Introduction

Adopting embedded Linux operating system, Hikvision DS-9000HMFI-ST series dedicated Mobile DVR (Digital Video Recorder) provides powerful monitoring functionalities, including audio and video encoding & decoding, 3G & Wi-Fi (optional) wireless network transmission, satellite positioning service, secure data storage, hard disk vibration damping. It can both work alone as a recorder and cooperate with other devices to build a comprehensive surveillance system.

Thanks to the features of high stability, easy-to-carry and low power consumption, the DS-9000HMFI-ST series Mobile DVR is widely applied to the surveillance projects of public transportations, school buses, etc.

Main Features

- User-friendly GUI providing easy and flexible operations
- Each channel supporting up to WD1 resolution with high-efficient and flexible H.264 encoding technology
- Built-in 3G (WCDMA) and Wi-Fi (optional) module providing flexible data transmission solutions
- Pluggable GPS (Global Positioning System) module precisely positioning the vehicle via the satellite, recording the location information in the video
- Hikvision private protocol (4000 protocol)
- 3-ch CVBS video outputs and 3-ch audio outputs
- 1-ch VGA video output at up to 1920×1080 resolution
- Two pluggable 2.5-inch HDDs/SSDs and one SD/SDHC card, adopting hard disk vibration damping technology
- Information collection interfaces collecting driving information such as left/right turn, braking, backing up, etc.
- Hard disk box with USB interface supporting intelligent temperature control and data export
- Specialized aviation connectors ensuring signal stability
- Extension interfaces for external devices, such as G-sensor, etc.
- Delay (0 to 6h) shutdown and 24-hour scheduled startup/shutdown
- Wide-range power input (+8 to +36 VDC)
- Power-off protection avoiding key data from loss
- Aluminum die-cast chassis with no fan design well adaptable to working environment
- Software-based firewall supported

Available Models

<table>
<thead>
<tr>
<th>Series</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-9004HMFI</td>
<td>DS-9004HMFI-ST</td>
</tr>
<tr>
<td></td>
<td>DS-9004HMFI-ST/GW</td>
</tr>
<tr>
<td></td>
<td>DS-9004HMFI-ST/GW/WI</td>
</tr>
<tr>
<td>DS-9008HMFI</td>
<td>DS-9008HMFI-ST</td>
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<td></td>
<td>DS-9008HMFI-ST/GW</td>
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<tr>
<td></td>
<td>DS-9008HMFI-ST/GW/WI</td>
</tr>
<tr>
<td>DS-9012HMFI</td>
<td>DS-9012HMFI-ST</td>
</tr>
<tr>
<td></td>
<td>DS-9012HMFI-ST/GW</td>
</tr>
<tr>
<td></td>
<td>DS-9012HMFI-ST/GW/WI</td>
</tr>
</tbody>
</table>

- The 3G dialing function is only supported by the “/GW” devices.
- The Wi-Fi function is only supported by the “/WI” devices.
### Physical Interfaces

#### Front Panel

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AV OUT</td>
<td>6-pin aviation plug for audio and video output, providing power supply</td>
</tr>
<tr>
<td>2</td>
<td>LAN</td>
<td>Network interface</td>
</tr>
<tr>
<td>3</td>
<td>USB/eSATA</td>
<td>USB interface/eSATA interface</td>
</tr>
<tr>
<td>4</td>
<td>Indicators</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PWR: Power indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turns green after device starts up; Turns red when device stands by.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GNS: GNSS indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No light when GNSS module is abnormal; Turns green when the GNSS module works normally; Blinks in green after the positioning successful.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RDY: Ready indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turns green when the device starts up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3G: 3G indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turns green when 3G module works normally; Blinks slowly in 3G registration; Blinks frequently after successful 3G registration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REC: Record indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turns green when recording; The light is out when all recording processes are abnormal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALM: Alarm indicator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turns red when alarm occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IR: IR receiver</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Receive IR signal from remote control</td>
</tr>
<tr>
<td>5</td>
<td>SD Card Slot</td>
<td>Insert the SD card for data storage.</td>
</tr>
<tr>
<td>6</td>
<td>Hard Disk Lock</td>
<td>Lock/Unlock the hard disk box.</td>
</tr>
<tr>
<td>7</td>
<td>Hard Disk Box</td>
<td>Insert two 2.5-inch SATA HDDs/SSDs.</td>
</tr>
</tbody>
</table>

#### Rear Panel

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M-ANT 1</td>
<td>3G antenna interface for SIM card 1.</td>
</tr>
<tr>
<td>2</td>
<td>M-ANT 2</td>
<td>3G antenna interface for SIM card 2. (Reversed)</td>
</tr>
<tr>
<td>3</td>
<td>GNSS</td>
<td>GNSS antenna interface</td>
</tr>
<tr>
<td>4</td>
<td>CAN</td>
<td>CAN function interface (reserved)</td>
</tr>
<tr>
<td>5</td>
<td>ALARM</td>
<td>Alarm input/output interface, including sensor input</td>
</tr>
<tr>
<td>6</td>
<td>SPOT</td>
<td>Spot output interface of video</td>
</tr>
<tr>
<td>7</td>
<td>AVOUT</td>
<td>4-pin aviation plug for audio &amp; video output</td>
</tr>
<tr>
<td>8</td>
<td>RS232</td>
<td>Connector for RS-232 devices</td>
</tr>
<tr>
<td>9</td>
<td>EXT.DEV</td>
<td>10-pin aviation plug for RS-422 communication (also reserved for automobile station reporter)</td>
</tr>
<tr>
<td>10</td>
<td>POWER</td>
<td>6-pin aviation plug for power supply</td>
</tr>
<tr>
<td>11</td>
<td>WIFI</td>
<td>Wi-Fi antenna interface</td>
</tr>
<tr>
<td>12</td>
<td>VGA</td>
<td>VGA interface</td>
</tr>
<tr>
<td>13</td>
<td>CH1<del>CH4, CH5</del>CH8</td>
<td>Audio &amp; video input of channel 1~7, providing power supply (12V).</td>
</tr>
</tbody>
</table>

**NOTE:**
- Part function is optional. For details, see the actual device model.
- The interfaces vary according to the actual device models.
### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Video/Audio Input</th>
<th>Video/Audio Output</th>
<th>Video/Audio Compression</th>
<th>Hard disk</th>
<th>Wireless Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-9000HMFI-ST</td>
<td>Analog video input: 4-ch, Aviation plug (1.0 Vp-p, 75 Ω)</td>
<td>VGA output: 1-ch, Resolution: 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz</td>
<td>Video compression: H.264</td>
<td>Two 2.5-inch SATA HDDs/SSDs</td>
<td>3G (WCDMA) (The 3G dialing function is only supported by the “/GW” devices.)</td>
</tr>
<tr>
<td>DS-9000HMFI-ST/GW</td>
<td>Audio input: 4-ch, Aviation plug (linear level, 1 K Ω)</td>
<td>CVBS output: 3-ch: AV OUT (on the front panel), AV OUT (on the rear panel), EXT.DEV, Aviation plug (1.0 Vp-p, 75 Ω); resolution: PAL: 704 × 576, NTSC: 704 × 480</td>
<td>Encoding resolution: WD1/4CIF/2CIF/CIF</td>
<td>2 × 1TB capacity</td>
<td>Built-in, 802.11 b/g/n supported, 2.4GHz (The Wi-Fi function is only supported by the “/WI” devices.)</td>
</tr>
<tr>
<td>DS-9000HMFI-ST/GW/WI</td>
<td></td>
<td>SPOT output: 1-ch</td>
<td>Video frame rate: PAL: 1 to 25 fps, NTSC: 1 to 30 fps</td>
<td>Pluggable</td>
<td></td>
</tr>
<tr>
<td>DS-9008HMFI-ST</td>
<td>Video bitrate: 32 Kbps to 2048 Kbps, or user defined (Max. 4096 Kbps)</td>
<td>Audio output: 2-ch, Aviation plug (linear level, 600 Ω)</td>
<td>Stream type: Video, Video and Audio</td>
<td>Patented hard disk vibration reduction technology</td>
<td></td>
</tr>
<tr>
<td>DS-9008HMFI-ST/GW</td>
<td></td>
<td></td>
<td>Audio bitrate: 16Kbps</td>
<td>Backup: Hard disk box, USB interface and eSATA interface supporting data backup</td>
<td></td>
</tr>
<tr>
<td>DS-9008HMFI-ST/GW/WI</td>
<td></td>
<td></td>
<td>Two-way audio: G.722</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Specifications

### Model

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>GNSS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPS</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Positioning

- **GNSS**
- **GPS**

### External interface

<table>
<thead>
<tr>
<th>Feature</th>
<th>DS-9004HMFI-ST/GW/WI</th>
<th>DS-9008HMFI-ST/GW/WI</th>
<th>DS-9012HMFI-ST/GW/WI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving information collection</td>
<td>4-ch high/low-level signal input, 1-ch pulse signal input (reserved)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm in</td>
<td>3-ch high/low level signal input</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm out</td>
<td>2-ch relay output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network interface</td>
<td>1; RJ45; 10M/100M self-adaptive Ethernet interface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antenna interface</td>
<td>SMA interfaces: One for 3G, two for Wi-Fi (reserved), and one for GPS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serial interface</td>
<td>1, RS-232; 1, RS-422; aviation plug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>eSATA interface</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB interface</td>
<td>1 × USB2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXP.STOR</td>
<td>Connectable to external HDD for storage expansion (reserved)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIM/UIM card</td>
<td>1 × standard SIM/UIM card slot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD/SDHC card</td>
<td>1, standard SD/SDHC card slots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating system</td>
<td>Linux</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### General

<table>
<thead>
<tr>
<th>Feature</th>
<th>DS-9004HMFI-ST/GW/WI</th>
<th>DS-9008HMFI-ST/GW/WI</th>
<th>DS-9012HMFI-ST/GW/WI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating method</td>
<td>Local control, IR remote control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>Input: +8 to +36 VDC; Output: 12 VDC/2A, 5 VDC/1A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>Standby: Max. 0.5W; Full load: Max. 20W (without IP camera or hard disk)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>-10 to +55°C (14 to 131°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working humidity</td>
<td>10% to 95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (W×D×H)</td>
<td>245.8 × 202 × 86.87mm (9.7 × 8.0 × 3.4&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Approx. 3.25kg (without hard disk)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DS-9000HMFI-ST Series Mobile DVR

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**Hikvision**

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