



Infinity

DMC 1000 DIGITAL MEDIA CAMCORDER

The Infinity digital media camcorder enhances and even redefines EFP and ENG workflows by fully embracing IT-based technologies, connectivity, and convenience.



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

Our Infinity™ Series digital media camcorder (DMC) 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 DMC is a perfect complement to your EFP and ENG workflows. It features multi-format support; advanced CMOS imagers and digital processing; on-board selectable compression; high-quality audio capabilities; support for IT-based recording media (including REV PRO™ removable media and CompactFlash removable media) and traditional and IT-based connectivity.

KEY FEATURES

- Three Xensium™ 2/3-inch CMOS imagers
- 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 35 and REV PRO XP/ER versions) and CompactFlash media and external devices
- 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
- HDMI viewfinder connector
- Gigabit Ethernet connectivity
- Control over IP connections with Thomson Grass Valley C2IP system
- Configurable four-channel audio router with multiple selectable input sources
- Built-in 3.6-inch TFT touch screen
- Supports Thomson Grass Valley LCP 400 wireless control panel software

* MPEG-2 encoding and decoding is available with an optional board

Enhancing Your Workflows

The Infinity DMC 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 camcorder in a fashion similar to that of videotape in tape-based workflows.

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 camcorder's 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 camera and manipulate metadata via a wireless Bluetooth connection.

Multi-Format Support

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

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

Advanced CMOS Image Capture, Digital Processing

The Infinity Series DMC features three newly developed Thomson Xensium 2/3-inch CMOS imagers. These in-house designed imagers provide full native HD resolution and offer a high dynamic range and signal-to-noise ratio.

The camcorder also features 22-bit digital signal processing to perform all camera image-management functions such as knee, gamma, contours, and variable matrix, with a high level of precision and perfect picture reproduction.

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 DMC supports DV25, JPEG 2000, and (optional) MPEG-2 compression, assignable via its interface. And it is already prepared for the easy integration of new compression standards. Its interface, for example, makes it easy for you to insert a compression-specific board in the future.

The camcorder's DV codec is 25 Mb/s 4:2:0 (PAL) or 4:1:1 (NTSC), making it ideal for immediate use in your 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 as many different resolutions as needed.

High-Quality Audio Recording

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

IT-Based Recording Media

The Infinity Series DMC is the first camcorder to use off-the-shelf Iomega REV removable disks, Thomson Grass Valley REV PRO removable disks, and professional-grade CompactFlash solid-state memory as recording and playback media.

The extremely durable REV PRO removable disks comes 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.

The Infinity DMC 1000/10 comes standard with a REV PRO 35 media drive. The DMC 1000/20 comes equipped with a REV PRO XP/ER drive on board. An upgrade kit is available for easy migration from DMC1000/10 to DMC 1000/20 operation.

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, extremely durable, and are designed specifically for high lifecycle removability. 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 DMC 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, making it the perfect pool camera.

For IT-based connectivity, the camcorder comes with three USB 2.0 connectors (two hosts and one device), one FireWire (IEEE 1394) connector, one HDMI display connector, and two Gigabit Ethernet ports. 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 viewfinders and other standard display devices, such as HD flat-screen monitors, via the HDMI connector.

Touch-Screen, Wireless Control

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

You can also use our LCP 400 software to control the camera. Running on a Windows Mobile PDA or Pocket PC smartphone, it gives you secure wireless Bluetooth access to all camera menus and settings—and lets you change them while shooting. 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 even camera settings before, during, or after the recording.

Compact Design

Performing anytime, anywhere, and under all circumstances has been one of the main design objectives for the Infinity Series DMC. As a result, it is well balanced, easy to handle, and offers a high level of mobility and comfort with an eye for detail and optimized ergonomics.

With its feature set and connectivity capabilities, the DMC eliminates the need for additional IT peripherals and reduces your travel volume and operational weight requirements. Dedicated accessories such as flight cases, carrier bags, and rain covers complement the camcorder.



SPECIFICATIONS

Infinity Digital Media Camcorder		Infinity DMC – Model Numbers DMC 1000/10 and DMC 1000/20	
General			
Power	DC 15V (11.0V to 17.0V) Consumption during record standby 45W, with active imaging, view finder, compression, buffer, and lens; Consumption while recording 49W, while recording to REV PRO		
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	5 kg (11 lbs.) without viewfinder, 5.7 kg (12.6 lbs.) with HD CRT viewfinder		
Dimensions	240 mm (H) x 150 mm (W) x 330 mm (L) without lens and battery		
Camera Part			
Lens mount	2/3" bayonet type		
Optical system	F1.4 prism		
Optical filters	Motorized: clear, 1/4 ND, 1/16 ND, 1/64 ND		
Color-correction filters	Electronic: 3200K, 4700K, 5600K, 7500K, 2 AWB presets and continuous auto-white, Variable color temperature: 2200°K to 20000°K in 10°K steps		
Pickup device	3 x 2/3" full HD Xensium CMOS imagers		
Digital processing	22-bit accurate processing		
Exposure	Electronic exposure down to 1/2000 sec		
Video mode	576i/480i	1080i/720p	
Temporal frequencies	50/59.94 Hz	50/59.94 Hz	
Gain	-6 dB to +42 dB in 3 dB steps (user-definable presets) and variable master gain between -6 dB and +17.9 dB in 0.1 dB steps		
Aspect ratio	16:9, 4:3, and letterbox	16:9	
Sensitivity	2000 lux (186 footcandles) at F8 typical		
S/N ratio in Y signal	61 dB typical	54 dB typical	
Modulation depth	70% at 5 MHz in luminance (Y) signal (16:9)	50% at 800TV lines (27 MHz) in luminance (Y) signal	
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 the DMC 1120 MPEG-2 option board)	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		
Built-In Storage			
REV PRO	REV PRO 35 digital media drive (DMC 1000/10) or REV PRO XP/ER digital media drive (DMC 1000/20)		
CompactFlash	2 x Type I and II CompactFlash slots, speed depending on media		
Camcorder Connectors			
Front microphone input	XLR-3 female, balanced +48V XLR-5 female, balanced +48V phantom (requires DMC 1180 option)		
Rear audio inputs	2 x XLR-3 female, mic-/line-level, balanced, +48V selectable		
Additional audio inputs	AES/EBU or embedded (HD-)SDI audio via BNC and 2 channels via wireless receiver slot		
Audio output	XLR-5 male, line-level, 2-channel mixed balanced 6.3 mm stereo jack earphone		
Additional audio outputs	AES/EBU or embedded (HD-)SDI 2-channel audio via BNC		
Lens connector	12-pin female Hirose		
Viewfinder connector	HDMI type A connector		
(HD-)SDI input	BNC, SMPTE 292M (1.5 Gb/s) or SMPTE 259M (270 Mb/s), 0.8 Vp-p, 75Ω		

SPECIFICATIONS CONT.

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(HD-)SDI output	BNC, SMPTE 292M (1.5 Gb/s) or SMPTE 259M (270 Mb/s), 0.8 Vp-p, 75Ω
Analog video input	BNC, CVBS, blackburst, linear time code or AES/EBU audio, 1.0 Vp-p, 75Ω
Analog video output	BNC, CVBS, linear time code or AES/EBU audio, 1.0 Vp-p, 75Ω
DC 15V in	XLR-4 male (11.0V to 17.0V)
DC 12V out	4-pin Hirose, 12V (11.0V to 17.0V) 1A with tally signal
IT Connectivity	
Ethernet	1 x RJ-45, control and file-transfer connectivity (1 x RJ-45 streaming for future release)
USB	2 x USB A host, 1 x USB B device
IEEE 1394	6-pin IEEE 1394 connector
Supplied accessories	User's Guide, Quick Start Guide, Quick Reference Guide
Options	
2" HD viewfinder	Model No. DMC 1100
Display	HD B/W CRT
Resolution	>600 TV lines (center)

ORDERING INFORMATION


Media & Information Technologies

Roscor Corporation

Phone: (847) 299-8080

Fax: (847) 299-4206

sales@roscor.com

HEADQUARTERS**Thomson Worldwide Headquarters**

46 Quai A. Le Gallo
92648 Boulogne Cedex
FRANCE

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