

VAADR MIL-N

Ruggedized Video and Advanced Data Recording Device

Overview

The DDC Video and Advanced Data Recorder (VAADR) records real-time video in ruggedized application, accommodating high frame rate, 16-bit high-resolution imagery and/or data. Capture RAW or compressed color or grayscale imagery, as well as associated metadata, such as GPS, timestamp, vehicular information, and other custom information. The RAW imagery recording and associated playback allows unprecedented advanced image analysis and processing during debriefing. The unit provides multiple channels, with mixed record/playback, a variety of conventional digital video controls, and a mix of very advanced image analysis and processing during playback. Additionally, it handles metadata acquisition, synchronization, management, and output to display.



Features and Capabilities

- Simultaneous recording and playback of multiple channels
- No debriefing station required, only a PC or laptop
- High bandwidth extraction via USB3.0
- Record RAW or compressed data
- Ruggedized for military use
- Optional chem-film
- Plug-and-play USB2.0 and USB3.0
- Instant access to video and data
- View recorded video with third-party applications
- Optional VAADRView provides instant access to video for debrief and analysis, such as blocking out sensitive information or exporting to various formats

Models Available

AADR MIL-N:

- DDC-VAADR2-RG-CT-004

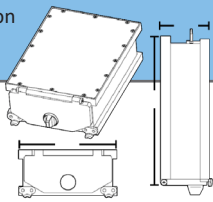
VRMM with USB2.0:

- DDC-VRMM-48-001 (48GB solid state drive)
- DDC-VRMM-128-001 (128GB solid state drive)
- DDC-VRMM-256-001 (256GB solid state drive)
- DDC-VRMM-512-001 (512GB solid state drive)
- DDC-VRMM-1-001 (1TB solid state drive)
- DDC-VRMM-2-001 (2TB solid state drive)

VRMM with USB3.0:

- DDC-VRMM-128-101 (128GB solid state drive)
- DDC-VRMM-256-101 (256GB solid state drive)
- DDC-VRMM-512-101 (512GB solid state drive)
- DDC-VRMM-1-101 (1TB solid state drive)
- DDC-VRMM-2-101 (2TB solid state drive)
- DDC-VRMM-4-101 (4TB solid state drive)

Specifications

Input Power	12V Power Barrel for Desktop Operation 28V Power via Rear Connector Battery-Backed RTC	
Input Ports	8 HOTlink II 2 Audio Channels 1 Cameralink 2 RS-170 / NTSC / PAL 1 RS-422 16-bit digital video input Mezz Card Expansion for Additional Video Ports	
Output / Data Retrieval Ports	1 USB2.0 / USB3.0 via VRMM 1 GigE (10/100/1000) 2 RS-170 / NTSC / PAL (plus 1 copy) Optional RGB component (S-Video, YPrPb Also Available) DVI	
Serial Ports	Configurable for Control, Metadata, and IRIG RS-422 (up to 40 Mbps), RS-232	
GPIO	5x 5V tolerant (3.3V drive) to DD104	
Front Panel	USB2.0 / USB3.0 via VRMM 4 LEDs (2 Red: record, full; 2 green: power, spare) 8-position DIP switch Power barrel for desktop power / data retrieval	

Dimensions	6.5" x 4.7" x 1.4" (VRMM)
Power / Temperature	19 W Maximum Dissipation / Built-In Temperature Monitor -40° to 60 °C (Operational) -55° to 125 °C (Storage)
Operational Envelope	7.5g Envelope • Vertical Maneuver: 7.5G Maximum in Operating Mode and Storage • Altitude: 40k-ft in Operating Mode / 50k ft in Storage
Power	< 12 W at 12V
Mechanical Shock (MIL-STD-810F)	Method 516.5, in Opposite Directions Along Each of Three Orthogonal Axes, with Waveform and Amplitude of the Shock Impulse Characteristics: • Operating: ±20 G • All Shocks: Half Sine Pulses • All three axes: 11 milliseconds duration
Vibration (MIL-STD-810F)	Method 514.5, Procedure 1

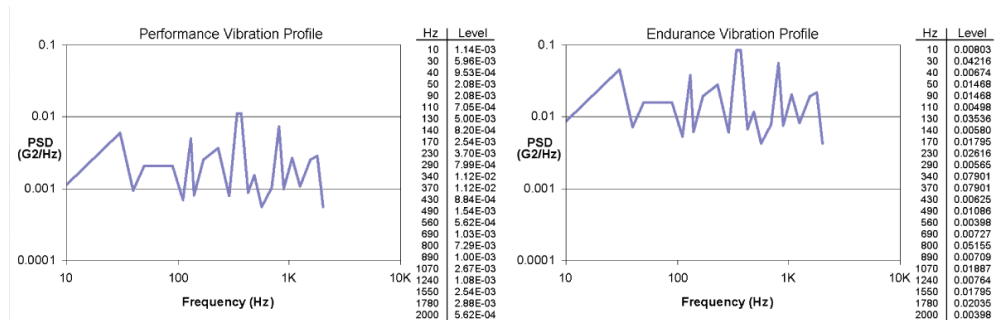
Front Panel



Back Panel



Vibration Profiles



VAADR Example Record Times

Video	RS-170		640x480 (16 bit, 30 fps)		720p (16 bit, 60 fps)		1024x1024 (16 bit, 30 fps)		1024x1024 (16 bit, 60 fps)		1080i (16 bit, 30 fps)		1080p (16 bit, 60 fps)		4K (16 bit, 30 fps)		4K (16 bit, 60 fps)	
	RAW	MPEG2	RAW	MPEG2	RAW	MPEG2	RAW	MPEG2	RAW	MPEG2	RAW	MPEG2	RAW	MPEG2	RAW	MPEG2	RAW	MPEG2
48 GB	1.6h	18h	47m	9.3h	7m	1.5h	13m	2.7h	6m	1.3h	7m	1.3h	3m	41m	1m	19m	36s	9.6m
128 GB	4.1h	2d	2h	24h	21m	4.1h	36m	7.2h	18m	3.6h	18m	3.6h	9m	1.8h	4m	51m	2m	25m
256 GB	8.2h	4.1d	4.1h	2d	41m	8.2h	1.2h	14h	36m	7.2h	36m	7.3h	18m	3.6h	8m	1.8h	4m	51m
512 GB	16h	8.2d	8.2h	4.1d	1.3h	16h	2.4h	29h	1.2h	14.5h	1.2h	14.7h	36m	7.3h	17m	3.4h	8m	1.7h
768 GB	24h	12.4d	12h	6.2d	2h	24h	3.6h	43h	1.8h	21h	1.8h	22h	55m	11h	25m	5.1h	13m	2h
1 TB	32h	16.1d	16h	8d	2.7h	32h	4.7h	2.3d	2.3h	28h	2.4h	28h	1.2h	14h	33m	6.7h	16m	3.3h
2 TB	2.6d	32.3d	32h	16.1d	5.3h	2.6d	9.4h	4.7d	4.7h	2.3d	4.7h	2.4d	2.4h	28h	1.1h	13h	33m	6.7h
3 TB	4d	48.5d	2d	24.2d	8h	4d	14h	7.1d	7.1h	3.5d	7.2h	3.6d	3.6h	43h	1.6h	20h	50m	10h
4 TB	5.3d	64.7d	2.7d	32.3d	10h	5.3d	18h	9.4d	9.4h	4.7d	9.5h	4.8d	4.7h	2.3d	2.2h	26h	1.1h	13h

*Table assumes a compression factor of 12. Larger compression factors of 25 or beyond are possible, but will affect video quality.