EX-45362 & EX-45362IS

2S RS232/422/485 3-in-1 Serial PCIe Card

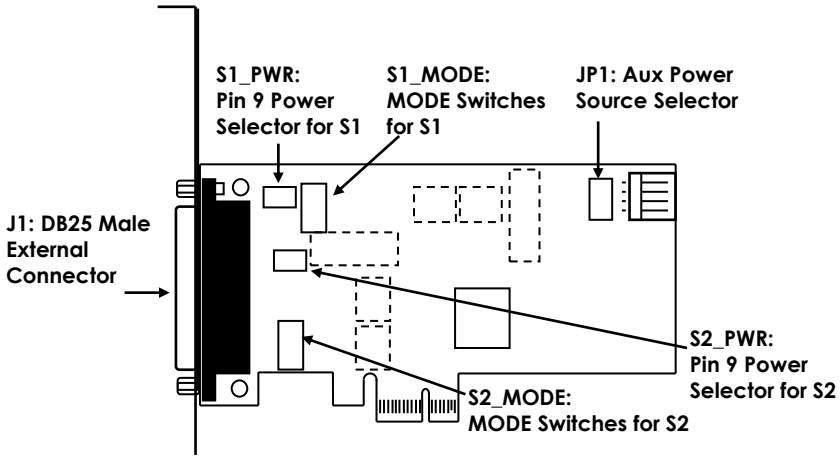
1. Introduction

Congratulation on your purchasing this high performance 2-Port RS232/422/485 3-in-1 Serial PCIe Host Adapter. The adapter is high speed PCIe bus based and plug-and-play compliant. Its serial ports are fully 16C550 UART compatible with most of the RS232, RS422 and RS485 devices available from the market.

Features:

- ✓ Fully PCI Express Specifications Revision 1.0a/1.1 Compliant
- ✓ 256-byte deep FIFO per transmitter and receiver
- ✓ Supports 5V or 12V on its DB25 connector, provides an option to supply power to all DB9 Connectors via the octopus cable
- ✓ 16C550 UARTs, Baud Rate up to 921.6Kbps
- ✓ Supports 2 serial ports with RS232, RS422, RS485-2wire and RS485-4wire modes (each port can be independently set) over one single PCIe slot
- ✓ Automated in-band flow control using programmable Xon/Xoff in both directions
- ✓ Supports Windows 2000, XP, 2003, Vista, Win7, 8.x, 10 and Linux

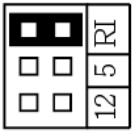
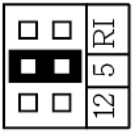
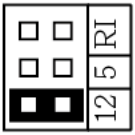
2. Board Layout



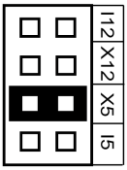
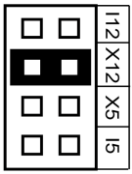
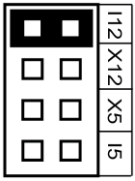
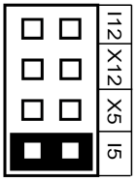
3. Jumper and DIP Switch Settings

1. **S1_PWR, S2_PWR: Pin-9 Power Setting Jumpers for S1, S2 Respectively:** The design of each DB9 male connector has an option to supply DC power to its Pin-9. Pin number 9 of the DB9 connector was defined for RS232 RI (Ring Indicator) signal. Since some applications do NOT use this signal, in that case, Pin-9 can be used to deliver DC power for the serial devices. This product provides 2 settings for the power, +5V and +12V. The default factory setting was set at "RI", i.e. no power supplied on the DB9M connector's pin-9.

Pin-9 Power Setting Table:

S1_PWR, S2_PWR	Jumper Settings
No Power Supplied on Pin-9 (Default)	
+5V DC on Pin-9	
+12V DC on Pin-9	

AUX. POWER Source Selector:

JP1	Settings
External 5V: Power source is +5VDC, from J2 AUX power connector. **(Default)**	
External 12V: Power source is +12VDC, from J2 AUX power connector.	
Internal 12V: Power source is +12VDC, from PCIe golden finger (motherboard's PCIe slot)	
Internal 5V: Power source is +5VDC, from onboard step-down regulator	

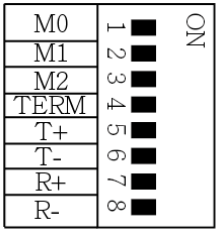
2. Mode DIP Switch Settings – S1_MODE, S2_MODE:

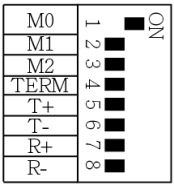
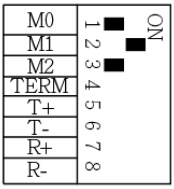
There are two 8-pin DIP switches S1_MODE and S2_MODE for the settings of serial Port S1 and Port S2 respectively. It is used for changing the operating modes, enable/disable terminator and enable/disable the bias for transmitter and receiver signals.

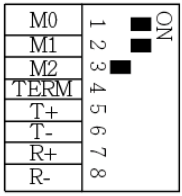
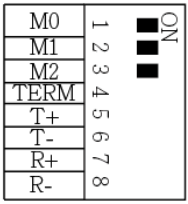
- **Mode Settings:**

Each DIP switch has 8 pins, the first 3 pins (M0, M1, M2) are for mode settings (RS232, RS485-2wire, RS485-4wire or RS422 modes), pin 4 (TERM) is to enable or disable terminator. Pin 5 and 6 (T+, T-) is for biasing TX+ and TX- signals. Pin 7 and 8 (R+, R-) is to enable or disable bias for RX+ and RX- signals.

Note: Pin 4 to 8 are designed for RS422 and RS485 only and should be set to **OFF** when you are setting the port to RS232 mode.



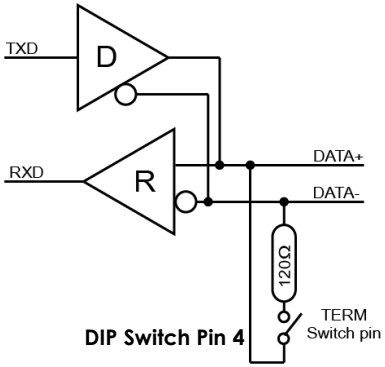
Modes	Settings M0 M1 M2 (ON)→
RS232 **(Default)**	
RS485-2W	

RS485-4W	
RS422	

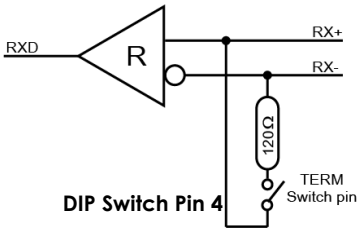
- **Termination Resistor Settings:**

The pin 4 of the DIP switch is to enable the 120 Ohm termination resistor between RX+ and RX- signals.

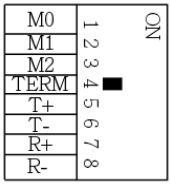
RS485-2wire mode:



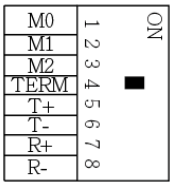
RS485-4wire or RS422 mode:



Terminator disabled (OFF, default):

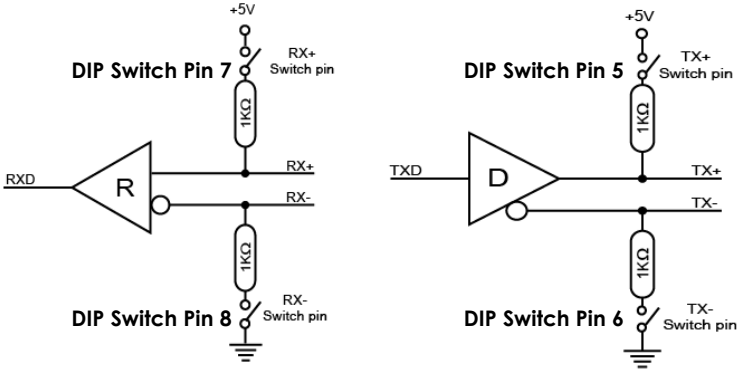


Terminator enabled (ON):

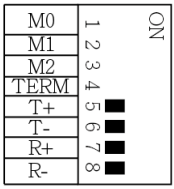


- **Bias Resistors Enable/Disable:**

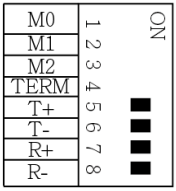
Pin 5 to 8 of the DIP switch are to enable (ON) or disable (OFF) the 4 bias resistors for TX+, TX-, RX+, RX- signals respectively. Please note that you have to set them to OFF if you are setting the port to RS232 mode.



Disable (default) all 4 Bias resistors for TX+, TX-, RX+ and RX-:



Enable all 4 Bias resistors for TX+, TX-, RX+ and RX-:

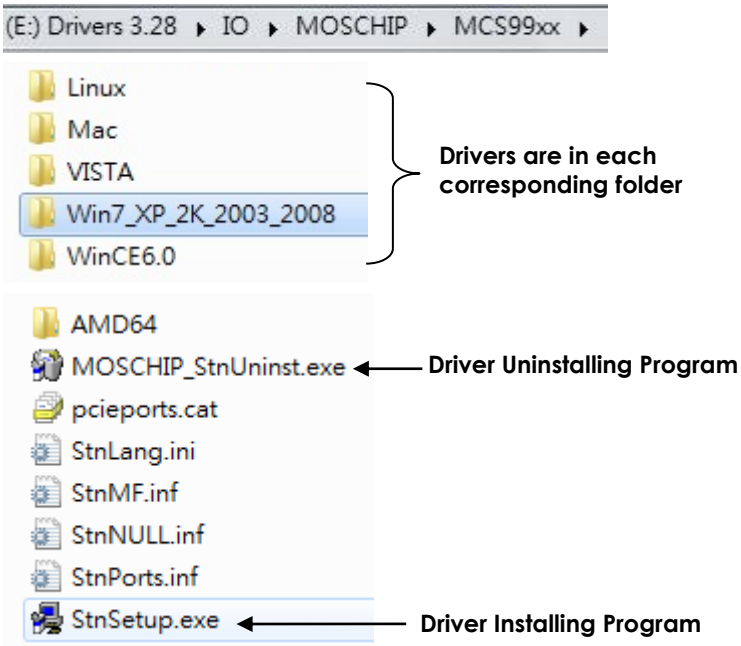


4. Software Installation

1. To install the Windows drivers, there are two methods, one is to run the setup utility (**StnSetup.exe**) in each corresponding folder. The other one is by the Windows' driver installation Wizard. We recommend you run the setup utility. It will be simpler. However, **PLEASE REFRESH HARDWARE OR REBOOT THE SYSTEM IN CASE YOUR DRIVER DID NOT TAKE EFFECT AFTER RUNNING THE SETUP UTILITY.**

   The drivers are shipped in the following folders on the driver CD:

   E:\IO\MOSCHIP\MCS99xx



5. Uninstalling the Software Drivers

In some cases, you may want to uninstall the drivers. To remove the drivers that already installed for Windows, there are two methods:

1. **Run (double click) the uninstall program (for example MOSCHIP_StnUninst.exe)** in each Windows' folder on the supplied driver CD, it is usually in the same folder as the StnSetup.exe utility:

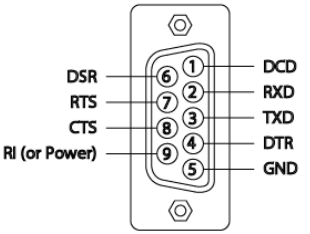
2. **Go to Windows' Control Panel's Add/Remove Program** to remove the drivers.

6. Connector Pin Assignments

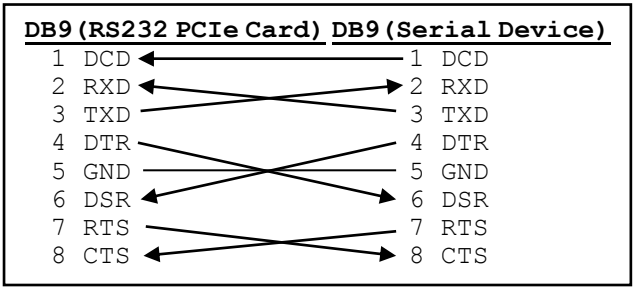
The pin assignment of the DB9 male connector of the Module Box is dependent on its operation modes. Please refer to the following figure for the corresponding mode:

1. RS232 Pin Assignment:

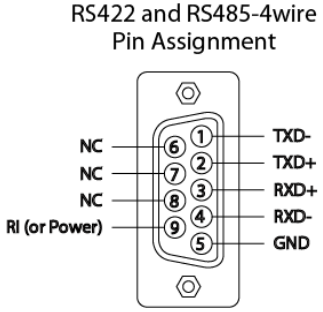
RS232 Pin Assignment



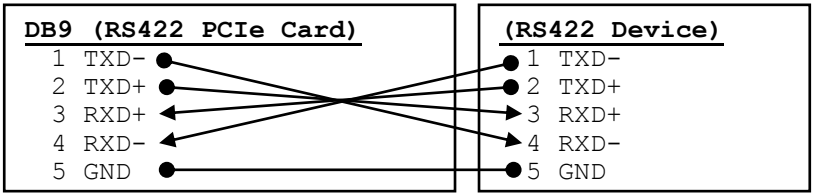
RS232 DB9(Male) to DB9(Male) Wiring:



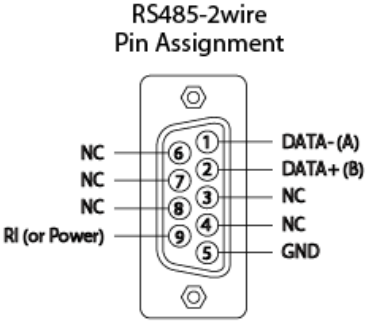
2. RS422 and RS485-4wire Pin Assignment:



RS422 Cable Wiring:



3. RS485-2wire Pin Assignment:



RS485-2wire Cable Wiring:

7. Specifications

Type	Specifications
Connectors	DB25 Male
Cable	DB25F-to-DB9MX2 Octopus type
Bus Interface	PCI Express x1
Number of Ports	2
RS-232 Signals	TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND
RS422 Signals	TXD+, TXD-, RXD+, RXD-, GND
RS485-4wire Signals	TXD+, TXD-, RXD+, RXD-, GND
RS485-2wire	DATA+(B)/DATA-(A)
Baud Rate	110 bps to 921.6Kbps
Data Bits	5,6,7,8
Stop Bits	1, 1.5, 2
I/O address/IRQ	Plug-and-Play (various)
Parity	None, Even, Odd
Flow Control	RTS/CTS, XON/XOFF
Power Requirement	3.3V/500mA
Operating Temperature	0 to 55°C(32 to 132°F)
Operating Humidity	5 to 95% RH
Storage Temperature	-20 to 85°C (-4 to 185°F)