SYSTEMBASE

Serial Card PCI

Hardware User Manual

Version 1.9 2022/02/10

www.sysbas.com

Revision History

Revision Date	Version	Pages	Description
10/24/2008	1.0	All	Renewal by hjnoh
01/30/2009	1.1	Partial	Added by msbaek
12/07/2009	1.2	Partial	Added by ymwon
02/09/2010	1.3	Partial	Added by ymwon
12/06/2010	1.4	Partial	Fixed by ymwon
07/14/2015	1.5	Partial	Added by dkhyun
12/09/2015	1.6	Partial	Fixed by ytji
05/15/2020	1.7	Partial	Remove CD context
11/18/2020	1.8	Partial	Fixed by hjlee
02/10/2022	1.9	Partial	Fixed by hjlee

Copyright 2019 SystemBase Co., Ltd. All rights reserved.

Internet Webpage: http://www.sysbas.com/

Tel: 82-2-855-0501 FAX: 82-2-855-0580

16F Daerung Post Tower-1, 288, Digital-ro, Guro-gu, Seoul, Republic of Korea

For any inquiries or comments, contact tech@sysbas.com

Contents

Greetings from CEO 6
About Serial Card 7
About PCI 8
Synopsis 9
Multi-1/LPCI VA2 10
- Product Specifications 10
- RS232, Combo Common 11
- RS232 Model 12
- RS422/RS485 Combo Model 13
Multi-1/LPCI VA3 16
- Product Specifications 16
- RS232, Combo Common 17
- RS232 Model 18
- RS422/RS485 Combo Model 19
Multi-2/PCI VA2 22
- Product Specifications 22
- RS232 Model 23
- RS422/RS485 Combo Model 24
Multi-2/PCI VA3 26
- Product Specifications 26
- RS232 Model 27
- RS422/RS485 Combo Model 28
Multi-2C/LPCI VA2 30
- Product Specifications 30
- RS232 Model 31
Multi-2C/LPCI VA3 33
- Product Specifications 33
- RS232 Model 34
- RS422/RS485 Combo Model 36
Multi-4/LPCI VA2 40
- Product Specifications 40
- RS232 Model 41
- RS422/RS485 Combo Model 42
Multi-4/LPCI VA3 45

- Product Specifications 45
- RS232/Combo Common 46
- RS232 Model 47
- RS422/RS485 Combo Model 48
Multi-4C/PCI VA2 52
- Product Specifications 52
- RS232 Model 53
Multi-4C/PCI VA3 55
- Product Specifications 55
- RS232 Model 56
- RS422/RS485 Combo Model 59
Multi-8/LPCI VA2 63
- Product Specifications 63
-RS232 Model 64
- RS422/RS485 Combo Model 65
Multi-8/LPCI VA3 68
- Product Specifications 68
-RS232, Combo Common 69
-RS232 Model 70
- RS422/RS485 Combo Model 71
Multi-8C/PCI VA2 74
- Product Specifications 74
- RS232 Model 75
Multi-8C/PCI VA3 76
- Product Specifications 76
- RS232 Model 77
- RS422/485 Combo Model 78
Multi-8H/PCI VA3 82
- Product Specifications 82
- RS232 Connector 83
Multi-16H/PCI VA3 85
- Product Specifications 85
- RS232 Connector 86
Multi-32/LPCI VA1 88
- Product Specifications 88
- RS232 Model 89

- RS422 Model 90
- RS485 Model 91
Multi-32/LPCI VA3 92
- Product Specifications 92
- RS232 model 93
- RS422/RS485 Combo model 95
Panel Compatibility Table 99
Power Consumption 100

Greetings from CEO

We appreciate all the customers for their deep interest in our products.

SystemBase has been engaged wholly in the field of the serial communications to produce the various products related to the same since it was founded in 1987.
Along with the recent booming market trend by the advanced skill of high speed communication applying LAN the applicable field of this serial communications could not draw the attention of the public. Consequently the customers of the serial communications have faced the difficulty of very poor technical support from the supplier in spite of its wide use before then.
But the customers of SystemBase are not needed to worry about such inconveniences since the technical discussions with customers for the application of our products as well as the efficient After-Service work have been kept effectively so far and will also be kept continuously in future by the technical staffs our company who have enough experiences and skills to perfect customers from such inconveniences.

Once again we appreciate all of our customers who have loved our products during the past years.

About Serial Card

Serial Card is a multi serial communication device which makes PC to a multi-user or Multi device system by applying it. Multi-user system or RAS(Remote Access System) is a system which enables a server computer to be used together by multi users thru the terminal at distance or to have the information used together.

All the users can access to the server thru the Serial Card equipped on the server at distance and can use the device connected to the network as if it is his own one, or can access to the file server as if he is on the LAN. In many cases only one computer is used simultaneously by multi staff in the company due to the function and economic reason. What makes it possible is the multi communication access device which connects the operating system with multi user function and multi users. The typical ones are LAN and the asynchronous serial communication port. Of these the device which connects the host and multi users locating at distance by using asynchronous communication port is the Serial Card.

The multi device system is mainly used for the automation system, and it collects and distributes the data at real time created from each device, or control various devices at distance by a computer installed at center with several asynchronous devices connected. In other words the user at center can work at the real time by catching the present status of all devices located at distance, or controlling the movement of them thru the Serial Card of the computer at center.

The merit of Serial Card is easy and economic to install and maintain.

Meantime LAN has high speed to transmit data, but the more devices connected and users are involved the more crashes among the transmitted data happens. Once such crashes happens far more times than some level then the transmitting efficiency is declined suddenly. But it is possible to realize Read Time without any distance limitation by applying Serial Card because it is 1:1 communication and transmitting capacity can be kept constantly even if several dozens of port were connected.

At the same time the speed of asynchronous communication is being improved along with the advanced technique of hardware day by day, so not necessary to worry about the communication speed.

There are 2 types of Serial Card-Dummy and Intelligent. Dummy Serial Card is the one which has no processor by itself. It is better in economical viewpoint than Intelligent one in case of smaller volume in transmitting data and fewer number of port connected to system. Usually it is more efficient to use Dummy Serial Card when the number of port is not exceeding 32. Meantime Intelligent Serial Card is rather efficient when required to transmit large volume of data due to its fast processing speed as it has processor by itself. Furthermore it is possible to connect several hundreds port to a system, but costs high.

About PCI

PCI(Peripheral Component Interconnect) is a type of local bus that connects CPUs and internal peripherals. In 1991, PCI was proposed by Intel Corporation for the first time, but now it is a local bus standard so that PCs, and even medium and large computer systems can adopt it. A few features of PCI bus can be summarized as follows.

The PCI is basically designed to operate at 33 MHz clock speed and 32 bit I/O. It also has an extended 66 MHz, 64 bit I/O that accommodates Baud rates 8 times faster than the conventional ISA bus type (8 MHz, 16 bit I/O).

Peripherals connected to the PCI bus have their own register and device information used for setting hardware automatically. This enables users to install PCI devices with ease.

The CPU works separately from the bus master, so that the PCI bus continues to perform its functions without waiting for the CPU even though the peripherals connected though the bus are slow. This structure helps PCI handle much more loads at the same time.

The PCI bus has multiplexed card pins that contribute to reduce component size, making them smaller than ISA cards and further lowering hardware costs.

PCI bus components are completely compatible with existing device drivers and applications. That is, they only require PCI in order to control the devices and show perfect compatibility with previously installed programs.

The PCI bus makes its surface reversely located from that of the ISA card so that it can utilize a shared slot (using the identical guide between different bus types).

The PCI bus is the most effective supporting type for 64-bit CPU. As it has the advantage on being compatible with the existing ISA bus, it is expected to be a standard bus type for all computers in the future.

Synopsis

SystemBase Serial Card PCI boards are installed on a PCI slot of your PC, providing 1, 2,4,8,16,24 or 32 RS 232/RS422/RSs485 serial ports.

Multi-1/PCI, Multi-2/PCI, Multi-4/PCI, Multi-8/PCI Serial Card boards provide one, two, four and eight serial ports respectively.

Multi-32/PCI Serial Card board is composed of 8, 16, 24, 32 ports with the extended external port box, Each port complies with standard UART for both-way communication at up to 921,600 bps.

Serial Card PCI board occupies one interrupt number (IRQ) and many I/O addresses.

Serial Card PCI board has automatic setting functions that eliminate the inconvenience of manually setting I/O base addresses and IRQ numbers.

Each PC has up to four Serial Card PCI boards and amounts to up to 128 ports.

In Multi user environments such as Linux, Windows 7 or above and Windows Server 2008 or above Serial Card PCI boards operate in multi-user mode connecting several terminals to one PC through multiplexed asynchronous serial communications.

In singular user environments such as windows 98 and MS-DOS, Serial Card PCI boards operate in multi-device mode connecting several devices to one PC through multiplexed asynchronous serial communications.

The Serial Card board includes

1. Serial Card controller board.
2. External port box(however, it is excluded from Multi-1, 2, 8C).
3. Controller cable(however, it is excluded from Multi-1,2).

Multi-1/LPCI VA2

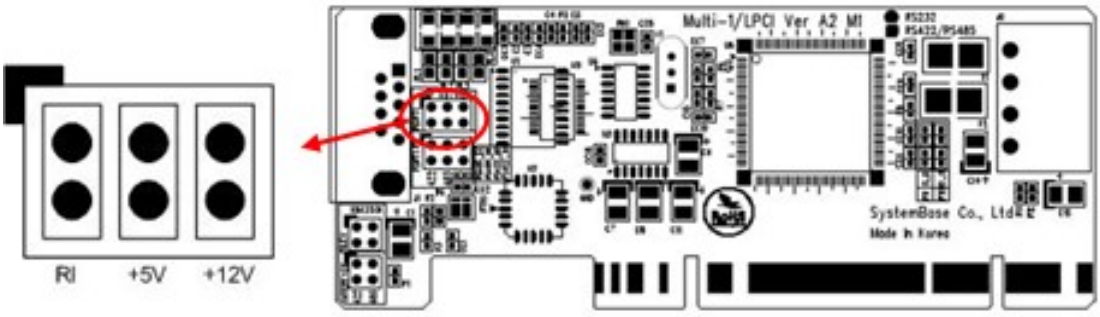
Multi-1/LPCI VA2 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous single port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-1/LPCI VA2uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-1/LPCI VA2 not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C552
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232, Combo Common

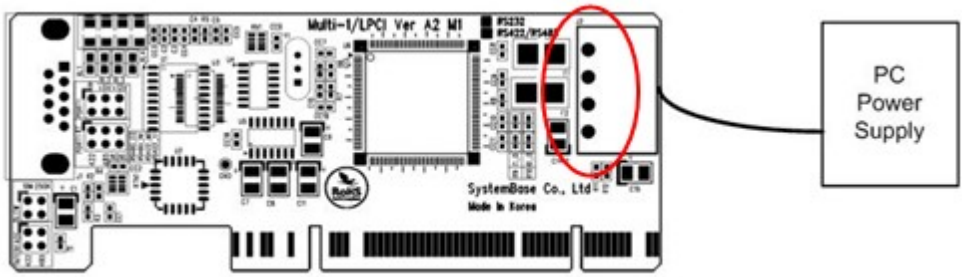
1. Port1: External Power Supply Setting Jumper



RI: Do not supply external power and use pin 9 for RI signal line. (Default)

+5V: Use pin 9 for supplying +5V external power.

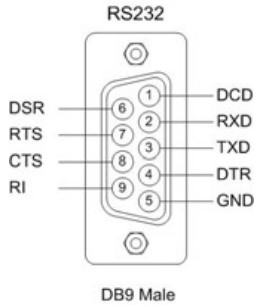
+12V: Use pin 9 for supplying +12V external power.



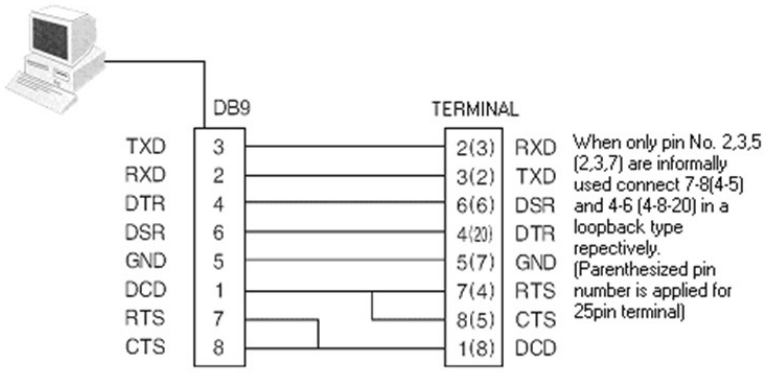
In case you want to supply +5V power but the PCI slot does not supply it, you should use PC's power supply.

- RS232 Model

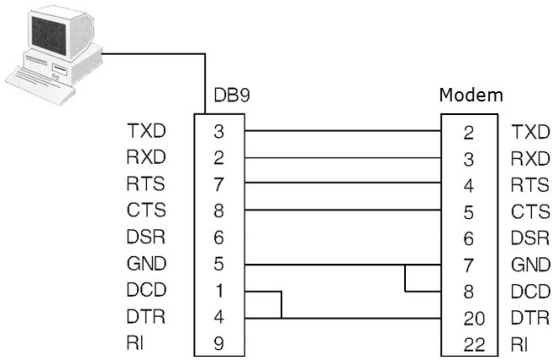
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



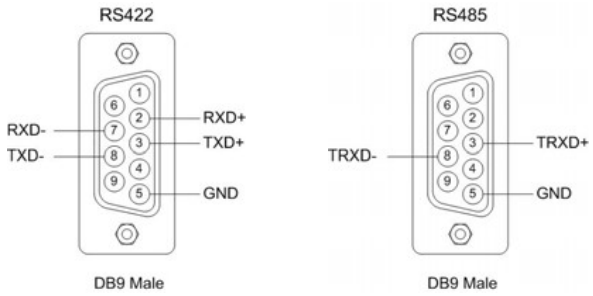
3. Connecting Modem



- RS422/RS485 Combo Model

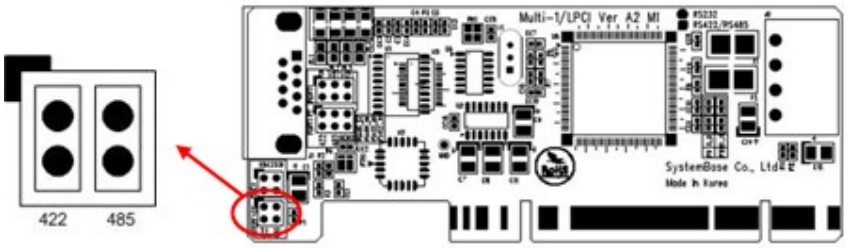
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings

1. DE9(DB9) Connector (Male)



2. Jumper Settings

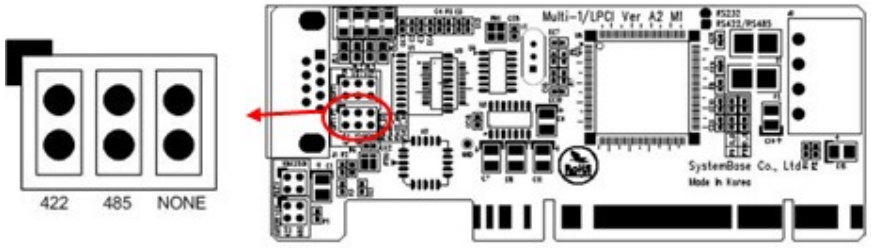
a. Interface Settings: Interface Selection



422: Select RS422 Interface

485: Select RS485 Interface (Default)

b. Port1 RT: RS422/RS485 Terminal Resistance Selection

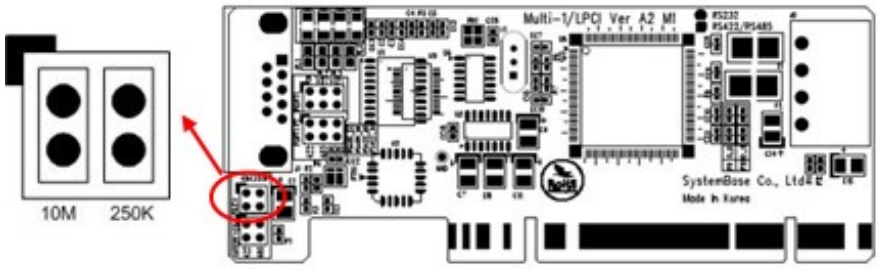


422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

c. Slew: Slew Rate Limit Ability

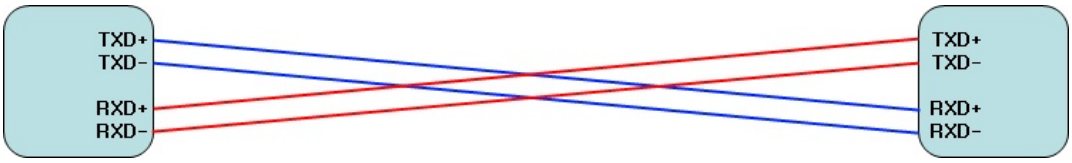


10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

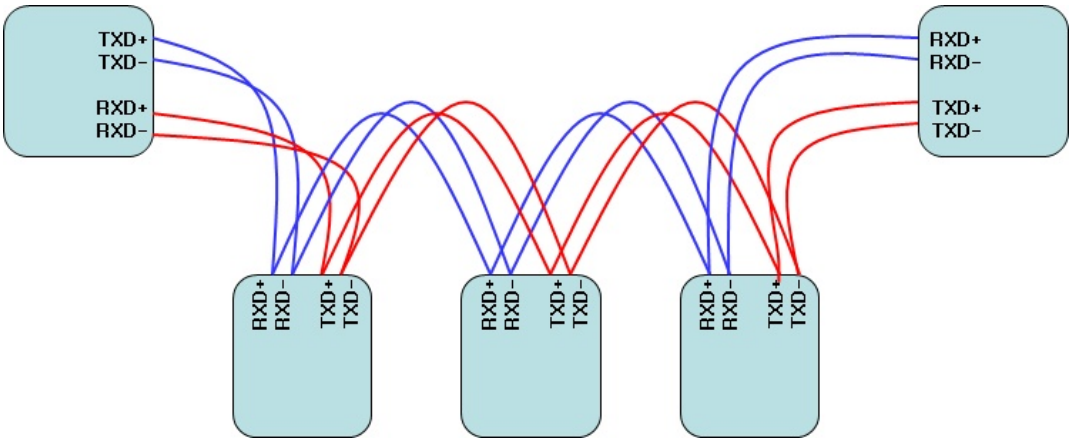
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode.

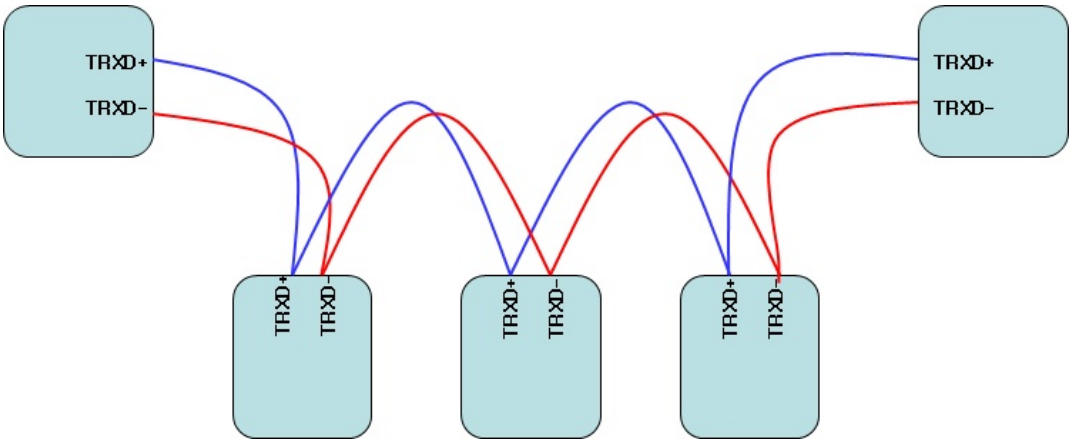
3. RS422 Point-to-Point Connection



4. RS422 Multi-Drop Connection



5. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-1/LPCI VA3

Multi-1/LPCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous single port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-1/LPCI VA3 uses SB16C1050 core designed by SystemBase. Multi-1/LPCI VA3 not only supports maximum communication speed of 921.6Kbps but also provides advanced ability of HW Auto Flow control and 256byte FIFO. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

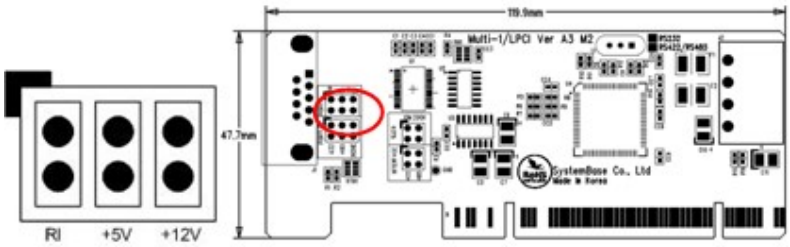
- Product Specifications

Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C1052PCI
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

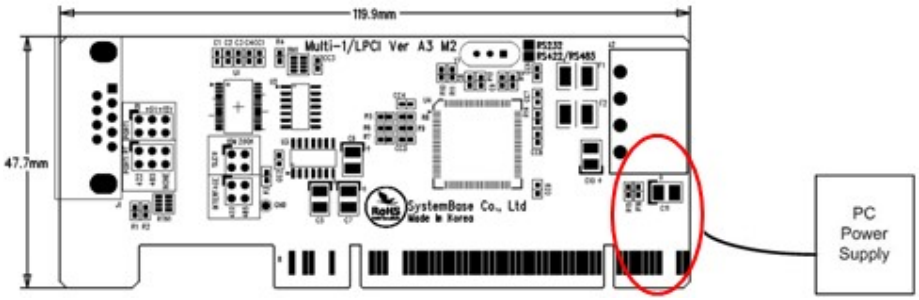
- RS232, Combo Common

Combo refers to products that can alternatively use RS422 or RS485 using jumper settings

1. Port1: External Power Supply Setting Jumper



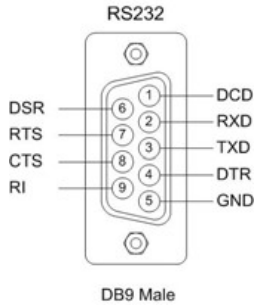
RI: Do not supply external power and use pin 9 for RI signal line. (Default)
+5V: Use pin 9 for supplying +5V external power.
+12V: Use pin 9 for supplying +12V external power.



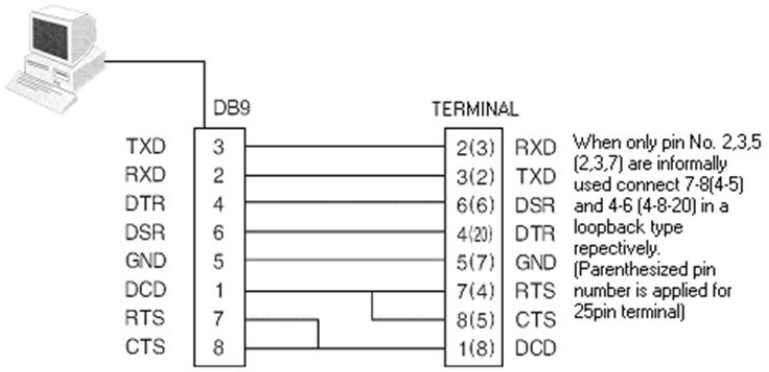
In case you want to supply +5V power but the PCI slot does not supply it, you should use PC's power supply.

- RS232 Model

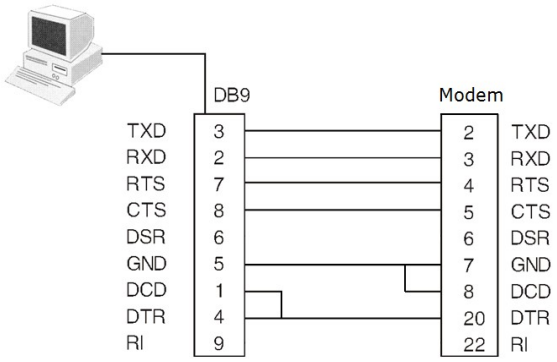
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



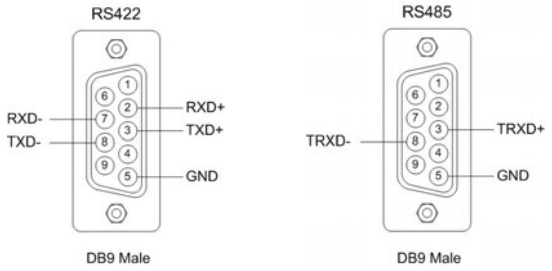
3. Connecting Modem



- RS422/RS485 Combo Model

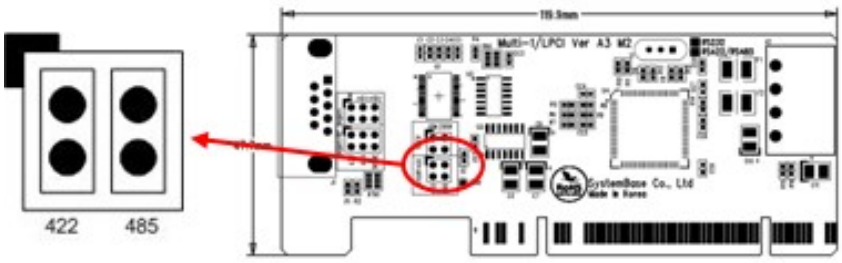
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings

1. DE9(DB9) Connector (Male)



2. Jumper Settings

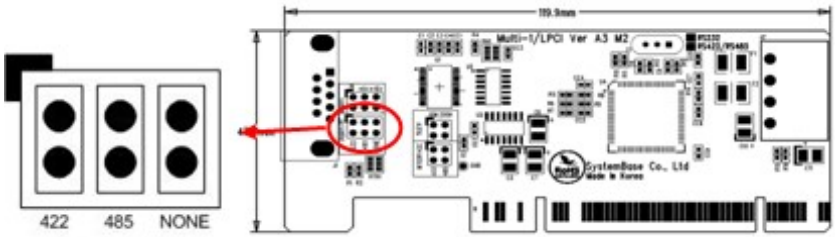
a. Interface Settings: Interface Selection



422: Select RS422 Interface

485: Select RS485 Interface (Default)

b. Port1 RT: RS422/RS485 Terminal Resistance Selection

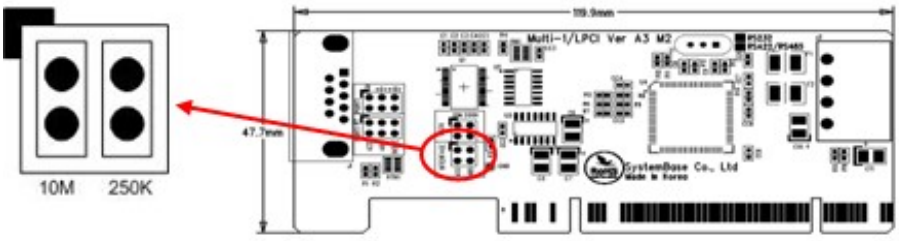


422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

c. Slew: Slew Rate Limit Ability

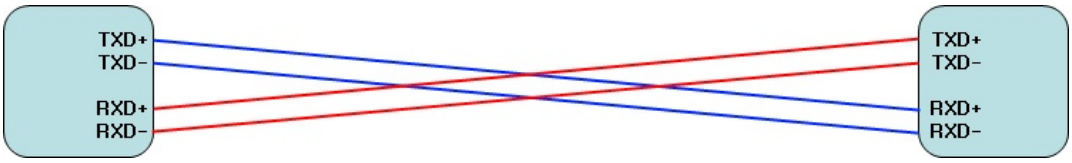


10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

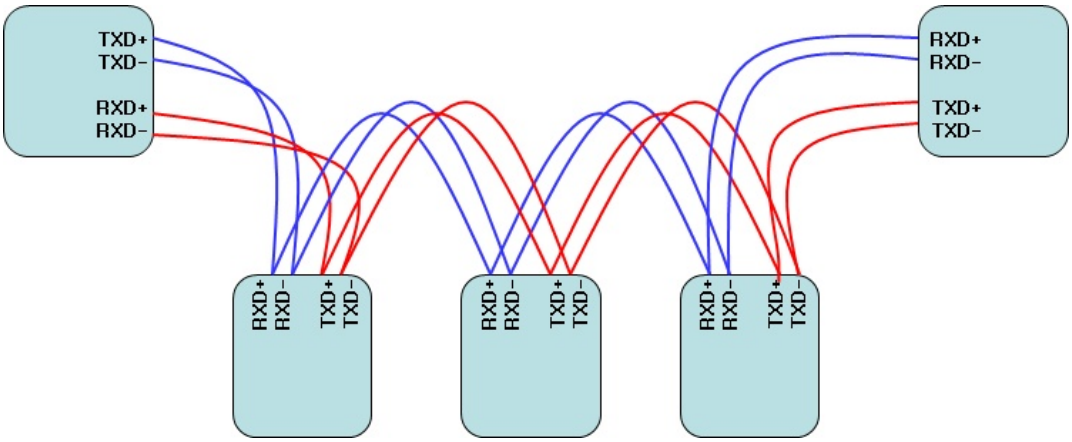
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode.

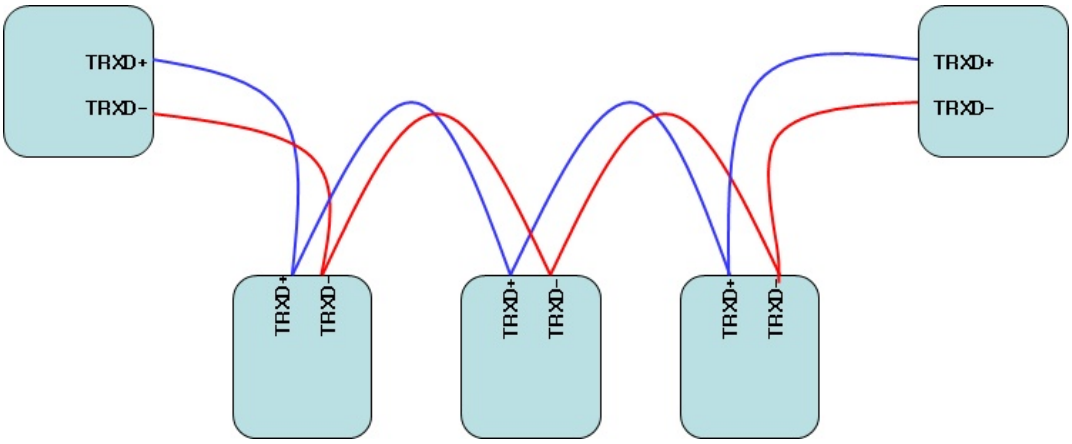
3. RS422 Point-to-Point Connection



4. RS422 Multi-Drop Connection



5. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-2/PCI VA2

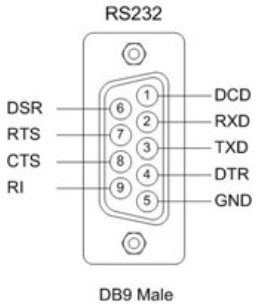
Multi-2/PCI VA2 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous 2 port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-2/PCI VA2 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-2/PCI VA2 not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

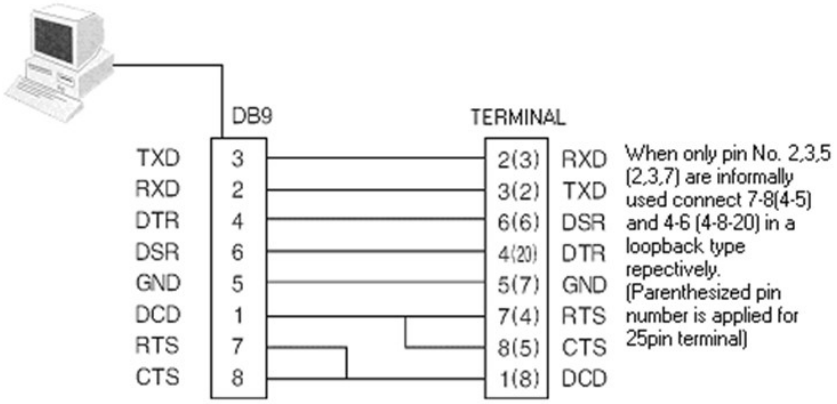
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C552
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

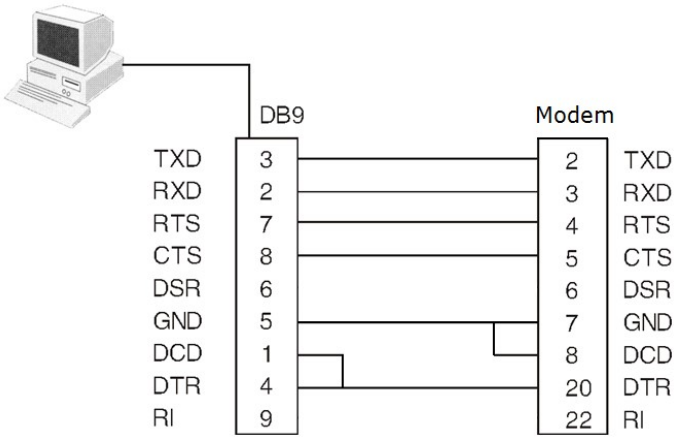
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



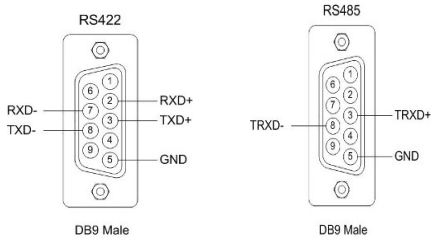
3. Connecting Modem



- RS422/RS485 Combo Model

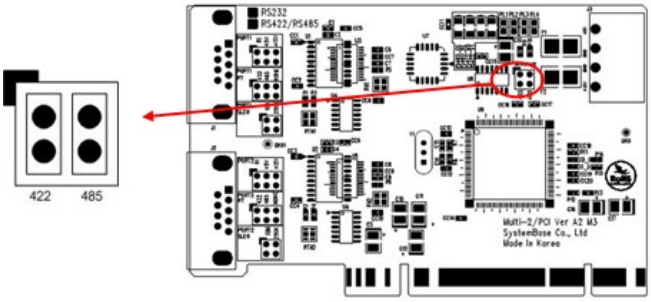
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

1. DE9(DB9) Connector (Male)



2. Jumper Settings

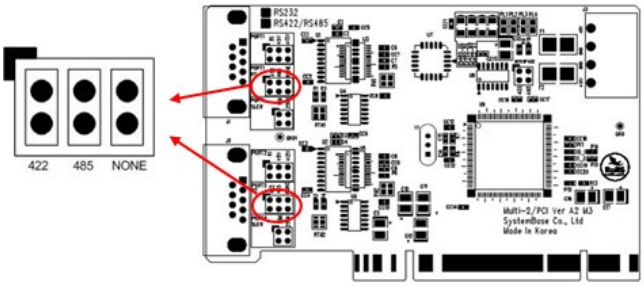
a. Interface Settings: Interface Selection



422: Select RS422 Interface

485: Select RS485 Interface (Default)

b. Port1 RT: RS422/RS485 Terminal Resistance Selection

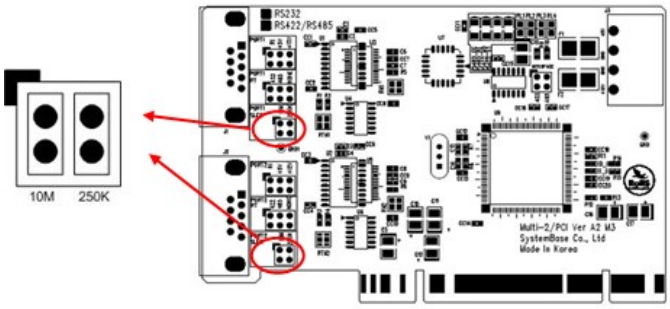


422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

c. Slew: Slew Rate Limit Ability



10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode.

Multi-2/PCI VA3

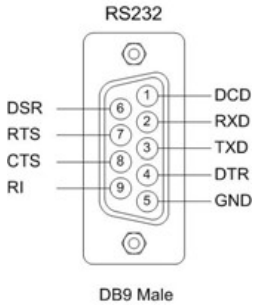
Multi-2/PCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous single port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-2/PCI VA3 uses SB16C1050 core designed by SystemBase. Multi-2/PCI VA3 not only supports maximum communication speed of 921.6Kbps but also provides advanced ability of HW Auto Flow control and 256byte FIFO. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

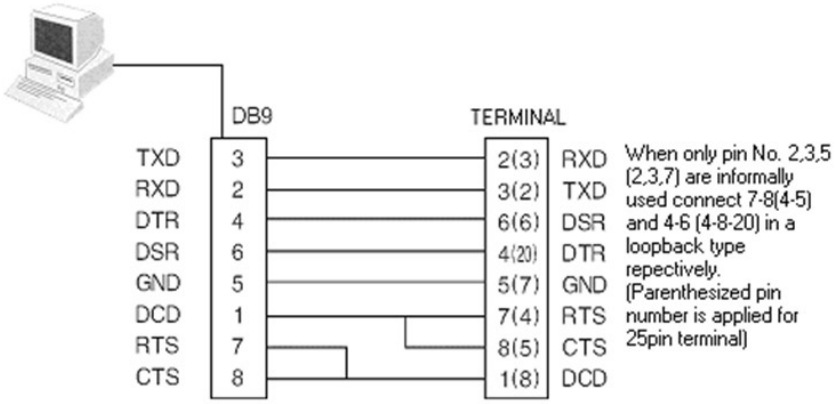
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	16C1052PCI
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

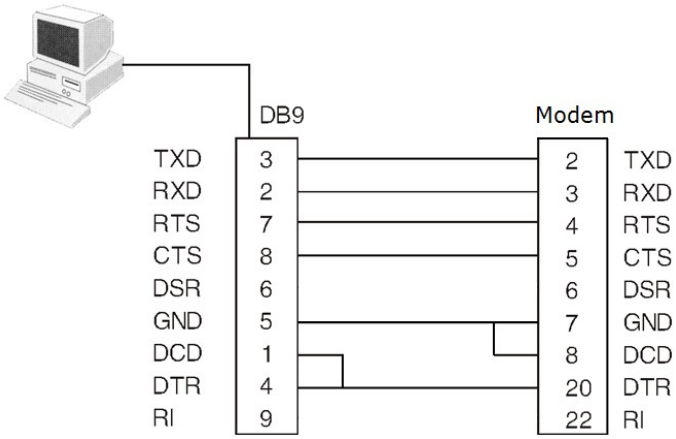
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



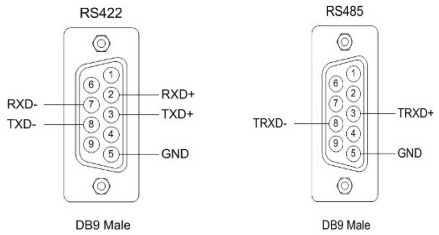
3. Connecting Modem



- RS422/RS485 Combo Model

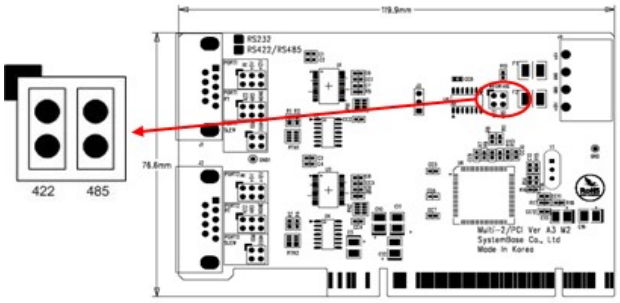
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

1. DE9(DB9) Connector (Male)



2. Jumper Settings

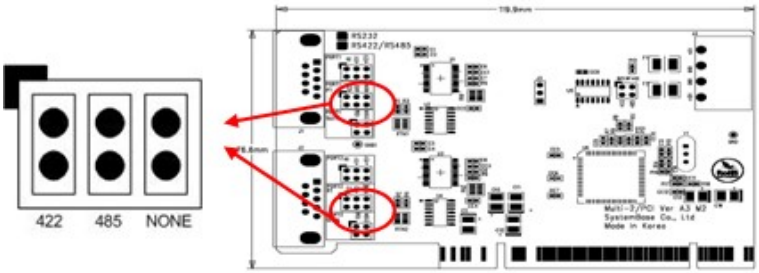
a. Interface Settings: Interface Selection



422: Select RS422 Interface

485: Select RS485 Interface (Default)

b. Port1 RT: RS422/RS485 Terminal Resistance Selection

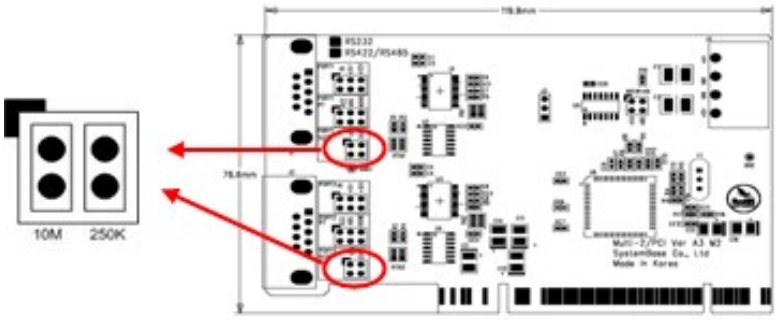


422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

c. Slew: Slew Rate Limit Ability



10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode

Multi-2C/LPCI VA2

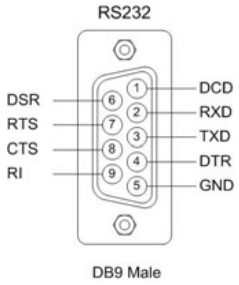
Multi-2C/LPCI VA2 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous 2 port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-2C/LPCI VA2 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-2C/LPCI VA2 board provides RS232 line interface and maximum communication speed of 921.6Kbps. In addition, it provides 2 DB9 Male connector cable that can be connected to DB25 pin connector for external connection. It is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

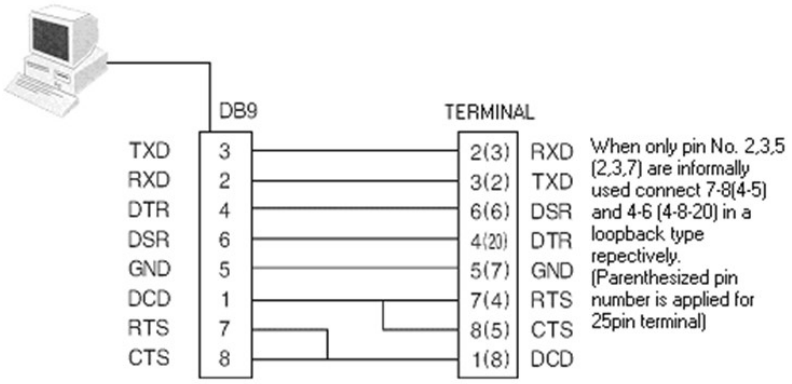
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB4002A
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

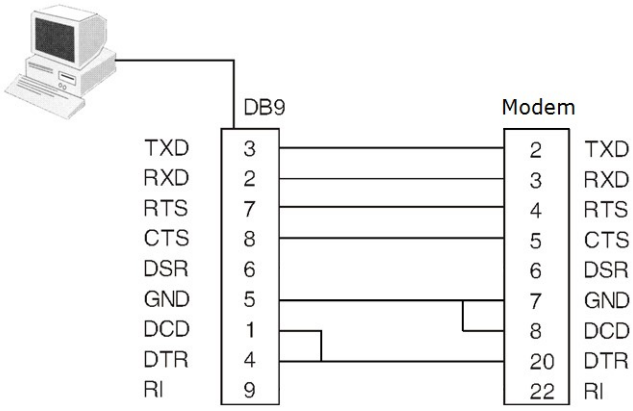
1. DE9(DB9) Connector (Male)



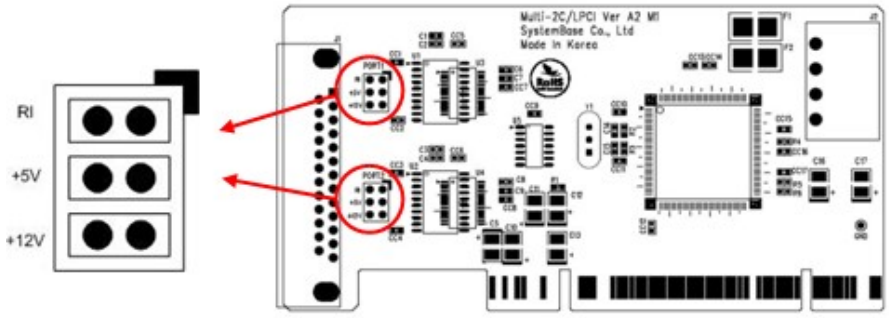
2. Connecting Terminal



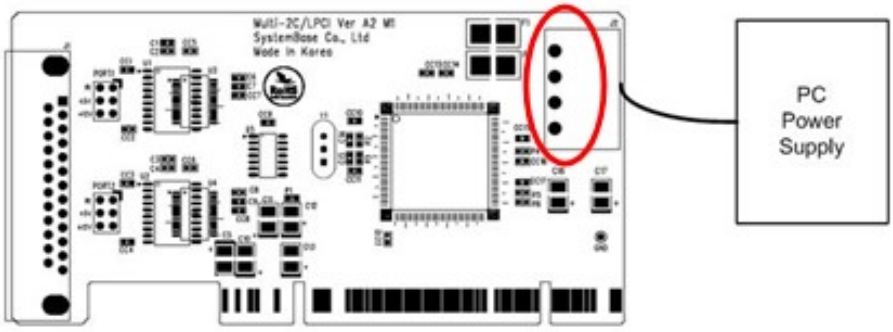
3. Connecting Modem



4. Portx: External Power Supply Setting Jumper



RI: Do not supply external power and use pin 9 for RI signal line. (Default)
+5V: Use pin 9 for supplying +5V external power.
+12V: Use pin 9 for supplying +12V external power.



In case you want to supply +5V power but the PCI slot does not supply it, you should use PC's power supply.

Multi-2C/LPCI VA3

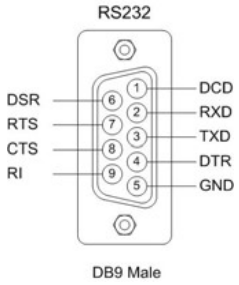
Multi-2C/LPCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous 2 port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-2C/LPCI VA3 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-2C/LPCI VA3 board provides RS232 line interface and maximum communication speed of 921.6Kbps. In addition, it provides 2 DB9 Male connector cable that can be connected to DB25 pin connector for external connection and advanced ability of HW Auto Flow control and 256byte FIFO. It is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

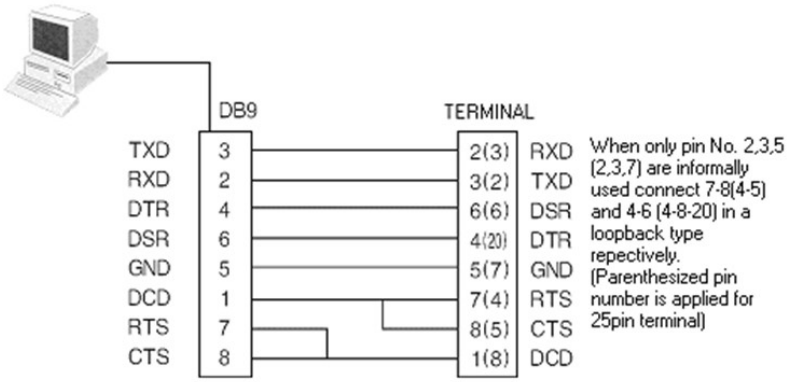
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	16C1052PCI
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

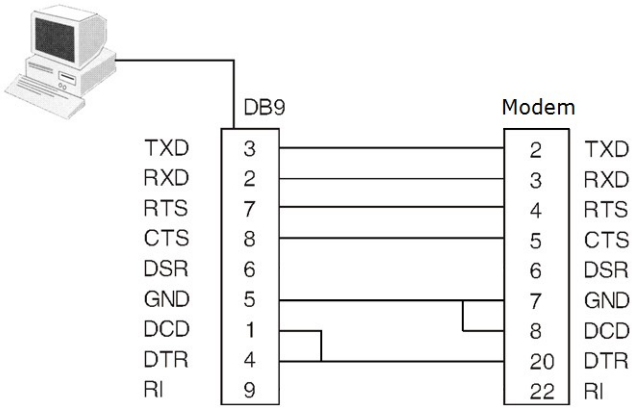
1. DE9(DB9) Connector (Male)



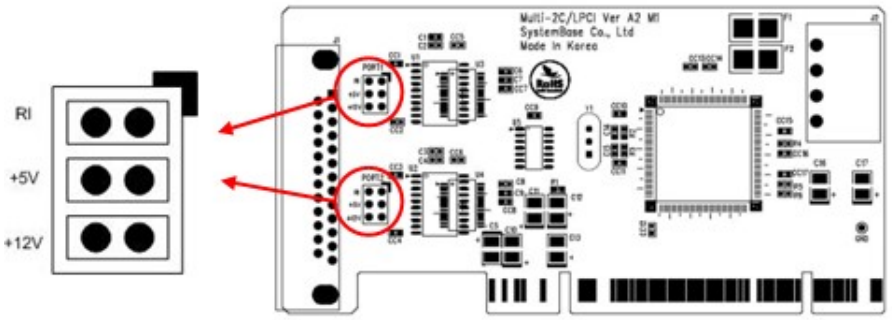
2. Connecting Terminal



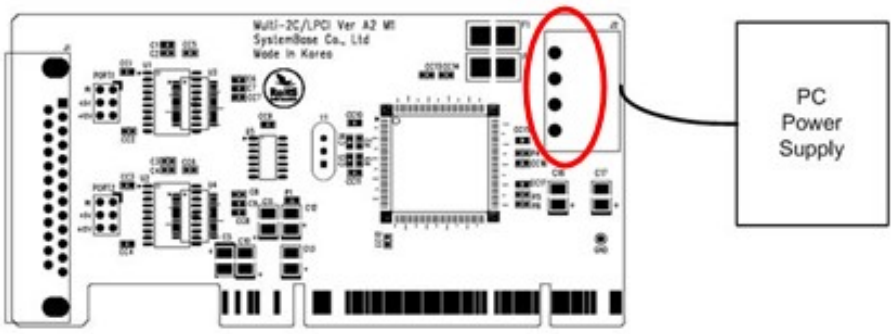
3. Connecting Modem



4. Portx: External Power Supply Setting Jumper



RI: Do not supply external power and use pin 9 for RI signal line. (Default)
+5V: Use pin 9 for supplying +5V external power.
+12V: Use pin 9 for supplying +12V external power.

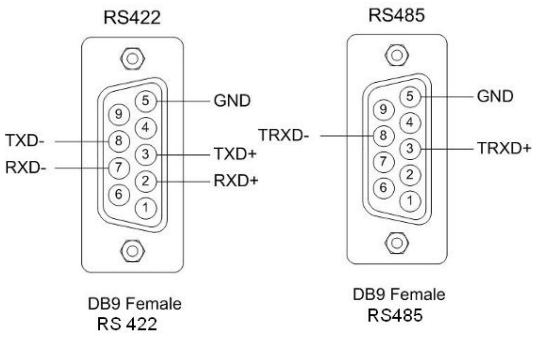


In case you want to supply +5V power but the PCI slot does not supply it, you should use PC's power supply.

- RS422/RS485 Combo Model

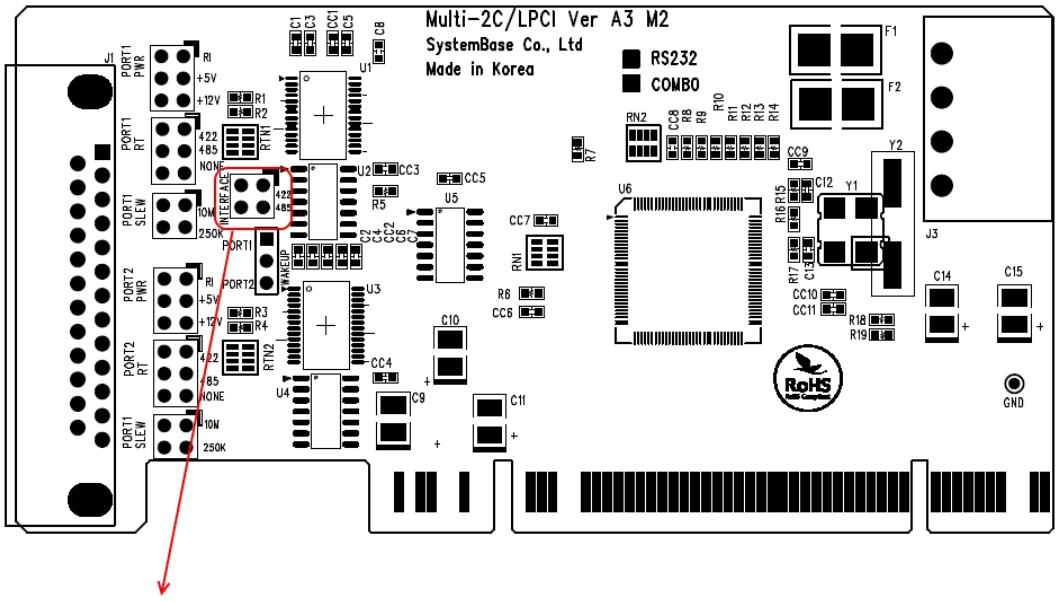
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

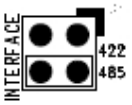
1. DE9(DB9) Connector (Female)



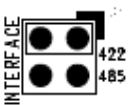
2. Jumper Setting

a. Interface Settings: Interface Selection



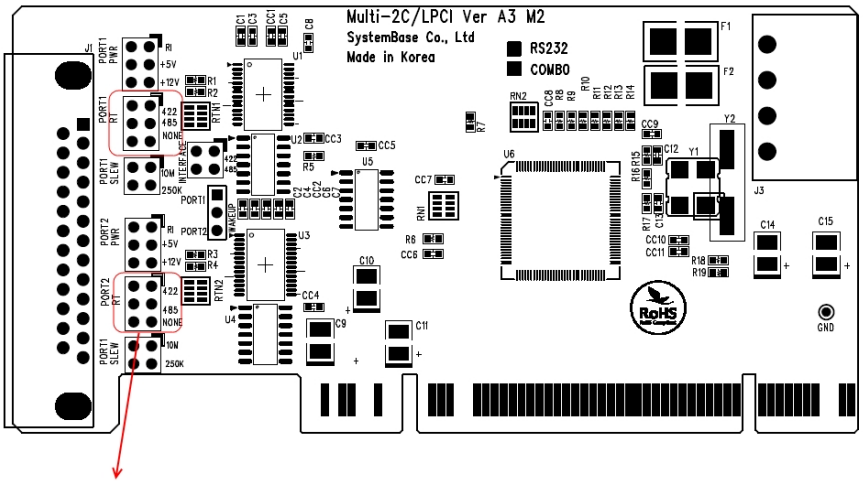


422: Select RS422 Interface



485: Select RS485 Interface (Default)

b. Port1 RT: RS422/RS485 Terminal Resistance Selection

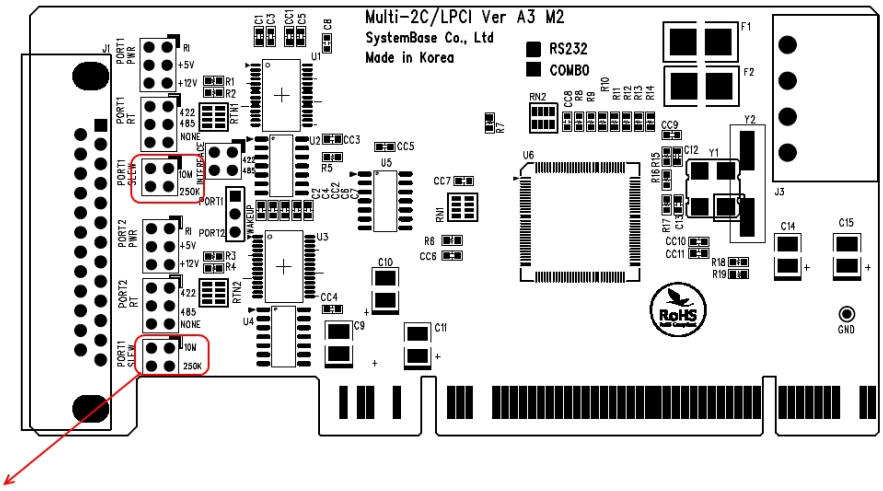


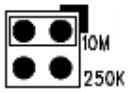
422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

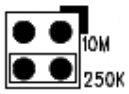
None: Do not set Terminal Resistor (Default)

c. Slew: Slew Rate Limit Ability





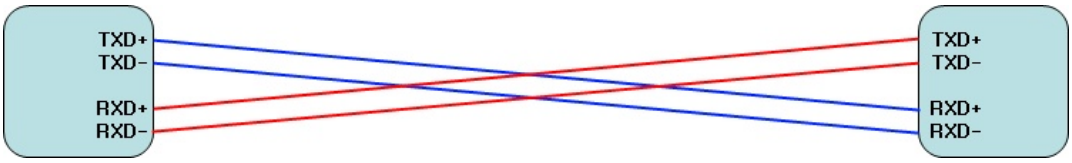
10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)



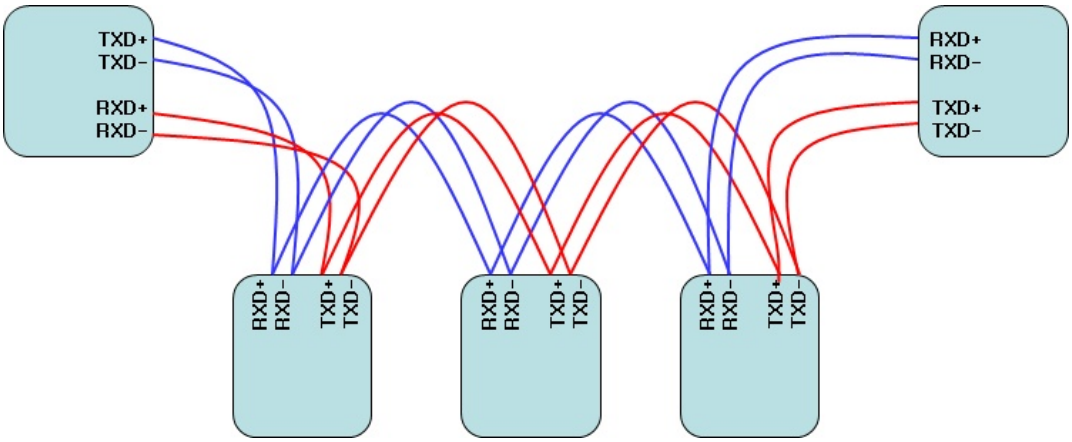
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode

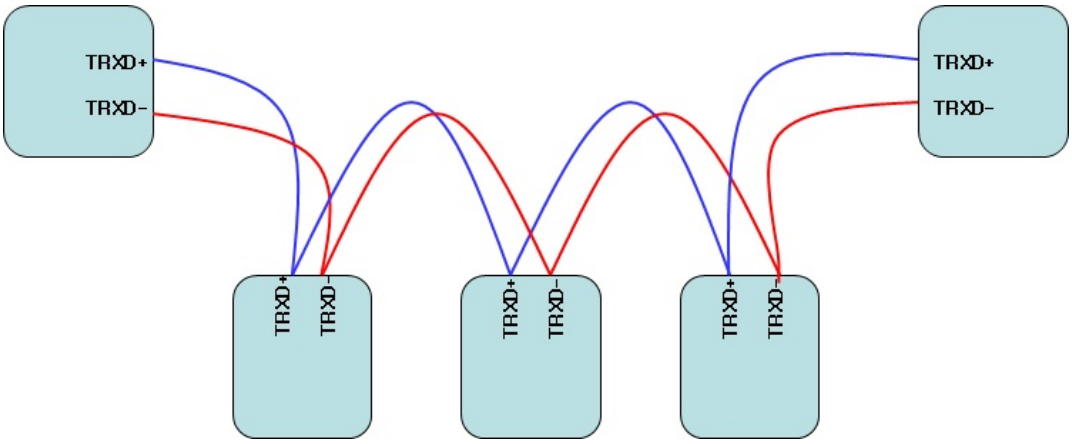
3. RS422 Point-to-Point Connection



4. RS422 Multi-Drop Connection



5. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-4/LPCI VA2

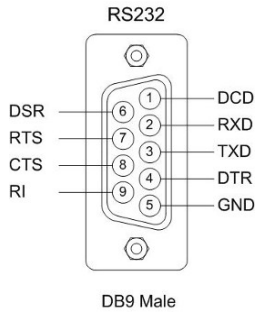
Multi-4/LPCI VA2 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-4/LPCI VA2 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-4/LPCI VA2 is used with Panel-4 VA2 panel. It not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

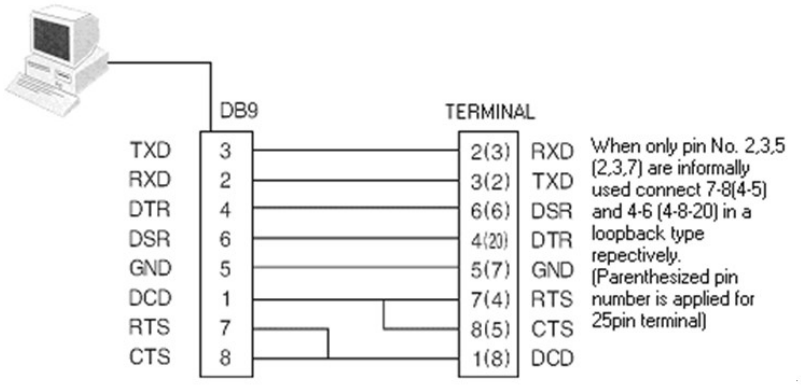
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C554
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

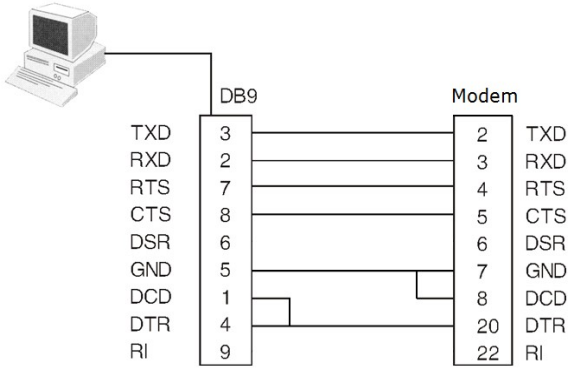
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



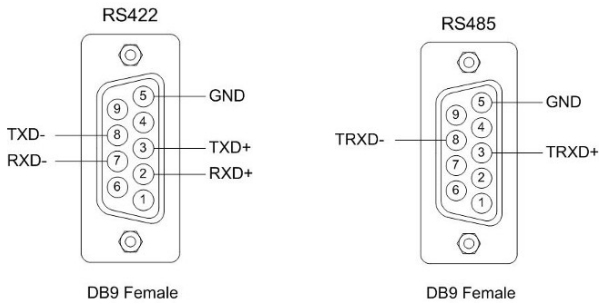
3. Connecting Modem



- RS422/RS485 Combo Model

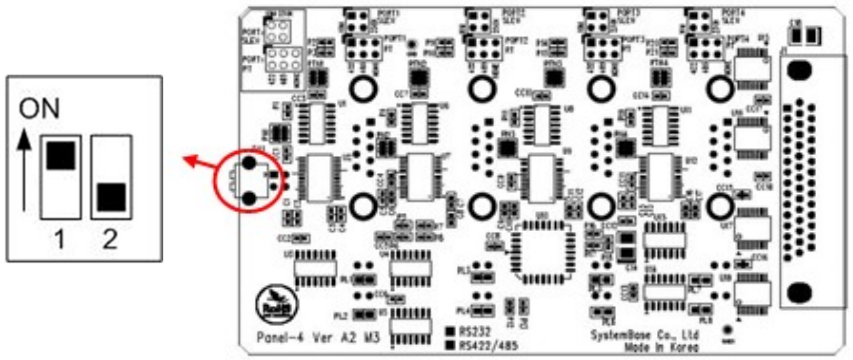
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

1. DE9(DB9) Connector (Female)



2. Panel Switch Settings

Selects RS422, RS485 line interface and mode

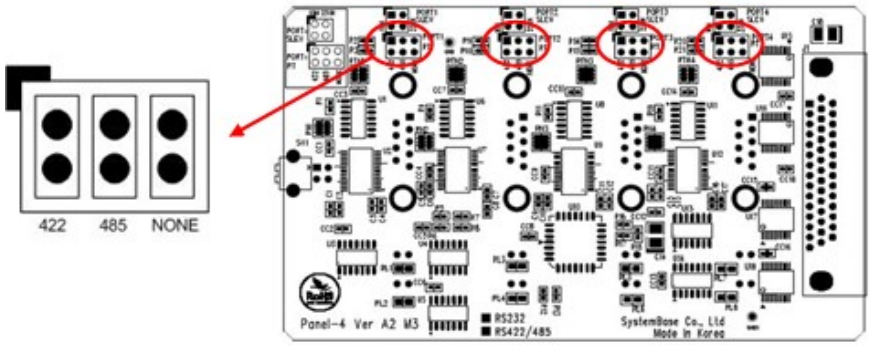


1	2	Interface	Mode
OFF	OFF	RS422	Point-to-Point
OFF	ON	RS422	Multi-Drop
ON (Default)	OFF (Default)	RS485	Non-Echo
ON	ON	RS485	Echo

3. Jumper Settings

a. Portx RT: RS422/RS485 Terminal Resistance Selection

(Port 1 is Port #1, Port2 is Port#2)

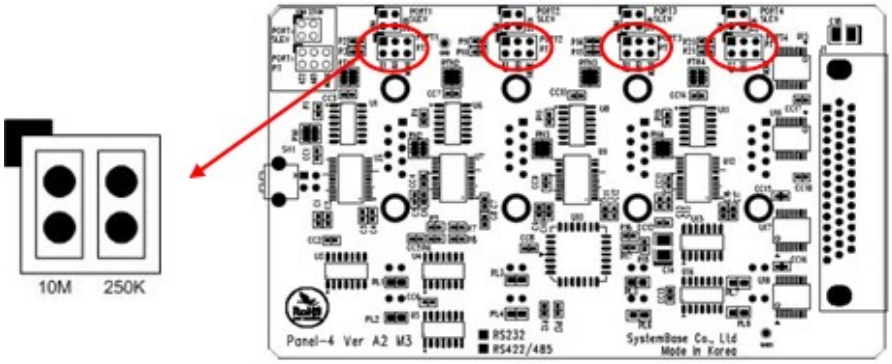


422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

b. Slew: Slew Rate Limit Ability

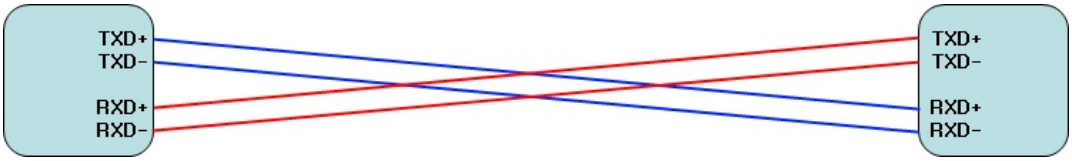


10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

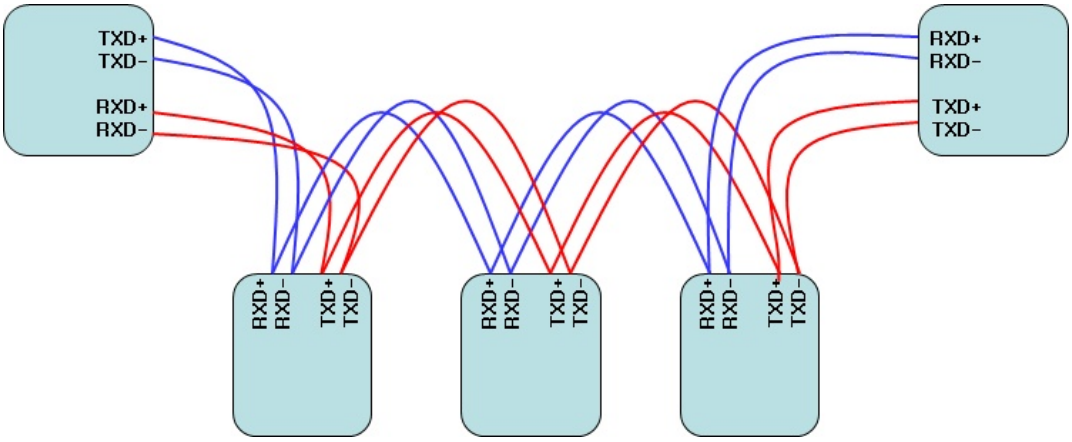
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode

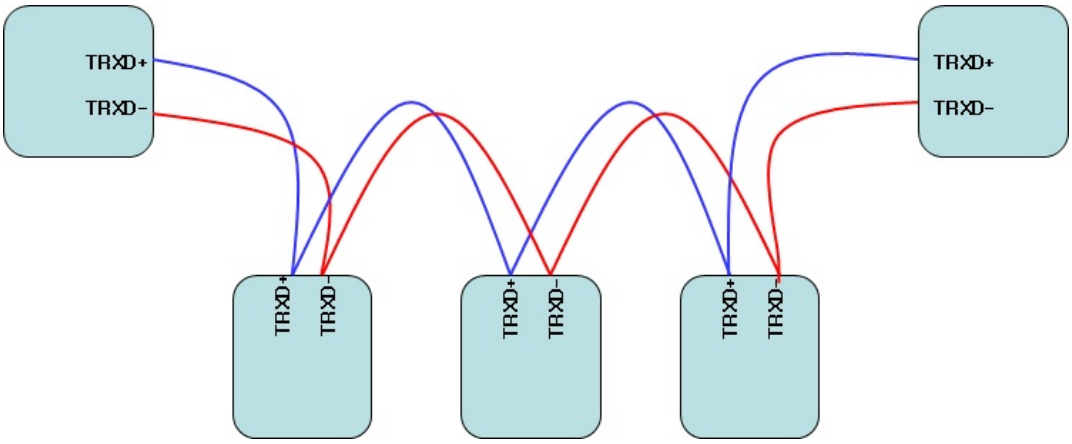
4. RS422 Point-to-Point Connection



5. RS422 Multi-Drop Connection



6. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-4/LPCI VA3

Multi-4/LPCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-4/LPCI VA3 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-4/LPCI VA3 is used with Panel-4 VA2 panel. It not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. And it provide voltage via direct connector to the device like bar code reader that is related with PC POS so is very useful when it is used in connecting small device (cash drawer, bar code reader, receipt printer and so on) Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

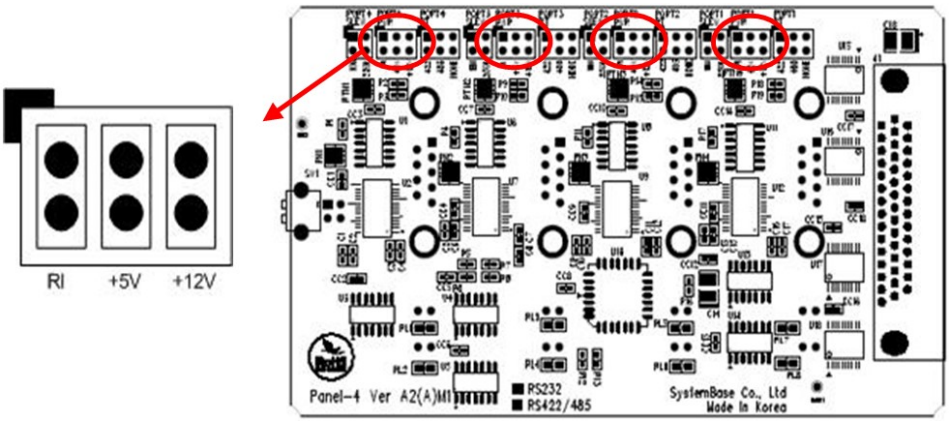
- Product Specifications

Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C1054PCI
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232/Combo Common

1. Portx: External Power Supply Setting Jumper

PORT1 is Port #1, PORT2 is Port #2



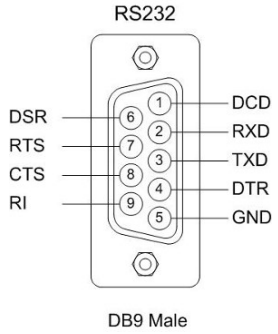
RI: Do not supply external power and use pin 9 for RI signal line. (Default)

+5V: Use pin 9 for supplying +5V external power.

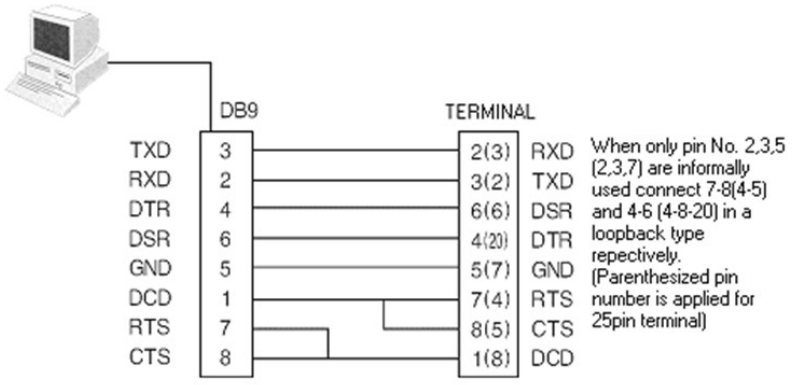
+12V: Use pin 9 for supplying +12V external power.

- RS232 Model

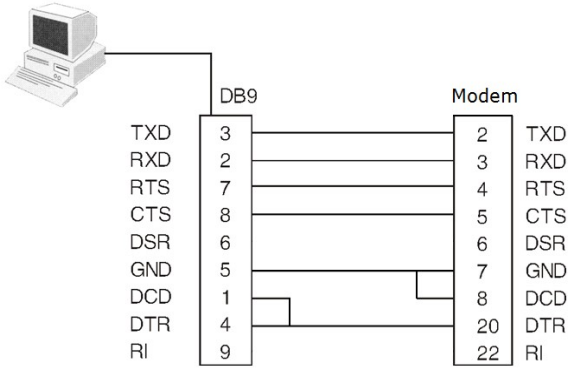
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



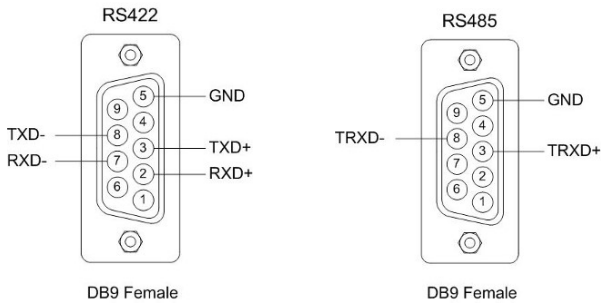
3. Connecting Modem



- RS422/RS485 Combo Model

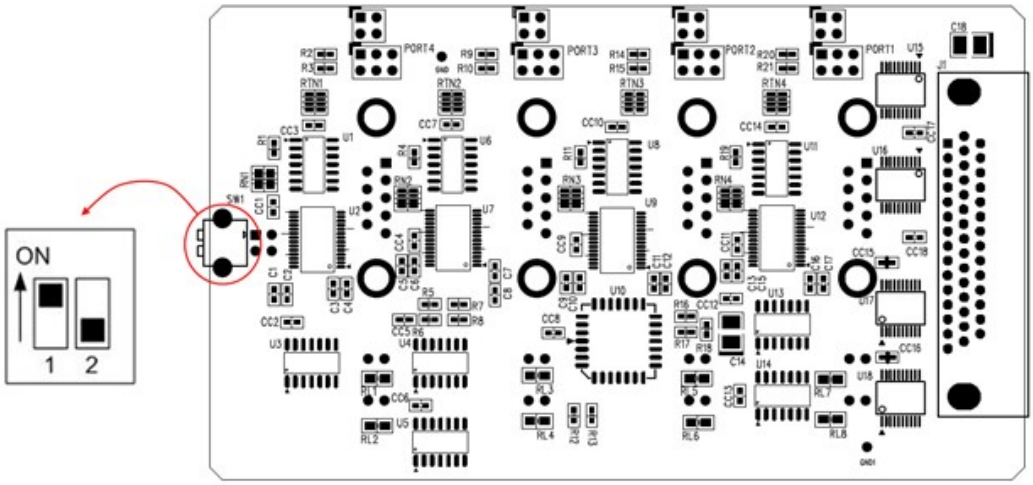
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

1. DE9(DB9) Connector (Female)



2. Panel Switch Settings

Selects RS422, RS485 line interface and mode

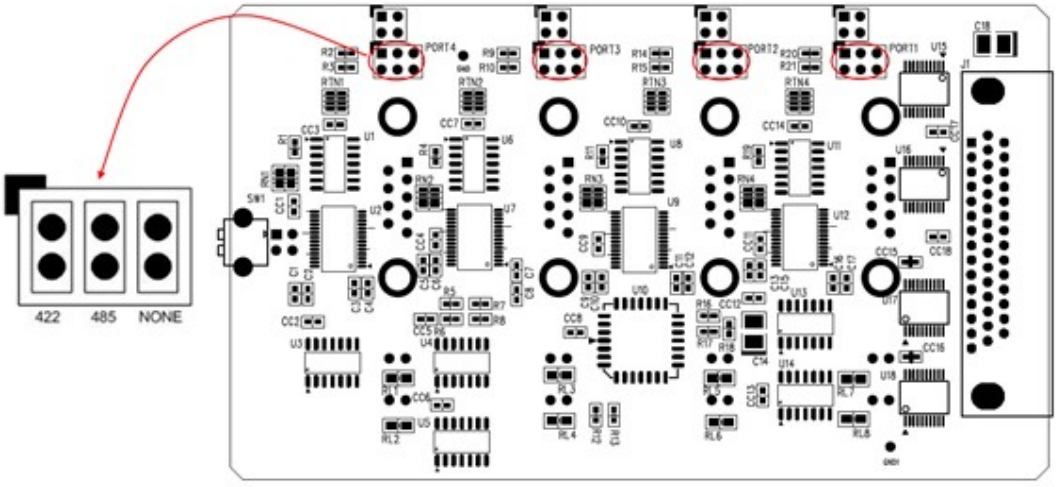


1	2	Interface	Mode
OFF	OFF	RS422	Point-to-Point
OFF	ON	RS422	Multi-Drop
ON (Default)	OFF (Default)	RS485	Non-Echo
ON	ON	RS485	Echo

3. Jumper Settings

a. Portx RT: RS422/RS485 Terminal Resistance Selection

(Port 1 is Port #1, Port2 is Port#2)

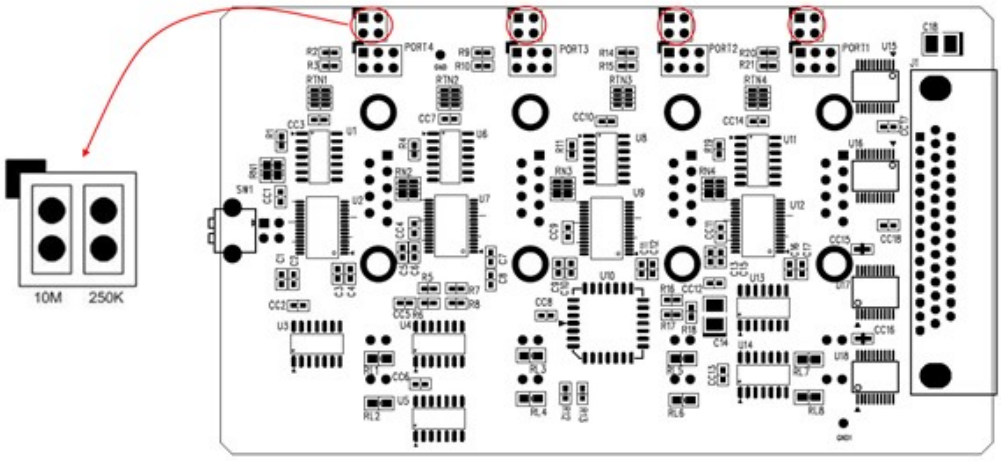


422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

b. Slew: Slew Rate Limit Ability

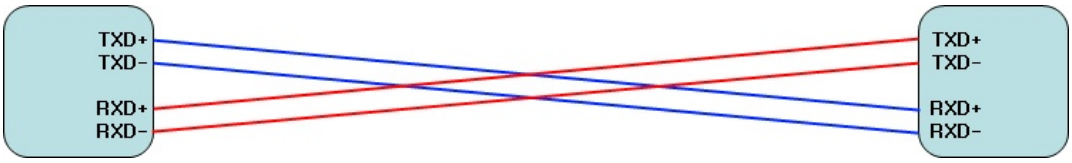


10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

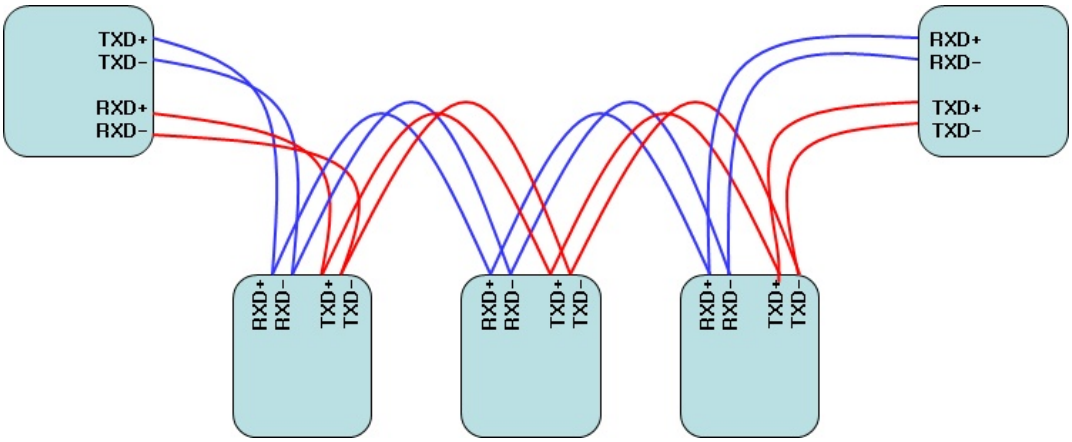
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode

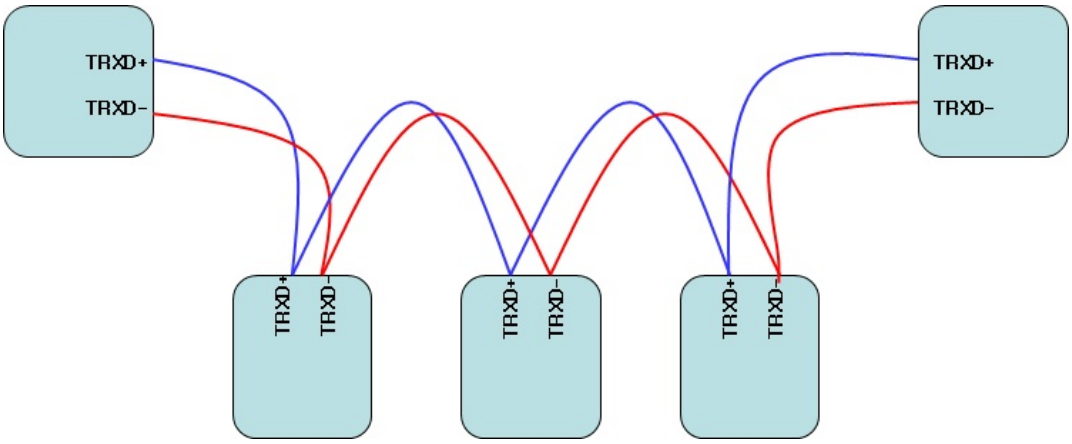
4. RS422 Point-to-Point Connection



5. RS422 Multi-Drop Connection



6. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-4C/PCI VA2

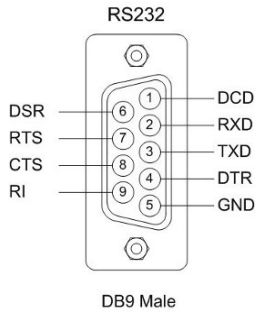
Multi-4C/PCI VA2 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-4C/PCI VA2 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-4C/PCI VA2 not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. As Multi-4C/PCI VA2 is cable-end type Serial Card, we supply DB44(M) to 4 x DB9(M) Cable so that user can work simple cabling. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

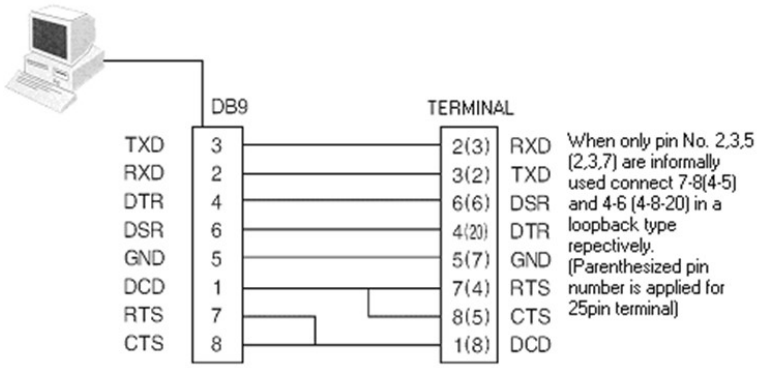
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232
Communication Controller	16C554 or 16C1054
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

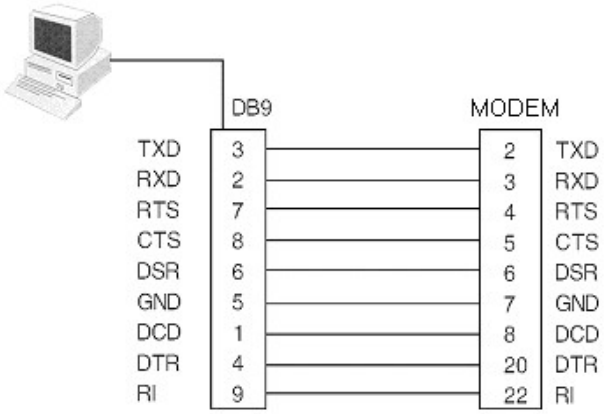
1. DE9(DB9) Connector (Male)



2. Connecting Terminal

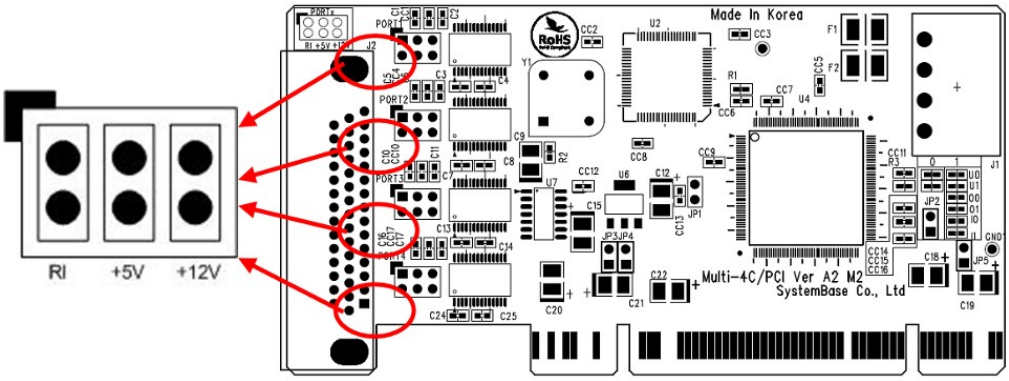


3. Connecting Modem



4. PORTx PWR: voltage supply selection jumper

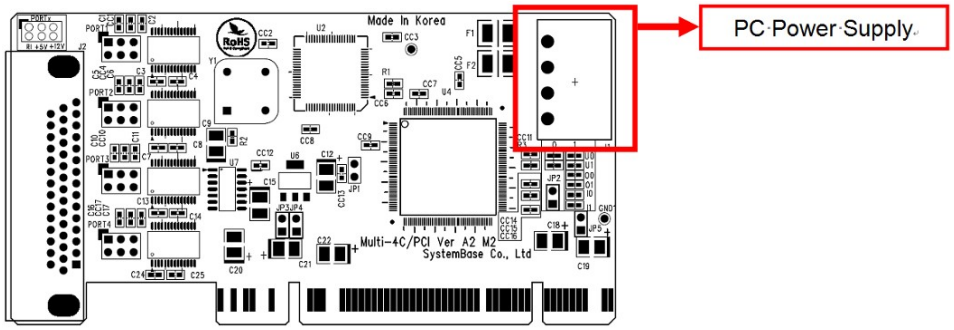
(PORT1 is Port #1~ PORT4 is Port #4)



+5V: supply 5V voltage to peripheral using 9th.pin.

+12V: supply 12V voltage to peripheral using 9th.pin.

RI: Enables RI communication when using RS232. not supply any peripheral. (Default)



If there is no 5V voltage in PCI slot of user's PC, should be supplied by Power Supply of PC.

Multi-4C/PCI VA3

Multi-4C/PCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Multi-4C/PCI VA3 not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. And It has 256 Byte FIFO, so that more stable.

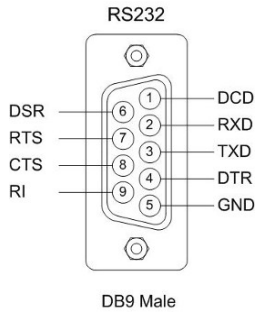
As Multi-4C/PCI VA3 is cable-end type Serial Card, we supply DB44(M) to 4 x DB9(M) Cable so that user can work simple cabling. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

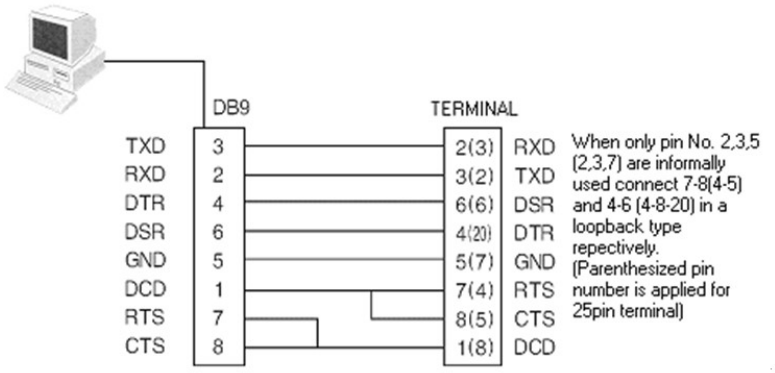
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C1054PCI
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15KV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

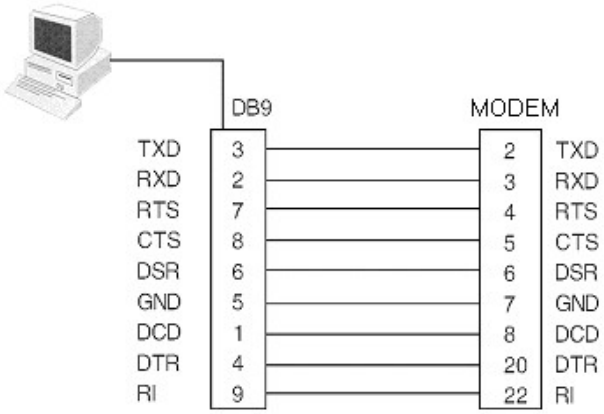
1. DE9(DB9) Connector (Male)



2. Connecting Terminal

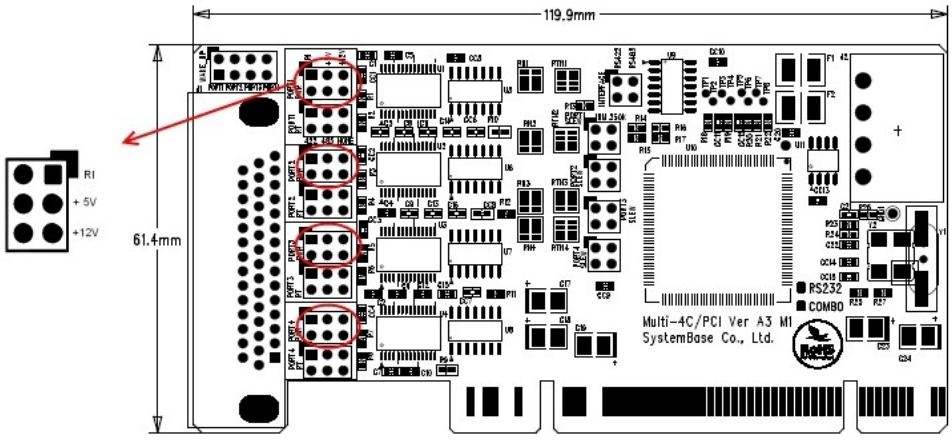


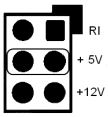
3. Connecting Modem



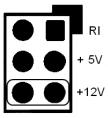
4. PORTx PWR: voltage supply selection jumper

(PORT1 is Port #1~ PORT4 is Port #4)

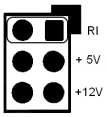




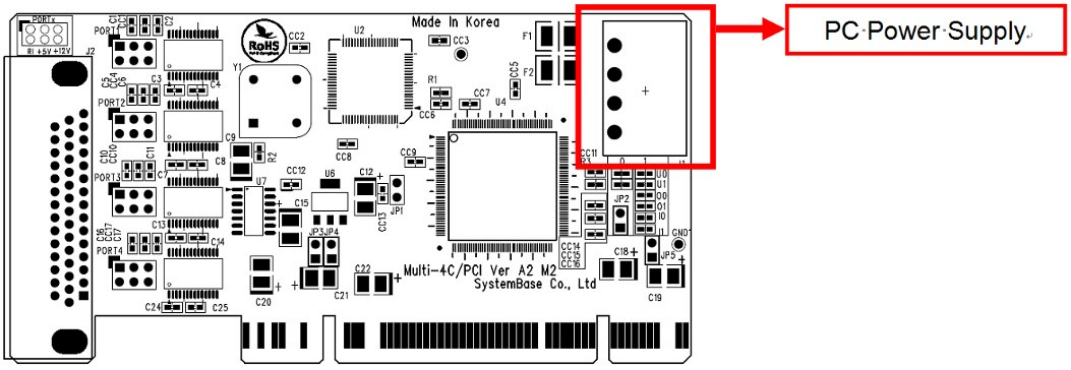
+5V: supply 5V voltage to peripheral using 9th.pin.



+12V: supply 12V voltage to peripheral using 9th.pin.



RI: Enables RI communication when using RS232. not supply any peripheral. (Default)



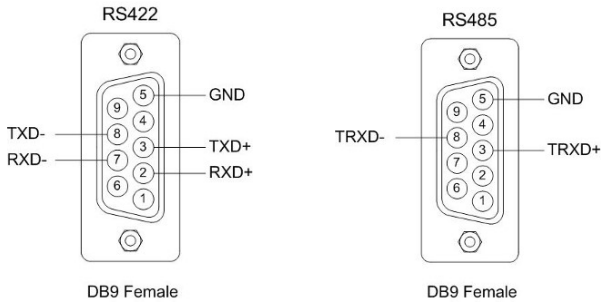
If there is no 5V voltage in PCI slot of user's PC, should be supplied by Power Supply of PC.

* Warning: When a jumper is set to +5V or +12V, it is necessary to make sure that a device that a jumper connects has the same setting as the jumper. Since power is supplied through pin 9, a device may break down when this requirement is not met.

- RS422/RS485 Combo Model

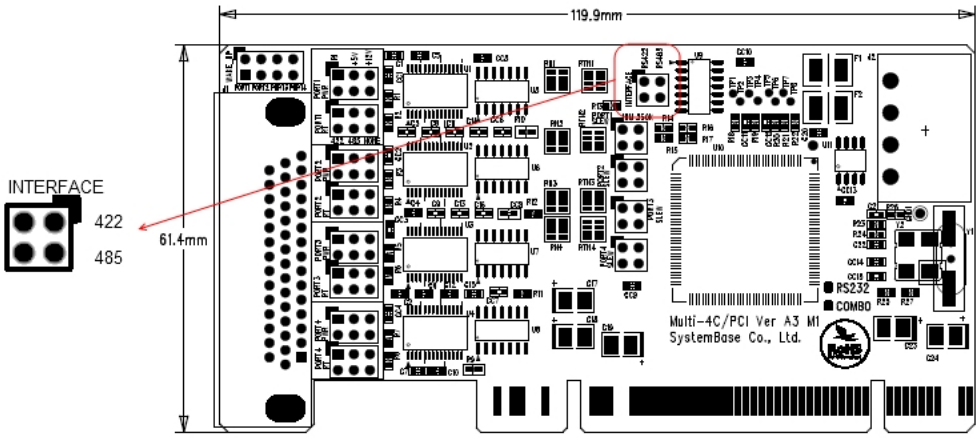
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

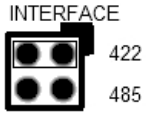
1. DE9(DB9) Connector (Female)



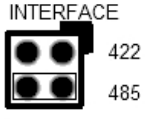
2. Interface Settings

Selects RS422, RS485 line interface and mode





422: If you want RS422, set jumper like this.

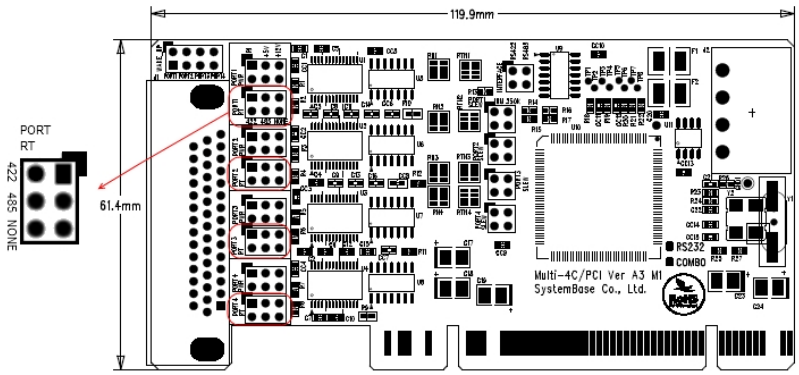


485: If you want RS485, set jumper like this (Default)

3. Jumper Settings

a. Portx RT: RS422/RS485 Terminal Resistance Selection

(Port 1 is Port #1, Port2 is Port#2)

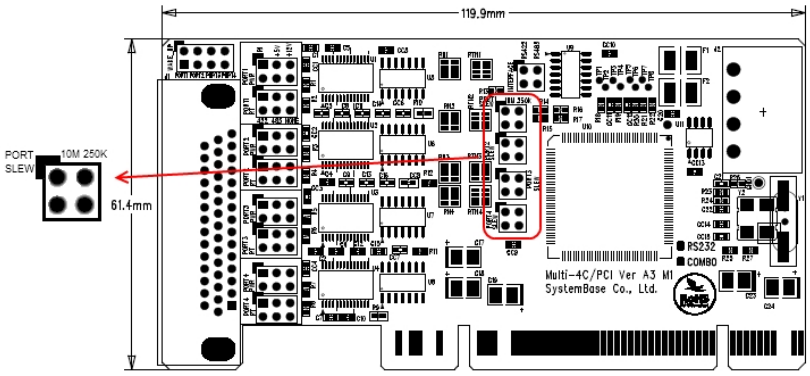


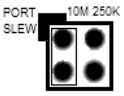
422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

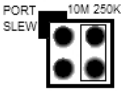
None: Do not set Terminal Resistor (Default)

b. Slew: Slew Rate Limit Ability





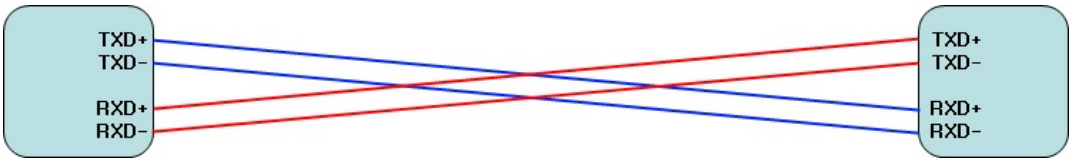
10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)



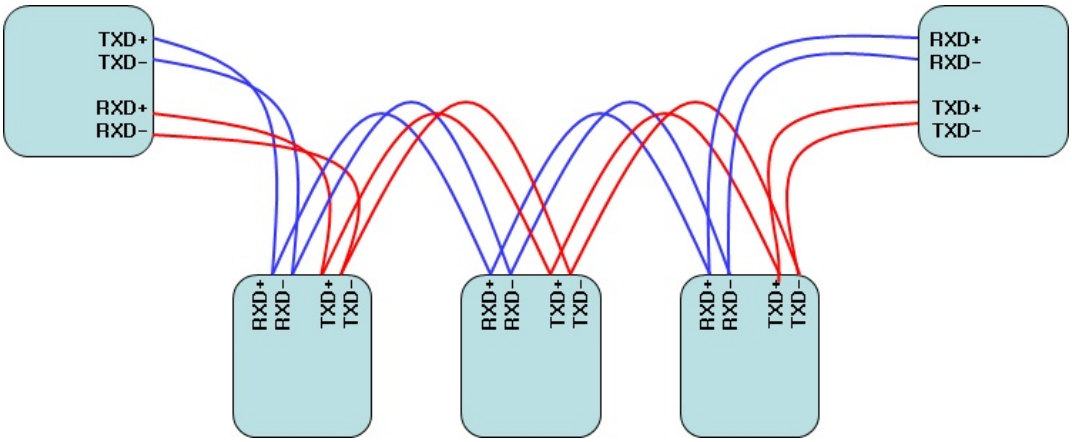
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode

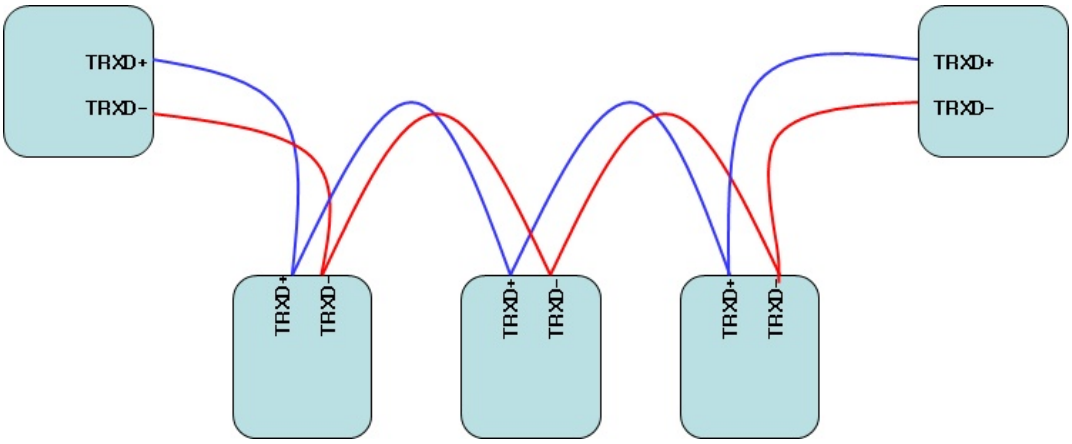
4. RS422 Point-to-Point Connection



5. RS422 Multi-Drop Connection



6. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-8/LPCI VA2

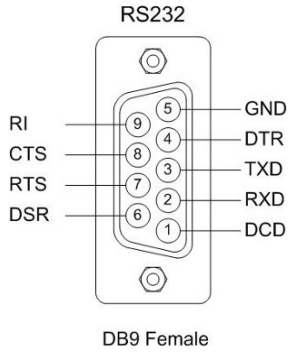
Multi-8/LPCI VA2 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-8/LPCI VA2 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-8/LPCI VA2 is used with Panel-8 VA2. It not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

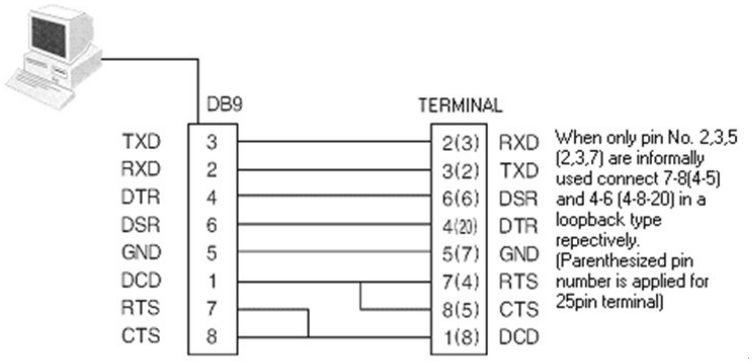
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	16C554
Connector	DB9 (Female)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

-RS232 Model

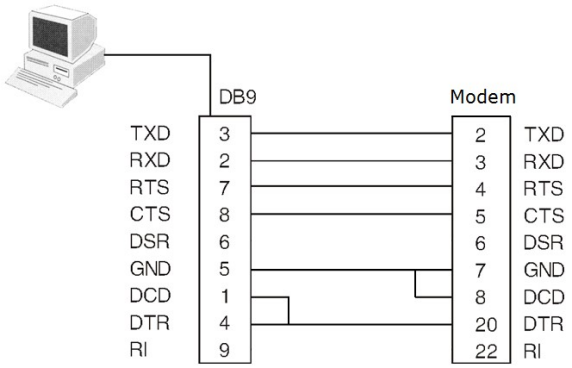
1. DE9(DB9) Connector (Female)



2. Connecting Terminal



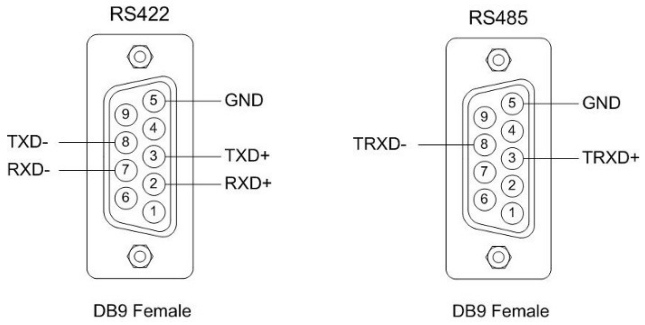
3. Connecting Modem



- RS422/RS485 Combo Model

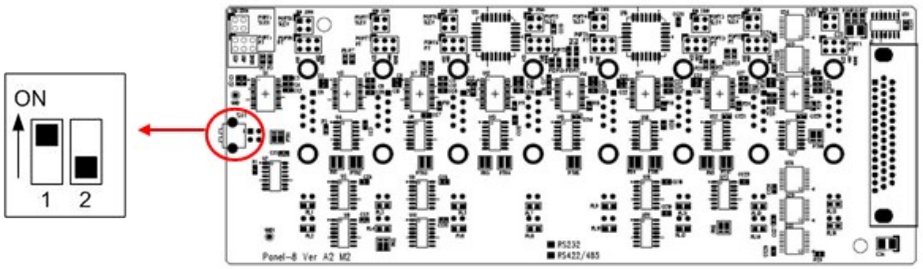
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

1. DE9(DB9) Connector (Female)



2. Panel Switch Settings

Selects RS422, RS485 line interface and mode

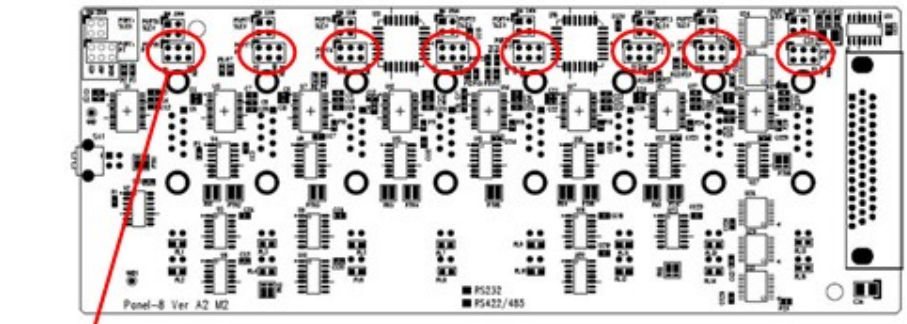


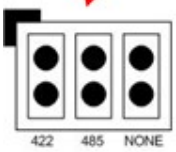
1	2	Interface	Mode
OFF	OFF	RS422	Point-to-Point
OFF	ON	RS422	Multi-Drop
ON (Default)	OFF (Default)	RS485	Non-Echo
ON	ON	RS485	Echo

3. Jumper Settings

a. Portx RT: RS422/RS485 Terminal Resistance Selection

(Port 1 is Port #1, Port2 is Port#2)



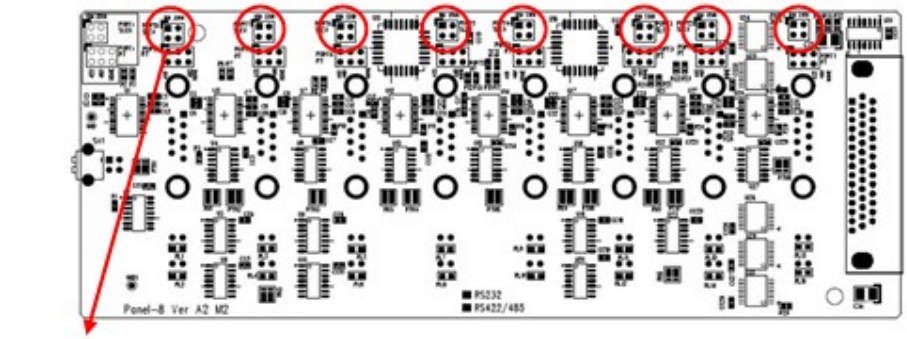


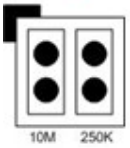
422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

b. Slew: Slew Rate Limit Ability



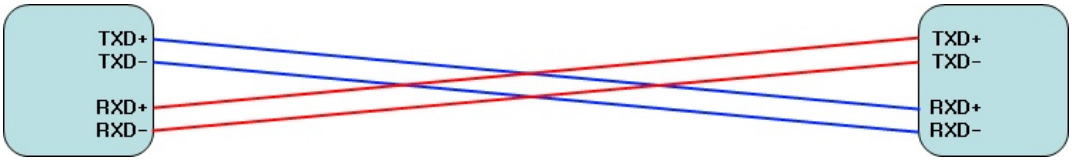


10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

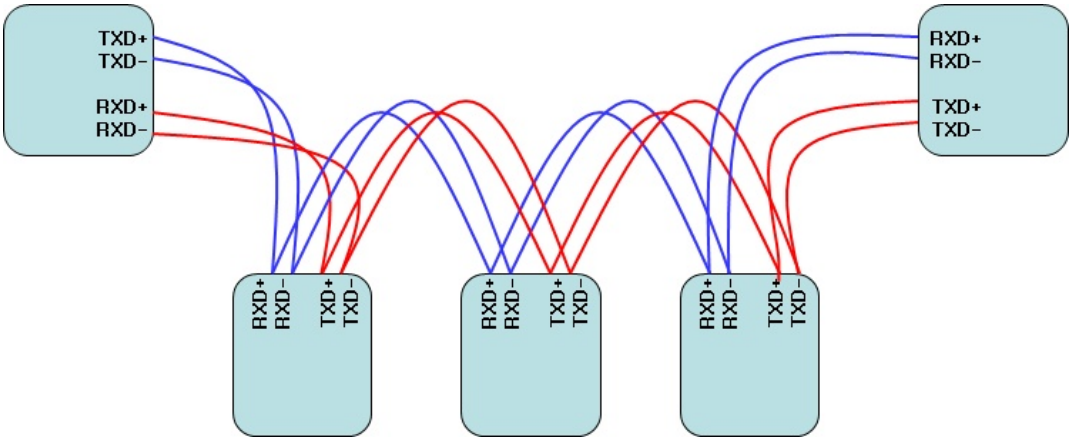
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode.

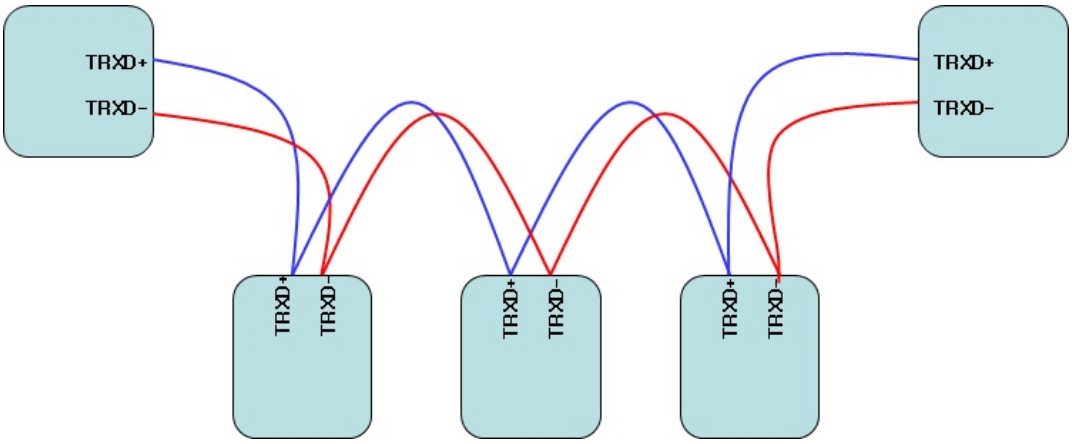
4. RS422 Point-to-Point Connection



5. RS422 Multi-Drop Connection



6. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-8/LPCI VA3

Multi-8/LPCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-8/LPCI VA3 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-8/LPCI VA3 is used with Panel-8 VA2. It not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. And SB16C1058PCI has 256byte deep FIFO, so this card provides more fast and sate communication. Furthermore, it is PCI hipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

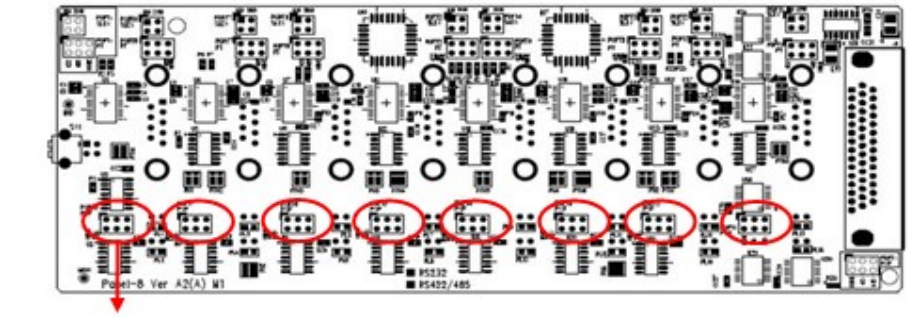
- Product Specifications

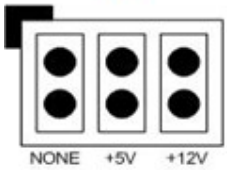
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C1058PCI
Connector	DB9 (Female)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232, Combo Common

1. Portx: External Power Supply Setting Jumper

PORT1 is Port #1, PORT2 is Port #2





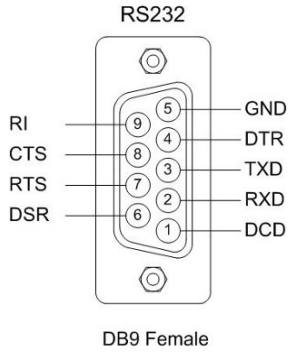
RI: Do not supply external power and use pin 9 for RI signal line. (Default)

+5V: Use pin 9 for supplying +5V external power.

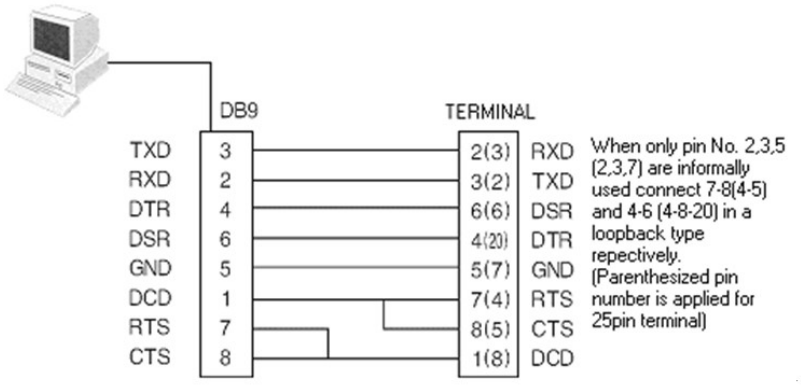
+12V: Use pin 9 for supplying +12V external power.

- RS232 Model

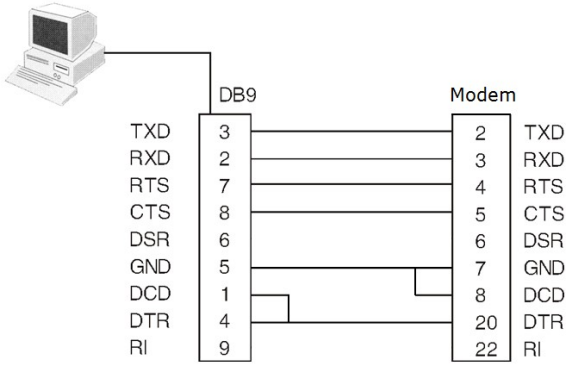
1. DE9(DB9) Connector (Female)



2. Connecting Terminal



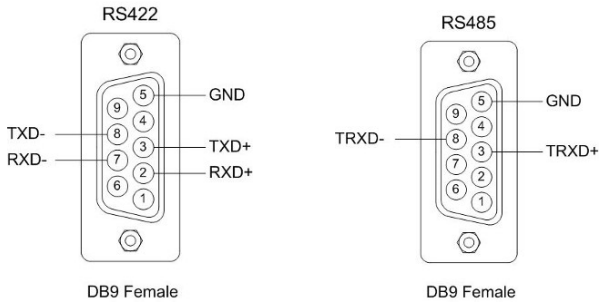
3. Connecting Model



- RS422/RS485 Combo Model

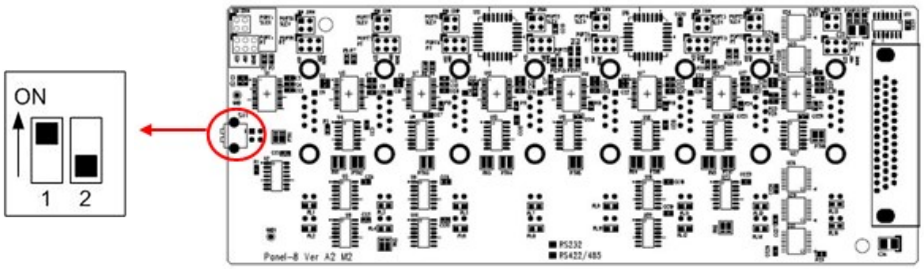
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

1. DE9(DB9) Connector (Female)



2. Panel Switch Settings

Selects RS422, RS485 line interface and mode

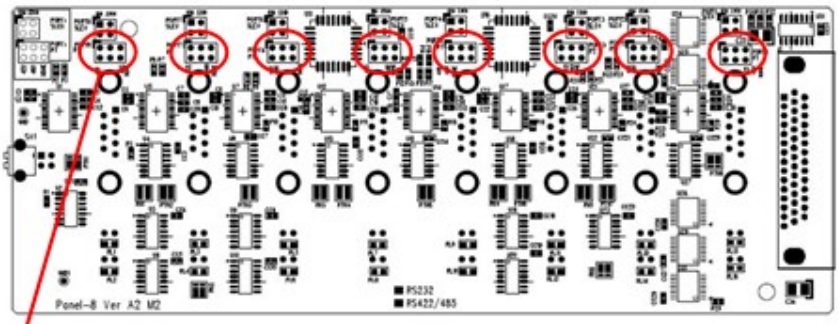


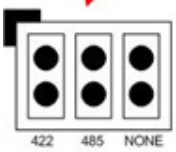
1	2	Interface	Mode
OFF	OFF	RS422	Point-to-Point
OFF	ON	RS422	Multi-Drop
ON (Default)	OFF (Default)	RS485	Non-Echo
ON	ON	RS485	Echo

3. Jumper Settings

a. Portx RT: RS422/RS485 Terminal Resistance Selection

(Port 1 is Port #1, Port2 is Port#2)



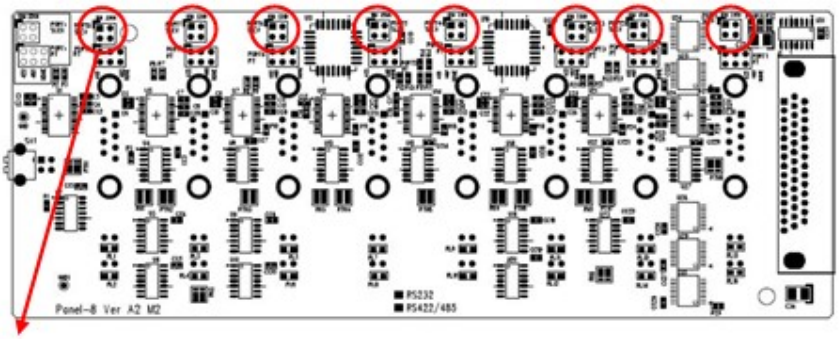


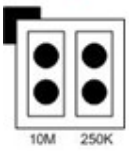
422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

None: Do not set Terminal Resistor (Default)

b. Slew: Slew Rate Limit Ability



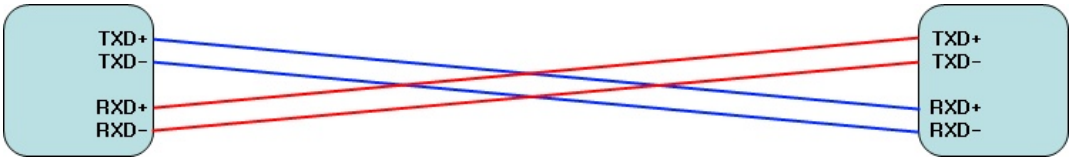


10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)

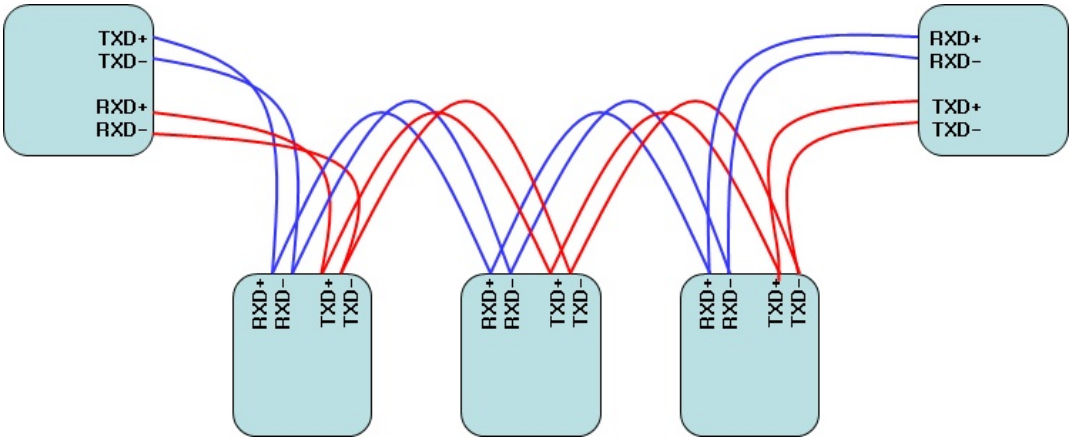
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode.

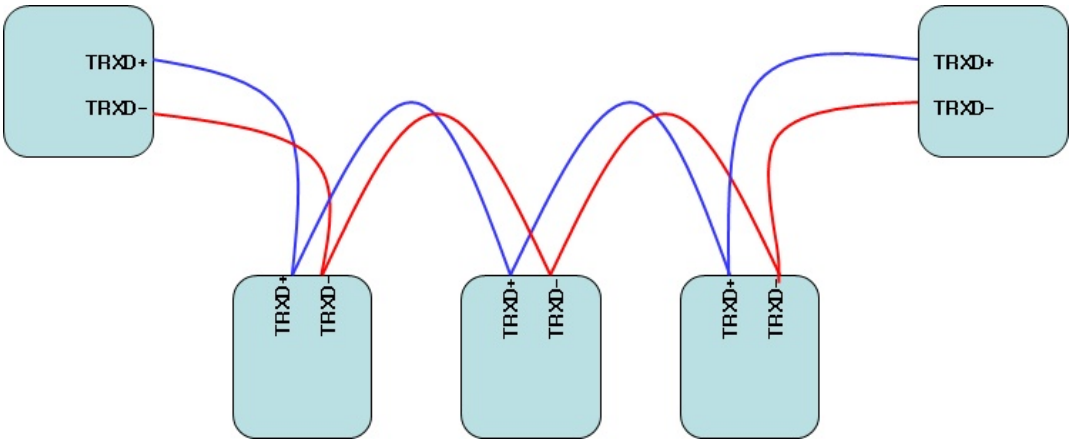
4. RS422 Point-to-Point Connection



5. RS422 Multi-Drop Connection



6. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-8C/PCI VA2

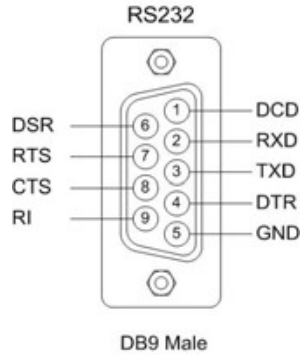
Multi-8C/PCI VA2 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-8C/PCI uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-8C/PC VA2I not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. As Multi-8C/PCI VA2 is cable-end type Serial Card, we supply DB62(M) to 8x DB9(M) Cable so that user can work simple cabling. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

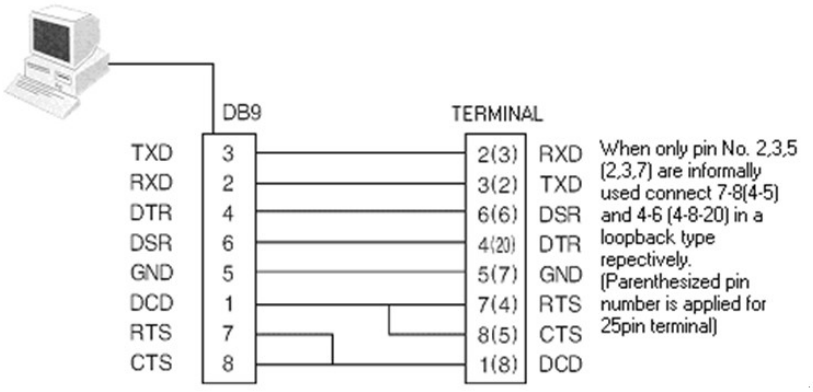
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232
Communication Controller	16C554 or 16C1054
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

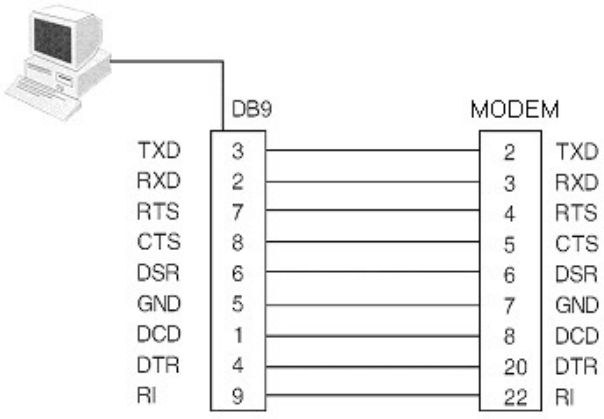
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



3. Connecting Modem



Multi-8C/PCI VA3

Multi-8C/PCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Multi-8C/PCI VA3 not only supports maximum communication speed of 921.6Kbps but also provides advanced ability to automatically control IO signals when it is used with driver provided by SystemBase. And It has 256 Byte FIFO, so that more stable.

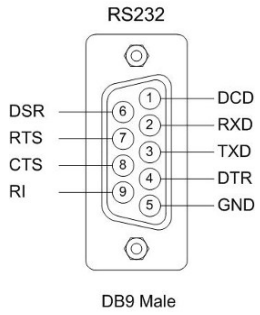
As Multi-8C/PCI VA3 is cable-end type Serial Card, we supply DB44(M) to 8 x DB9(M) Cable so that user can work simple cabling. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

- Product Specifications

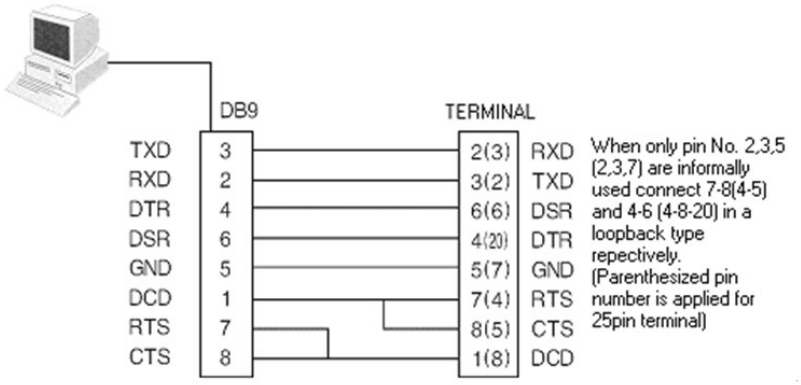
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	SB16C1058PCI
Connector	DB9 (Male)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15KV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

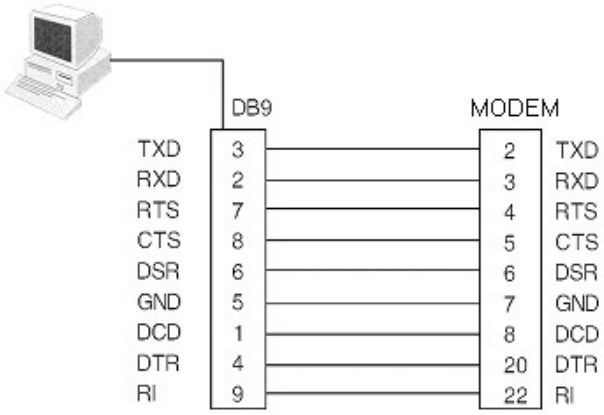
1. DE9(DB9) Connector (Male)



2. Connecting Terminal



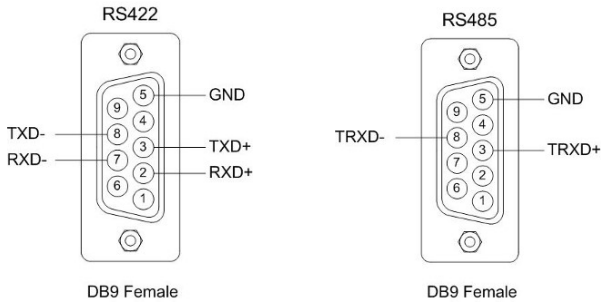
3. Connecting Modem



- RS422/485 Combo Model

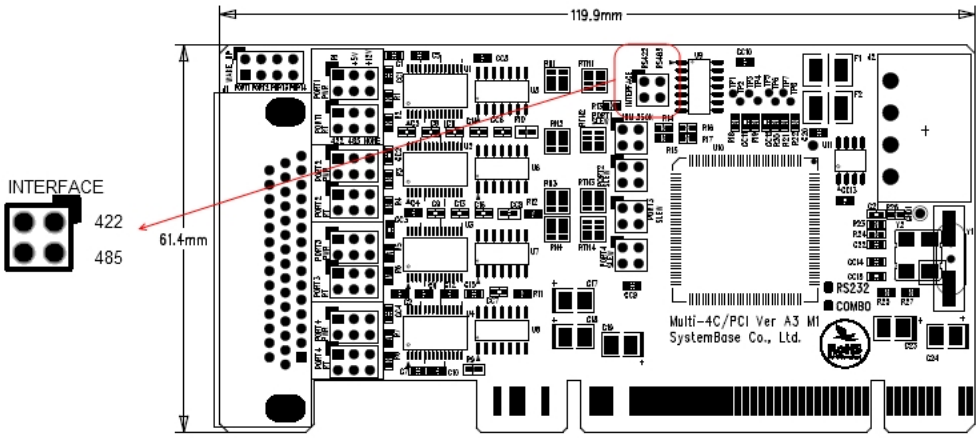
Combo refers to products that can alternatively use RS422 or RS485 using jumper settings.

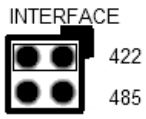
1. DE9(DB9) Connector (Female)



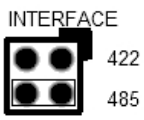
2. Interface Settings

Selects RS422, RS485 line interface and mode





422: If you want RS422, set jumper like this.

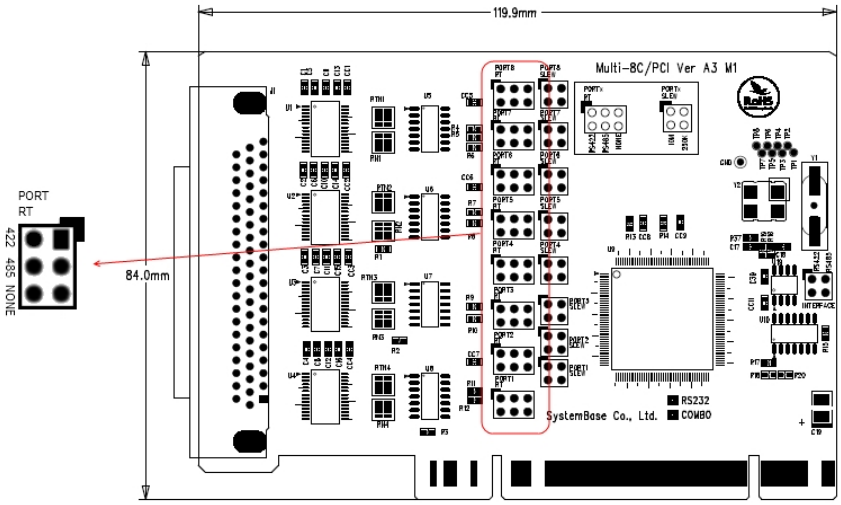


485: If you want RS485, set jumper like this (Default)

3. Jumper Settings

a. Portx RT: RS422/RS485 Terminal Resistance Selection

(Port 1 is Port #1, Port2 is Port#2)

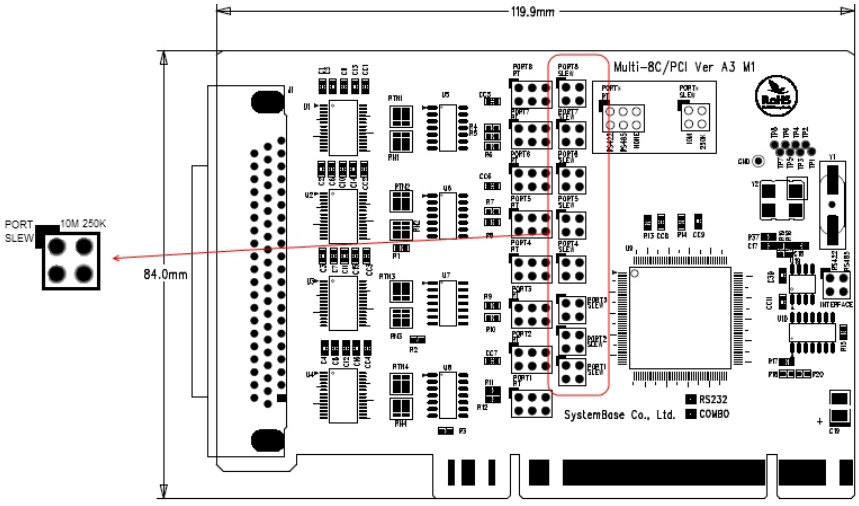


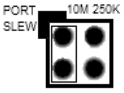
422: Set RS422 Terminal Resistor

485: Set RS485 Terminal Resistor

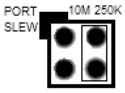
None: Do not set Terminal Resistor (Default)

b. Slew: Slew Rate Limit Ability





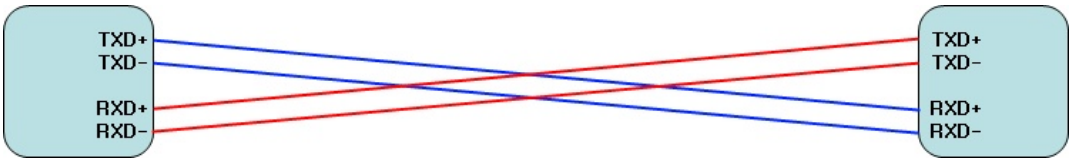
10M: Not use Slew Rate Limit ability. Maximum communication speed 921.6Kbps in this mode. (Default)



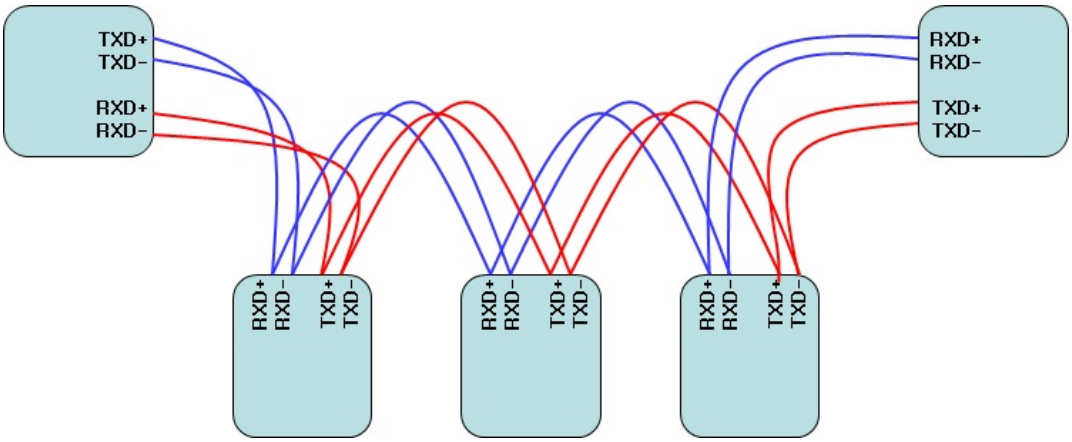
250K: Use Slew Rate Limit ability. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode

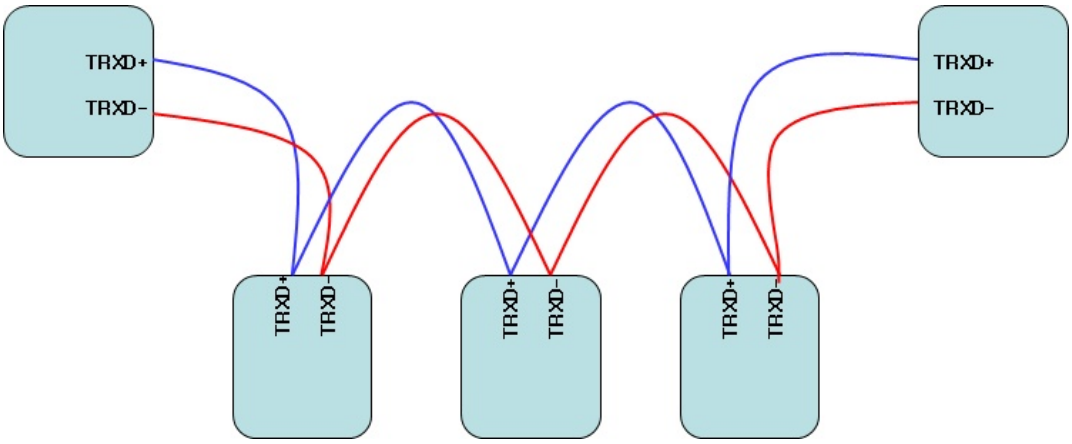
4. RS422 Point-to-Point Connection



5. RS422 Multi-Drop Connection



6. RS485 Connection



RT: 120 Ohm (Not necessary when there is not much noise)

RS485, like LAN, uses Half Duplex Bus and has no classification between host and terminal

Multi-8H/PCI VA3

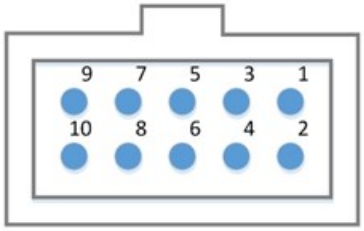
Multi-8H/PCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous 8 port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-8H/PCI VA3 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-8H/PCI VA3 board supports RS232 line interface and maximum communication speed of 230.4Kbps. Also, 2.54mm Header pin connector is provided for outside communication. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

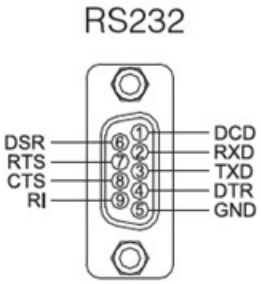
- Product Specifications

Communication Speed	Maximum 230.4K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232
Communication Controller	SB16C1058PCI
Connector	8EA 2x5 Header Pins(2.54mm pitch)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Connector

1. 10Pin Connector



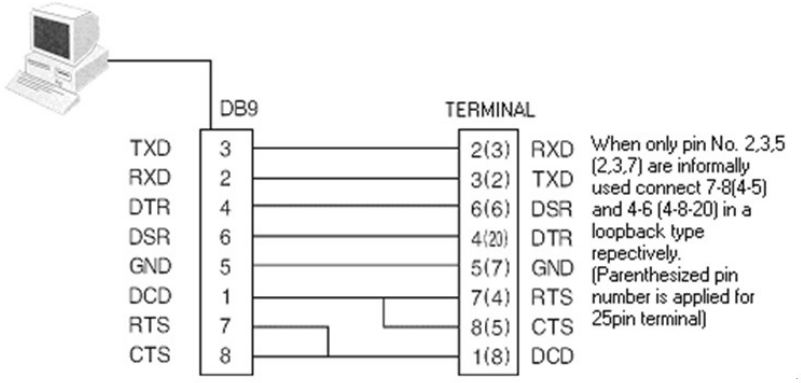


DB9 Male

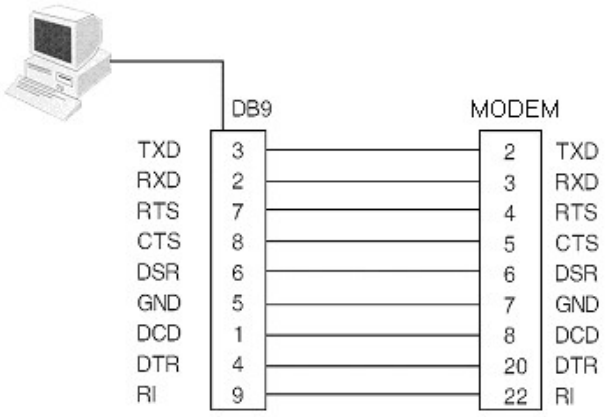
No.	Signal	No.	Signal
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI
5	GND	10	NC

When you use normal 10P to DB9 cable, the pin configuration will be as shown in the table above.

2. Connecting Terminal



3. Connecting Modem



Multi-16H/PCI VA3

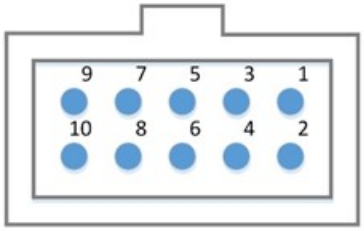
Multi-16H/PCI VA3 board is a model that supports PCI Local Bus Spec 2.3. It is an asynchronous 16 port product designed to automatically set I/O address and IRQ number when ROM bios or the operating system starts. Unlike former products, Multi-16H/PCI VA3 uses core for PCI Local Bus Spec 2.3 designed by SystemBase. Multi-16H/PCI VA3 board supports RS232 line interface and maximum communication speed of 230.4Kbps. Also, 2.54mm Header pin connector is provided for outside communication. Furthermore, it is equipped with surge protector to protect internal systems from outer shock. Unlike former products, all information about the board is contained within the board itself so the users can easily know information such as number of ports currently installed, maximum communication speed, kind of communication controller and etc.

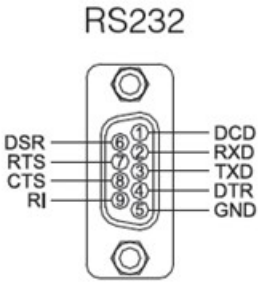
- Product Specifications

Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232
Communication Controller	PCI Controller: SB4002A Octal UART: SB16C1058
Connector	16EA 2x5 Header Pins(2.54mm pitch)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Connector

1. 10Pin Connector



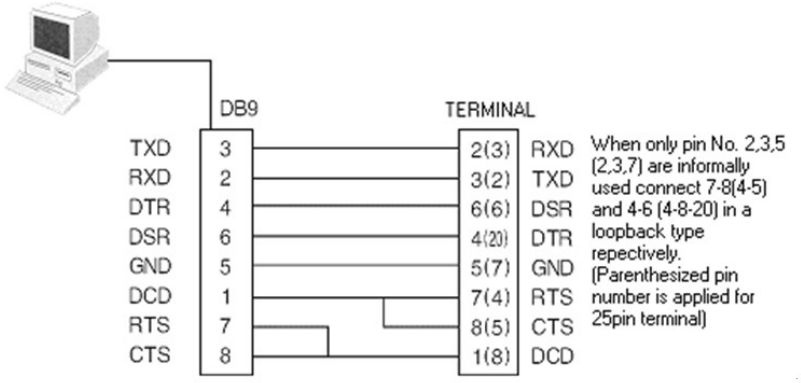


DB9 Male

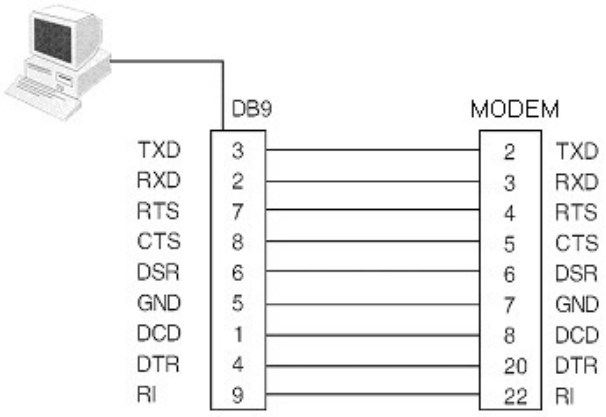
No.	Signal	No.	Signal
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI
5	GND	10	NC

When you use normal 10P to DB9 cable, the pin configuration will be as shown in the table above.

2. Connecting Terminal



3. Connecting Modem



Multi-32/LPCI VA1

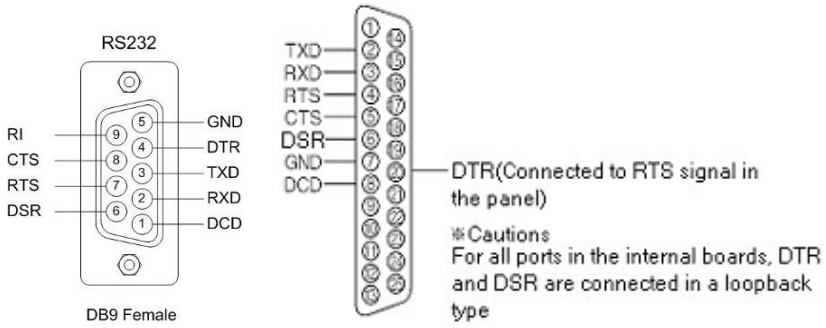
Multi-32/LPCI VA1 is a model that supports PCI Local Bus Spec 2.3, which is designed to set up I/O address and IRQ number automatically upon starting ROM BIOS and Operating System without DIP switch to board. In the Multi-32/LPCI VA1, 32 ports only occupy 64 bytes of small I/O space and there is no limitation of number to be installed as long as slots are available, which solves a problem of Multi-32/PCI VA1 as it was limited to install maximum 4 units. It doesn't have any conflicts between I/O address and Interrupt, which has been a frequent problem in products ISA. Also, the driver identifies the number of each port box and interface type automatically; thus easily installation is available. In addition, it is also designed to protect the system safely from transient-voltage by attaching the surge protector on the TX, RX line.

- Product Specifications

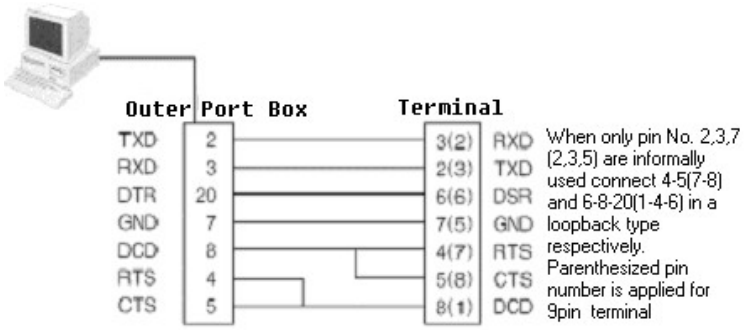
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	16C554
Connector	DB25 (Female)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 Model

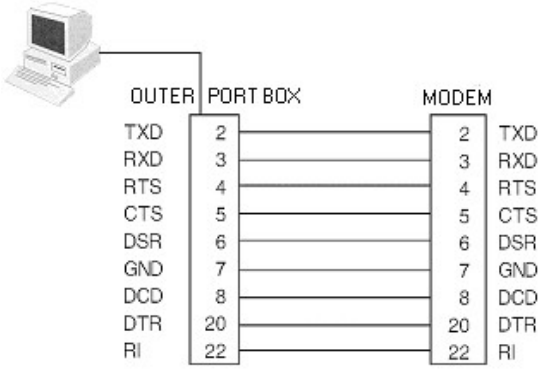
1. DE9(DB9), DE25(DB25) Connector (Female)



2. Connecting Terminal

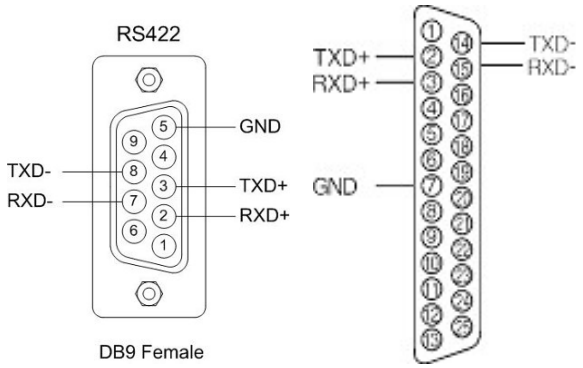


3. Connecting Modem



- RS422 Model

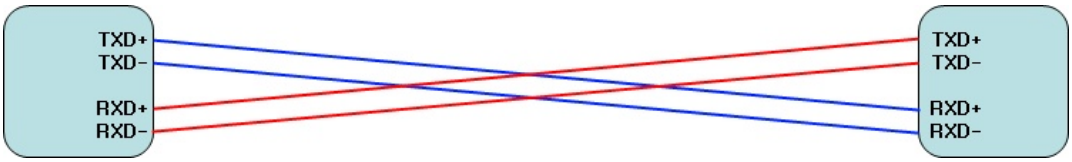
1. DE9(DB9), DE25(DB25) Connector (Female)



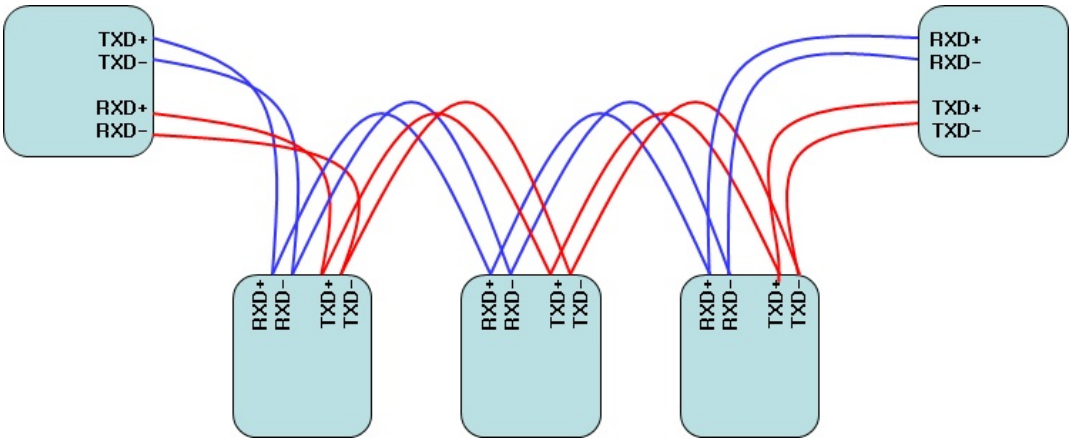
2. Mode Change

Select between point-to-point mode and multi-drop mode during the installation of the device driver. The default is point-to-point mode.

3. Connecting External point-to-point

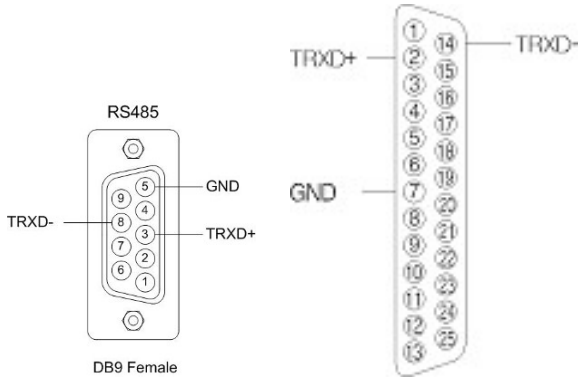


4. Connecting Multi-drop



- RS485 Model

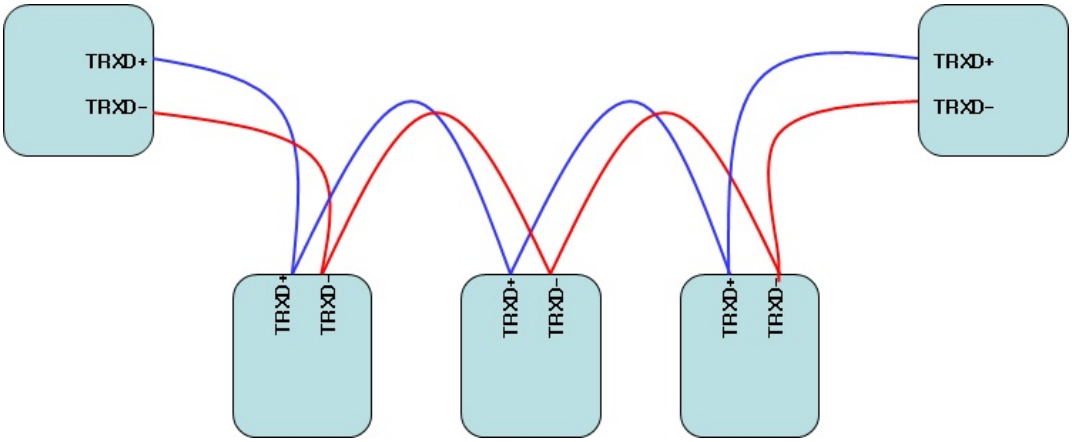
1. 9 Pin, 25 Pin Connector (Female)



2. Mode Change

Select between non-echo mode and echo mode during the installation of the device driver. The default is non-echo mode.

3. Connection



RT: 120ohm (if there is no serious noise, termination resistors are not required)

RS485, like, adopts a half duplex bus where the host is not divided from terminals.

Multi-32/LPCI VA3

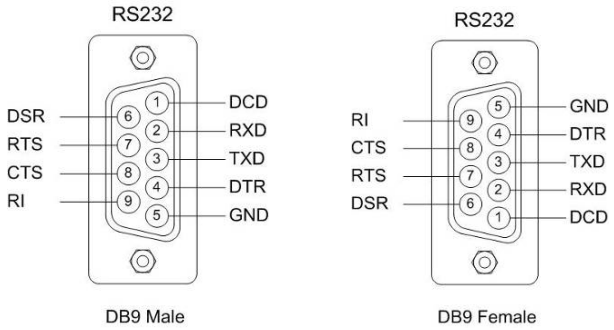
Multi-32/LPCI VA3 board is the model supports PCI Local Bus Spec 2.3. It has 32 Ports that can set I/O address and IRQ number automatically. In addition, unlike existing products, VA3 applies PCI Local Bus Spec 2.3 Core which was developed by SystemBase. Multi-32/LPCI VA3 board is used with Panel-8e VA2 or Panel-8e VA3. It not only supports maximum speed of 921.6Kbps but also offers enhanced management of automatic I/O. Also it protects system from any outside damage by implementing Surge Protector on signal line. Furthermore VA3 add DB9 Male type, power port in Panel-8e VA2 or VA3 panel thereby enabling variety use than before. Unlike other products, every information of the board is in board itself. So after implementing driver, automatically user can know implemented port, communicate controller, sort of circuit interface and maximum communication speed in now.

- Product Specifications

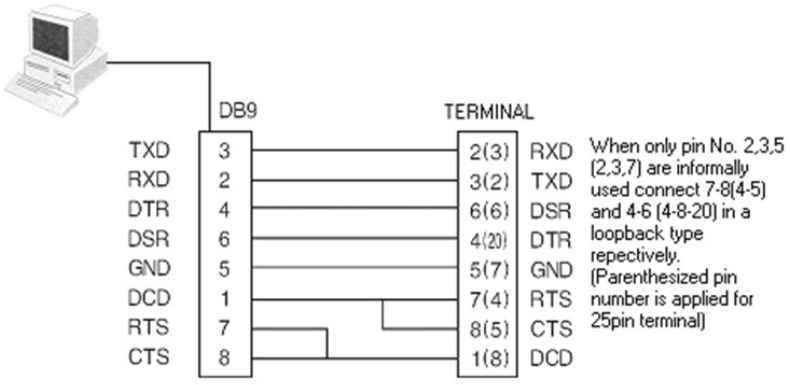
Communication Speed	Maximum 921.6K BPS
BUS Interface	PCI Local Bus Spec 2.3
Circuit Interface	RS232/RS422/RS485
Communication Controller	PCI Controller: SB4002A SystemBase's Octal UART Controller: SB16C1058
Connector	DB9 (Male, Female)
I/O Address	Automatic Configuration
IRQ Number	Automatic Configuration
Circuit Protection	15kV Surge Protector Attached
Supported OS	Windows 7 or above, Windows Server 2008 or above Linux
Manufacturer	SystemBase Co., Ltd.

- RS232 model

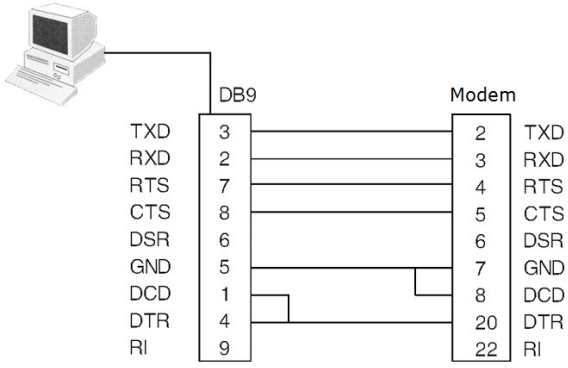
1. DE9(DB9) Connector



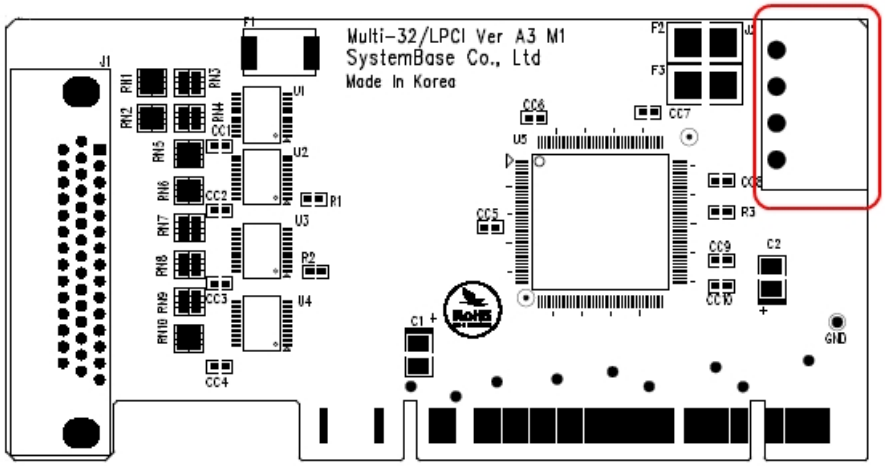
2. Connecting Terminal



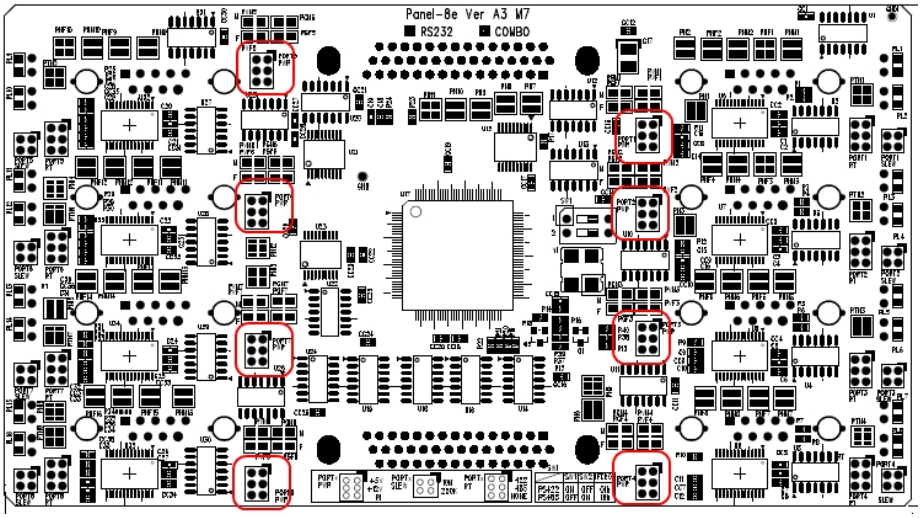
3. Connecting Modem

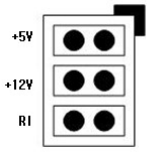


4. External Power Supply



In case you want to supply +5V power, you should use PC's power supply.





+5V: supply 5V voltage to peripheral.

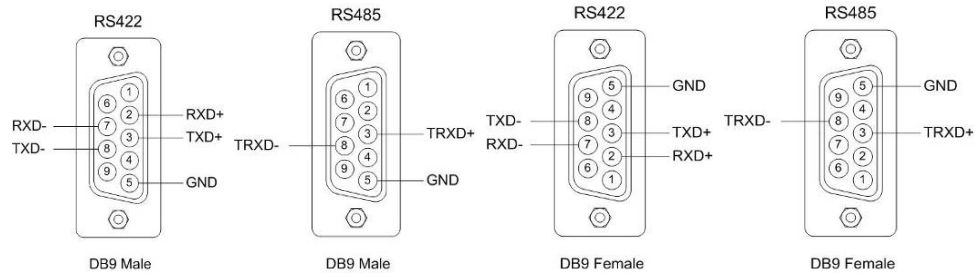
+12V: supply 12V voltage to peripheral.

RI: Enables RI communication when using RS232. (Default)

- RS422/RS485 Combo model

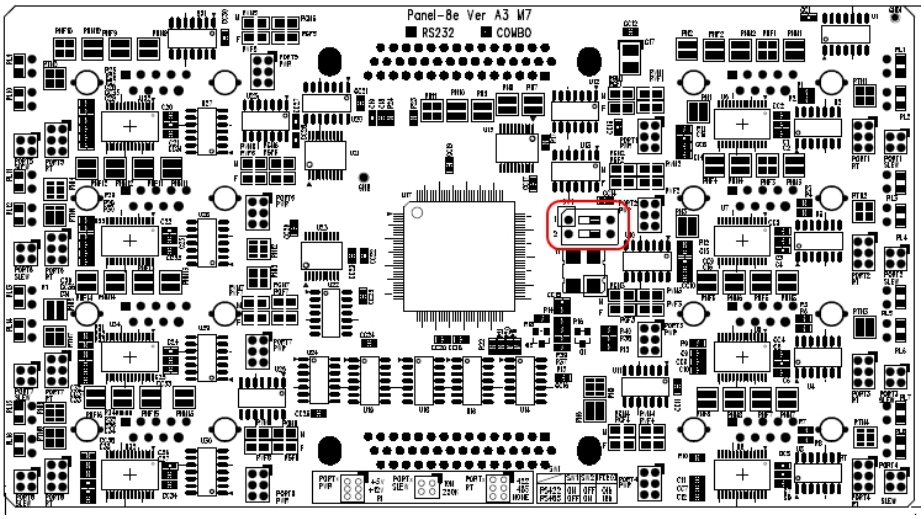
What is combo in this case?: The products that can be selected in RS422, 485 by jumper setting

1. DE9(DB9) connector pin specification



2. Panel switch setting

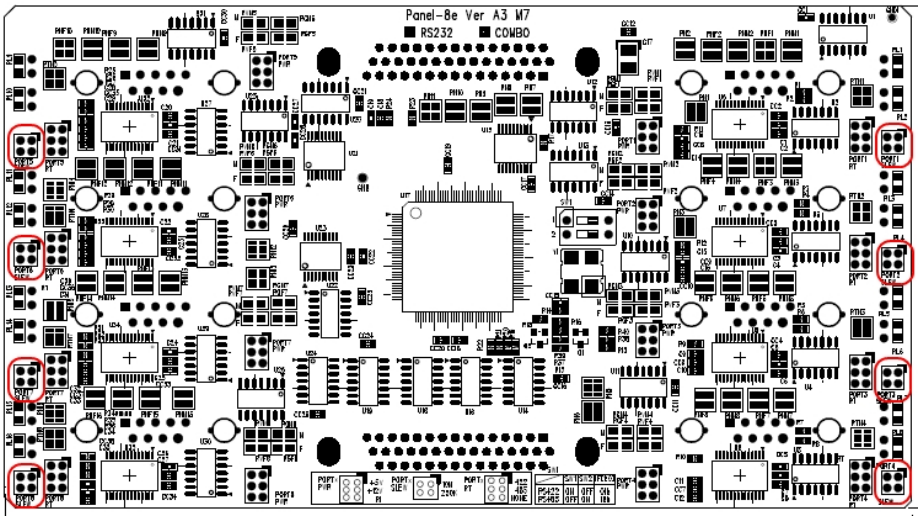
a. RS422, RS485 circuit interface selecting jumper

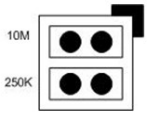


422: RS422 Interface Mode

485: RS485 Interface Mode (Default)

b. PORTx RT: RS422, RS485 terminal resister selection jumper



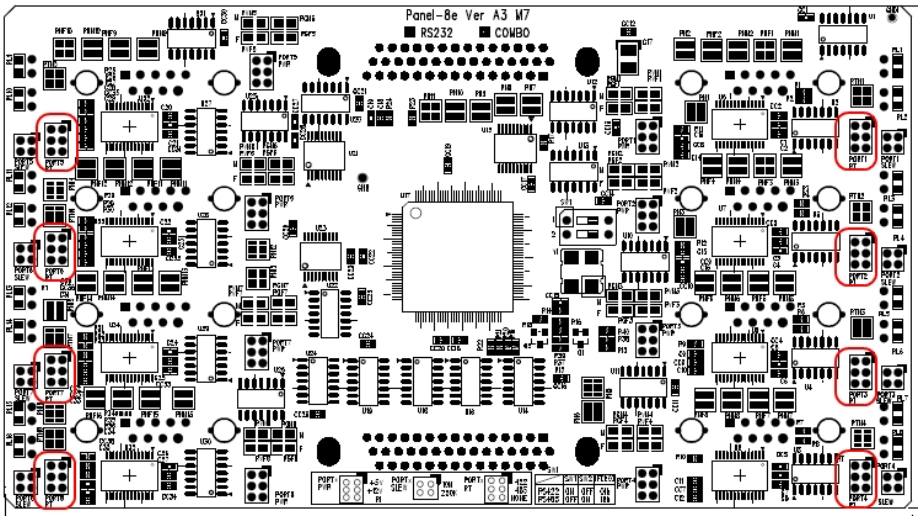


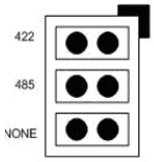
10M: Not use Slew Rate Limit function. Maximum communication speed 921.6Kbps in this mode. (Default)

250K: Use Slew Rate Limit function. Communication speed is limited under 250Kbps.

Slew Rate Limit reduces reflected waves emitting from ends of communication cables and speeds up slew-rate driver that restrains EMP electromagnetic waves thereby enabling communication with no data errors. But communication speed is limited in this mode.

c. PORTx RT: RS422, RS485 terminal resister selecting jumper





422: Install RS422 terminal resister.

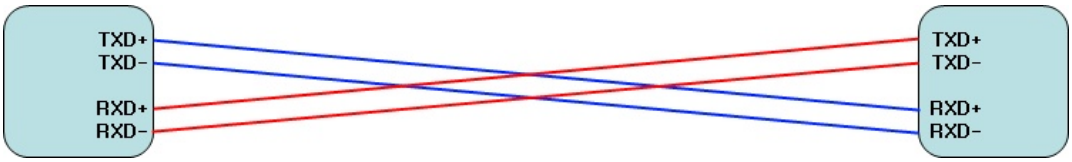
485: Install RS485 terminal resister.

NONE: Not install terminal resister. (Default)

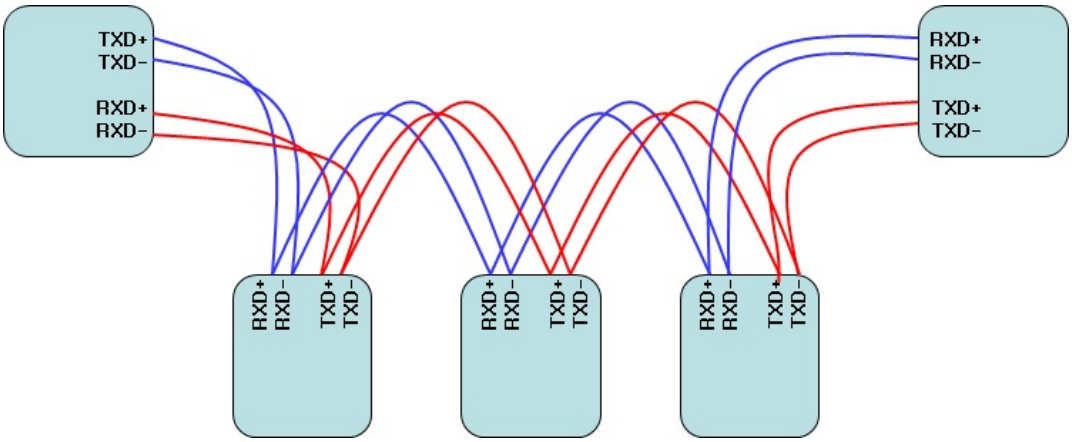
※ What is terminal resister?

Transmission interface has several design impedance standards. So when that comes up to this specific resister, we need terminal resister in order to avoid reflection phenomenon.

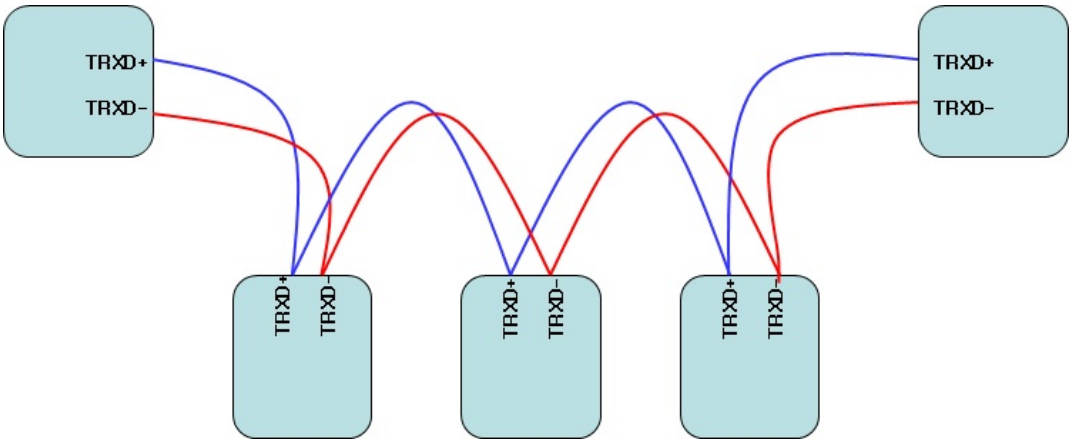
3. RS422 Point-to-point Connection



4. RS422 Multi-drop Connection



5. RS485 Connection



RT: 120 ohm(If there is no serious noise, termination resistors are not required)

RS485, like LAN, adopts a half duplex bus where the host is not divided from terminals.

Panel Compatibility Table

Board \ Panel		Panel-4		
		VA1	VA2	VA3
Multi-4	LPCI VA1	O	X	-
	LPCI VA2	X	O	-
	LPIC VA3	X	O	-

Board \ Panel		Panel-8		
		VA1	VA2	VA3
Multi-8	LPCI VA1	O	X	-
	LPCI VA2	X	O	-
	LPCI VA3	X	O	-

Board \ Panel		Panel-8E		
		VA1	VA2	VA3
Multi-32	LPCI VA1	O	X	X
	LPCI VA2	X	O	O
	LPCI VA3	X	O	O

Power Consumption

Type	Product Name	Power Consumption (W)	Voltage (V)	Current (A)
VA3 PCI Serial Card	Multi-1/LPCI RS232	1.6401	3.3	0.497
	Multi-1/LPCI COMBO	1.6071	3.3	0.487
	Multi-2/PCI RS232	1.8381	3.3	0.557
	Multi-2/PCI COMBO	1.7721	3.3	0.537
	Multi-4/LPCI RS232	4.5012	3.3	1.364
	Multi-4/LPCI COMBO	4.3692	3.3	1.324
	Multi-8/LPCI RS232	5.8971	3.3	1.787
	Multi-8/LPCI COMBO	5.6331	3.3	1.707
	Multi-32/LPCI RS232	25.9479	3.3	7.863
	Multi-32/LPCI COMBO	24.9579	3.3	7.563

In PCISig, It can supply a power supply maximum 25W per one slot.

So, If you use a Multi-32/LPCI, I recommend you to use external power supply in order to manage more stably.

If you have any inconvenience while using the product, please contact us.

Email

- Purchase/Quotation: overseas@sysbas.com
- Technical Support/RMA: tech@sysbas.com

www.sysbas.com

Tel: +82-2-855-0501

Fax: +82-2-855-0580

Copyright ⓒ 2020 SystemBase Co., Ltd. All Right Reserved.