CORNET
SWITCHING SYSTEMS

Intelligent VDO® NVRP

Network Video Recorder & Playback

The Cornet Switching Systems iVDO NVRP is a small rugged standalone NetworknVideo Recorder and Playback device with two removable solid-state SATA drives. Each drive can store up to 256 GB of video. Designed for military, aerospace, avionics and ground vehicle systems, its function is to record, store, and playback multiple digital motion images in compliance with STANAG 4609.

Features and Functions

Recording – The iVDO NVRP can record up to six high quality STANAG 4609 compliant transport streams (UDP/IP and multicasts) which can be selected or deselected as needed. Recording is set to stop only when the storage sector associated with a particular stream is full.

Storage – The iVDO NVRP can store up to twelve hours from six STANAG 4609 compliant streams. Maximum size of the transport stream can be set by the user. Recorded transport stream video, data, and logs are organized in folders. The unit's two standard solid-state SATA hard drives mount on removable sleds that plug directly into the backplane where they receive power and the differential SATA interface from the controller board.

Playback – The iVDO NVRP offers playback of previously recorded MPEG-2 Transport Streams while simultaneously writing to the same data files. The unit can stream two videos while automatically spanning multiple files and folders for the streaming playback of any previously-recorded transport stream. Users can control play, pause, and stop settings as well as unicast/ multicast, IP addresses, port numbers, start-time, source etc.

Control is through a web server and API which provide detailed status information such as BIT, software, and firmware versions as well as the amount of storage consumed and available. The iVDO NVRP control provides a means of naming streams, devices, and hardware ports. These names can be as long as 32 characters.

Network Accessible Storage (NAS) – NAS is supported through the iVDO NVRP Ethernet interface. The drive can be read via a PC running Windows XP SP3 as a mapped drive. iVDO NVRP allows the drive to be read while it is recording; however, the video being recorded will be on a slight delay. The NAS function does not interfere with its use as a video recorder/player.

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Key Features

- Two solid state removable SATA drives
- Records up to six high quality STANAG 4609 compliant transport streams
- Stores up to 12 hours
- Transport stream size settable by user
- Organization is in folders
- Ability to play MPEG-2 and H.264 streams being recorded
- Can stream two videos while spanning multiple files and folders
- User control of play, pause, stop settings, unicast/ multicast, IP address, port numbers, start-time, and sourc
- Drive removal in less than 2 minutes
- Data storage blocks are sized so that not more than 60 seconds of data is lost in case of an unplanned power loss
- Ready to record and playback in 30 seconds after installation
- Real-time clock provides 1/30 of a second accuracy
- Control through web server and API
- NAS supported through Ethernet interface
- Human readable user inserted Event Markers for quick data access
- Comes with an upgrade path to next generation SATA drives

Specifications

Video Input

Analog Video (SD)

Format:	Four NTSC color, B/W composite, 75 ohm and S-Video (Y/C) 30 fps (29.97), 2:1 interlaced, compliant with EIA-170/RS-170A
Video Levels:	Nominal 1.0 Vp-p
Sync Level:	60 mV to 549 mV (9 to 80 IRE)
Active Video:	0 V to 1 V (0 to 140 IRE)

Digital Video (HD)

Video Input:	Four HD-SDI (SMPTE-292M)/SMPTE 259M

Audio Input

Stereo Audio:	Four, enable or disable selectable 600 ohm terminated, AGC range -21 to +4 dBm

KLV Metadata

Mux:	Ingestion of KLV metadata from external sources

Network

Interface:	10/100/1000Base-T
Protocols:	RTP, UDP, TCP/IP, HTTP, IGMP V2, ARP, NTP, SAP
IP Packets:	Unicast and Multicast

Other Functions

File transfer:	New firmware upgrade via TFTP
Reset recovery:	Less than 15 seconds, from initialization to operational
RTC:	Internal Real Time Hardware Clock for time stamping per MISB 0604. Set and maintain UTC "Zulu" time via NTP over wired Ethernet interface. NTP updates required or requested less than 10 time/hour.
Control & Settings:	Built-in web browser. Configuration via web server GUI. Support for SNMP V1, V2 and V3. All settings stored in NVRAM. On power, wakes up to last or default setting.
Presets:	10 user definable user settings

Built-In Memory

Flash:	1 GB of NOR; 1 GB of NAND
NVRAM:	40 years of life, 120 KB
DDR2:	2 banks of 512 MB DDR2

Mechanical and Environmental

Enclosure:	No cooling fan
Dimension:	356mm w x 170mm d x 215mm h
Weight:	11.6 kg
Connectors:	Eight are Series 805 "Mighty Mouse" Triple-Start Threaded Coupling connectors manufactured by Glenair (J1, J2, J3< 5< 6< 8,J9, J10). Four are Tyco BNC connectors for the HD video inputs (J4, J13, J14, J15) and one is an Amp RF connector used for the GPS antenna (J20).
Ethernet:	10/100/1000Base-T

Temperature

Operating:	0° C to +55° C
Storage:	-25° C to +70° C
Humidity:	95% non-condensing

Electrical

Power Interface: 28 VDC	Operational over 16-70 VDC nominal DC input EMI filtering Complies with MIL-STD-704A Supports remote on-off discrete LED to indicate power on No fusing or fusible links
Power Consumption:	76 W typical (4A @ 28 VDC)

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