

SR-R1000

SRMASTER storage unit



Overview

The SR-R1000 is an ultra high-speed, new-generation storage system suitable for a variety of applications in live, broadcast, and post-production, including multi-camera ISO recording, instant replay clip feeder, high-speed multi-ingest, cache storage, and more. Thanks to the outstandingly high bandwidth of the SRMemory platform, the SR-R1000 can handle 2D, 3D, 1080p, and 4K, all in one unit, offering unparalleled professional creativity.

Features

High-speed, High-capacity Removable Storage

The SRMASTER Series adopts the SRMemory card as its recording media. SRMemory cards are unique in the industry for achieving a guaranteed read/write speed of up to 5 Gbps, and offering a storage capacity of up to 1 TB, all within an exceptionally small, light-weight form factor. Unlike other general purpose IT memory cards and SSDs, SRMemory card guarantees the data throughput thanks to Sony's proprietary memory control algorithm. With this extreme recording/playback capability, SRMemory cards are ideal storage devices for applications including 3D production and high frame rate 4K digital cinematography. A single SRMemory card can simultaneously record up to three 3D camera rigs and

stunt replay from any one of them.

Mastering Quality Files

SRMASTER products employ the MPEG-4 SStP (Simple Studio Profile) image compression scheme that's also used by the HDCAM SR VTR product range. Fully tested and proven, SStP is an intra-frame/field visually lossless compression algorithm that records 10-bit or 12-bit RGB or 10-bit 4:2:2 image files which can be edited natively by many leading nonlinear editing platforms.

As well as existing SR-HQ (880-Mbps) and SR-SQ (440 Mbps) modes, SRMASTER products support an additional compression level called SR-Lite (220 Mbps at 1080/59i) to serve HDTV programme production. Up to 16 channels of uncompressed audio tracks and associated metadata can be recorded, all wrapped in an industry-standard MXF wrapper.

High Security

The SRMemory card has a powerful built-in data salvage system which means that precious images and data can be retrieved in the event of memory chip failure caused, for example, by power loss.*

* In some instances, it may not be possible to restore images recorded just before an accident. No warranty is given on always achieving content restoration.

MPEG-4 Simple Studio Profile

The SR-R1000 offers outstanding picture quality by incorporating Sony's industry-standard HDCAM-SR codec, the MPEG-4 Simple Studio Profile (SStP). A variety of operating levels are supported from SR-Lite (220 Mbps), and SR-SQ (440 Mbps), up to SR-HQ (880 Mbps). Both 4:2:2 (10-bit) and RGB 4:4:4 (10-bit and 12-bit) recording are supported.

4 x Dual-stream Channels

The SR-R1000 comes as standard in a 1-Out configuration, and can be expanded to handle up to four channels in flexible configurations – 3-In/1-Out, 2-In/2-Out, 1-In/3-Out, or 4-Out – by installing optional SRK-R201 or SRK-R202 Input/Output boards. Each A/V channel of the SR-R1000 is designed to handle up to dual-stream video, which allows users to record and playback one pair of 3D stereoscopic signals or key/fill signals just with one A/V channel. All four A/V channels can be operated simultaneously, thanks to high-speed SRMemory cards. This increases productivity during live operation and post-production.

Powerful Stereoscopic 3D Operation – 1080P 3D

The SR-R1000 brings a new 3D production level to live operation and post-production. Each A/V channel of the SR-R1000 comes equipped with a dual-link 3G-SDI interface, making 3D stereoscopic production easier and more affordable. The SR-R1000 can handle up to four channels of 1080p 3D signals, or RGB 4:4:4 3D signals.

Multi-format - 1280x720, 1920x1080, 2048x1080/1556

Building on the extraordinary multi-format recording capability of HDCAM-SR VTRs, the SR-R1000 supports the following formats: 1280x720/4:2:2, 1920x1080/4:2:2, 1920x1080/4:4:4 and 2048x1080/4:4:4.

4K Recording

When configured to handle four streams of HD/2K signal, the SR-R1000 can record and playback 4K images (3840x2160, 4096x2160) over quad HD-SDI or quad 3G-SDI. Playback while recording is supported even in 4K operation.

16-channel Audio

Each A/V channel supports 16-channel uncompressed digital audio (24-bit, 48 kHz/96 kHz*), along with a split-edit capability for audio and video.

* Supports 8-channel audio in case of 96kHz.

4TB Removable Storage

The SR-R1000 has four slots for removable SRMemory cards. Each slot can be loaded with a 256 GB, 512 GB, or 1 TB memory card, providing up to 4 TB of storage capacity. As soon as, for example, a live event finishes, you can instantly eject the SRMemory cards to take to the postproduction facility - no more wasting time waiting for data to off-load.

Network Capability

The SR-R1000 has a network file transfer capability over two Gigabit Ethernet ports (GbE), and supports FTP-protocol file transfer in the MXF (MPEG4 SStP) format. 10GbE option is also available.

Versatile Control Protocol

The SR-R1000 can be fully controlled by switcher and slow-motion controllers, separately for each A/V channel. The system is compatible with the most popular control protocols such as Sony's VTR/Disc protocol and VDCP . When working in a live operation or post-production environment with MVS switchers, the SR-R1000 can be used as a 2D/3D clip feeder, synchronized key/fill source, graphics feeder, or temporary buffer for compositing.

Specifications

General

Recording Format	MPEG-4 SStP format
Power	100 to 240 V AC (50/60 Hz)

Requirements

Power Consumption	Max. 480 W
Operating Temperature	5°C to 40°C 41°F to 104°F
Storage Temperature	-20°C to +60°C -4°F to +140°F
Humidity	25% to 90% (no condensation)
Mass	23 kg (with all options) 50 lb 11 oz (with all options)
Dimensions (W x H x D) *1	427 x 174 x 540 mm (excluding protrusion) 16 7/8 x 6 7/8 x 21 5/16 inches (excluding protrusion)

Input/Output

HD-SDI Input	With SRK-R201 (option) A: BNC (x2) (including one monitor output) B: BNC (x2) (including one monitor output) HD-SDI (1.485 Gbps) (SMPTE 292M/372M, BTA-S004B standard) 3G-SDI (2.97 Gbps) (SMPTE 424M)
Digital Audio Input (AES/EBU)	With SRK-R201 (option) BNC (x8) CH1/2 to CH15/16 AES/EBU format, unbalanced
Timecode Input	With SRK-R201 (option) BNC

	(x1) 0.5 to 18 Vp-p/10 kΩ
Timecode Output	BNC (x1) 2.2 Vp-p, low impedance (SMPTE 12M standard) With SRK-R202 (option) BNC (x1) 2.2 Vp-p, low impedance (SMPTE 12M standard)
Multi Monitor Output	BNC (x1) With SRK-R202 (option) or SRK-R201 (option) HD-SDI (1.485 Gbps) (SMPTE 292M/372M, BTA-S004B standard)
HD-SDI Output	With SRK-R202 (option); A: BNC (x3) (including one character out) B: BNC (x2) (including one character out) HD-SDI (1.485 Gbps) (SMPTE 292M/372M, BTA-S004B standard) 3G-SDI (2.97 Gbps) (SMPTE 424M)
Digital Audio Output (AES/EBU)	With SRK-R202 (option) BNC (x8) CH1/2 to CH15/16 AES/EBU format, unbalanced
Reference Input	BNC (x2) (including one loop-through) HD Tri-level sync or SD Black burst
Audio Monitor Output	XLR-3-pin (male) (x2)
Headphone	Phone jack (x1)
Remote	D-sub 9-pin (female) (x4)

GPIO	D-sub 25-pin (female) (x1)
Video Output	D-sub 9-pin (female)
Network	RJ-45 jack (x2) 1000BASE-T
USB	USB (x2)

Video (422 Format)

Sampling Frequency	Y: 74.25 MHz, Pb/Pr: 37.125 MHz
Quantization	10 bits
Compression	MPEG-4 SStP

Video (444 Format)

Sampling Frequency	RGB: 74.25 MHz
Quantization	10 bits, 12 bits
Compression	MPEG-4 SStP

Digital Audio Signal Format

Sampling Frequency	48 kHz
Quantization	24 bits
Headroom	20/18 dB selectable

Analog Monitor Input

D/A Quantization	24 bits
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Memory Drive

Search Speed	±100 times
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Supplied Accessories

Supplied Accessories	AC power cord (1) Operation guide (1) Installation manual (1) Operation manual (CD-ROM) (1)
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Analog Monitor Output

D/A Quantization	24 bits
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Notes

Note	*1 The values for dimensions are approximate.
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Gallery

