The DIVAR IP all-in-one 7000 family is an affordable, simple and reliable all-in-one recording, viewing and management solution for network surveillance systems of up to 256 channels (with 8 channels pre-licensed). Running the full BVMS solution and powered by Video Recording Manager software from Bosch, DIVAR IP all-in-one 7000 is an intelligent IP video management and storage device. DIVAR IP all-in-one 7000 3U is a 3HU rack mount unit that combines advanced management and state-of-the-art recording management into a single cost-effective, plug-and-play IP recording appliance for IT-minded customers.

**System overview**

The DIVAR IP all-in-one 7000 family utilizes an energy efficient, embedded design which reduces possible points of failure and boasts Bosch quality through-and-through. Utilizing “enterprise-rated” hard drives in a fault tolerant RAID-5 configuration, dual port Gigabit Ethernet network interface, 8 GB system memory and an Intel Xeon Quad Core Processor, the device delivers high-end performance at a very affordable price. Easy to install and operate, the system features wizard-based set-up and centralized configuration. All components are pre-installed. Simply connect to the network and power the unit up - DIVAR IP all-in-one 7000 is ready to begin recording straight out of the box.

BVMS manages all IP and digital video and audio, plus all the security data being transmitted across your IP network. It seamlessly combines IP cameras and encoders, provides system-wide event and alarm management, system health monitoring, user and priority management.

**Functions**

The DIVAR IP all-in-one 7000 3U units feature highly energy-efficient hot-swap redundant power supplies, as well as front-swappable SATA-3 hard drives providing up to 192 TB of gross storage capacity. All system software is pre-installed and pre-activated - creating an out-of-the-box ready-to-use video management appliance. The DIVAR IP all-in-one 7000 3U units utilize Microsoft Windows Storage Server 2016.

**Instant real time access to video**

View high quality HD and even UHD video despite low or limited bandwidth connections. Dynamic Transcoding technology ensures you can view your video immediately - anytime, anywhere. The built-in transcoder supports up to 4 x UHD resolution video streams in parallel.
Management
Once booted up the system will offer immediate access to the BVMS management application via a customized GUI. The ability to use one central GUI for configuration and operation management reduces installation and training requirements, and helps keep ongoing system management costs low.

Remote viewing
For remote viewing of a single DIVAR IP all-in-one 7000 system, BVMS Operator Client is included. For multiple systems, add them to BVMS Enterprise Management Server. Alternatively, use Video Security Client for viewing video from a separate workstation or mobile device.

IT Management
Microsoft Windows Storage Server 2016 provides a simple, intuitive user interface for system configuration and unified appliance management. Administrators and IT professionals will appreciate the ability to manage DIVAR IP all-in-one 7000 systems using the built-in Microsoft System Center Suite. The ability to use one central tool for configuration and operations management reduces installation and training requirements, and helps keep ongoing system management costs low.
In addition, the DIVAR IP all-in-one 7000 system offers advanced monitoring and management options using the Intelligent Platform Management Interface (IPMI).

Monitoring
The DIVAR IP all-in-one 7000 family provides SNMP, Remote Desktop and HTTP monitoring support for the system’s hardware and for the video management applications.
Increased reliability of high-availability hardware, embedded design as well as system-wide monitoring and management ensure maximum uptime.

Bosch quality
Bosch subjects all its products to the most comprehensive and rigorous battery of quality endurance tests in the industry. Our recording products are subjected to extreme temperatures, voltages and vibrations to determine reliable operating limits, so you can be assured of long-term reliable operation. And Bosch firmly stands behind every product it sells with an end-to-end 3 year warranty backed by technical support.

Installation/configuration notes

Notice
Environmental conditions
Install the system in a clean, dust-free, dry and weather-protected area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. The standard warranty coming with the system will be void if evidence is seen that the system was exposed to conditions contradicting the environmental conditions mentioned here.

System status
DIVAR IP all-in-one 7000 units come fully loaded and fully functional with Microsoft Operating System and Bosch Bosch applications: Windows Storage Server 2016, 64-bit; BVMS; Video Recording Manager including Video Streaming Gateway; Dynamic Transcoding.

Third-party hard drives
DIVAR IP all-in-one 7000 units without pre-installed hard drives:
The RAID configuration of third-party data hard drives must be set up manually via the pre-installed RAID management utility. Only after this manual RAID configuration the DIVAR IP all-in-one 7000 system provides full functionality.

RAID configuration
DIVAR IP all-in-one 7000 3U units come pre-configured in a RAID-5 standard configuration with iSCSI LUNs (fully populated system only) and provide the following specifications:

<table>
<thead>
<tr>
<th>Gross Capacity</th>
<th>Net Capacity</th>
<th>Bandwidth*</th>
<th>IP Cameras</th>
</tr>
</thead>
<tbody>
<tr>
<td>w/o HDD</td>
<td>n/a</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
<tr>
<td>16 x 8 TB</td>
<td>111720 GB</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
<tr>
<td>16 x 12 TB</td>
<td>167580 GB</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
</tbody>
</table>

*Performance only warranted with hard drive models tested and qualified by Bosch.

These values refer to the BVMS recording engine; Net capacity for a RAID-5 configuration without hot spare; 256 connected IP cameras indicate the number of concurrent recordable cameras plus 8 sessions for replay.
Optional supported RAID configurations are RAID-5 with 1 x hot spare or RAID-6 without hot spare. The optional RAID configurations will not come pre-configured but must be set up manually via the pre-installed RAID configuration utility.
### RAID-5 plus hot spare configuration

<table>
<thead>
<tr>
<th>Gross Capacity</th>
<th>Net Capacity</th>
<th>Bandwidth*</th>
<th>IP Cameras</th>
</tr>
</thead>
<tbody>
<tr>
<td>w/o HDD</td>
<td>n/a</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
<tr>
<td>16 x 8 TB</td>
<td>104272 GB</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
<tr>
<td>16 x 12 TB</td>
<td>156408 GB</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
</tbody>
</table>

*Performance only warranted with hard drive models tested and qualified by Bosch.

### RAID-6 configuration

<table>
<thead>
<tr>
<th>Gross Capacity</th>
<th>Net Capacity</th>
<th>Bandwidth*</th>
<th>IP Cameras</th>
</tr>
</thead>
<tbody>
<tr>
<td>w/o HDD</td>
<td>n/a</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
<tr>
<td>16 x 8 TB</td>
<td>104272 GB</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
<tr>
<td>16 x 12 TB</td>
<td>156408 GB</td>
<td>550 Mbit/s</td>
<td>256 max.</td>
</tr>
</tbody>
</table>

*Performance only warranted with hard drive models tested and qualified by Bosch.

### Operation modes

DIVAR IP all-in-one 7000 units can operate in three different modes:

- Full video recording and management system, utilizing the BVMS and Video Recording Manager core components and services. This mode allows for advanced video management features such as event and alarm handling. A base license with 8 included camera channels is already pre-licensed. You can expand the system up to 32 channels with a MBV-BPLU-DIP license and further up to 256 channels with additional 1-channel licenses (MBV-1CHAN-DIP). The recorded video streams need to be configured in a way that the maximum bandwidth of the system (BVMS/Video Recording Manager base system plus iSCSI storage expansions) is not exceeded.

- Pure video recording system, utilizing the Video Recording Manager core components and services. In this mode 64 Video Recording Manager camera-recording channels are already pre-licensed. You can expand the system up to 256 channels with the Video Recording Manager channel licenses listed in the ordering information. The recorded video streams need to be configured in a way that the maximum bandwidth of the system (BVMS/Video Recording Manager base system plus iSCSI storage expansions) is not exceeded.

- iSCSI storage expansion for a BVMS or Video Recording Manager system, which runs on a different hardware. Up to four of these iSCSI storage expansions can be added to a BVMS or Video Recording Manager system running on a DIVAR IP all-in-one 7000 unit.

### License limitations

For the BVMS licenses applied on DIVAR IP all-in-one 7000 units, please note the upper limit of each:

<table>
<thead>
<tr>
<th>License type</th>
<th>Pre-licensed</th>
<th>Upper limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workstation clients</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>DVR/BRS systems</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>CCTV keyboards</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Mobile Video Service</td>
<td>1*</td>
<td>4*</td>
</tr>
<tr>
<td>Intrusion Panels</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

*Mobile Video Service needs to run on separate hardware

For further information, under Ordering information see Software Options.

### Notice

Uninterruptable Power Supply (UPS). We strongly recommend using an "Online UPS" with an always active battery. The UPS must support Microsoft Windows Storage Server 2016 and must be sufficient to allow time to bring an auxiliary power source on line, or to properly shut down the DIVAR IP disk array(s).

Bosch is not liable for system failures of units equipped with third-party hard drives if the third-party hard drives are source of the issues. Such drives are not covered by the 3 years warranty.

### Technical specifications

#### Electrical

- AC input rating: 100 to 240 V / 50 to 60 Hz
- Input current: 3.3 A
- Actual output wattage from power supply: 413.9 W
- Efficiency of power supply: 92%
- Power consumption*: 449.9 W

*Power consumption: 550 Mbit/s, 16 x 8 TB, 104272 GB, 550 Mbit/s, 256 max.
### Electrical 140 VAC input

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total BTU/h</td>
<td>1535.4</td>
</tr>
<tr>
<td>Power factor</td>
<td>0.98</td>
</tr>
<tr>
<td>System AC input VA requirement</td>
<td>459.0 VA</td>
</tr>
</tbody>
</table>

*System power consumption may vary based on workload and environment.

### Electrical 240 VAC input

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Input current</td>
<td>1.9 A</td>
</tr>
<tr>
<td>Actual output wattage from power supply</td>
<td>413.9 W</td>
</tr>
<tr>
<td>Efficiency of power supply</td>
<td>94%</td>
</tr>
<tr>
<td>Power consumption*</td>
<td>440.3 W</td>
</tr>
<tr>
<td>Total BTU/h</td>
<td>1502.7</td>
</tr>
<tr>
<td>Power factor</td>
<td>0.96</td>
</tr>
<tr>
<td>System AC input VA requirement</td>
<td>458.6 VA</td>
</tr>
</tbody>
</table>

*System power consumption may vary based on workload and environment.

### Mechanical

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Form factor</td>
<td>3HU rack mount</td>
</tr>
<tr>
<td>Power supply</td>
<td>1200 W Platinum Level Redundant</td>
</tr>
</tbody>
</table>
| USB ports            | Front: 2 USB 2.0 ports  
                       | Rear: 2 USB 2.0 ports, 2 USB 3.0 ports |
| Network              | Dual Intel i210AT Gigabit LAN (teamed)  
                       | 1 IPMI BMC port |
| Dimensions (H x W x D) | 132 x 437 x 648 mm (5.2 x 17.2 x 25.5 in) |
| Weight               | 32.7 kg (72 lb) |

### Environmental

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>+10 °C to +35 °C (+50 °F to +95 °F)</td>
</tr>
<tr>
<td>Non-operating temperature</td>
<td>-40 °C to +70 °C (-40 °F to +158 °F)</td>
</tr>
<tr>
<td>Operating relative humidity</td>
<td>8 to 90% (non-condensing)</td>
</tr>
<tr>
<td>Non-operating relative humidity</td>
<td>5 to 95% (non-condensing)</td>
</tr>
</tbody>
</table>

### Processor

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| Processor            | Intel Xeon Processor E3-1275 V3  
                       | (8 MB Cache, 3.5 GHz) |
| Socket               | 1         |
| Cache memory         | 8 MB Intel Smart Cache |

### Ordering information

**DIP-72G8-16HD Management appliance 3U 16X8TB**
All-in-one recording, viewing and management solution for network surveillance systems.  
With 16 x 8 TB storage capacity.  
Order number **DIP-72G8-16HD**

**DIP-72GC-16HD Management appliance 3U 16X12TB**
All-in-one recording, viewing and management solution for network surveillance systems.  
With 16 x 12 TB storage capacity.  
Order number **DIP-72GC-16HD**

**DIP-72G0-00N Management appliance 3U without HD**
All-in-one recording, viewing and management solution for network surveillance systems.  
Without HDD.  
Order number **DIP-72G0-00N**
**Accessories**

**DIP-7GRSN-P6 Graphic / sound for DIPaio7000**
Graphics and sound card for DIVAR IP all-in-one 7000 appliances.
Order number DIP-7GRSN-P6

**DIP-AIO12-HDD 12TB HDD DIVAR IP all-in-one**
Hard disk storage expansion for DIVAR IP all-in-one appliances with a capacity of 12 TB.
Order number DIP-AIO12-HDD

**DIP-AIO4-HDD 4TB HDD DIVAR IP all-in-one**
Hard disk storage expansion for DIVAR IP all-in-one appliances with a capacity of 4 TB.
Order number DIP-AIO4-HDD

**DIP-AIO8-HDD 8TB HDD DIVAR IP all-in-one**
Hard disk storage expansion for DIVAR IP all-in-one appliances with a capacity of 8 TB.
Order number DIP-AIO8-HDD

**KBD-UXF Keyboard, USB CCTV-oriented**
USB CCTV-oriented keyboard for use with BVMS, BIS - Video Engine, or DIVAR IP systems.
Order number KBD-UXF

**Software Options**

**MBV-1CHAN-DIP License Camera/decoder expansion**
BVMS license for DIVAR IP all-in-one. Expansion license for 1 channel (cameras/decoders).
Order number MBV-1CHAN-DIP

**MBV-BPLU-DIP License Plus base for DIP AIO 6000-7000**
BVMS Plus license for DIVAR IP all-in-one 6000 and DIVAR IP all-in-one 7000.
Expansion license to expand to 32 channels (cameras/decoders).
Order number MBV-BPLU-DIP

**MBV-1DUR-DIP License Camera dual recording expansion**
BVMS license for DIVAR IP all-in-one. Expansion license for 1 encoder channel used for dual recording.
Order number MBV-1DUR-DIP

**MBV-1FOV-DIP License VRM Failover channel expansion**
BVMS license for DIVAR IP all-in-one.
Expansion license for 1 encoder channel used with a Failover VRM.
Order number MBV-1FOV-DIP

**MBV-XWST-DIP License Workstation expansion**
BVMS license for DIVAR IP. Expansion license for 1 workstation (each extra workstation requires 1 license).
Order number MBV-XWST-DIP

**MBV-XDVR-DIP License DVR expansion**
BVMS license for DIVAR IP. Expansion license for 1 DVR. Order the exact number required.
Order number MBV-XDVR-DIP

**MBV-XKBD-DIP License Keyboard expansion**
BVMS license for DIVAR IP. Expansion license for 1 CCTV keyboard. Order the exact number required.
Order number MBV-XKBD-DIP

**MBV-XMVS-DIP License Mobile video service expansion**
BVMS license for DIVAR IP. Expansion license for 1 Mobile Video Service.
Order number MBV-XMVS-DIP

**MBV-XINT-DIP License Intrusion panel expansion**
BVMS license for DIVAR IP. Expansion license to integrate intrusion panels.
Order number MBV-XINT-DIP

**MVM-XVRM-016 16 camera Upgrade License**
Video Recording Manager upgrade license. For 16 cameras.
Order number MVM-XVRM-016

**DLA-XVRM-032 AIO - 32 camera Upgrade License**
Video Recording Manager upgrade license. For 32 cameras.
Order number DLA-XVRM-032

**DLA-XVRM-064 AIO - 64 camera Upgrade License**
Video Recording Manager upgrade license. For 64 cameras.
Order number DLA-XVRM-064

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