ALL-S/TAR™ DVR (Digital Video Recorder)

Strategic/Tactical Airborne Recorder

Broadcast Quality Video Recording for Airborne Sensors I Selected for US Navy P-8A Poseidon

PRODUCT DESCRIPTION
Specifically developed for Airborne Surveillance missions, the ALL-S/TAR™ DVR (Digital Video Recorder) supports video recording from a range of digital and analog high-definition and standard-definition input formats. High-resolution recording is achieved through low compression ratio MPEG-2 coding and striping data to up to 4 disks concurrently. Video is recorded on 4 HiPERDisk™/HiPERFlash™ Removable Media Modules (HRMM). The DVR’s simultaneous record and play, slow/still motion playback and JPEG-2000 export features support airborne image analysis and sharing with off-platform assets. Post mission, the HRMMs are removed from the DVR integrated chassis assembly and processed via a standard SATA (Serial ATA) interface at our companion HRMM Media Management Station (HMMS).

- Recording of eight independent video channels
- Superb image quality, 8-bit 4:2:2 sampling
- Industry Standard Interfaces and Protocols
- Low Cost of Ownership, No Preventive Maintenance

FEATURES
- Video Recording
  - High-Definition Video Inputs
    - Component RGB (SOG)
    - Digital SMPTE 292M/274M
  - Standard Definition Video Inputs
    - Composite SMPTE 170M
- Simultaneous Record & Play
  - Records 4 HD and 4 SD Channels
  - Plays 1 HD and 1 SD Channel
- Flexible MPEG-2 Codecs
  - Compression Ratios 5.5:1-50:1
- Synchronized Metadata
- Ethernet SNMP Control
- Removable Media
- 1920GB of Storage
- Time Stamping of Video
- Event Marking (Record/Play)
- NSA 9-12 Secure Erase (HiPERFlash™)

- Hot Swappable Media
- Slow Motion and Still Scan Play
- Export Selected Individual Video Frames (JPEG-2000 via Ethernet)

APPLICATIONS
- High-Resolution Sensor & Weapons Video Recorder
- Surveillance
- Search & Rescue
- Drug Interdiction
- Commercial Security Systems

PLATFORMS/SYSTEMS
- Fixed Wing
- Rotary
- Surface/Subsurface Vessels

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PHYSICAL CHARACTERISTICS

- **Volume:** 2.3 CuFt (3990 in³)
- **Size:** 10.5" H x 19" W x 20" D
  - 267 mm H x 483 mm W x 508 mm D
- **Weight:** 108 lbs;
  - 49.1 kgs (with removable media)
- **Power:** 115VAC; 47-400 Hz, 1 Ph 435 watts
- **Cooling:** Forced Air Convection (External)

PERFORMANCE CHARACTERISTICS

- **Storage Capacity:** 1920 Gbytes
- **Input Channels:**
  - RGB (SOG) Component: Expandable to 5 (2 typ)
  - EIA-170 Composite: Expandable to 20 (4 typ)
  - SMPTE 292 (digital HD): Expandable to 5 (2 typ)
- **Output Channels:**
  - RGB (SOG) Component: Expandable to 5 (1 typ)
  - EIA-170 Composite: Expandable to 5 (1 typ)
- **Total number of mixed input/output channels is design configuration constrained**
- **Control:** SNMP, Gigabit Ethernet
- **Time Reference:** IRIG-B
- **Image Distribution:** JPEG-2000 via Ethernet
- **Time Stamping/Search:** Yes
- **Simultaneous Record/Play:** Yes
- **MTBF (at 35°C):** 3,500 hrs

SPECIAL FEATURES

- **Multiple Frame Rates:** 23.98, 24, 25, 29.97, 30, 50, 59.94, 60, 60.6
- **Frame Sizes:** up to 1920 x 1080p (custom sizes permitted)
- **MPEG2 stream rates:** up to 140 MBits/sec
- **Chroma format:** 4:2:2
- **Group of Pictures (MPEG2):** 1(all l-frame) up to 63
- **Video Frame Format:** Progressive, Interlaced

ACCESSORIES

- **HRMM Media Management Station (HMMS)**
- **Mounting Slides**

ENVIRONMENTAL QUALIFICATIONS

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<thead>
<tr>
<th></th>
<th>Operating</th>
<th>Non-operating</th>
</tr>
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<tbody>
<tr>
<td><strong>Temperature</strong></td>
<td>5°C to +35°C</td>
<td>-40°C to +70°C</td>
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<tr>
<td><strong>Altitude (max)</strong></td>
<td>11,000 ft</td>
<td>40,000 ft</td>
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<tr>
<td><strong>Humidity (non-condensing)</strong></td>
<td>6% to 95%</td>
<td>6% to 95%</td>
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<tr>
<td><strong>Shock (half-sine)</strong></td>
<td>10 G, 11 ms</td>
<td>10 G, 11 ms</td>
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<tr>
<td><strong>Vibration (random)</strong></td>
<td>0.9 Grms, 10 to 2000 Hz</td>
<td>2.1 Grms, 10 to 2000 Hz</td>
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EMI/EMC: MIL-STD-461E
Power: MIL-STD-704E
Environmental: MIL-STD-810F
- **Altitude** Meth 500.4 Proc III
- **Rapid Decompression** Meth 500.4 Proc III
- **Random Vibration** Meth 514.5 Proc I
- **Acceleration** Meth 513.5 Proc II
- **Crash Safety** Meth 513.5 Proc III
- **Shock** Meth 516.5 Proc I
- **Bench Handling** Meth 516.5 Proc VI
- **Temperature** Meth 501.4 Proc I & II
- **Temperature Shock** Meth 503.4 Proc I
- **Explosive Atmosphere** Meth 511.4 Proc I
- **Humidity** Meth 507.4 Proc I
- **Fungus** Fungus Inert Material
- **Decontamination** No Damage

OPTIONS

- **Multiple IO Channels Mix:** Consult factory
- **MPEG-2 Compression:** Tailored to sensor video
- **Media:** Rotating Disk/Flash Disk

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