DIVAR IP 6000 3U

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BOSCH
Invented for life

iSCSI   RAID5   RAID6

- ▶ RAID-5 protected (standard configuration), all-in-one recording solution for up to 128 channels
- ▶ Pre-installed, pre-configured IP storage solution with up to 64 TB storage capacity
- ▶ Dedicated storage operating system delivers robust, secure operation
- ▶ Hot-swappable hard drives
- ▶ Remote monitoring via desktop application, browser or SNMP

The DIVAR IP 6000 family is an affordable, simple and reliable all-in-one recording management solution for network surveillance systems.

The DIVAR IP 6000 systems are shipped as pre-configured storage array for the Bosch video recording solution with the VRM Video Recording Manager software not yet installed. Once VRM has been downloaded from the Bosch product catalog and installed on DIVAR IP 6000 it will start with 64 channels pre-licensed and is upgradeable up to 128 channels.

Powered by VRM Video Recording Manager software from Bosch, DIVAR IP 6000 is an intelligent IP storage device that eliminates the need for separate NVR (Network Video Recorder) server and storage hardware, reducing the total cost of ownership by as much as 45%.

DIVAR IP 6000 3U is a 3HU rack mount unit that combines advanced recording management and state-of-the-art iSCSI storage into a single cost-effective, plug and play IP recording appliance for IT-minded customers which are seeking for a state-of-the-art "second generation" NVR recording solution.

System overview

The DIVAR IP 6000 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 interfaces, 8 GB system memory and a latest Intel Quad Core E3-1275 V3 Processor (3.5 GHz, 8 MB Cache), the new models of the DIVAR IP 6000 family deliver high-end performance at a very affordable price.

Easy to install, the system fully integrates into Bosch Video Management System and VRM Video Recording Manager wizard-based set-up and centralized configuration to reduce installation times by as much as 45%. All components relevant to the usage of DIVAR IP 6000 as storage array in a Bosch recording solution are pre-installed and pre-configured. Simply connect to the network and power the unit up — DIVAR IP 6000 is ready to begin recording straight out-of-the-box.

To create a complete video recording management solution, just download and add VRM.

To create a complete video management solution add DIVAR IP 6000 to Bosch Video Management System (Bosch VMS). DIVAR IP 6000 offfers iSCSI-based storage, which is the basis for the resilient and scalable video recording and management functionality in Bosch VMS.

Bosch VMS 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.

Video Client may be used as playback client only or to create an entry-level complete video management solution without the need of additional licenses.

Functions

DIVAR IP 6000 3U features highly energy-efficient hot-swap redundant power supplies, as well as hot-swap SATA-3 hard drives supporting up to 64 TB (16 x 4 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. It utilizes Microsoft Windows Storage Server 2012 R2.

Instant real time access to video
View high quality HD or UHD video despite low or limited bandwidth connections. If VRM is installed, Dynamic Transcoding technology ensures you can view your video immediately — anytime, anywhere.

Remote viewing
DIVAR IP 6000 supports our advanced Video Client for remote viewing. Video Client is a Windows PC application for live viewing and playback including Configuration Manager which allows the settings of DIVAR IP 6000 be configured.

IT Management
Microsoft Windows Storage Server 2012 R2 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 6000 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.

Monitoring
The DIVAR IP 6000 family provides SNMP, Remote Desktop and HTTP monitoring support for the system's hardware and, if installed, for the VRM Video Recording Manager application. 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.

Certifications and approvals

Region	Certification	
Europe	CE	DIVAR IP 6000 (R2)
USA	UL	DIVAR IP 6000 (R2)

Installation/configuration notes

DIVAR IP 6000 3U comes pre-configured in a RAID-5 standard configuration with iSCSI LUNs (fully populated system only) and provides the following specifications:

RAID-5 configuration

Gross Capacity	Net Capacity	Bandwidth *	IP Cameras
w/o HDD	n/a	550 Mbit/s	64+ pre-licensed / 128+ max.
16 x 3 TB	41885 GB	550 Mbit/s	64+ pre-licensed / 128+ max.
16 x 4 TB	55860 GB	550 Mbit/s	64+ pre-licensed / 128+ max.

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

These values refer to the Bosch recording applications; Net capacity for a RAID-5 configuration without hot spare; 64+/128+ concurrent iSCSI sessions indicate the number of concurrent recording sessions plus eight 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	64+ pre-licensed / 128+ max.
16 x 3 TB	39102 GB	550 Mbit/s	64+ pre-licensed / 128+ max.
16 x 4 TB	52136 GB	550 Mbit/s	64+ pre-licensed / 128+ 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	475 Mbit/s	64+ pre-licensed / 128+ max.
16 x 3 TB	39102 GB	475 Mbit/s	64+ pre-licensed / 128+ max.
16 x 4 TB	52136 GB	475 Mbit/s	64+ pre-licensed / 128+ max.

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

DIVAR IP 6000 may be upgraded once with an additional 64 channel license. The respective upgrade license has to be purchased. The upgrade allows for the maximum of 128+ sessions: 128 sessions for recording, eight sessions for replay.

ℹ Notice

Uninterruptable Power Supply (UPS). We strongly recommend using an "Online UPS" with an always active battery. The UPS must support Windows Storage Server 2012 R2 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

DIVAR IP 6000 comes pre-installed with all the software components necessary in a Bosch recording environment. It is pre-configured to be integrated into a recording or video management solution from Bosch out-of-the-box without any additional configuration tasks to be carried out on the storage system itself.
The VRM software is not yet installed and DIVAR IP 6000 does not include any video management or viewing application. Video management or viewing software must be installed on separate hardware.

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.

Parts included

Quantity	Component
1	DIVAR IP 6000 3U
1	Quick Installation Guide
2	Power cords
1	Recovery DVD

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)

Storage	
Storage Type	16 Trays: 3.5-inch SATA
Hard Drives Installed	
• Data	SATA-3, 7200 RPM, 64 MB, 3.5", RAID-5 configuration DIP-61F3-16HD: 16 x 3 TB DIP-61F4-16HD: 16 x 4 TB DIP-61F0-00N: w/o HDD
• OS	2 x 120 GB SSD RAID-1 configuration
Optical	DVD-RW
SAS RAID Card	8 ports LSI 3108 SAS3 controller

System status

DIVAR IP 6000 comes fully loaded and fully functional with Microsoft Operating System Windows Storage Server 2012 R2. It comes with a built-in 64 channels VRM recording application license from Bosch which will be activated once VRM is installed by the user.

DIVAR IP 6000 without pre-installed hard drives:
The RAID configuration of third-party data hard drives must be set up manually via the pre-installed Intel RAID management utility. Only after this manual RAID configuration the system provides full functionality.

Technical specifications

Electrical	
AC input rating	100 to 240 V / 50 to 60 Hz

Electrical 140 VAC input	
Input current	2.9 A
Actual output wattage from power supply	362.7 W
Efficiency of power supply	92%
Power consumption*	394.3 W

Electrical 140 VAC input	
Total BTU/h	1345.6
Power factor	0.98
System AC input VA requirement	402.3 VA

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

Electrical 240 VAC input	
Input current	1.7 A
Actual output wattage from power supply	362.7 W
Efficiency of power supply	94%
Power consumption*	385.9 W
Total BTU/h	1317.0
Power factor	0.96
System AC input VA requirement	402.0 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
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 ℃ to +35 ℃ (+50 ℉ to +95 ℉)
Non-operating temperature	-40 ℃ to +70 ℃ (-40 ℉ to +158 ℉)
Operating relative humidity	8 to 90% (non-condensing)
Non-operating relative humidity	5 to 95% (non-condensing)

Ordering information

DIVAR IP 6000 3U, 16 x 3 TB HDD
Recording management solution for network surveillance systems.
Up to 128 channels; VRM software not pre-installed;
16 x 3 TB storage capacity
Order number **DIP-61F3-16HD**

DIVAR IP 6000 3U, 16 x 4 TB HDD
Recording management solution for network surveillance systems.
Up to 128 channels; VRM software not pre-installed;
16 x 4 TB storage capacity
Order number **DIP-61F4-16HD**

DIVAR IP 6000 3U, w/o HDD
Recording management solution for network surveillance systems.
Up to 128 channels; VRM software not pre-installed;
w/o HDD
Order number **DIP-61F0-00N**

Accessories

DIVAR IP 6000/7000 Storage Expansion 3 TB
3 TB HDD
Order number **DIP-6703-HDD**

DIVAR IP 6000/7000 Storage Expansion 4 TB
4 TB HDD
Order number **DIP-6704-HDD**

Software Options

DIVAR IP 6000 Upgrade
Upgrade license for 64 cameras (e-license)
Order number **DLA-XVRM-064**