



CORNET SWITCHING SYSTEMS

Intelligent VDO® NVRP

Network Video Recorder & Playback



The Cornet Switching Systems iVDO NVRP is a small rugged standalone Network Video 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.

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 source
- 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

Real-time Clock (RTC) is settable by the user or in the absence of a valid time selection will display a default date and time that is automatically incremented with every system reset. To avoid overwriting a recording when using the default time and date the default date is set to 1/01/1970. The RTC provides 1/30 of a second accuracy.

Event Markers – To help cue up stored information, the iVDO NVRP allows the user to insert an event marker (stored in human-readable form on the removable media). These markers permit quick access to the associated data.

Initiation and Operational States – During the initiation state the iVDO NVRP processor starts, checks the validity of its code, then proceeds to the operational state. The embedded operating system and its applications run in the operational state.

Ground Station Facilities – iVDO NVRP offers a USB 2.0 interface for connecting to a ground station PC or the NVRP can be plugged directly into a network switch or a hub for access to the ground station PC through the Ethernet. Alternatively, if the ground station PC supports SATA drives the drives can be removed from the sled and plugged directly into the PC.

Specifications

Storage

Capacity:	256 GB
Removal:	In less than one-minute by simply turning the drive lock
Record & Playback:	In 30 seconds once installed and configured.
Data Storage:	In blocks -- sized so that no more than 60 seconds of data is lost in case of an unplanned power loss.

Network

Ethernet:	Ports 1 and 2 (optional—may be used for redundancy) 100/1000BaseT
Connectors:	Via Marvell 88E1111 Ethernet Phys to Milspecification connectors 8 “mighty Mouse MIL-DTL-38999 circular connectors (performance in smaller size)
Transfer Rate:	5 MB per sec.

Management & Control

Control:	API interface support computer to computer control via the Ethernet port. Built-in web server, accessible via Ethernet interface
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Analog

Video Output: 2 RS-170 NTSC video outputs - one composite and one S-Video
Video outputs available for both live and prerecorded video streams
Decodes STANAG 4609 compliant H.264 and MPEG-2 streams with or without Metadata
User control via web server and API

Output Impedance: 75 ohm

Audio Output: 2 audio outputs The outputs are associated with two video streams.

Output Impedance: 600 ohm

Base: 0 db - 63.5 db adjustable

Environmental

Temperature

Operating: -25° C to +55° C

Storage: -45° C to 90° C

Humidity: 95% non-condensing

Mechanical

Mount: CDU style panel mount (Dzus rails) per MS25212C

Dimensions: 10" D x 4.5" H x 5.75" W

Weight: 10 lbs approx.

Electrical

Power Interface: Operational over 16-70VDC nominal 28 VDC

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: 80 W typical (3A @ 28VDC)

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