

# MCS9901

## Windows Vista 32 / 64 bit User Manual

### Table of Contents

1. Introduction.....	2
2. Obtaining Driver.....	2
3. Driver Installation .....	2
4. Verifying Driver Installation.....	5
5. Serial Port Properties Sheet:.....	6
6. Serial Port Features and Mode Changes: .....	13
7. Direct Memory Access (DMA): .....	17
8. Parallel Port Features and Mode Changes: .....	18
9. USB Features:.....	18
10. Uninstalling Drivers: .....	19
11. Technical Support: .....	19

### 1. Introduction

This document describes the software driver installation / Un-installation procedure for MosChip MCS9901 PCIe to Serial / Parallel / USB products or other manufacturer's product based on MosChip MCS9901 series on Windows Vista 32/64 bit OS.

### 2. Obtaining Driver

MCS9901 software drivers can be downloadable from [www.moschip.com](http://www.moschip.com). The driver disk contains VISTA and Windows folders for Windows Vista and Windows XP/2K operating systems respectively.

### 3. Driver Installation

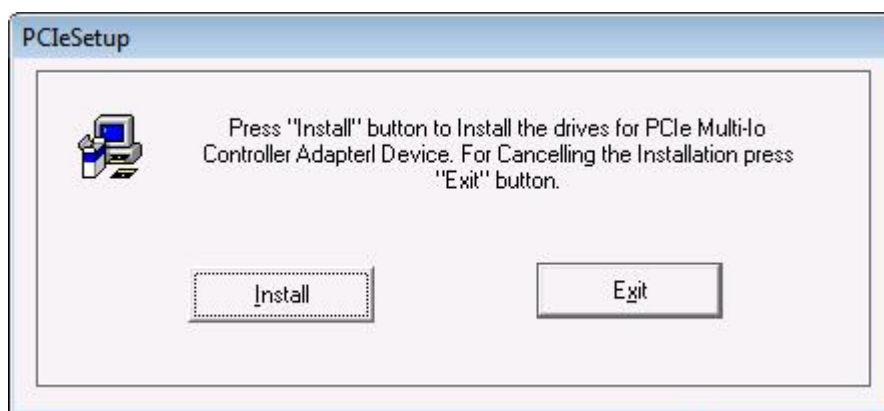
**Attention:** If you are installing MCS9901 Drivers on **Vista 64 Bit**, restart the system and while booting press "**F8**" Select "**Disable Driver Signature Enforcement**" option and press enter.

Ignore this Note if you are installing MCS9901 drivers on **Vista 32 bit**.

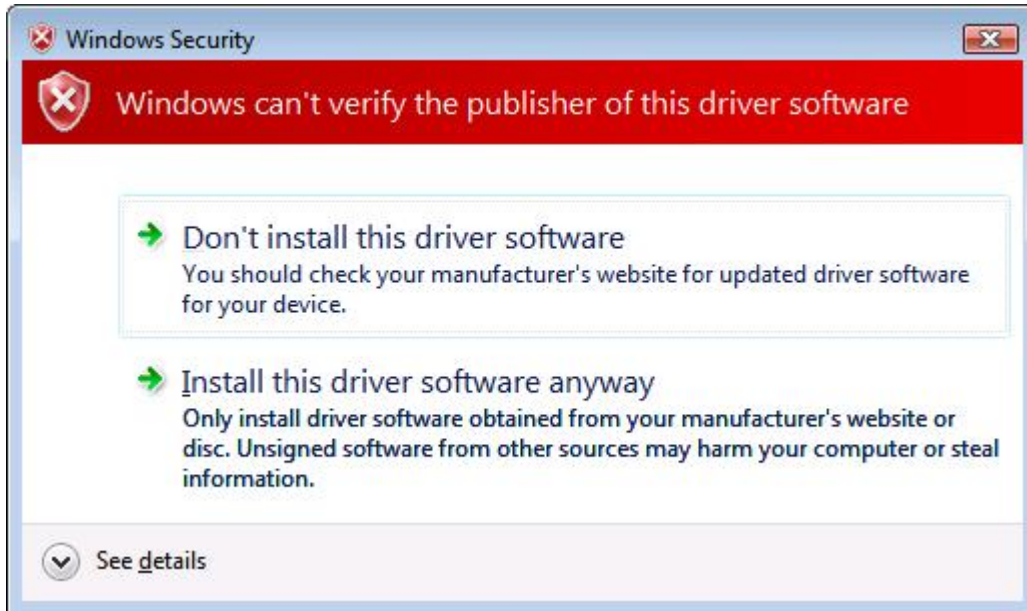
#### Installing drivers for the first time:

Make sure that you have **not** inserted PCIe card into PCIe slot.

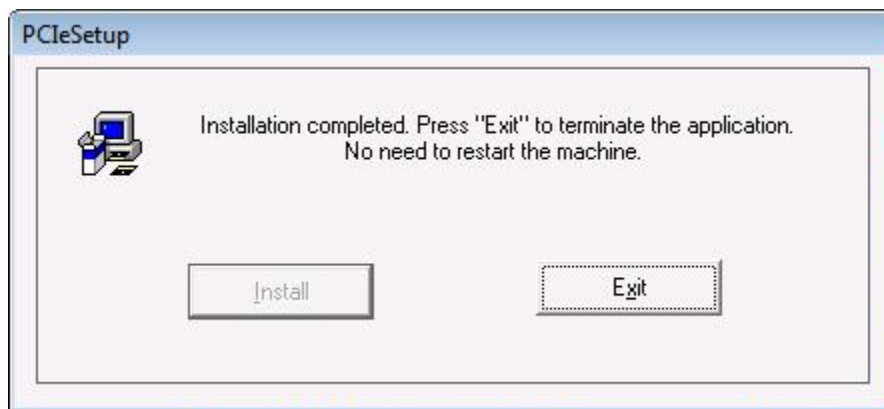
- Run "**PClesetup.exe**" file from the driver disk folder [\\version1.0.0.1\\Vista](#).
- **PCleSetup** window will be popped up as shown below



- Click on "**Install**" button to install the drivers automatically. During the installation "**Windows security**" wizard will appear saying that Windows can't verify the publisher.



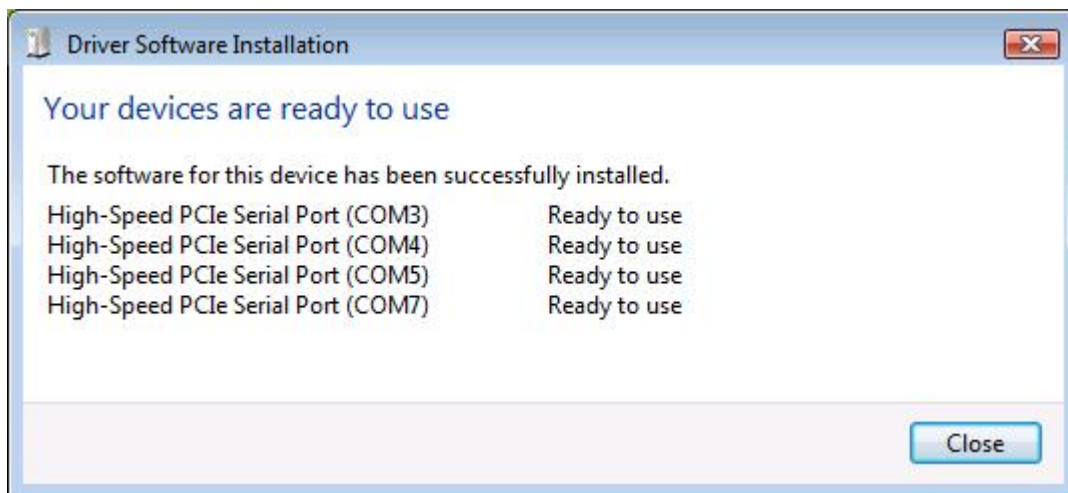
- Select **"Install this driver software anyway"** to install the drivers.



- Click on **"Exit"** and shutdown the PC. Place the MCS9901 based PCIe card into PCIe slot and then power on the system. After the system boots, the drivers are installed automatically and the status of installation can be viewed in the taskbar.

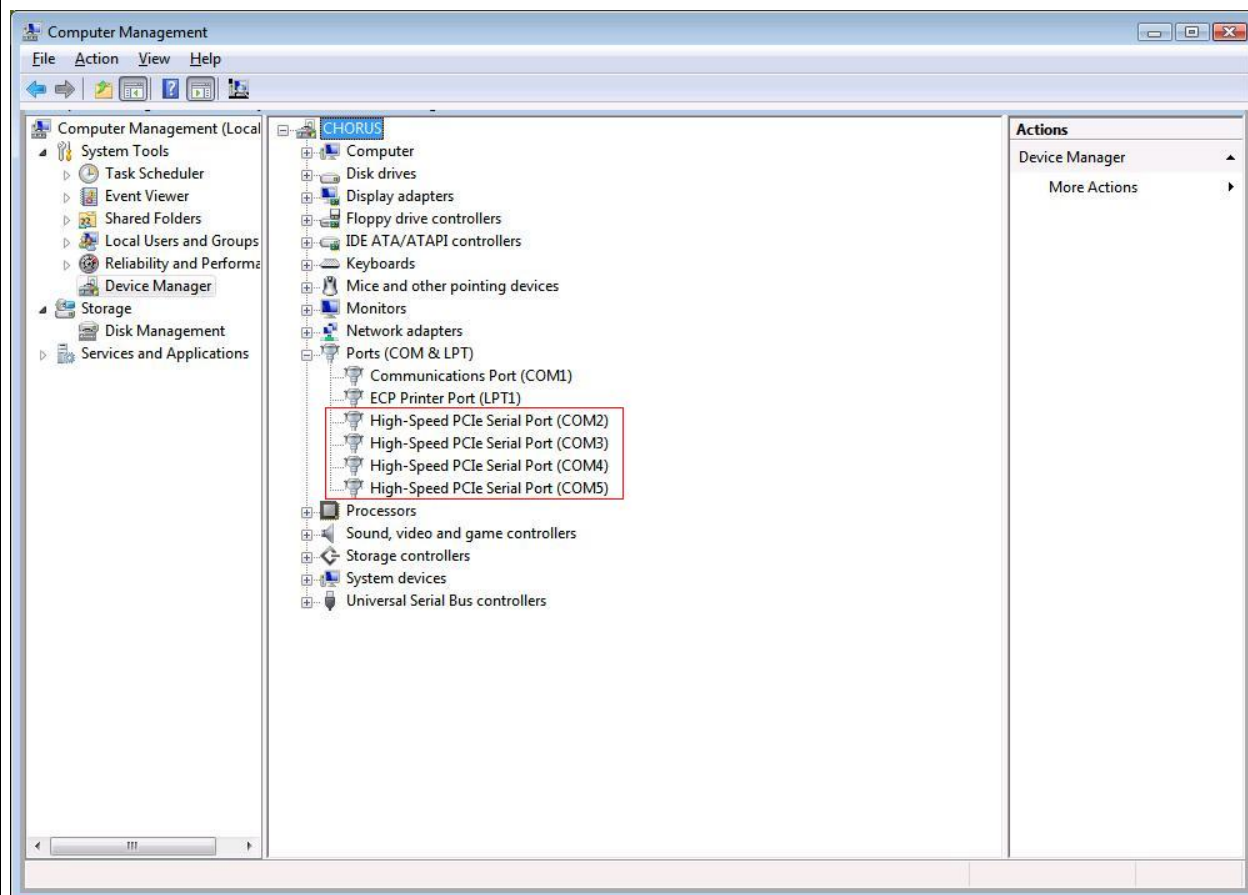


- To check the installed driver's status, click on the popup.



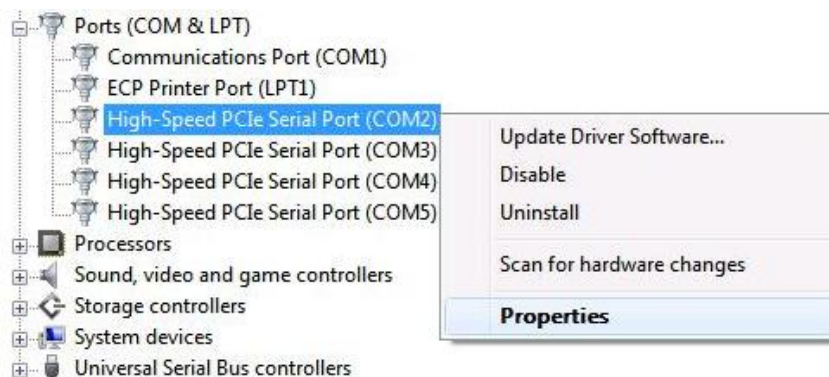
## 4. Verifying Driver Installation

MCS9901 device detection and driver installation can be confirmed from Device Manager. For Example proper detection of the MCS9901 PCIe Card (2 Serial + 1 Parallel) can be confirmed by viewing the Device manager as shown below:



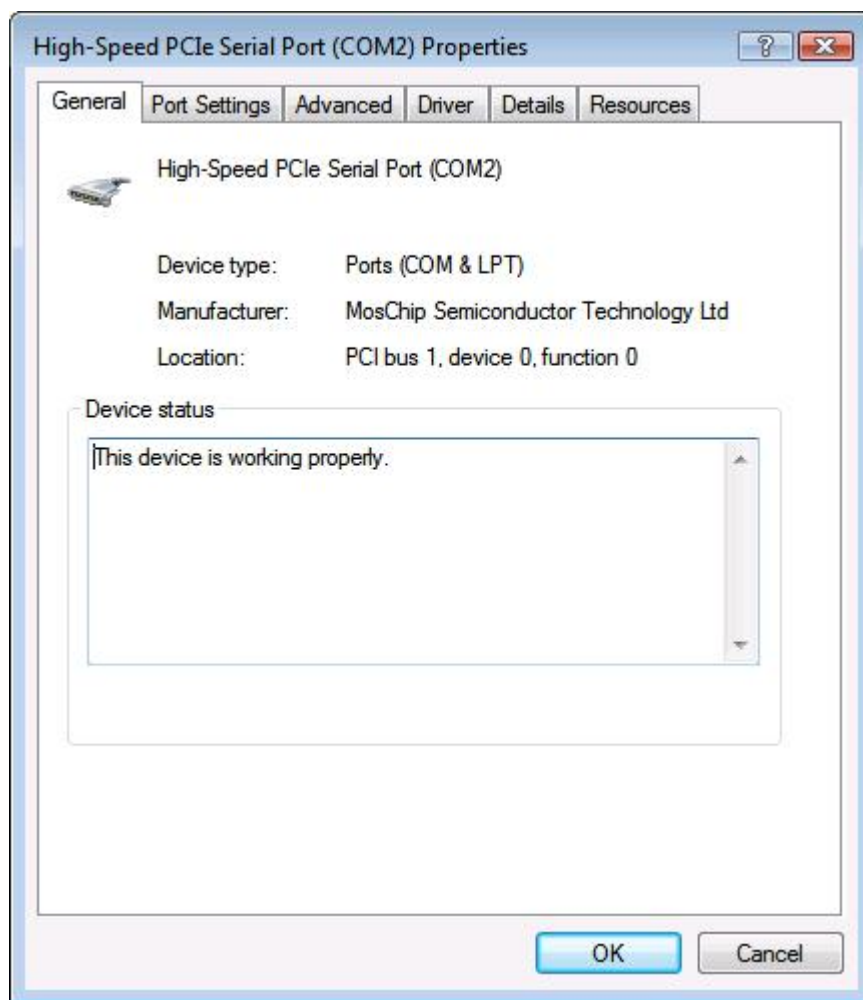
## 5. Serial Port Properties Sheet:

In the Device Manager Right Click on required Port and then click on “**Properties**” Option to open the Properties page of the serial port.



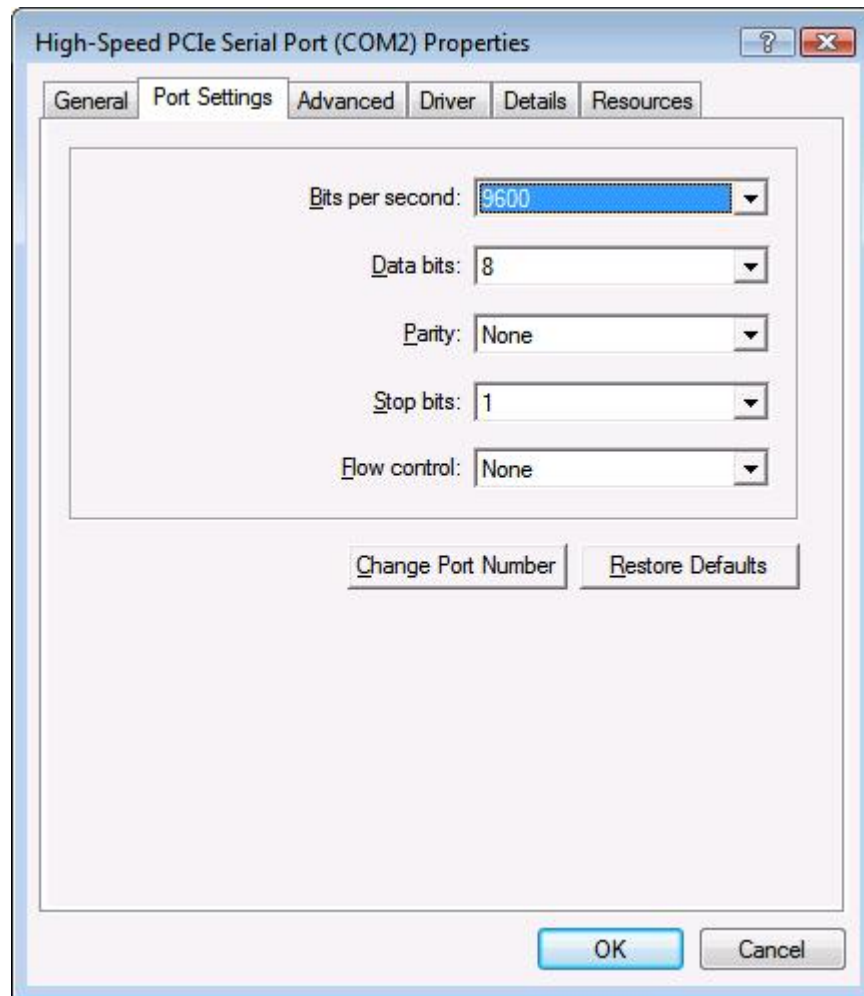
## General Tab:

The “**General**” Tab provides you details about “Device Type”, “Manufacturer” and “Device Status”.



## Port Settings Tab:

The “**Port Settings**” TAB is used to configure parameters of the Serial Port.



**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.

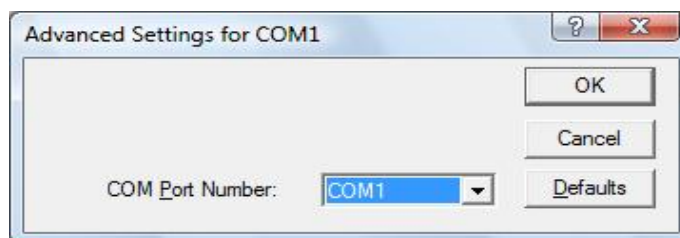
**Parity** selection will have Even, Odd, None, Mark and Space parity settings.

**Stop bits** selection will have 1, 1.5 and 2 selections.

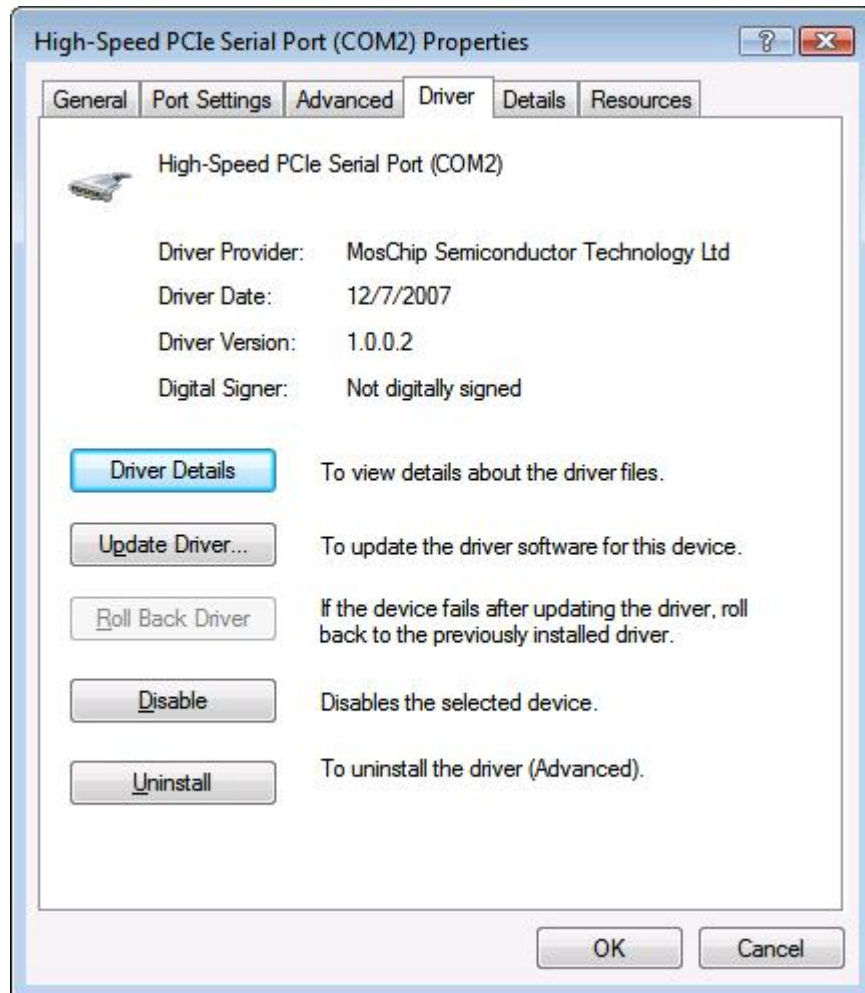
**Flow Control** selection will have Xon/Xoff, Hardware and None settings.



If you want to change the Port Number click on **“Change Port Number”** and select the required Port Number as shown below:

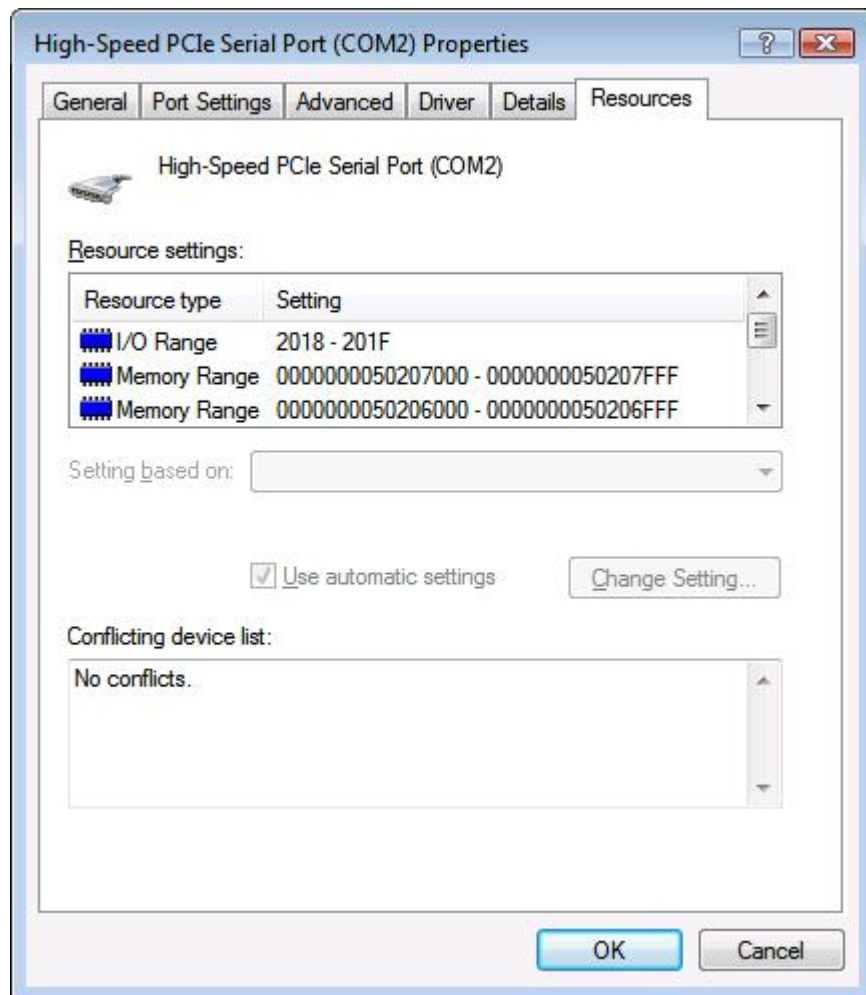


## Driver Tab:



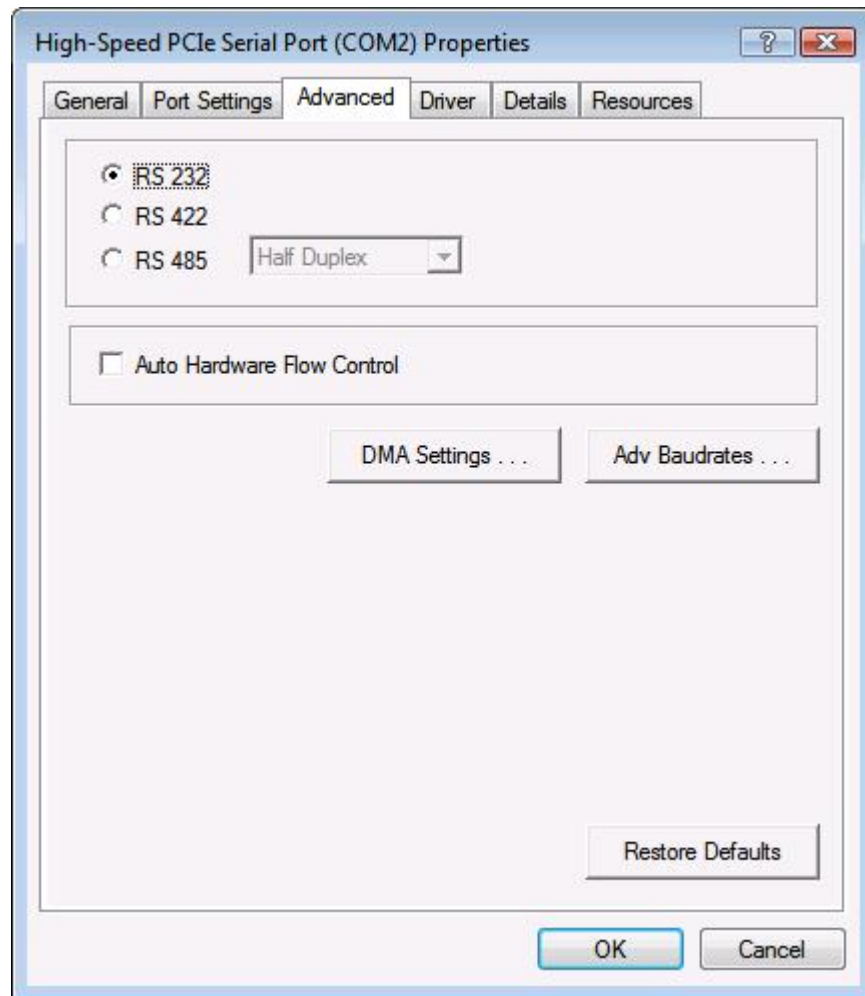
The **Driver Tab** shows the details of Driver Provider, Driver Release Date, Driver version is installed on your PC and Digital Signer details as shown above.

## Resource Tab:



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

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



## 6. Serial Port Features and Mode Changes:

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

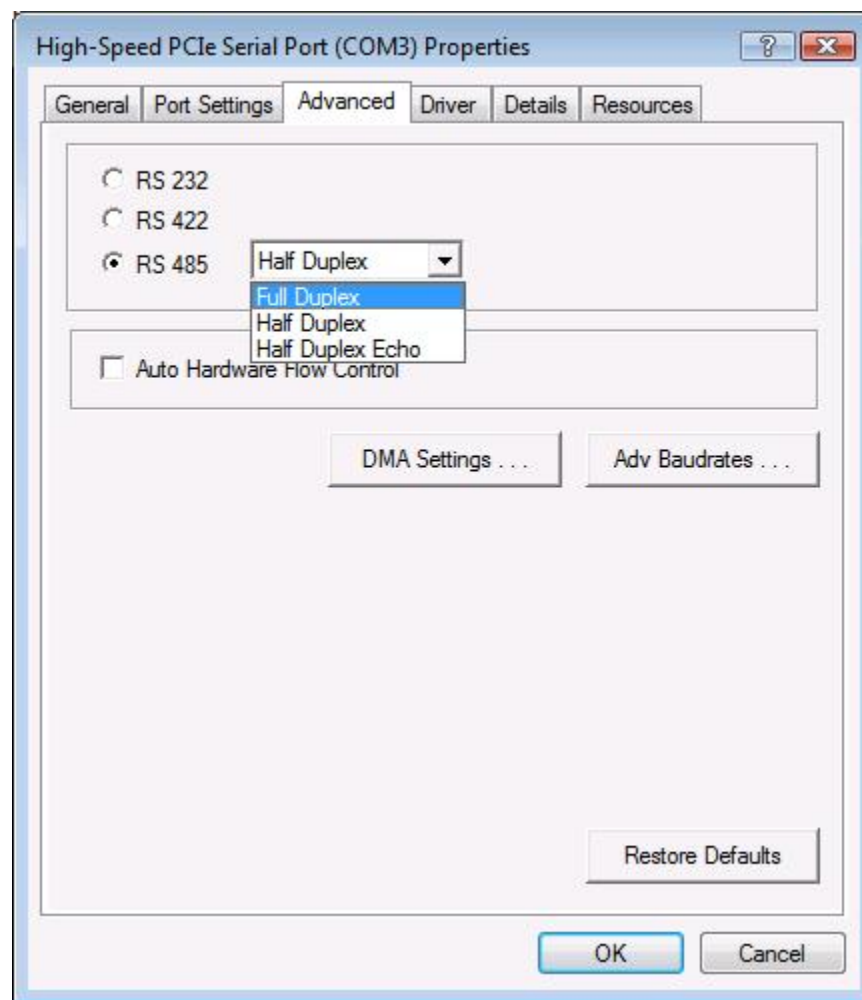
Serial port can also be set to **RS 422** or **RS 485** Mode. select the appropriate Radio button as shown below:

### Selecting RS 422 Mode:

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

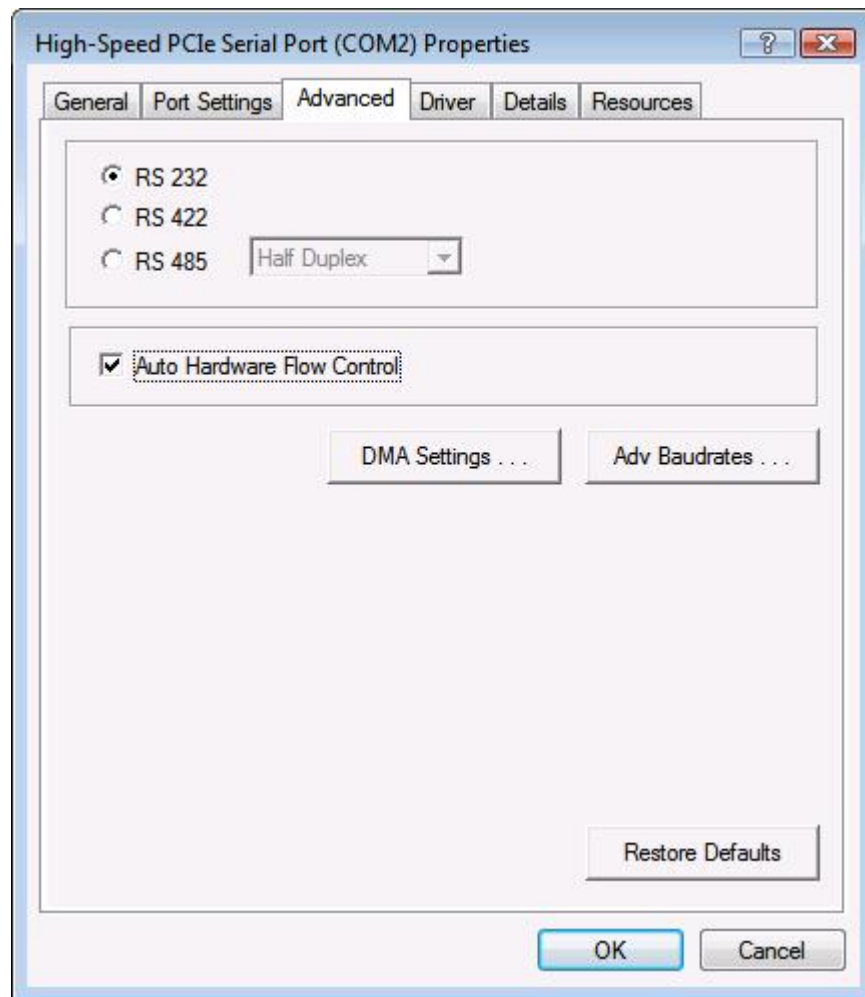
### Selecting RS 485 Mode:

After selecting **RS 485** Radio button you will have different Mode settings like Full Duplex, Half Duplex and Half Duplex Echo. You can select as per your requirement.



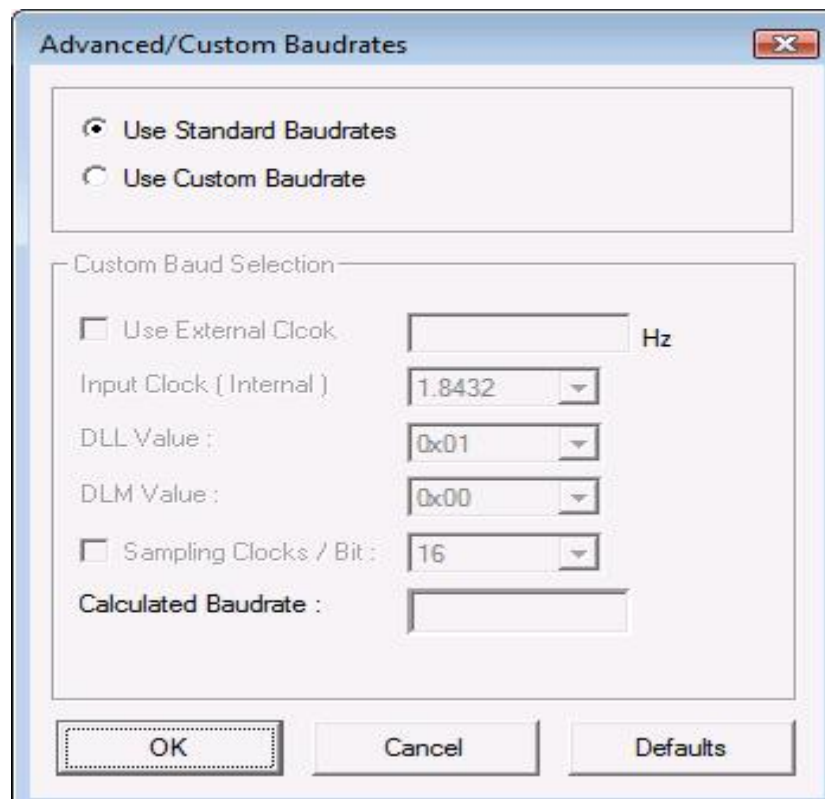
### Selecting Hardware Flow Control:

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.



## Configuring Advanced Baud rates:

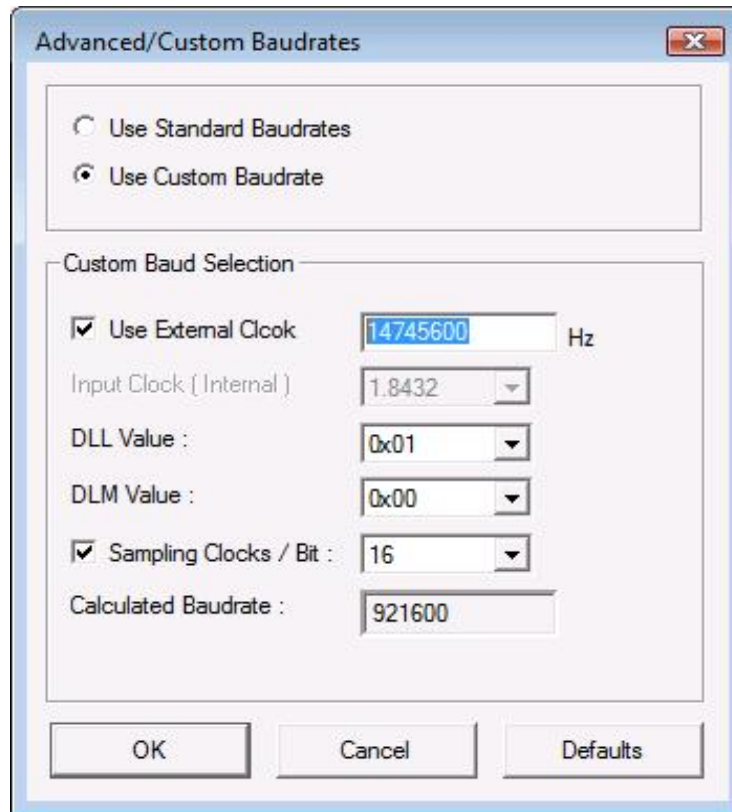
To Configure Advanced Baud rates click on “**Adv Baudrates**” button.



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



When an external clock option is selected then 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.

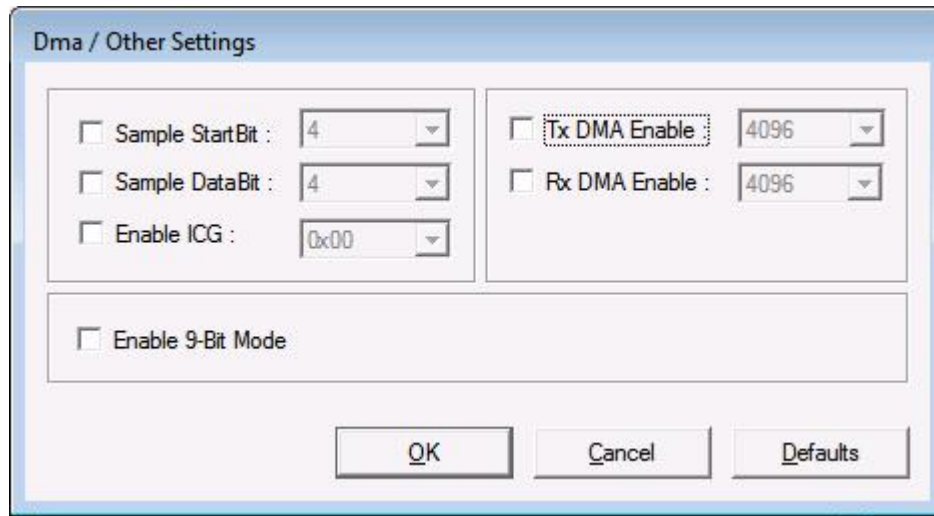
To calculate the custom bauds please refer **Custom Baud Application Note** or contact [techsupport@moschip.com](mailto:techsupport@moschip.com).



## 7. Direct Memory Access (DMA):

### Selecting DMA mode.

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.

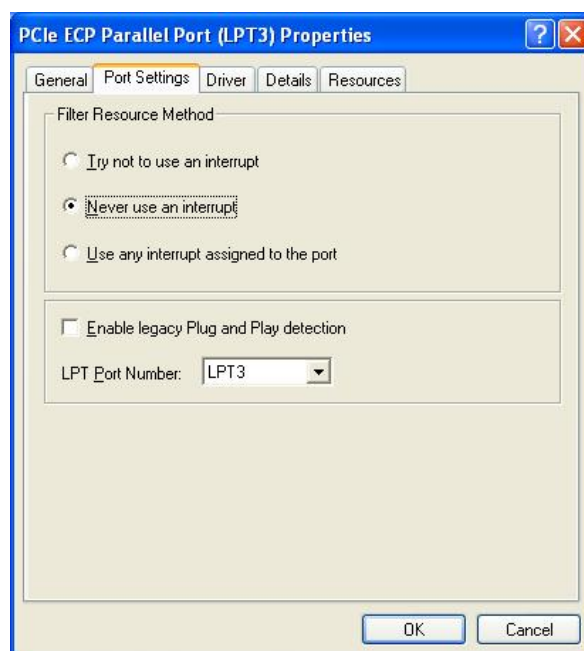
→Suitable value for **Inter Character Gap (ICG)** has to be set for special application like RAID controller devices.

→To enable 9bit Mode support, Select “**Enable 9-Bit Mode**”.

## 8. Parallel Port Features and Mode Changes:

### Parallel Port Features:

Parallel port will support SPP/CBFIFO/ECP/EPP modes. Parallel port mode will be automatically configured to the required mode after handshaking with the connected device.



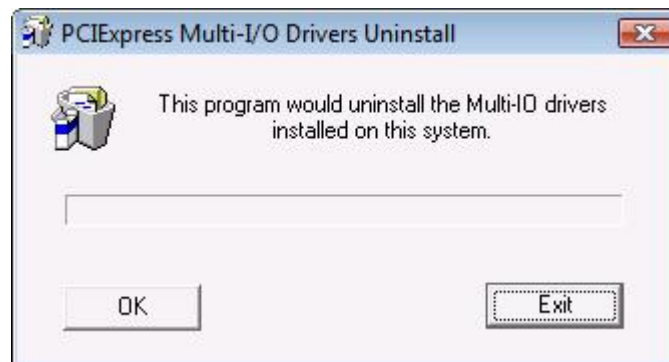
## 9. USB Features:

There is no Custom driver for USB device, default drivers will be loaded automatically.

## 10. Uninstalling Drivers:

### Using Uninstall Utility:

To Uninstall MCS9901 drivers, run "**MOSCHIP\_PClUninst.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.

### From Add/Remove Programs:

The MCS9901 drivers can also be un-installed/removed from PC through Control Panel → Add/Remove Programs. In Add/Remove programs, select "PCI-Express Multi I/O Controller" and click on Remove button.

### From Device Manager:

The MCS9901 drivers can be un-installed through device manager. In Device Manager, under Ports (COM & LPT) category, select the "High-Speed PCIe Serial Port (COM X)", right click on it and select "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.

## 11. Technical Support:

For queries and support contact [techsupport@moschip.com](mailto:techsupport@moschip.com).

## Revision History

Date	Reason for change	Version
10th Dec 2007	First cut document	0.1
02 <sup>nd</sup> Jan 2008	Document update per internal review	0.2
24 <sup>th</sup> Jan 2008	Internal inputs updated	0.3

### **IMPORTANT NOTICE**

MosChip Semiconductor Technology, LTD products are not authorized for use as critical components in life support devices or systems. Life support devices are applications that may involve potential risks of death, personal injury or severe property or environmental damages. These critical components are semiconductor products whose failure to perform can be reasonably expected to cause the failure of the life support systems or device, or to adversely impact its effectiveness or safety. The use of MosChip Semiconductor Technology LTD's products in such devices or systems is done so fully at the customer risk and liability.

As in all designs and applications it is recommended that the customer apply sufficient safeguards and guard bands in both the design and operating parameters. MosChip Semiconductor Technology LTD assumes No liability for customer's applications assistance or for any customer's product design(s) that use MosChip Semiconductor Technology, LTD's products.

MosChip Semiconductor Technology, LTD warrants the performance of its products to the current specifications in effect at the time of sale per MosChip Semiconductor Technology, LTD standard limited warranty. MosChip Semiconductor Technology, LTD imposes testing and quality control processes that it deems necessary to support this warranty. The customer should be aware that not all parameters are 100% tested for each device. Sufficient testing is done to ensure product reliability in accordance with MosChip Semiconductor Technology LTD's warranty.

MosChip Semiconductor Technology, LTD believes the information in this document to be accurate and reliable but assumes No responsibility for any errors or omissions that may have occurred in its generation or printing. The information contained herein is subject to change without notice and no responsibility is assumed by MosChip Semiconductor Technology, LTD to update or keep current the information contained in this document, nor for its use or for infringement of patent or other rights of third parties. MosChip Semiconductor Technology, LTD does **not** warrant or represent that any license, either expressed or implied, is granted to the user.

Copyright © 2008 MosChip Semiconductor All Rights Reserved.