

DIVAR IP all-in-one 7000 2U

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- ▶ 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 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 2U is a 2HU 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 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. All system software is pre-installed - creating an out-of-the-box ready-to-use video management appliance. The DIVAR IP all-in-one 7000 2U 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 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 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 (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 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).

**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 2.4 A

Actual output wattage from power supply 305.6 W

Efficiency of power supply 92%

Power consumption* 332.2 W

Electrical 140 VAC input

| | |
|--------------------------------|----------|
| Total BTU/h | 1133.9 |
| Power factor | 0.98 |
| System AC input VA requirement | 339.0 VA |

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

Electrical 240 VAC input

| | |
|---|----------|
| Input current | 1.4 A |
| Actual output wattage from power supply | 305.6 W |
| Efficiency of power supply | 94% |
| Power consumption* | 325.1 W |
| Total BTU/h | 1109.7 |
| Power factor | 0.96 |
| System AC input VA requirement | 338.7 VA |

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

Mechanical

| | |
|------------------------|--|
| Form factor | 2HU rack mount |
| Power supply | 740 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) | 89 x 437 x 648 mm (3.5 x 17.2 x 25.5 in) |
| Weight | 23.6 kg (52 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 |

Processor

| | |
|--------------------|----------------|
| Memory protection | ECC unbuffered |
| Max front side bus | 1600 MHz |

Memory

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

Storage

| | |
|-----------------------|--|
| Storage Type | 8 Trays: 3.5-inch SATA |
| Hard Drives Installed | <ul style="list-style-type: none"> Data: SATA-3, 7200 RPM, 64 MB, 3.5", RAID-5 configuration (default) DIP-7284-8HD: 8 x 4 TB DIP-7288-8HD: 8 x 8 TB DIP-728C-8HD: 8 x 12 TB DIP-7280-00N: 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-7284-8HD Management appliance 2U 8X4TB**

All-in-one recording, viewing and management solution for network surveillance systems.
With 8 x 4 TB storage capacity.
Order number **DIP-7284-8HD**

DIP-7288-8HD Management appliance 2U 8X8TB

All-in-one recording, viewing and management solution for network surveillance systems.
With 8 x 8 TB storage capacity.
Order number **DIP-7288-8HD**

DIP-728C-8HD Management appliance 2U 8X12TB

All-in-one recording, viewing and management solution for network surveillance systems.
With 8 x 12 TB storage capacity.
Order number **DIP-728C-8HD**

DIP-7280-00N Management appliance 2U without HD

All-in-one recording, viewing and management solution for network surveillance systems.
Without HDD.
Order number **DIP-7280-00N**

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-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**

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**

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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