VN-Matrix™ Recorder

NETWORK ATTACHED STORAGE FOR RECORDING AND PLAYBACK OF HIGH-RESOLUTION COMPUTER GRAPHICS, VIDEO, AUDIO, AND DATA

- **Records visually lossless high-resolution encoded VN-Matrix™ streams over IP**
- **Virtual switching over IP**
- **Record and synchronize up to 5 channels**
- **Digitally record and playback video, audio, & data**
- **Point-to-point and long distance distribution**
- **Mission critical imagery**
- **Real-time visual collaboration**
- **Networked storage architecture makes systems highly scalable and flexible**

VN-Matrix™ Recorder is designed for digital recording and playback of multiple, high-resolution video/graphic, audio, and data streams encoded to the IP network by VN-Matrix encoders and decoders. The VN-Matrix Recorder is ideally suited for the documentation, archive, review and playback of highly sophisticated or demanding A/V imagery including: defense, simulation, visualization, training and education, corporate, medical, surveillance utility or entertainment.

DESCRIPTION

The VN-Matrix™ Recorder is a network attached storage - NAS device used to digitally record and playback high-definition computer graphics, video, audio and data streams encoded to the IP network via VN-Matrix encoders and decoders.

VN-Matrix encoders accept a wide variety of analog and digital inputs: computer graphics up to WUXGA, high-definition and standard definition video, audio and data streams. The source signals are compressed and sent over an IP network to the VN-Matrix recorder.

VN-Matrix encoders utilize the PURE3 codec. The PURE3 Codec features both spatial and temporal image compression; a guarantee of transparent image quality further enhanced by 4:4:4 sampling and the lack of pre and post filtering. The PURE3 Codec eliminates the management of forward error correction while still providing robust protection against network errors. The PURE3 codec preserves the three performance factors which regularly challenge the delivery of video over networks: low latency, low bandwidth and high image quality. The result is a pure and uncompromised image quality. Imagery recorded with the PURE3 codec will maintain the native resolution, motion, detail, contrast and color depth of the original input. This is critical for applications that use sophisticated or demanding A/V imagery.

The VN-Matrix Recorder provides far more efficient use of storage space than uncompressed recording systems. Networked storage architecture makes systems highly scalable and flexible. Storage capacity can be increased or decreased based on the number of inputs, recording time and archiving requirements.

The VN-Matrix Recorder is ideally suited for applications requiring the documentation, archive, review and playback of highly sophisticated or demanding imagery including: defense, simulation, visualization, training and education, corporate, medical, surveillance utility or entertainment.

FEATURES

- **Records multiple visually lossless high-resolution encoded VN-Matrix™ streams over IP**
- **Virtual switching of video, graphics, and audio over IP**
- **Record and synchronize up to 5 channels**
- **Digitally record and playback video, audio, & data**
- **Point-to-point and long distance distribution**
- **Mission critical imagery**
- **Real-time visual collaboration**
- **Networked storage architecture makes systems highly scalable and flexible**

SPECIFICATIONS

VN-MATRIX UNIT CONGURATION CONTROL

IP address & logical name
Encode or decode operation
Source input or playback resolution and frequency
Compression & bandwidth controls
Logical grouping of units
Playback position bar

VN-MATRIX RECORDING/PLAYBACK CONTROL FUNCTIONS

Record
Go to beginning or end
Playback
Mark in and out
Pause
Loop
Stop
Event marking
Playback bar
Duration, record time, elapsed
File selection and le management

RECORDING FRAME RATE SUPPORT

VGA to UXGA	60Hz – 85 Hz	60 fps
WUXGA	30Hz – 60 Hz	30 fps
640p, 720p	60Hz	60 fps
1080p	23.97, 29.94, 30 & 60 Hz	23.97, 29.94, 30 & 60 fps
1080i	29.97Hz/59.94	29.97/59.94fps

Programmable custom input modes
Software frame translator for porting content to portable video productions.

TYPICAL STORAGE REQUIREMENTS PER CHANNEL, Mbps @60HZ FRAME RATE

BANDWIDTH	IMAGE TYPE
Low	Data/graphic screens
Medium	Graphic visualizations, low-motion SD or HD video
High	HD video, video animations, high motion graphic simulations

RESOLUTION	LOW (Mb/s)	MED (Mb/s)*	HIGH(Mb/s)*
XGA	1.00	11	28
SXGA	1.00	19	47
SXGA+	1.00	21	52
UXGA	1.00	27	69
WUXGA	1.00	16	41
720p	1.00	20	55
1080p	1.00	20	55
1080i	1.00	20	55

*Med and High rate will be 50% or 25% if recorded at 30fps or 15fps
**Continuous improvement of compression and control applications

VN-MATRIX MULTI-CHANNEL SERVER 3 TBYTE VERSION

Operating System: Linux Red Hat
Processor: XEON 2.33 GHz, 12 MB L3 Cache, 1333 MHz System Bus with 800 MHz FSB & 1MB of CPU Cache
RAM: 4GB DDR333 PC2700 ECC Memory (512MB x 8)
Integrated AGP Graphics
24x CD-ROM Drive – Floppy Drive
Dual Integrated Gigabit Network Adapters, Keyboard & Mouse
Storage: 3 Terabyte (2.4 Terabyte RAID5)
Dimensions (H x W x D): 7" x 16.8" x 25.6" (178mm x 426mm x 650mm)
Higher capacity NAS storage options available

Model		Version Description	Part number
VNM RECORDER	(ES3403)	VN-Matrix Recorder	60-1121-01

Specifications are subject to change without notice.

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