

# DIVAR IP all-in-one 7000 3U

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Invented for life



- ▶ RAID-5 protected (standard configuration), all-in-one video management solution for up to 256 channels
- ▶ Out-of-the-box IP video management solution with up to 192 TB storage capacity
- ▶ Instantly find what you are looking for
- ▶ Advanced user and alarm management
- ▶ 3 years warranty, including next business day services

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 H.264 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.

## Certifications and approvals

Region	Regulatory compliance/quality marks	
Europe	CE	DIVAR IP all-in-one 7000

## 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 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:

### RAID-5 configuration

Gross Capacity	Net Capacity	Bandwidth*	IP Cameras
w/o HDD	n/a	550 Mbit/s	256 max.
16 x 8 TB	111720 G B	550 Mbit/s	256 max.
16 x 12 TB	167580 G B	550 Mbit/s	256 max.

\*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

Gross Capacity	Net Capacity	Bandwidth*	IP Cameras
w/o HDD	n/a	550 Mbit/s	256 max.
16 x 8 TB	104272 G B	550 Mbit/s	256 max.
16 x 12 TB	156408 G B	550 Mbit/s	256 max.

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

**RAID-6 configuration**

Gross Capacity	Net Capacity	Bandwidth*	IP Cameras
w/o HDD	n/a	550 Mbit/s	256 max.
16 x 8 TB	104272 G B	550 Mbit/s	256 max.
16 x 12 TB	156408 G B	550 Mbit/s	256 max.

\*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:

License type	Pre-licensed	Upper limit
Workstation clients	2	10
DVR/BRS systems	1	10
CCTV keyboards	2	10
Mobile Video Service	1*	4*
Intrusion Panels	1	10

\*Mobile Video Service needs to run on separate hardware

For further details, see the respective license information.

**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).

**Notice**

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.

**Notice**

The next business day on-site service level can only be provided if the respective system has been registered immediately after receipt and installation. Otherwise, service will be provided based on best effort basis. Information about registration details is available in every shipment (registration form) or from the Bosch online product catalog. Next business day services cannot be provided in every country everywhere. For limitations and exceptions see the registration details in the registration form.

**Technical specifications**

Electrical	
AC input rating	100 to 240 V / 50 to 60 Hz
Electrical 140 VAC input	
Input current	3.3 A
Actual output wattage from power supply	413.9 W
Efficiency of power supply	92%
Power consumption*	449.9 W
Total BTU/h	1535.4
Power factor	0.98
System AC input VA requirement	459.0 VA

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

**Electrical 240 VAC input**

Input current	1.9 A
Actual output wattage from power supply	413.9 W
Efficiency of power supply	94%
Power consumption*	440.3 W
Total BTU/h	1502.7
Power factor	0.96
System AC input VA requirement	458.6 VA

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

**Mechanical**

Form factor	3HU rack mount
Power supply	1200 W Platinum Level Redundant
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**

Operating temperature	+10 °C to +35 °C (+50 °F to +95 °F)
Non-operating temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Operating relative humidity	8 to 90% (non-condensing)
Non-operating relative humidity	5 to 95% (non-condensing)

**Processor**

Processor	Intel Xeon Processor E3-1275 V3 (8 MB Cache, 3.5 GHz)
Socket	1
Cache memory	8 MB Intel Smart Cache
Memory protection	ECC unbuffered
Max front side bus	1600 MHz

**Memory**

Memory installed	8 GB, DDR3-1666 ECC UNB (1 x 8 GB)
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**Storage**

Storage type	16 trays: 3.5-inch SATA
Hard drives installed	
• Data	SATA-3, 7200 RPM, 64 MB, 3.5", RAID-5 configuration (default) DIP-72G8-16HD: 16 x 8 TB DIP-72GC-16HD: 16 x 12 TB DIP-72G0-00N: w/o HDD
• OS	2 x 120 GB SSD RAID-1 configuration
SAS RAID card	8 ports LSI 3108 SAS3 controller
DVD writer	Internal

**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**

**EWE-71F8SFH-IW DIP-71F8-16HD SRV Ext. 12 Mths IW**

12-month hardware service extension next business day for DIP-71F8-16HD, DIP-72G8-16HD or DIP-72GC-16HD, available for a 4th or a 4th and 5th year as a standard.

Order number **EWE-71F8SFH-IW**

**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**

**EWE-71F8SFH-IW DIP-71F8-16HD SRV Ext. 12 Mths IW**

12-month hardware service extension next business day for DIP-71F8-16HD, DIP-72G8-16HD or DIP-72GC-16HD, available for a 4th or a 4th and 5th year as a standard.

Order number **EWE-71F8SFH-IW**

**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**

**EWE-71F0S0N-IW DIP-71F0-00N SRV Ext. 12 Mths IW**

12-month hardware service extension next business day for DIP-71F0-00N or DIP-72G0-00N, available for a 4th or a 4th and 5th year as a standard.

Order number **EWE-71F0S0N-IW**

**Accessories****DIP-7GRSN-P6 Graphic / sound for DIPaio7000**

Graphics card (Nvidia Quadro P620 or successor) 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).  
The use with DIVAR IP all-in-one 5000 requires a MBV-BLIT-DIP license.  
The use with DIVAR IP all-in-one 7000 requires a MBV-BPLU-DIP license.  
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**

**MBV-XPI-DIP License Person ident. channel expansion**

Expansion license for 1 person identification channel.  
Order the exact number required.  
Order number **MBV-XPI-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**

**Represented by:**

**Europe, Middle East, Africa:**  
Bosch Security Systems B.V.  
P.O. Box 80002  
5600 JB Eindhoven, The Netherlands  
Phone: + 31 40 2577 284  
emea.securitysystems@bosch.com  
emea.boschsecurity.com

**Germany:**  
Bosch Sicherheitssysteme GmbH  
Robert-Bosch-Ring 5  
85630 Grasbrunn  
Germany  
www.boschsecurity.com

**North America:**  
Bosch Security Systems, LLC  
130 Perinton Parkway  
Fairport, New York, 14450, USA  
Phone: +1 800 289 0096  
Fax: +1 585 223 9180  
onlinehelp@us.bosch.com  
www.boschsecurity.us

**Asia-Pacific:**  
Robert Bosch (SEA) Pte Ltd, Security Systems  
11 Bishan Street 21  
Singapore 573943  
Phone: +65 6571 2808  
Fax: +65 6571 2699  
apr.securitysystems@bosch.com  
www.boschsecurity.asia