Infinity

DMR 1000 DIGITAL MEDIA RECORDER

Designed to provide freedom of choice in compression, format support, and recording media, the Infinity Series DMR is a perfect complement to your EFP and ENG workflows.

With one of the best-known design teams in the world and multiple technical Emmy® awards, Thomson Grass Valley™ products continue to break ground for innovation and creative ideas.

Our Infinity™ Series Digital Media Recorder (DMR) is a revolutionary step in EFP and ENG acquisition—combining the best of our Emmy award-winning camera engineering with leading IT recording and connectivity technologies. The result is a multi-format solution designed from the ground up to deliver all the benefits of advanced acquisition and recording in an affordable, open, and truly flexible system.

Designed to provide freedom of choice in compression, format support, and recording media, the Infinity Series DMR is a perfect complement to your EFP and ENG workflows. It features multi-format support; on-board selectable compression; high-quality audio capabilities; support for IT-based recording media, including REV PRO™ and CompactFlash removable media; and IT-based connectivity.

Enhancing Your Workflows

The Infinity DMR enhances and even redefines EFP and ENG workflows by fully embracing IT-based technologies, connectivity, and convenience. You can, for example, use media from the recorder in a fashion similar to that of videotape in tape-based workflows.

The Infinity DMR is perfect for situations where portable, compact, and DC power use is required. This includes use in restricted areas to record POV cameras on reality programs or in a moving vehicle, with the ability to record on solid-state CompactFlash.

However, Infinity Series products offer more than just videotape replacements. In nonlinear editing environments, for instance, you can connect a REV PRO drive or CompactFlash card reader to a workstation for direct access to the recorded media.

For greater accessibility, you can copy the files on the media to a file server for immediate, enterprise-wide use. With metadata assigned at the capture phase, or any time in the process, you can edit, sort, and find files with greater ease no matter where they are stored. We also offer the LCP 400 wireless control panel software that enables you to control the DMR and manipulate metadata via a wireless connection.

Multi-Format Support

The Infinity Series DMR provides a choice of SD and HD formats that are easily selectable. This design makes it ideal for multi-format acquisition and for a straightforward migration from SD to HD acquisition and workflows.

KEY FEATURES

- Infinity portable recorder
- HD/SD multi-format support including 480i60, 576i50, 720p50/60, 1080i50/60
- Recording/playback to and from integrated REV PRO removable media drive (available in REV PRO XP/ER version), CompactFlash media, and external devices
- DC operation for portable field production
- Metadata, video, and audio content written in an open, MXF-based wrapper
- Supports DV25, JPEG 2000, and MPEG-2* compression schemes
- Traditional and IT-based inputs/outputs
- Integrated, large flip-up LCD monitor available on certain models
- HDMI monitor connector
- Built-in 3.6-inch, menu-driven TFT touch screen
- Compatible with Thomson Grass Valley LCP 400 wireless control panel software

* MPEG-2 encoding and decoding is available with model DMR-1000-MPEG

The DMR's format support includes that for 480i60, 576i50, 1080i50, 1080i60, 720p50, and 720p60. SD formats are selectable in 16:9, 4:3, and letterbox aspect ratios.

On-Board Selectable Compression

Infinity Series products provide a choice of compression schemes and bit rates, letting you select what is best for your workflow today and in the future. The DMR supports DV25, JPEG 2000, and MPEG-2 (certain models) compression, assignable via its interface.

The recorder's DV codec is 25 Mb/s 4:2:0 (PAL) or 4:1:1 (NTSC), making it ideal for immediate use in your SD workflow today.

The next-generation JPEG 2000 compression scheme can be used for SD and HD acquisition. It provides, high-efficiency compression, 10-bit 4:2:2 encoding, high image quality, and no blocking artifacts—and is fully scalable through its ability to encode once and decode many different resolutions as needed.

High-Quality Audio Recording

The Infinity Series DMR records uncompressed, real-time, high-quality, four-channel audio, and offers mixture of four selectable analog and digital input sources. It features AES/EBU inputs and outputs for external audio device connectivity.

IT-Based Recording Media

The Infinity Series DMR is a portable field unit that uses off-the-shelf Iomega REV removable disks, Thomson Grass Valley REV PRO, and professional-grade CompactFlash solid-state memory as recording and playback media. The extremely durable REV PRO removable disks come in three varieties. The basic REV PRO 35* combines the portability, ease of use, and low cost of videotape, with the nonlinear, high-speed access of a hard drive. REV PRO XP, for eXtra Performance, supports high-performance ingest (more than 2X real-time). And REV PRO ER provides Extended Recording time.

Professional-grade CompactFlash memory is a readily available solid-state technology that delivers high-level performance for demanding professional video applications. CompactFlash cards are small, lightweight, and extremely durable. They are available in various capacities from dealers worldwide and trends indicate that their storage capacities will continue to increase while their costs decrease.

Both REV PRO and CompactFlash media offer unprecedented advantages in terms of usability, price, and performance, including nonlinear random access to video files, simultaneous playback while recording, and non-degrading archival storage.

Ultimate Connectivity

The Infinity Series DMR offers the ultimate in connectivity. Its traditional inputs/outputs include BNC connectors for (HD-)SDI, CVBS, TC, and AES digital audio—as well as XLRs for analog audio.

For IT-based connectivity, this unit comes with two USB 2.0 connectors, one FireWire (IEEE 1394) connector, one HDMI display connector, and a Gigabit Ethernet port. It can also connect to an external storage device such as a hard drive or flash memory device via USB or FireWire. You can connect standard display devices, such as HD flat-screen monitors, via the HDMI connector.

Touch-Screen, Wireless Control

You can manipulate the Infinity Series DMR through traditional controls for standard operation and through a TFT touch-screen display. A built-in user interface supports video monitoring, clip management, audio setup and metering, and detailed configuration.

You can also use our optional LCP 400 software to control the DMR 1000. Running on a Windows Mobile PDA or Pocket PC Phone, it gives you access to menus and settings. It displays audio levels and, thanks to its extremely low latency, lets you make critical adjustments to audio parameters such as gain. And you can create and edit metadata such as names, dates, slugs, locations, and other settings before, during, or after the recording. It can also be used to remotely start and stop recordings.

Compact, Portable Design

Performing anytime, anywhere, and under all circumstances has been one of the main design objectives for the Infinity Series DMR. As a result, it is well balanced, easy to handle, and offers a high level of mobility inside and outside.

With its feature set and connectivity capabilities, the DMR eliminates the need for additional IT peripherals and reduces your travel volume and operational weight requirements. Dedicated accessories such as a field case and a shelf mount kit for "grab and go" installation are available.

The Infinity Digital Media Camcorder, the companion to the Digital Media Recorder.

* REV PRO 35 disks can be used in the DMR 1000 for SD record/play or HD playback only.

SPECIFICATIONS

Infinity Digital Media Recorder	Infinity DMR – Model No. DMR 1000	
General		
Power	AC universal power supply, 100-130 VAC, 200-240 VAC, 50 or 60 Hz DC 15V (11.0V to 17.0V) , no internal charging of attached battery Typical power consumption 50W	
Temperature range	Operating: 0°C to 40°C (32°F to 104°F); Storage: -20°C to 60°C (-4°F to 140°F)	
Humidity range	10 to 90% (relative humidity)	
Weight	6 kg (13 lbs.)	
Dimensions	Length = 17 in. (432 mm); width = 8.25 in. (210 mm); height = 7 in. (178 mm) (All approx.)	
Video Mode	**576i/480i**	**1080i/720p**
Temporal frequencies	50/59.94 Hz	50/59.94 Hz
Aspect ratio	16:9, 4:3, and letterbox	16:9
Audio	20 Hz – 20 kHz unweighted, 24 bits PCM, 48 kHz, dynamic range 85 dB	
Compression		
DV25	Both PAL (4:2:0) and NTSC (4:1:1)	
JPEG 2000	**SD**	**HD**
	10-bit, 4:2:2	10-bit, 4:2:2
	30-, 40-, 50 Mb/s	50-, 75-, 100 Mb/s
MPEG-2 (requires DMR-1000-MPEG model)	**SD**	**HD**
	8-bit, 4:2:2	8-bit, 4:2:0
	30-,40-, 50 Mb/s, I-Frame (VBR profile)	60 and 80 Mb/s, I-Frame
File Formats		
High-quality content	MXF OP-1A (SMPTE 378M), including 4 channels of PCM audio and metadata	
Metadata definition	Compatible with SMPTE Metadata Dictionary RP210	
Storage – Removable Media		
REV PRO	REV PRO XP/ER digital media drive or optional REV PRO 35 digital media drive	
CompactFlash	2 x Type I and II CompactFlash slots, speed depending on media	
Connectors		
Analog audio inputs	4 x XLR-3 female, one channel is mic-/line-level, balanced, +48V selectable	
Digital audio inputs	AES/EBU digital audio via BNCs (2 each, 4 channels total)	
Analog audio output	XLR-3 male (4 each), line-level, 2-channel mixed balanced 6.3 mm stereo jack earphone (front panel)	
Digital audio outputs	AES/EBU on 2 each BNCs, (4 channels total) and embedded (HD-)SDI 2 channel audio via BNC	
HDMI output connector	HDMI connector for use on qualified monitors	
(HD/SD-)SDI input	BNC, SMPTE 292M (1.5 Gb/s) or SMPTE 259M (270 Mb/s), 0.8 Vp-p, 75Ω	
(HD/SD-)SDI output	2 x BNC, SMPTE 292M (1.5 Gb/s) or SMPTE 259M (270 Mb/s), 0.8 Vp-p, 75Ω	
Analog video input	BNC, CVBS, reference loop-through blackburst, 1.0 Vp-p, 75Ω	
Analog video output	BNC, CVBS, Super Output, 1.0 Vp-p, 75Ω	
Time code	LTC input, LTC output, BNCs – VITC input and output	
DC 15V in	XLR-4 male (11.0V to 17.0V)	
IT Connectivity		
Ethernet	1 x RJ-45 (for testing, setup, and future use)	
USB 2.0	2 x USB A host connectors, one on front panel, one on rear panel	
IEEE 1394	6-pin IEEE 1394 connector	
Supplied Accessories	User's Guide/Quick Start Guide, power cord, 1 piece REV PRO removable media	
Optional Accessories		
Field carrying case	Order DMR-CASE-1	
Shelf mounting kit – quick release	Model DMR-GRBNGO-1	

ORDERING INFORMATION

DMR-1000

Portable HD/SD digital media recorder/ player with internal support for REV PRO XP/ER media, CompactFlash media

DMR-1000-LCD

Portable HD/SD digital media, recorder/ player with additional LCD monitor with internal support for REV PRO XP/ER media, CompactFlash media

DMR-1000-MPEG

Portable HD/SD digital media recorder/ player with additional LCD monitor and MPEG compression with internal support for REV PRO XP/ER media, CompactFlash media

DMR-CASE-1

Field protective case

DMR 1000, field protective case with shoulder strap, premium grade materials

DMR-GRBNGO-1

DMR shelf mounting kit

DMR 1000 shelf mounting kit, includes quick release, mechanical components to provide mounting of the DMR onto a flat surface, such as a shelf in an equipment rack

HEADQUARTERS

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PROFESSIONAL SERVICES

Our professional services offerings ensure optimal system performance and maximize uptime. These services include call centers staffed around the clock; system planning, design, and commissioning; professional training courses; and technical maintenance programs and service agreements.

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FINANCING

Financing is available through Thomson financial services. Please contact your products representative for more details.

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