



# GVS9000 4NXU virtual tape recorder

## GVS9000 4NXU VTR

Designed to fit seamlessly into a high-resolution production workflow, the GVS9000 4NXU VTR offers a Virtual Tape capability that allows users to incrementally move to a digital disk based workflow. With this digital disk based technology, the GVS9000 4NXU VTR provides a single flexible platform for all your content production from live and post production applications.

Offering uncompressed dual-link HD 4.4.4 support, leading video editing capabilities and compatibility with a huge range of QuickTime Video and industry standard hardware the GVS9000 4NXU VTR is a professional, non-linear VTR. The 4NXU's transparent storage and sharing of a wide variety of digital assets over dual 2Gb/s fibre and dual gigabit network make it the ideal solution for working storage, transport and archival for Event, Broadcast, Post house, Design and Production facilities.

System includes:

- Professional video I/Os for 4, 8, 12, or 24 SDI composite video converters
- Data I/Os including dual 2-4Gb/s Fibre and 1-10Gigabit Ethernet
- Real time HD capture, edit, store, broadcast and archive
- Live cast during capture or play back in QuickTime in real-time VDCP Automation Control
- High speed electronic transfer
- Automated QC opportunities
- Low level integration
- External control via Midi, Sony 9-pin protocols or TCP/IP
- Color space support including both 4:2:2, 4:4:4 and 4:4:4:4 (with 36-bit color depth (optional 48-bit internal storage with 4K options)
- Dual layer DVD/RW, Blu-ray or HD DVD mastering option

Uncompressed Capacity:

# 10 hrs. 4:4:4 HD



Support for SD, HD and digital intermediate work at 2K and above

## 4NXU VTR—rugged, extremely quiet solution for recording studios

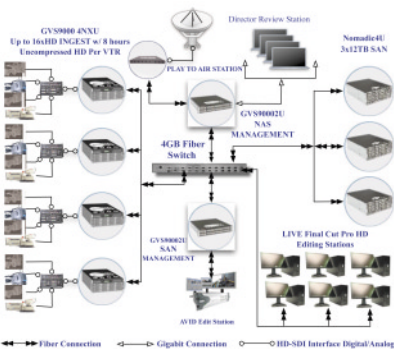
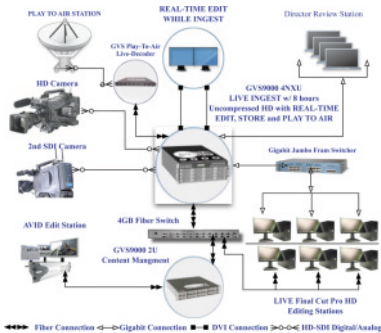
The GVS9000 4NXU VTR allows up to 16 concurrent HD users to share content simultaneously. No other storage technology provides the means to seamlessly capture 16xHD content at the same time. This technology introduces a remarkable production ability to capture live events, view, convert movies, remove scratches, or edit content in a complete shared environment.

Combining 16x storage bay with GVS9000 4NXU VTR offers excellent performance, superb integration with a variety of systems, and enables cost effective electronic transfer of high-resolution masters. Beginning with capture—via telecine, direct from digital camera, tape or direct to disk animation—GVS9000 4NXU VTR technology records an exact copy of the original content. Throughout the post process, from color correction to DSR, editing, effects, audio processing finishing and optional down conversion for distribution, 4NXU VTR can integrate with or replace portions of existing systems.



The GVS9000 4NXU VTR offers 8 independent digital, format free audio I/O channels with a choice of 16, 20 or 24-bit audio at 44.1, 48 kHz as well as the option to upgrade to 96 or 192kHz allowing the ability to sync audio to video clips recorded at any frame rate. With unlimited virtual channels and independent channel editing capabilities, the 4NXU VTR supports the most rigorous audio requirements during the digital mastering process.

Whatever your requirements, GVS9000 4NXU VTR offers flexibility, speed, and the highest possible image quality. Using visually lossless, highly efficient Quality Encoding fiber based shared image storage the 4NXU VTR provides the most accurate digital replica of your projects available today. Support for 24, 25, 29.97, 30, 48, 50, 59.94, and 60 frame images, progressive, interlaced and segmented frames, drop and non-drop, allows you to work with images at their native resolution and frame rate. With this introduction, 4NXU VTR provides the best platform for cost effective HD production and post-production as well as 2K and 4K digital intermediate to come.



Part Number	Model Number	Hardware RAID	Max Cache	HD 4:4:4 Support	HD 4.2.2 Support	Audio I/O	Drive Type	Max Storage	SAN Support
4NXU08ATP2S008	GVS90004NXUVTR-1422	PCI-e	128MB	No	Yes	4	SATA-II	4.0TB	No
4NXU12ATP2S021	GVS90004NXUVTR-1444	2xPCI-e	256MB	Yes	Yes	4	SATA-II	8.0TB	No
4NXU12ATP2F024	GVS90004NXUVTR-1422	2890C	1,000MB	No	Yes	4	SATA-II	4.0TB	Yes
4NXU12ATP2F028	GVS90004NXUVTR-2422	2890C	1,000MB	No	Yes	8	SATA-II	8.0TB	Yes
4NXU12ATP2F044	GVS90004NXUVTR-2444	2x2890C	2,000MB	Yes	Yes	8	SATA-II	9.0TB	Yes
4NXU12ATP2F048	GVS90004NXUVTR-4448	4GB Fiber	256MB	Dual	Dual	8	4GB Fiber	5.0TB	4X



# GVS9000 4NXU VTR technical specifications

## Absolute Max Shuttle Speed

Real time speed

## DV Out Sync

Special settings are designed for each of your output sources, from HD to DV with sync options.

## Emulate 9-Pin

A protocol which emulates a 9-pin video deck providing extremely good overall compatibility, with the ability to select various parameters to insure 100% compatibility.

## Force Lock To Sound Timebase

This function ensures that timebase is selected from the specific source during capture.

## Full Screen On

This provides the ability to have full video source on LCD or video screen.

## MTC Stop Overshoot Correct Frames

When chasing timecode, VTR automatically plays when the timecode starts and stops when the timecode stops. This provides complete control of backup and compensation for any timecode run on.

## MTC overrides Video Hardware timestamp

Allows for manual entry of the timecode track during recording via MTC through Midi, from an external LTC feed, and can be automatically generated or imported from a number of different interfaces.

## 9-pin ID

GVS9000 4NXU VTR can identify itself as a variety of different VTRs. This allows user to choose the status returned by VTR when requested via 9-pin.

## 9-Pin Preferences

True 9-pin control frames are clocked out in sync with your controller, maintaining perfectly drift-free playback at all times.

## Operational Performance

- Rec/Play time per 1,800 GB 2048 x 1556 (~7.5 hours)
- Visually lossless: 1920 x 1080 4:4:4 (~10 hours)
- SD (~30 hours)

*(Storage estimates based on real-world recording tests. Exact storage results vary depending on content, source quality, frame rate, and image settings.)*

## PreRoll Movie

GVS9000 4NXU VTR offers a "Pre-Roll" mode which will automatically pre-cache data and ready to start playback instantly.

## Preview During Capture

For input SDI or HD as well as at its video output.

## Restore Video Settings

For expediting the production, GVS9000 4NXU VTR creates audio and video settings so any previous parameters can be recalled to ensure the exact form. When VTR enters E-E or record mode, it will use the default parameters saved from session to session.

## Standard.Sync

GVS9000 4NXU VTR can be programmed to chase an external timecode source in order to get the proper video frame to appear to coincide with the incoming frame of timecode.

## Superimpose Graphics On Picture

Foley and ADR recording. One of the major architectural additions is for superimposing graphics on top of the movie pictures as they are played. The desired graphics are then applied over the top, and the finished frame is passed to the specified Video output.

## Sync Tolerance Frames

Acting as an External timecode source, it constantly tracks the timecode values arriving from a number of different sources such as telecine, direct from digital camera, tape, direct to disk animation or another GVS9000 4NXU VTR.

## Video Head Disengage Threshold

GVS9000 4NXU VTR allows playback of picture at slower, and faster than real time.

## GVS9000 4NXU VTR Specifications:

### Video Modes InPut:

- Rec/Play time Play visually lossless with 1,800 GB Storage,
- Dual Link with support
- 2K 2048 x 1556 24p, 24psF, 48i
- HD 1920x1080 4.4.4 1080psf 1080psf 23.98 1080i29.97
- SD D1 720x486 720p 60 720p 59.9
- SD D1 720x576 625i 525i 29.97

### Video Modes OutPut:

- Dual link 4:4:4 (RGB) I/O
- Dual link 4:2:2:4 Video + Key (YUV) I/O
- Single Link 4:2:2 (YUV) I/O

### Analog: SD and HD Output, 12-bits, BNC:

- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- Composite/YC (composite mode)

### Pixel Formats:

- 16/12/10/8 bit YUV/RGB
- QuickTime, Cineon and DPX support

## Audio:

- Quantization: 16-bit, 20-bit, 24-bit selectable
- 8 channels S/P DIF BNC audio
- 6 channels of AES/EBU XLR audio
- 16 Channels of embedded audio per SDI
- 48Khz synchronous
- Upgrade option available to 96Khz or 192 kHz audio support

## Genlock:

- Analog: SD: Black Burst, Bi-Level; HD: Tri-Level
- Digital: SD : SD SDI; HD : HD-SDI, QuLink

## Storage Option:

- 1.8TB Onboard Highspeed Recording Storage
- 4x Removable RAID Media Sets 2.0TB Storage

## Play Control:

- Dual 2Gb/s Fiber Interface for external storage
- 10/100/1000BT Network for small file transfer to DV
- RS-422: D-sub 9-pin
- RS-232: 3-sub 9-pin
- FireWire 800 port and FireWire 400
- USB 2.0 ports (on one front panel), two USB
- Back headphone minijack and speaker
- Optical digital audio in and out
- Stereo audio in and out

## Electrical and environmental requirements:

- Meets ENERGY STAR requirements
- Line voltage: 650W 100-125V AC or 200-240V AC
- Frequency: 50Hz to 60Hz, single phase
- Maximum current: 6.5A (low-voltage range) or 9.5A (high-voltage range)
- Operating temperature: 50° to 95°F (10° to 35°C)
- Storage temperature: -40° to 116°F (-40° to 47°C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 feet

## Size and weight:

- Height: 7.3 inches (185 mm)
- Width: 17.2 inches (437mm)
- Depth: 26 inches (660mm)
- Weight: 39.2 pounds (17.8 kg), fully configured model: 100 pounds (45.5 kg)

For hard drive capacity measurements, 1GB = 1 billion bytes; actual formatted capacity less by 5% base on OS. Weight varies by configuration and manufacturing process.

Product specifications are subject to change without notice.

GVS9000 4NXU VTR designed and manufactured in the U.S. by GVS-Grande Vitesse Systems Inc.

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