

DIVAR IP all-in-one 7000 2U



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).

DIVAR IP all-in-one 7000 2U is a 2U 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, 16 GB system memory and an Intel Xeon Hexa 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. 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.

- ▶ 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 96 TB storage capacity
- ▶ Instantly find what you are looking for
- ▶ Advanced user and alarm management
- ▶ 3 years hardware warranty, including next business day services

Functions

The DIVAR IP all-in-one 7000 2U units feature highly energy-efficient hot-swap redundant power supplies, as well as front-swappable SATA-3 hard drives providing up to 96 TB of gross storage capacity. The DIVAR IP all-in-one 7000 2U units utilize Microsoft Windows Server IoT 2019 for Storage Standard.

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 2 x UHD resolution video streams in parallel.

Management

DIVAR IP Software Center provides a central user interface for software setup, upgrade and operation mode selection, which reduces installation and training requirements and keeps 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 Server IoT 2019 for Storage Standard 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 Windows Admin Center. 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 DIVAR IP Software Center.

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 2U 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.
8 x 4 TB	26068 GB	550 Mbit/s	256 max.
8 x 8 TB	52136 GB	550 Mbit/s	256 max.
8 x 12 TB	78204 GB	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.
8 x 4 TB	22344 GB	550 Mbit/s	256 max.
8 x 8 TB	44688 GB	550 Mbit/s	256 max.
8 x 12 TB	67032 GB	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.
8 x 4 TB	22344 GB	550 Mbit/s	256 max.
8 x 8 TB	44688 GB	550 Mbit/s	256 max.
8 x 12 TB	67032 GB	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.

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. 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 BVMS documentation.

i 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).

i 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.

i Notice Hardware warranty

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.

i Notice Software maintenance

Maintenance of software components is not included in this product. A separate maintenance agreement needs to be purchased, in order to receive updates and technical support for the installed software.

Technical specifications

Electrical

Type of power supply	VAC
Operating voltage (VAC)	100 - 240 VAC
Maximum output power (W)	800 W
Power frequency	50 Hz; 60 Hz

120 VAC input (DIP-738C-8HD)

Rated input current (A)	2.1 A
Actual output wattage from power supply (W)	228.8 W
Efficiency of power supply (%)	94%
Power consumption* (W)	243.4 W
Maximum heat loss (BTU/h)	830.7 BTU/h
Power factor	0.98
System AC input VA requirement	248.3 VA

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

240 VAC input (DIP-738C-8HD)

Rated input current (A)	1.0 A
Actual output wattage from power supply (W)	228.8 W

Efficiency of power supply (%)	96%
Power consumption* (W)	238.3 W
Maximum heat loss (BTU/h)	813.4 BTU/h
Power factor	0.96
System AC input VA requirement	248.2 VA

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

Mechanical

Dimension (H x W x D mm)	89 x 437 x 648 mm
Dimension (H x W x D in)	3.5 x 17.2 x 25.5 in
Mounting type	rack-mounted
Rack unit (U)	2 U

	DIP-7380-00N Management appliance, 2U w/o HD 3rd gen
Weight (kg)	16.50 kg
Weight (lb)	36.39 lb

	DIP-7384-8HD Management appliance, 2U 8X4TB 3rd gen
Weight (kg)	21.90 kg
Weight (lb)	48.39 lb

	DIP-7388-8HD Management appliance, 2U 8X8TB 3rd gen
Weight (kg)	22.70 kg
Weight (lb)	50.15 lb

	DIP-738C-8HD Management appliance, 2U 8X12TB 3rd gen
Weight (kg)	22.10 kg
Weight (lb)	48.79 lb

Environmental

Operating temperature (°C)	10 - 35 °C
Operating temperature (°F)	50 - 95 °F
Storage temperature (°C)	-40 - 70 °C
Storage temperature (°F)	40 - 158 °F

Operating relative humidity, non-condensing (%)	8 - 90 %
Storage relative humidity (%)	5 - 95 %

Operation

Processor	Intel® Xeon® E-2226GE
Processor base frequency	3.40 GHz
Cache	12 MB Intel® Smart Cache
Installed memory	16GB DDR4-2666 2Rx8 ECC UDIMM
Memory protection	ECC unbuffered
Operating system	Microsoft Windows Server IoT 2019 for Storage Standard
Processor graphics	Intel HD onboard graphics (three digital outputs: 1 DVI-I port, 2 DisplayPort ports), VGA disabled
SAS RAID Card	12Gb/s Eight-Port
Software compatibility	Web browser; Bosch Configuration Manager; Bosch Video Management System; Video Recording Manager; Video Security App

Storage

Internal storage	HDD
HDD connectivity	SATA3
HDD dimension	3.5 inch
Maximum internal hard drives	8
HDD rotation speed (rpm)	7200 rpm
Optical drive type	DVD double layer

Connectivity

Number of USB ports	6 Front: 2 USB 2.0 ports Rear: 3 USB 3.1 ports and 1 USB-C port
Number of Ethernet ports	2 RJ45 Gigabit Ethernet LAN ports (teamed)
Network port	1 IPMI BMC port

Ordering information

DIP-7380-00N Management appliance, 2U w/o HD 3rd gen

All-in-one recording, viewing and management solution for network surveillance systems.

Without HDD.

Order number **DIP-7380-00N | F.01U.385.539**

DIP-7384-8HD Management appliance, 2U 8X4TB 3rd gen

All-in-one recording, viewing and management solution for network surveillance systems.

With 8 x 4 TB storage capacity.

Order number **DIP-7384-8HD | F.01U.385.540**

DIP-7388-8HD Management appliance, 2U 8X8TB 3rd gen

All-in-one recording, viewing and management solution for network surveillance systems.

With 8 x 8 TB storage capacity.

Order number **DIP-7388-8HD | F.01U.385.541**

DIP-738C-8HD Management appliance, 2U 8X12TB 3rd gen

All-in-one recording, viewing and management solution for network surveillance systems.

With 8 x 12 TB storage capacity.

Order number **DIP-738C-8HD | F.01U.385.542**

Accessories

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 | F.01U.362.421**

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 | F.01U.362.420**

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 | F.01U.362.419**

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 | F.01U.279.328**

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