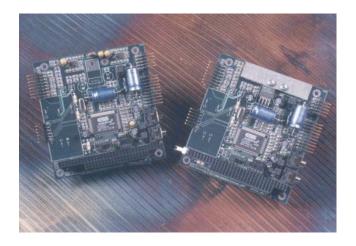


# **CRYSTAL-MM**

# Full-Duplex SoundBlaster Pro Compatible Stereo Audio PC/104 Module



- SoundBlaster Pro and Windows Sound System compatibility
- Full-duplex capability for simultaneous record/playback
- Plug and Play configuration
- 5W per channel max output power
- 16-bit stereo audio
- 4KHz to 44.1 KHz sample rates

### DESCRIPTION

The Crystal-MM-HP audio module offers full duplex performance, plug and play capability, and multiple output power options. It is fully compatible with the SoundBlaster Pro<sup>™</sup> and Windows Sound System<sup>™</sup> standards.

Full-duplex capability enables the board to perform simultaneous recording and playback on separate channels. Sample rates of up to 44.1KHz are supported for both record and playback. An extensive selection of audio inputs and outputs on multiple I/O connectors make Crystal-MM-HP easily adaptable to any application's configuration. Both pin headers and stereo mini-jacks are provided to enable easy connections to custom wiring as well as industry-standard connectors.

Crystal-MM-HP includes a 6-channel mixer with stereo inputs for line, CD, auxiliary, and MIDI, and mono input for microphone. Outputs include speaker, line, and MIDI. An optional mono I/O channel can be provided with a semi-custom configuration.

# SPECIFICATIONS

Mono microphone input 100KΩ max	10mV to 125mΩ p-p 30KΩ min.	
Stereo CD input	0V to 4V p-p 30KΩ min, 100KΩ max	
Stereo line input	0V to 4V p-p 30KΩ min, 100KΩ max	
Stereo line output	0V to 3.5V p-p 30KΩ typical	
PC speaker input	TTL input from CPU	
Stereo speaker output	0.5W per channel into $8\Omega$	
Power supply	5VDC ±5%	
Dimensions	3.550" x 3.775"	
PC/104 Bus	16-bit configuration	
Operating temp.	-20 to +70°C operating	



Plug and play configuration provides 4 DMA and 6 interrupt selections for increased flexibility and ease of installation. Additional features include a PCcompatible dual game port and connections for hardware volume and mute controls, so that volume can be controlled both in software and through front-panel controls. Software drivers for Windows 3.1, Windows 95, and Windows NT are included.

#### I/O Connections

Crystal-MM-HP includes multiple I/O connectors to handle the wide range of audio signals. Many signals are present on more than one header for increased flexibility in I/O connections. The two stereo mini-jacks are configurable with jumpers for input and output source. The speaker outputs are available on a mini-jack, a dedicated pin header with external volume control input, and a combination I/O main header. Only one speaker connection should be used at a time.

## **ORDERING INFORMATION**

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Part No.	Description	
CMM-HP-5	5V in, 0.5Wx2 output	

#### FOR MORE INFORMATION

Diamond Systems Corporation 1255 Terra Bella Avenue Mountain View, CA 94043 Tel: 650-810-2500 Fax: 650-810-2525 techinfo@diamondsystems.com