



MICRO CHANNEL MULTI-SERIAL ADAPTER™ PART # 3301-3305 USERS MANUAL

Sections:

1. Installation
2. Option Selection
3. Connector Pin-Outs
4. Technical Description
5. Specifications
6. Warranty

Sealevel Systems Incorporated
PO Box 830
155 Technology Place
Liberty, SC 29657 USA
(864) 843-4343 (864) 843-3067 FAX
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SECTION 1.

Installation

The Multi-Serial Adapter must be installed in one of the expansion slots of a Micro Channel Architecture (MCA) computer. Remove the cover from the computer and insert the board in one of the empty expansion slots. Tighten the retaining screw located on the back of the computer. Replace the cover on the case and you are done.

SECTION 2.

Option Selections

The Sealevel Systems Multi-Serial Adapter must be configured by running the adapter setup program. The Multi-Serial Adapter uses ID 61D6, so @61D6.adf must be copied to your reference disk. Address options are selected by changing the POS (**P**rogrammable **O**ption **S**elect) register. The software provided with the board will make all necessary modifications to the POS register. Please refer to the *Micro Channel Technical Reference* for more details on the initialization sequence and POS register programming. The options available through programming are listed below.

Port Addressing Options:	
COM2	2F8 Hex - 2FF Hex
COM3	3220 Hex - 3227 Hex
COM4	3228 Hex - 322F Hex
COM5	4220 Hex - 4227 Hex

If you are configuring the RS-232, Current Loop, or MIDI Adapters, the only option to select is the board IO address. If you are configuring the RS-422/485 version there are several more options to choose from.

RS-422/485 Driver Configuration	
RS-422	Driver always enabled
RS-485 Echo	Driver enabled by RTS, transmitted data is echoed to the receiver.
RS-485 No Echo	Driver enabled by RTS, transmitted data is not echoed to the receiver.

*Jumper Options
(3302 and 3303 only)*

The only jumper located on the board is jumper E1. If the jumper is on, the 100 ohm termination resistor needed for RS-422/485 is included in the circuit. If the jumper is off, the resistor is excluded. Normally, both ends of a RS-422/485 line must be terminated. If multiple Multi-Serial Adapter boards are configured in a network, only the boards at each end should have the jumper installed.

SECTION 3.

Connector Pin-Outs

MSA-232 (P/N3301) RS-232 Interface			
	Signal Name	Pin Number	Type
TD	Transmit Data	2	Output
DTR	Data Terminal Ready	20	Output
RTS	Request To Send	4	Output
CTS	Clear To Send	5	Input
DSR	Data Set Ready	6	Input
RD	Receive Data	3	Input
DCD	Data Carrier Detect	8	Input
RI	Ring Indicator	22	Input
GND	Ground	7	

MSA-422/485 RS-422/485 (P/N 3302) MSA-ISO 422/485 Isolated RS-422/485 (P/N 3303)			
	Signal Name	Pin Number	Type
TD+	Transmit Data (+)	24	Output
TD-	Transmit Data (-)	25	Output
RD+	Receive Data (+)	12	Input
RD-	Receive Data(-)	13	Input
GND	Ground	7	

MSA-CL 20mA Current Loop (P/N 3304)			
	Signal Name	Pin Number	Type
TD+	Transmit Data (+)	14	Output
TD-	Transmit Data (-)	16	Output
RD+	Receive Data (+)	15	Input
RD-	Receive Data (-)	17	Input
CS1	+12V 20mA Current Source 1	19	Current Source
CS2	+12V 20mA Current Source 2	18	Current Source
GND	Ground	7	

MSA-MIDI (P/N 3305)			
	Signal Name	Pin Number	Type
MO+	MIDI Out (+)	13	Output
MO-	MIDI Out (-)	25	Output
MI+	MIDI In (+)	24	Input
MI-	MIDI In (-)	12	Input
MT+	MIDI Thru (+)	11	Output
MT-	MIDI Thru (-)	21	Output
GND	Ground	7	

SECTION 4.

Technical Description

The Sealevel Systems Multi-Serial Adapter (P/N's 3301, 3302, 3303, 3304, and 3305) is a single channel asynchronous serial adapter for your Micro Channel Architecture computer. The Multi-Serial Adapter can be configured as COM2:, COM3:, COM4:, or COM5:, providing a low cost means for expanding the number of serial ports on your MCA computer. The IBM corporation registration number for the Multi-Serial Adapter is 61D6. The Multi-Serial Adapter utilizes the 16550 UART. This chip features programmable baud rate, data format, interrupt control and a 16 Byte input and output FIFO.

SECTION 5.

Warranty

Sealevel Systems, Inc. provides a lifetime warranty for this product. Should this product fail to be in good working order at any time during this period, Sealevel Systems will, at it's option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Sealevel Systems assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Sealevel Systems will not be liable for any claim made by any other related party.

Return authorization must be obtained from Sealevel Systems before returned merchandise will be accepted. Authorization can be obtained by calling Sealevel Systems and requesting a Return Merchandise Authorization (RMA) Number.

Sealevel Systems Incorporated
102 West Main Street
P.O. Box 830
Liberty SC, 29657 USA
(803) 843-4343 Phone
(803) 843-3067 fax
E-mail: CompuServe at 72662,267
Internet: 72662.267@compuserve.com

Technical Support is available from 8 a.m. to 5 p.m. Eastern time.
Monday - Friday

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