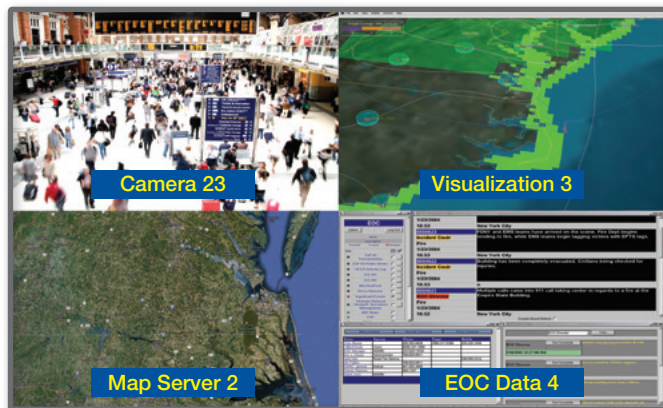


VNS 104

MULTI-STREAM DECODING SOFTWARE FOR VN-MATRIX 225 OR VN-MATRIX 200 SERIES

- ▶ Decodes and displays one or four VN-Matrix video streams on a single display from a Windows PC platform
- ▶ Decodes one audio source, which is selectable from the four decoded VN-Matrix streams
- ▶ Managed and controlled from VN-Matrix Enterprise Controller
- ▶ Monitor four VN-Matrix streams from one display as a cost effective alternative to multiple hardware decoders and displays
- ▶ Scaling and aspect ratio control
- ▶ Select display mode and switch streams from an external control interface



VNS 104 Multi-Stream Decoding Software decodes one or four video streams and one stereo audio stream from VN-Matrix 225 real-time encoders and recorded playback channels. It operates on a Windows PC and is managed from a VN-Matrix Enterprise Controller. The VNS 104 is used for monitoring, remote presentation viewing, distance collaboration, and data visualization, in a variety of environments including command and control, after action review, training and simulation, and medical or geological visualization.



Extron Electronics
INTERFACING, SWITCHING AND CONTROL

DESCRIPTION

Multi-Stream Presentation

VNS 104 Multi-Stream Decoding Software decodes and presents one or four VN-Matrix® streaming source windows on a single display, allowing users to monitor and interpret visual data from multiple information sources. The VNS 104 is used for monitoring, remote presentation viewing, distance collaboration, data visualization, or any application where a single display is desired for viewing one or four VN-Matrix streams. The VNS 104 is a cost effective alternative to using VN-Matrix hardware decoders and is well suited to in a variety of environments, including command and control, after action review, training and simulation, and medical or geological visualization.



PURE3 Codec

The Extron PURE3® codec applied in VN-Matrix systems streams audio and video across networks with very low latency, maintaining native resolutions and 4:4:4 color sampling for visually lossless image quality. The unique combination of low delay and high quality makes VN-Matrix streaming systems ideal for use in applications with the most demanding quality requirements. Extensive bit rate management and error concealment make VN-Matrix systems adaptable to different network conditions and flexible enough to support a wide range of streaming and recording applications.



Source and Status Messaging

VNS 104 Multi-Stream Decoding Software can present visual text messaging that identifies streaming source information and decoding status. This helps to distinguish streaming sources, a particularly valuable feature in systems that have many AV inputs. VNS 104 status messaging identifies if source streams have not been selected, are absent from the system, or if decoding has been suspended. A customized splash screen can be presented when a source stream is absent. These features are valuable in system commissioning and fault finding.

A variety of fonts and colors are available including Arial or Courier in 24, 32, or 48 point size. Red, green, blue, magenta, cyan, black, white, or various levels of gray can be applied to the font and text background, so that complementary color combinations may be applied to maximize legibility. Text messaging can be positioned in one of nine zones of the display or display quadrant to maximize the visibility of critical information.

Image Scaling and Aspect Ratio Control

The VNS 104 provides aspect ratio management for VN-Matrix streams, offering selection of a FILL mode, which fills the display or display quadrant, a FOLLOW mode, which preserves the original source aspect ratio, or a 1:1 mode. Streams presented in 1:1 mode are centered within the display or quadrant. If the streamed source has greater resolution than the display, the image will be cropped. If the source stream is a lower resolution than the display, the outside edges of the display area will be unused. When presenting four streams, FILL, FOLLOW, or 1:1 presentation modes can be applied independently to each source.

Applications

- ▶ Multiple Stream Decoding and Monitoring
- ▶ Virtual Switching Over IP
- ▶ Decoding of VN-Matrix Recorder Streams
- ▶ Point-to-Point and Multi-Point Distribution
- ▶ Remote Presentation Viewing
- ▶ Distance Collaboration

Text overlay messaging can be positioned flexibly within source windows to maximize data interpretation

A variety of font styles, sizes, and background colors can be applied to optimize visibility of data and legibility of the text



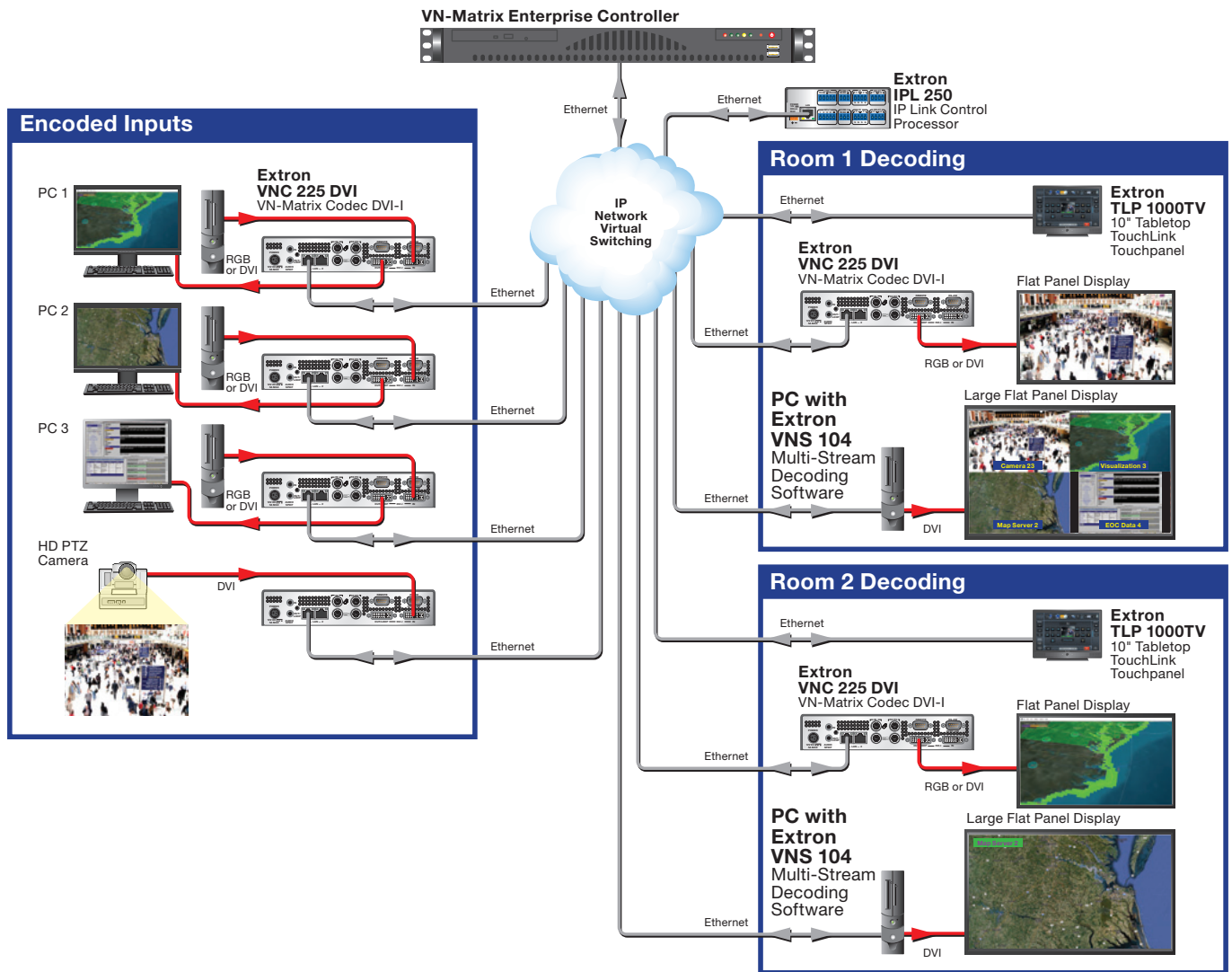
Customized splash screen presents familiar messaging when source streams are not assigned or available

Status messaging improves system awareness and aids in fault finding activities

Aspect ratio management allows images to be presented accurately or fill source windows

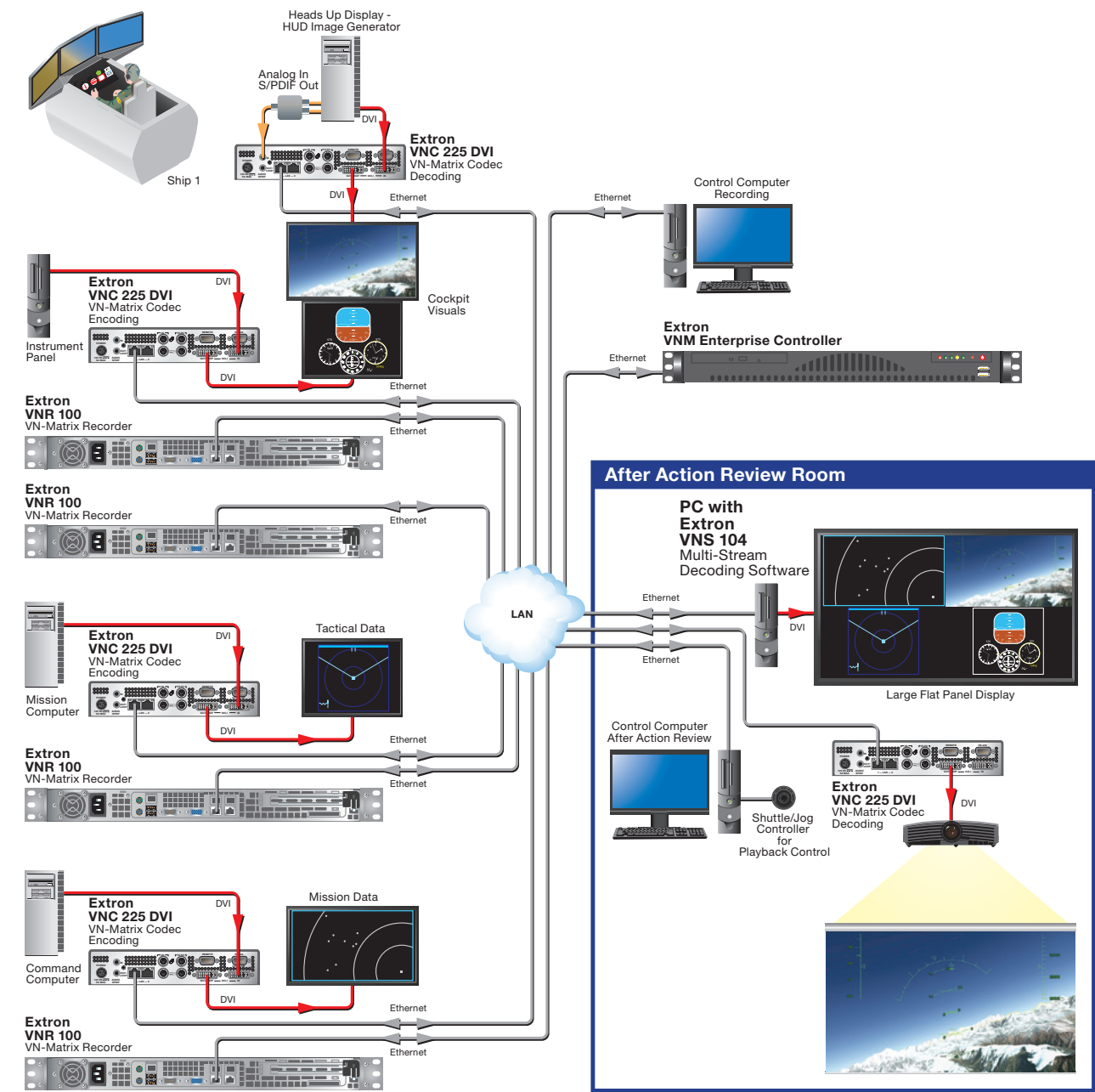
VIRTUAL SWITCHING

VN-Matrix virtual switching applications turn an IP network into a real-time AV switching and distribution system, routing sources from encoders to decoders. VNS 104 Multi-Stream Decoding Software decodes and presents four VN-Matrix streams on a single display, providing an alternative to using multiple hardware decoders and displays. VN-Matrix hardware decoders can be used to present those sources that require more critical real-time analysis and examination.



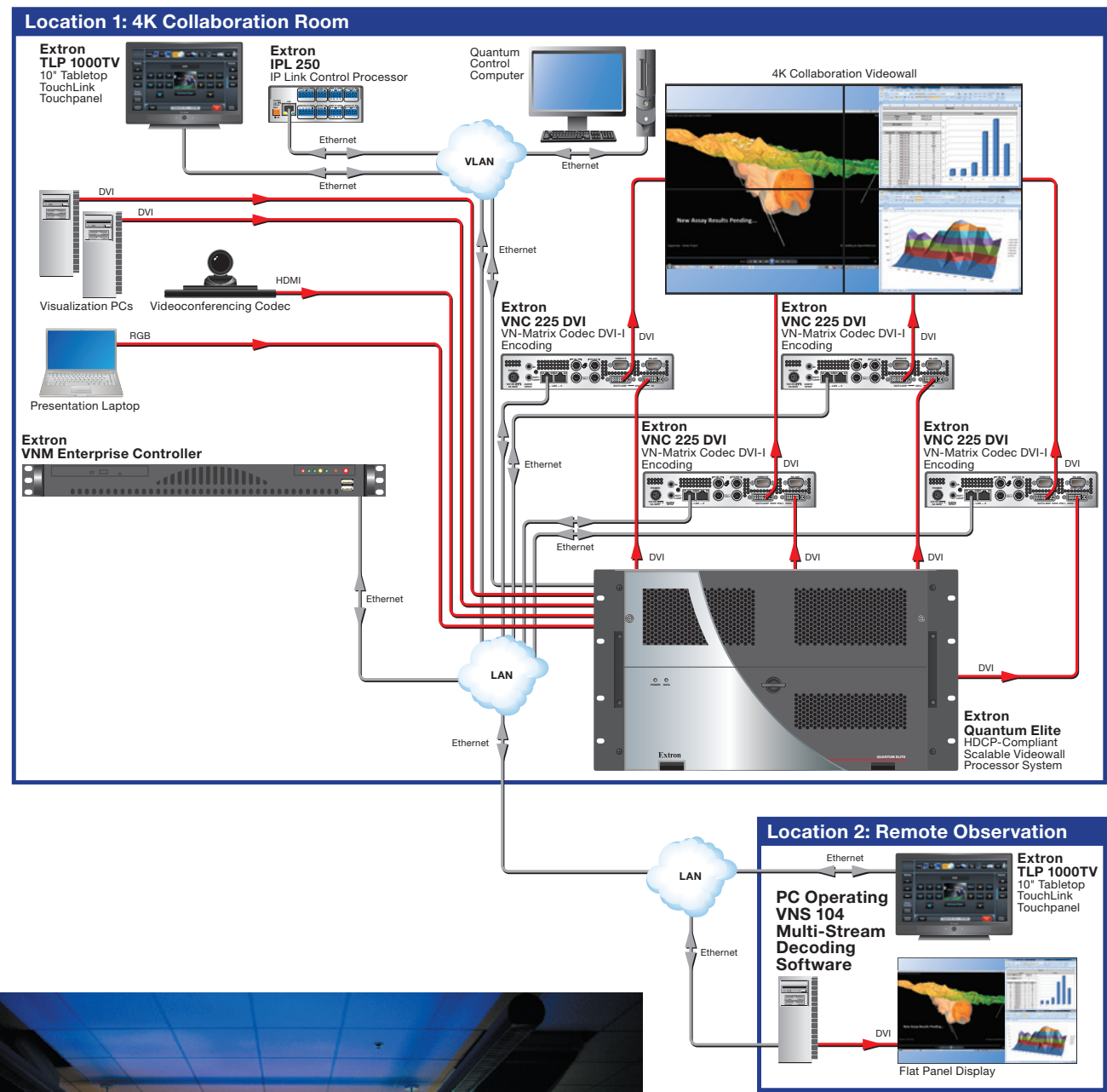
AFTER ACTION REVIEW

VN-Matrix Recorder systems record and playback multiple AV sources from aircraft or naval training and simulation applications and command and control displays. Recorded media originates from instrument panels, a cockpit heads up display – HUD, and graphical visualizations of the mission overview. VNS 104 Multi-Stream Decoding Software can be used with a VN-Matrix Recorder for after action review to decode and present slower moving imagery such as a graphical mission overview or instrument panels, while VN-Matrix hardware decoding is used for detailed viewing of full motion, real-time video such as the cockpit HUD.



4K VIDEOWALL MONITORING

Control room, presentation, and collaboration videowalls often require that a condensed, thumbnail overview be streamed for remote viewing and monitoring. VN-Matrix 225 encoders, in collaboration with VNS 104 Multi-Stream Decoding Software, can stream and present a 2x2 videowall on a single display. Each quadrant in the 2x2 decoded image may update at different points in time. The full 2x2 image can be presented, or any quadrant can be presented full screen for more detailed analysis.



THE VN-MATRIX PRODUCT SERIES

VNS 104 is part of the VN-Matrix® product series, which consists of hardware encoders for multi-rate SDI signals or RGB/DVI video, audio, and data, as well as the VN-Matrix Single Channel and Multi-Channel recorders and the VN-Matrix Enterprise Controller. This series of products is employed in system designs that provide real-time streaming and recording solutions for the most demanding applications.



VN-Matrix 225 DVI
RGB/DVI Codec
Encoder & Decoder Models also available



VN-Matrix Multi-Channel Recorder



VN-Matrix 300
3G/HD/SDI Codec



VN-Matrix Single Channel Recorder



VN-Matrix Enterprise Controller

Management from VN-Matrix Enterprise Controller

Once launched, the VNS 104 multi-stream decoder is controlled from a VN-Matrix Enterprise Controller that manages selection of streaming sources, window arrangement, aspect ratio, and text messaging parameters. The VNM Enterprise Controller also manages VNS 104 Multi-Stream Decoding Software system licensing. External control systems can interface with a VNM Enterprise Controller to select streaming sources, window arrangements, or preset system configurations. The VNM Enterprise Controller is integral to VN-Matrix streaming systems, simplifying the management of encoders, decoders, recorders, and VNS 104 Multi-stream decoding software.



VN-Matrix Enterprise Controller

Minimum PC Requirements

- ▶ Windows® 7 Professional 32-bit or 64-bit operating system
- ▶ Intel® i5® Core™ Processor, 4 Cores
- ▶ 4 GB of RAM or greater
- ▶ 512 MB graphics memory, Intel HD chipset recommended
- ▶ 12 MB of hard disk space or greater
- ▶ 1 GB network interface card - NIC

System Requirements

- ▶ VN-Matrix Enterprise Controller
- ▶ VN-Matrix 225 or 200 encoded AV streams
- ▶ Encoded progressive scan video signals
- ▶ Network routers and switches support Internet Group Management Protocol - IGMP for multicast applications

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