Multii-Port
for Allen Bradley

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MULTII-PORT CONNECTOR PIN OUT AND JUMPER OPTIONS FOR ALLEN BRADLEY APPLICATIONS

Terminal Strip	9-pin D	RS232	RS422	RS485
1	1	DCD (in)	TX+	TRD+
2	6	DSR (in)	RX+	TRD+
3	2	RXD (in)	TX-	TRD-
4	7	RTS (out)	RX-	TRD-
5	3	TXD (out)	TX+	TRD+
6	8	CTS (in)	RX+	TRD+
7	4	DTR (out)	TX-	TRD-
8	9	RI (in)	RX-	TRD-
9	5	GND	GND	GND

NOTE: The Multii-Port power supply circuit board is used in both the MARC Omnii-Comm and Multii-Port products. **When used in the Multii-Port applications, the connector and jumper identification marks on the board silkscreen are reversed for the Multii-Port operation.**

Silkscreen ID	Multii-Port ID
P1	P4
P2	P3
P3	P2
P4	P1

P1, P2, P3 and P4 can be configured for RS232/RS422 or RS485 operation. The selection is determined by a 9-position jumper located near each connector.
RS232 operation is selected by a connecting the 9-position jumper for the selected port between the center position and the pins on the left side.
RS422/RS485 operation is selected by connecting the 9-position jumper for the selected port between the center position and the pins on the right side.
If operating in RS422/RS485 mode, install a jumper between pins 10 and 13 of the appropriate 9-position jumper.
If operating in RS422/RS485 mode, additional options are configured by adding or removing jumpers located along the upper edge of the module. There are 4 6-position jumpers, one for each port. If the port is configured for RS232 operation the jumpers are not used.

RS422 Jumper Options	
1-2	TX Termination (120 ohms)
9-10	TX+ Pull UP
3-4	TX- Pull DOWN
7-8	RX Termination (120 ohms)
11-12	RX+ Pull UP
5-6	RX- Pull DOWN

RS485 Jumper Options	
3-5, 7-9	RS485 Enable (connects TX+ to RX+ and TX- to RX-)
1-2	Termination Enable (120 ohms)
11-12	TRD+ Pull UP
6-8	TRD- Pull DOWN

Jumpers J8, J7 and J6 are 3-position jumpers located near the upper right side of the board. J8 is on the left, J7 is in the center and J6 is on the right. *Jumpers J6 and J7 are for factory use only*. Jumper J8 is used to select the mode of operation of the reset switch. If J8 is installed 1-2 pressing the reset switch stops the Omnii-Comm operation and forces the P5 connector to be a Configuration port. If J8 is installed 2-3 then pressing the reset switch forces a hard reset and the Omnii-Comm will restart its program just as if power had been cycled.
NOTE: Connector P5 located on the bottom of the DIN Omnii MultiiPort is the debug configuration port. Connector P1 located on the bottom of the DIN Omnii MultiiPort is the "Common" Connector. Connect P1 to the Allen-Bradley PLC port that is to be shared. This connector is RS232 only. Connect P2, P3, and P4 to the other Allen-Bradley devices that will communicate with the common device. **All ports must be DF-1 Full Duplex. The DF-1 device connected to the common port (P1) cannot originate a message.**

Changing Serial Port Parameters

The serial port communication parameters can be changed to meet system requirements. To make changes:

- Connect a PC serial port to connector P5.
- Use a "Null Modem" cable (2 and 3 swapped) to connect to the PC.
- Start up a terminal program on the PC. This could be Putty, Procomm or any Telnet program.
- Set the communication parameters to 9600,8,N,1.
- Power up the MultiiPort Module.
- Wait until the green "active" LED starts to blink at a steady rate.
- Press the black reset button located near connector P5
- You should get a help screen detailing how to make the changes. The screen should look like this:

```
MultiPort>?

? is Show this help screen

MARC DIN Omnii MultiPort -- Available Commands:

? Show this help screen              A  Show status All connectors
C    Select connector                B  Change baud rate
P    Change parity                   S  Change stop bits
H    Change handshake lines          T  Set Time Out (hex)
M    Set Timer Multiplier
R    Restart MultiPort operation when changes finished
```

*******Select Connector before making changes*******

A will show status of All connectors

```
MultiPort>A

Connector 1:   9600 baud 8N1 Common Port
Connector 2:   9600 baud 8N1 passthru to: 1
Connector 3:   9600 baud 8N1 passthru to: 1
Connector 4:   9600 baud 8N1 passthru to: 1
Connector 5:   9600 baud 8N1 Configuration Port
```

C Selects connector 1-4 select which port you want to change

```
MultiPort>C

Select Connector 1,2,3,4: 1
```

1 will select the common port

```
Connector 1:   9600 baud 8N1 Common Port
```

B will change the baud rate for port selected

```
MultiPort>B

 Select Baud Rate:
1=300,2=600,4=1200,6=2400,7=4800,8=9600,9=19.2K: 9
```

9 will change the port to 19.2 baud

```
Connector 1:   19.2K baud 8N1 Common Port
```

A will show the status of all ports

```
MultiPort>A

Connector 1:   19.2K baud 8N1 Common Port
Connector 2:    9600 baud 8N1 passthru to: 1
Connector 3:    9600 baud 8N1 passthru to: 1
Connector 4:    9600 baud 8N1 passthru to: 1
Connector 5:    9600 baud 8N1 Configuration Port
```

MULTII-PORT JUMPER LOCATIONS