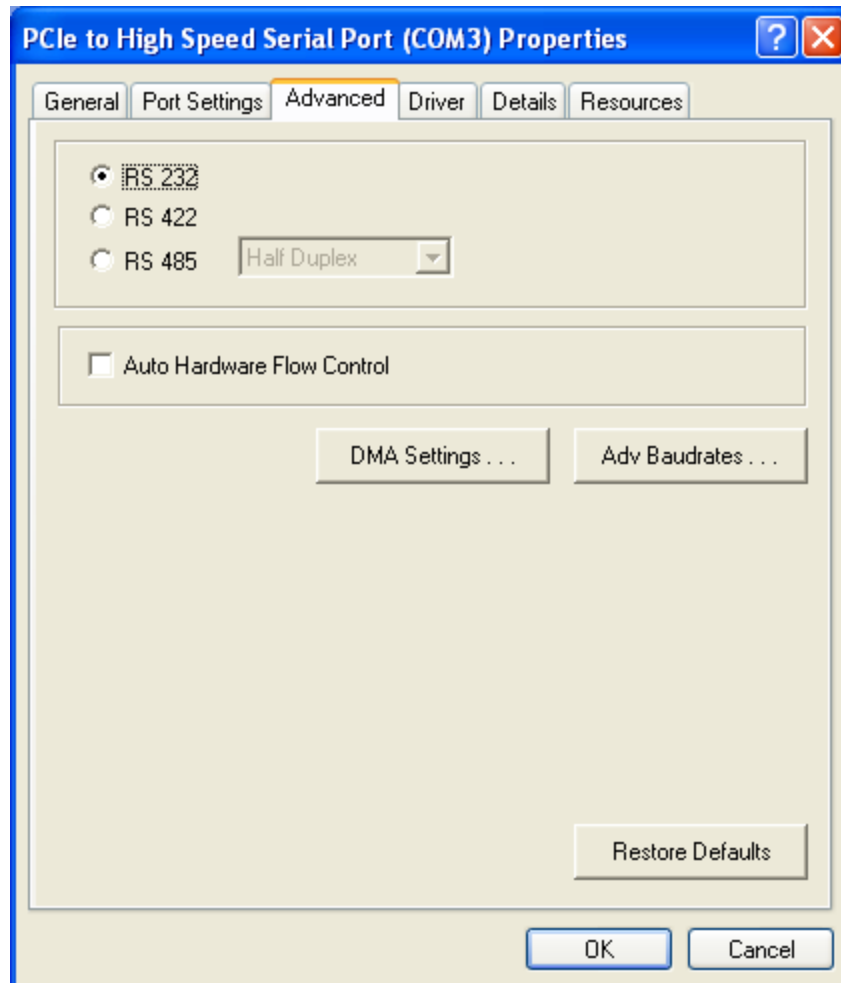
6.4 Resource Tab:

The Resource Tab gives the details of IRQ, IO Ranges and Memory ranges that are assigned to a particular Serial Port.

6.5 Advanced Tab

Advanced Tab allows the user to configure Serial Port Features and Mode changes as explained below.
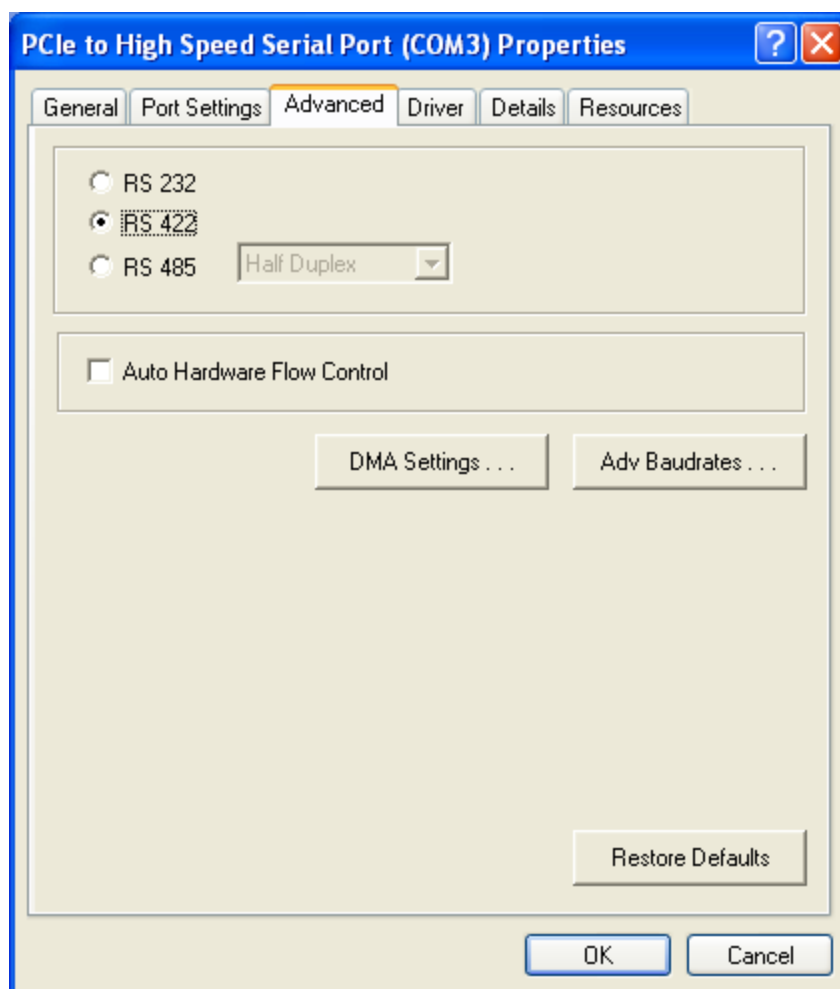
7 Serial Port Features and Mode Changes:

By default every serial Port will be in RS 232 Mode.

Serial port can also be set to RS 422 or RS 485 Mode. Select the appropriate Radio button as shown below:
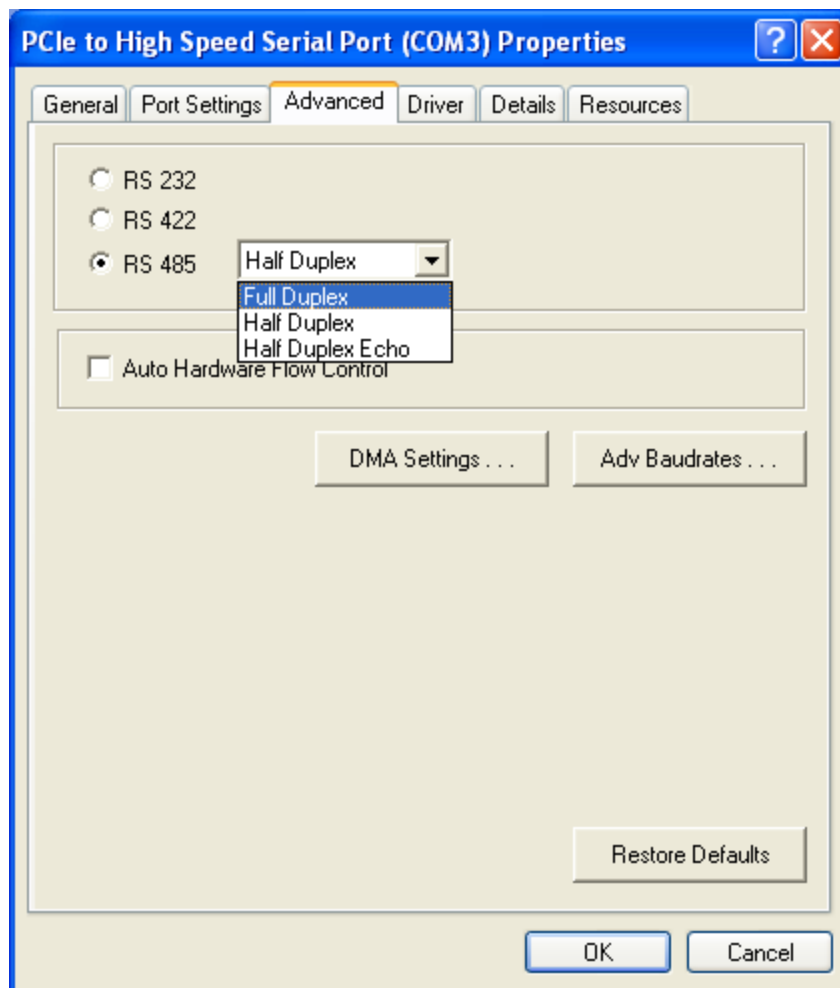
7.1 Selecting RS 422 Mode:

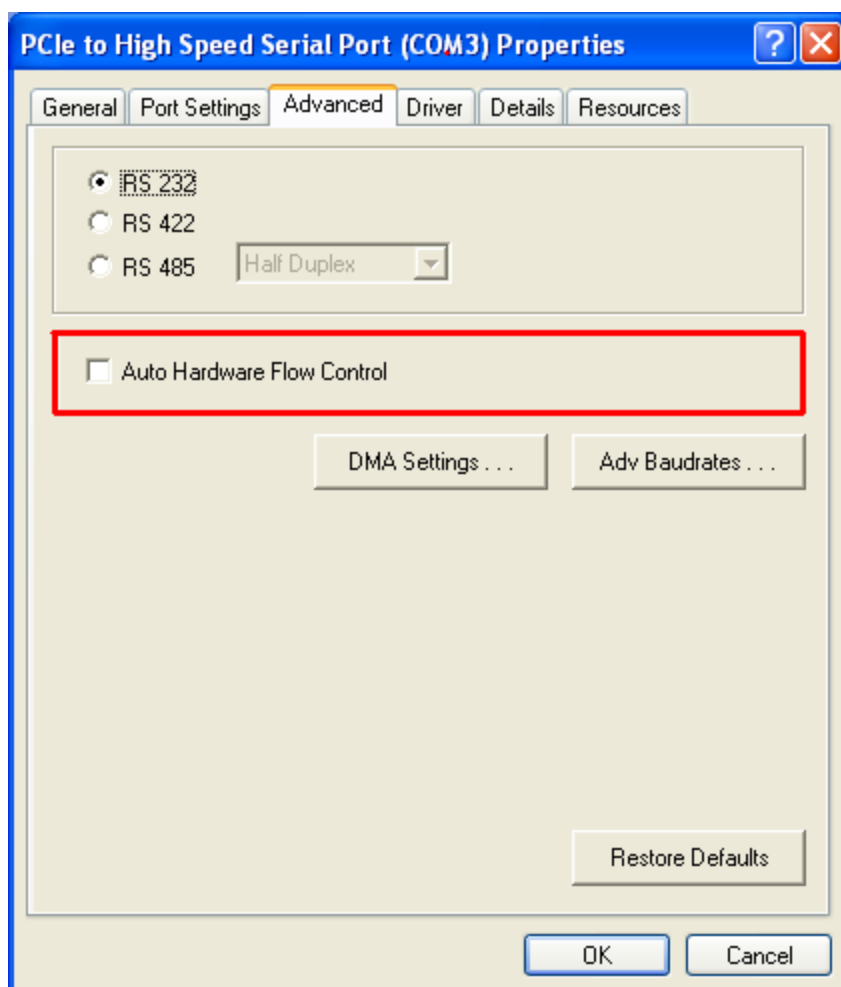Select the RS 422 Radio button to select the RS 422 Mode.

7.2 Selecting RS485 Mode:

After selecting RS 485 Radio button, different Mode settings like Full Duplex, Half Duplex and Half Duplex Echo can be selected through the dropdown list as per the requirement.
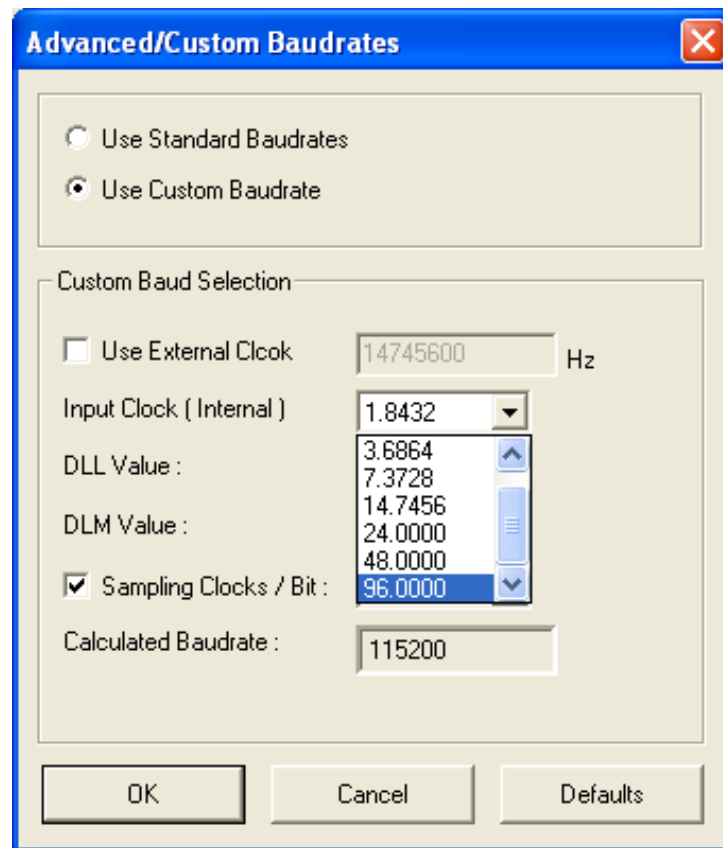
7.3 Selecting Hardware Flow Control:

To enable Hardware flow control, select the "Auto Hardware Flow Control". This enables RTS / CTS Hardware Flow control for the selected serial port. This setting is applicable only for RS 232 Mode only.

7.4 Configuring Advanced Baud rates:

To Configure Advanced Baud rates click on "Adv Baudrates" button.
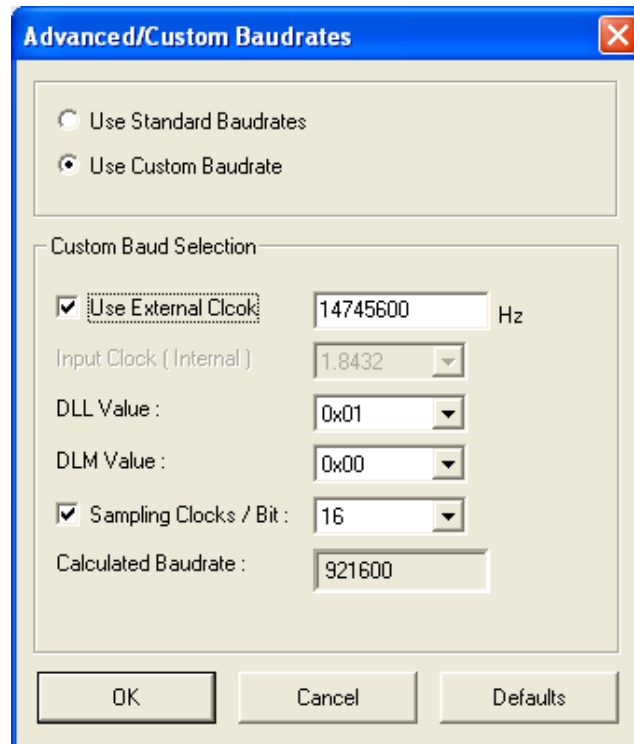

By default "Use Standard Baudrates" option is enabled.

To configure custom Baud rate select "Use Custom Baudrate".

Note: When "Use Custom Baudrate" is selected, Serial Port baudrate is independent of the value set in the Application

7.5 Input clock:

When an external clock option is selected, the value of the external clock must be entered in the text box provided against "Use External Clock column".
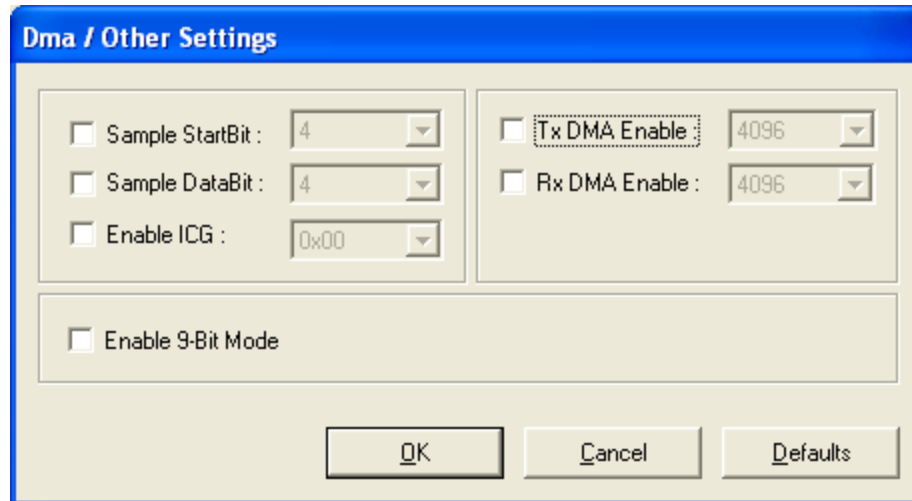
Custom baud rates can be obtained by selecting required Input clock, DLL DLM and sampling clock Values. The calculated baud rate will be shown in the Text Box provided for it.

To calculate the custom bauds please refer Custom Baud Application Note or contact techsupport@moschip.com

7.6 Direct Memory Access (DMA):

DMA mode selection.

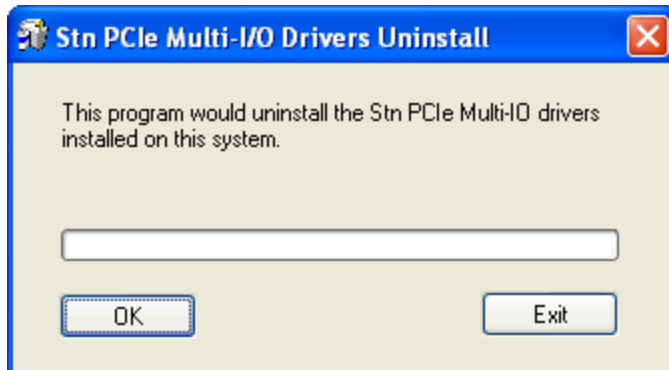For Selecting DMA Mode click on DMA Settings on Advanced TAB as shown below:

- To enable DMA Mode selects "TX DMA Enable" and "Rx DMA Enable" check box options.

- Suitable value for Inter Character Gap (ICG) has to be set for special application like RAID controller devices.

- To enable 9bit Mode support, Select "Enable 9-Bit Mode".

8 Uninstalling Drivers:

8.1 Using Uninstall Utility:

To Uninstall MCS9900 drivers, run "MOSCHIP_StnUninst.exe" available in the driver disk. PCI Express Multi-I/O Drivers Uninstall window will be displayed as shown below. Click on OK button.

Click on Exit button to complete un-installation process. No need to restart the PC, unless prompted by the OS.

8.2 From Device Manager:

The MCS9900 drivers can be un-installed through device manager. In Device Manager, under Ports (COM & LPT) category, select the "PCIe to High-Speed Serial Port (COM X)", right click on it and selects "Uninstall". OS will prompt for confirm device removal, click on "OK" to uninstall the drivers. In this method each and every port has to be uninstalled separately.

9 Installation / Detection / Un-Installation of MCS9900 on Win 2000, Win 2003 server

MCS9900 drivers of XP holds good for Win 2000, Win 2003 server - 32/64 bit also. The installation, Detection and Un-installation procedures are same as explained for Win XP.

10 Technical Support:

For queries and support contact techsupport@moschip.com.