

## PURPOSE



## MVRD4000

**Realtime MPEG-1/MPEG-2/MPEG-4 Encoding and Decoding**

MVRD4000 is a hardware-based, high-quality MPEG-1, MPEG-2 and MPEG-4 encoding/decoding solution. Featuring software for capture and playback, MVRD4000 also includes a software development kit for programmers to create custom applications that utilize the hardware for MPEG encoding and decoding tasks.

**MVRD4000: Key Features**

With realtime MPEG-4 encoding capabilities, MVRD4000 can produce high-quality video streams with reduced file sizes, making them ideal for delivery over networks, e-mail attachments and for optimum storage on hard disk drives and optical media. MVRD4000 also supports Main Profile at Main Level (MP@ML) MPEG-2 encoding. When using MP@ML, the MVRD4000 delivers the high-quality video and audio MPEG-2 output required by today's video professionals for DVD authoring. In addition, MVRD4000's variable bitrate capability is one of the most effective techniques used to maintain video quality while reducing file size. With composite and S-Video inputs, MVRD4000 is scalable up to full-D1 resolution with NTSC and PAL format support.

The capture and playback application MPEGPit is included with MVRD4000. MPEGPit is provided to monitor basic operation of the MVRD4000 board and to create MPEG files, such as content files, for Grass Valley MediaEdge. MVRD4000 also features an SDK for developers to create custom applications that use MVRD4000 to encode and decode MPEG video.

**MPEGPit**

The realtime analog-to-MPEG capture capability of MVRD4000 also makes it an ideal companion to Grass Valley MediaEdge, a LAN-based client / server video distribution system. When combined with MediaEdge, MVRD4000 provides realtime MPEG encoding and live stream network broadcast of high-quality MPEG-4 video.

**MVRD4000: Specifications**

\*Specifications are subject to change without notice

**Package Contents:**

- MVRD4000 PCI bus card
- Installation CD-ROM
- User manual
- PCI mounting bracket (low profile)
- 2 x 7-pin miniDIN S-Video to composite video conversion cable
- 2 x 3.5mm to RCA stereo cable

**Technical Specifications:****Video Format**

- NTSC: 720x480 @ 29.97fps
- PAL: 720x576 @ 25fps
- CCIR 601 to square pixel conversion

**Audio Format**

- 2-channel 48kHz 16-bit
- 2-channel 44.1kHz 16-bit
- 2-channel 32kHz 16-bit

**Analog Video Input/Output**

- 1 x S-Video (7-pin miniDIN) input
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**Works with MediaEdge**

- **MediaEdge Video Distribution Systems**

MediaEdge systems sold separately.

- 1 x 3.5mm stereo input
- 1 x 3.5mm stereo output

**MPEG Encoding/Decoding Video Compression**

- ISO/IEC 14496-2 (MPEG-4)
- ISO/IEC 13818-2 (MPEG-2)
- ISO/IEC 11172-2 (MPEG-1)

**Profiles and Level**

- Simple Profile@L1 - L3 (MPEG-4)
- MP@ML (MPEG-2 )

**Video Resolutions**

- 720x480, 704x480 (Full-D1)
- 720x576, 704x576 (Full-D1)
- 640x480, 640x576 (VGA)
- 480x480, 480x576 (2/3-D1)
- 352x480, 352x576 (Half-D1)
- 352x240, 352x288 (SIF)

**Video Bitrate**

- MPEG-4 Full-D1, VGA 2-15Mbps
- MPEG-4 Half-D1, 2/3-D1 1.5-8Mbps
- MPEG-4 SIF 512kbps-4Mbps
- MPEG-2 Full-D1, VGA 3-15MbpsMPEG-2 Half-D1, 2/3-D1 2-8Mbps
- MPEG-2 SIF 1-4Mbps
- MPEG-1 SIF 1-1.8Mbps

**GOP**

- IBBP (selectable M=from 1 to 3, N=from 1 to 30)
- MPEG-1 GOP pattern interval of 3
- MPEG-4 GOP pattern interval of 1

**Audio Compression**

- ISO/IEC 11172-3 Layer 2

**Audio Bitrate**

- 256, 320, 384Kbps

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**Minimum System Requirements:**

- Intel® Pentium® II 400MHz CPU or faster (2.0GHz CPU or faster required for higher bitrate encoding/decoding)
- 128MB RAM or more
- Graphics card capable of 1024x768 resolution, 65536 colors or higher
- One free bus-mastering PCI slot (v2.1 or later)
- Windows® 2000 Professional (Service Pack 4 or later), Windows 2000 Server (Service Pack 4 or later), Windows XP Professional (Service Pack 1 or later) or Windows Server™ 2003
- Visual C++ 6.0 or higher for the SDK environment

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**Service and Support**

- Limited warranty
  - Access to the Canopus Registered Users Web site at [www.canopus.com](http://www.canopus.com) when you register your product in an active [Canopus User Account](#)
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