

DIVAR IP all-in-one 4000



- ▶ All-in-one, fully featured BVMS-based video recording and management solution for up to 32 channels
- ▶ Out-of-the-box IP video recording with up to 36 TB (2 x 18 TB) storage capacity pre-installed
- ▶ Robust, secure operation – instant real time access to video
- ▶ BVMS-based advanced user and alarm management
- ▶ DIVAR IP System Manager for operation mode selection, software setup and upgrades

DIVAR IP all-in-one 4000 is an affordable and easy to use all-in-one recording, viewing, and management solution for network surveillance systems of up to 32 channels (with 8 channels pre-licensed).

DIVAR IP all-in-one 4000 is a 2-bay mini tower unit that combines advanced Bosch Video Management System capabilities and state-of-the-art recording management into a single cost-effective, convenient to install and operate IP recording device for IT-minded customers.

System overview

DIVAR IP all-in-one 4000 devices utilize a highly energy efficient embedded design. Easy to install and operate, DIVAR IP all-in-one 4000 devices feature wizard-based set-up and centralized configuration.

Operation modes

DIVAR IP all-in-one 4000 devices 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 provides an advanced IP video security solution that delivers seamless management of digital video, audio and data across an IP network. It seamlessly combines IP cameras and encoders, provides system-wide event and alarm management, system health monitoring, user and

priority management. This mode provides the best video management system to go with Bosch video surveillance devices, leveraging the unique capabilities of Bosch cameras and recording solutions. It includes Video Streaming Gateway components to integrate third-party cameras.

- Advanced video recording solution for a BVMS system, utilizing the Video Recording Manager core components and services, leveraging the unique capabilities of Bosch cameras and recording solutions. Up to two Video Recording Manager servers can be added to a BVMS system running on a DIVAR IP all-in-one device.
- iSCSI storage expansion for a BVMS system, which runs on a different hardware. Up to two of these iSCSI storage expansions can be added to a BVMS system running on a DIVAR IP all-in-one 4000 device.

Functions

DIVAR IP all-in-one 4000 devices utilize embedded design and core components, and are based on the operating system Microsoft Windows Server IoT 2022 for Storage Workgroup.

DIVAR IP all-in-one 4000 devices feature “enterprise-rated” front-swappable SATA hard drives, providing up to 36 TB of gross storage capacity.

Ease of installation

Once started, the system will offer installation of the DIVAR IP System Manager application, which will guide you through the operation mode selection. Latest software packages can be installed in one step.

The system features wizard-based BVMS set-up and configuration to begin recording after just a few simple steps.

Management and health monitoring

DIVAR IP System Manager provides a central user interface for operation mode selection and for software setup and upgrade, which reduces installation and training requirements and keeps ongoing system management costs low. When DIVAR IP all-in-one is connected to the Bosch Remote Portal, Remote System Management service allows to leverage the power of the Internet of Things (IoT) to provide an easy-to-use set of tools and capabilities for secure, transparent and cost-effective asset management throughout the life cycle of a device or system. This service enables users to perform inventory and update management, as well as health monitoring tasks for an entire system from one centralized Remote Portal platform. The DIVAR IP all-in-one 4000 devices provide SNMP monitoring support for the system's hardware and for the video management applications to ensure maximum uptime.

Instant real time access to video

View high quality HD or UHD video despite low or limited bandwidth connections. Dynamic Transcoding technology ensures you can view your video immediately – anytime, anywhere. Dynamic Transcoding decodes and re-encodes the data stream to a lower rate bit stream tailored to the bandwidth of the connection. When the video is paused, the instant detail enhancement feature instantly displays the full resolution video. DIVAR IP all-in-one 4000 systems support transcoding of up to four 4K UHD 30fps streams.

Remote viewing

For remote viewing of a single DIVAR IP all-in-one system, BVMS Operator Client is included. For multiple systems, add them to BVMS Enterprise Management Server. Alternatively, use Video Security App for remote viewing from mobile devices.

Regulatory information

Certifications/ Directives	CB, UL, CE, UKCA, FCC, VCCI, RCM, KC, BSMI, SABS, NRCS LOA, RoHS, WEEE, China RoHS, NDAA, TAA
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Region	Regulatory compliance/quality marks	
Europe	CE	DIVAR IP all-in-one 4000

Region	Regulatory compliance/quality marks	
Global	IEC 62443	Industrial Cyber Security Capability
Great Britain	UKCA	DIVAR IP all-in-one 4000
Morocco	CMIM	DIVAR IP all-in-one 4000

Installation/configuration notes

i 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.

Configuration of new hard drives

DIVAR IP all-in-one units that come pre-equipped with hard drives from factory are ready to record out-of-the-box. Hard drives that have been added to an empty unit need to be configured before using them for video recording.

The configuration of new hard drives must be set up manually via the pre-installed Disk Management utility. Only after this manual disk configuration the DIVAR IP all-in-one 4000 system provides full functionality.

DIVAR IP all-in-one 4000 configuration

DIVAR IP all-in-one 4000 units come pre-configured in a standard non-RAID configuration and have following specifications:

Total pre-installed gross storage capacity	Net capacity	Maximum recording bandwidth*	Maximum IP camera channels
w/o HDD	n/a	250 Mbps	32
2 x 4 TB	7448 GB	250 Mbps	32
2 x 8 TB	14896 GB	250 Mbps	32
2 x 18 TB	33516 GB	250 Mbps	32

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

These values refer to the BVMS/VRM recording engine, net capacity for a non-RAID configuration, 32 licensed IP camera channels providing up to 64 recording iSCSI sessions, and 4 replay clients with combined replay bandwidth of 150 Mbps. These specifications apply to all three operation modes.

i Notice

The recorded video streams need to be configured in a way that the maximum bandwidth of the system (BVMS/VRM base system plus iSCSI storage expansions) is not exceeded.

Licensing

For the BVMS licenses applied on DIVAR IP all-in-one 4000 systems, note pre-licensed quantities, quantities that come with the base license, and the upper limit of each:

License type	Pre-li-censed	Base license MBV-BLIT-DIP	Upper limit
IP channel	8	32	32
Workstation client	2	2	5
DVR	1	1	10
CCTV Keyboard	2	2	5
Mobile Video Service	1*	1*	1*
Intrusion Panel	1	1	5
Failover VRM channel	0	8	32
Dual recording channel	0	8	32
LPR channel	0	0	5
Online map functionality	0	0	1
Map-based tracking assistant	0	0	1
Privacy overlay (BVMS 12.0.0 and later)	0	0	1

*Mobile Video Service needs to run on separate hardware.

i Notice

Bosch is not liable for any data loss, damages, or system failures of units equipped with hard drives that are not supplied by Bosch. Bosch cannot provide support if non-Bosch-supplied hard drives are considered to be the cause of the problem. To troubleshoot potential hardware issues, Bosch will require Bosch-supplied hard drives to be installed.

i Notice

The system requires mouse and keyboard for setup and operation. These components are not included.

i Notice Hardware warranty

DIVAR IP all-in-one devices come with a 5-year service level agreement that covers parts replacement within 3 business days. This service level can only be provided if the respective device 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 or in the Bosch online product catalog. This service level cannot be provided in every country everywhere.

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. You can find more details about the Bosch Software Assurance under: <https://www.boschsecurity.com/xc/en/solutions/management-software/bosch-software-assurance/>

Technical specifications**Electrical**

Type of power supply	VAC
Operating voltage (VAC)	100 - 240 VAC
Maximum output power (W)	350 W
Power frequency	50 Hz; 60 Hz
Power supply efficiency rating	80 PLUS Gold

120 VAC input (under highest capacity)

Rated input current (A)	1.2 A
Actual output wattage from power supply (W)	131 W
Efficiency of power supply (%)	90%
Power consumption* (W)	Maximum 145 W

Maximum heat loss (BTU/h)	496 BTU/h
Power factor	0.98
System AC input VA requirement	148 VA

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

240 VAC input (under highest capacity)

Rated input current (A)	0.6 A
Actual output wattage from power supply (W)	131 W
Efficiency of power supply (%)	92%
Power consumption* (W)	Maximum 142 W
Maximum heat loss (BTU/h)	485 BTU/h
Power factor	0.96
System AC input VA requirement	148 VA

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

Mechanical

Dimension (H x W x D mm)	240 x 210 x 281 mm
Dimension (H x W x D in)	9.5 x 8.3 x 11 in
Form factor	Compact mini-tower

	DIP-4420IG-00N Management appliance, w/o HDD
Dimensions (H x W x D) (mm)	240 mm x 210 mm x 281 mm
Dimensions (H x W x D) (in)	9.5 in x 8.3 in x 11 in
Weight (kg)	5.50 kg
Weight (lb)	12.10 lb

	DIP-4424IG-2HD Management appliance, 2x4TB
Dimensions (H x W x D) (mm)	240 mm x 210 mm x 281 mm
Dimensions (H x W x D) (in)	9.5 in x 8.3 in x 11 in
Weight (kg)	6.50 kg

	DIP-4424IG-2HD Management appliance, 2x4TB
Weight (lb)	14.30 lb

	DIP-4428IG-2HD Management appliance, 2x8TB
Dimensions (H x W x D) (mm)	240 mm x 210 mm x 281 mm
Dimensions (H x W x D) (in)	9.5 in x 8.3 in x 11 in
Weight (kg)	6.50 kg
Weight (lb)	14.30 lb

	DIP-442IIG-2HD Management appliance, 2x18TB
Dimensions (H x W x D) (mm)	240 mm x 210 mm x 281 mm
Dimensions (H x W x D) (in)	9.5 in x 8.3 in x 11 in
Weight (kg)	6.50 kg
Weight (lb)	14.30 lb

Environmental

Operating temperature (°C)	0 - 40 °C
Operating temperature (°F)	32 - 104 °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® Core™ i3-10100E
Processor base frequency	3.20 GHz
Cache	6 MB Intel® Smart Cache
Installed memory	8GB DDR4-2666 1RX8 LP SODIMM
Operating system	Microsoft Windows Server IoT 2022 for Storage Workgroup
System drive	256 GB M.2 SSD
Processor graphics	Intel® UHD Graphics 630 (three digital outputs : 1 DisplayPort port, 2 HDMI ports)

Software compatibility	Bosch Video Management System, Video Recording Manager, Video Security App, Video Security Client, Video Streaming Gateway
Storage	
Internal storage	HDD
HDD connectivity	SATA3
HDD dimension	3.5 inch
Maximum internal hard drives	2
HDD rotation speed (rpm)	7200 rpm
Connectivity	
Number of USB ports	6 Front: 2 USB 2.0 ports Rear: 4 USB 3.2 Gen2 ports
Number of Ethernet ports	2 RJ45 Gigabit Ethernet LAN ports (teamed)
Audio input	Mic-level input
Audio output	Line-out
Number of video outputs	3 <ul style="list-style-type: none"> • 1 x DisplayPort 1.2 , 4K@60 Hz • 1 x HDMI 2.0, 4K@60Hz • 1 x HDMI 1.4, 4K@30 Hz
Multi-display support	Maximum of 3 displays of up to 4K@30Hz resolution per display
Maximum IP camera channels	32
Data security	
Crypto coprocessor (TPM)	Discrete TPM 2.0 (FIPS 140-2 certified)

Ordering information

DIP-4420IG-00N Management appliance, w/o HDD

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

Without HDD.

NDAA and TAA compliant.

Order number **DIP-4420IG-00N**

DIP-4424IG-2HD Management appliance, 2x4TB

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

With 2 x 4 TB storage capacity.

NDAA and TAA compliant.

Order number **DIP-4424IG-2HD**

DIP-4428IG-2HD Management appliance, 2x8TB

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

With 2 x 8 TB storage capacity.

NDAA and TAA compliant.

Order number **DIP-4428IG-2HD**

DIP-442IIG-2HD Management appliance, 2x18TB

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

With 2 x 18 TB storage capacity.

NDAA and TAA compliant.

Order number **DIP-442IIG-2HD**

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**

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-AIO18-HDD 18TB HDD DIVAR IP all-in-one

Hard disk storage expansion for DIVAR IP all-in-one appliances with a capacity of 18 TB.

Order number **DIP-AIO18-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-BLIT-DIP License Lite base for DIP AIO 4000-5000

BVMS license for DIVAR IP all-in-one 4000/DIVAR IP all-in-one 5000.

Base license for 32 channels (cameras/decoders).

Order number **MBV-BLIT-DIP**

MBV-XWSTLIT License Workstation expansion

Expansion license for 1 workstation (each extra workstation requires 1 license).

Order number **MBV-XWSTLIT**

MBV-XDVRLIT License DVR expansion

Expansion license for 1 DVR. Order the exact number required.

Order number **MBV-XDVRLIT**

MBV-XKBDLIT License Keyboard expansion

Expansion license for 1 CCTV keyboard. Order the exact number required.

Order number **MBV-XKBDLIT**

MBV-XINTLIT License Intrusion panel expansion

Expansion license to integrate intrusion panels.

Order number **MBV-XINTLIT**

MBV-XFOVLIT License VRM Failover channel expansion

Expansion license for 1 encoder channel used with a Failover VRM.

Order number **MBV-XFOVLIT**

MBV-XDURLIT License Camera dual recording expansion

Expansion license for 1 encoder channel used for dual recording.

Order number **MBV-XDURLIT**

MBV-XLPRLIT License LPR camera expansion

Expansion license for 1 (Tattile) LPR camera. Order the exact number required.

Order number **MBV-XLPRLIT**

MBV-FMAPLIT License online map functionality

Expansion license for online map functionality.

Order number **MBV-FMAPLIT**

MBV-FOBJLIT License Map-based tracking assistant

Expansion license for Map-based tracking assistant.

Order number **MBV-FOBJLIT**

MBV-FPRILIT License Privacy overlay

Expansion license for Privacy overlay.

Order number **MBV-FPRILIT**

CBS-RM-DIP4 Remote System Management DIP 4000 1yr

License to enable Remote System Management services for one DIVAR IP all-in-one 4000 device for a 1 year period

Order number **CBS-RM-DIP4**

MBV-MLIT-DIP SMA license for MBV-BLIT-DIP, 1 year

One year of maintenance cover for the BVMS license for DIVAR IP all-in-one 4000 / DIVAR IP all-in-one 5000.

Order number **MBV-MLIT-DIP**

MBV-MWSTLIT SMA license for MBV-XWSTLIT, 1 year

One year of maintenance cover for a BVMS Lite Workstation expansion license.

Order number **MBV-MWSTLIT**

MBV-MDVRLIT SMA license for MBV-XDVRLIT, 1 year

One year of maintenance cover for the BVMS Lite DVR expansion license.

Order number **MBV-MDVRLIT**

MBV-MKBDLIT SMA license for MBV-XKBDLIT, 1 year

One year of maintenance cover for a BVMS Lite CCTV keyboard expansion license.

Order number **MBV-MKBDLIT**

MBV-MINTLIT SMA license for MBV-XINTLIT, 1 year

One year of maintenance cover for a BVMS Lite intrusion panel expansion license.

Order number **MBV-MINTLIT**

MBV-MFOVLIT SMA license for MBV-XFOVLIT, 1 year

One year of maintenance cover for a BVMS Lite Failover VRM expansion license.

Order number **MBV-MFOVLIT**

MBV-MDURLIT SMA license for MBV-XDURLIT, 1 year

One year of maintenance cover for a BVMS Lite Dual Recording VRM expansion license.

Order number **MBV-MDURLIT**

MBV-MLPRLIT SMA license for MBV-XLPRLIT, 1 year

1 year of maintenance cover for the (Tattile) LPR camera expansion license.

Order number **MBV-MLPRLIT**

MBV-MMAPLIT SMA license for MBV-FMAPLIT, 1 year

One year of maintenance cover for an online map functionality license.

Order number **MBV-MMAPLIT**

MBV-MOBLIT SMA license for MBV-FOBJLIT, 1 year

One year of maintenance cover for the Map-based tracking assistant license.

Order number **MBV-MOBLIT**

MBV-MPRILIT SMA license for MBV-FPRILIT, 1 year

One year of maintenance cover for a Privacy overlay license.

Order number **MBV-MPRILIT**

