

| From | Product Management | Telephone | Nuremberg |
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| BT-SC | ST-BT/PAS4 | +49 911 93456 0 | 13-Aug-2020 |

Release Letter

| Product: | DIVAR IP all-in-one 7000 Family | |
|----------|--|--|
| Version: | OS image version 1.1.0 (initial release) | |

This letter contains latest information about the above-mentioned Bosch DIVAR IP all-in-one 7000 Family.

1. General

DIVAR IP all-in-one 7000 is an affordable, simple and reliable all-in-one recording and management solution for network surveillance systems of up to 256 channels (with 8 channels pre-licensed).

Running the full Bosch VMS (Video Management System) solution and powered by Bosch Video Recording Manager software, DIVAR IP all-in-one 7000 is an intelligent IP storage device that eliminates the need for separate NVR (Network Video Recorder) server and storage hardware.

It combines advanced recording management and state-of-the-art iSCSI storage into a single cost-effective, IP recording appliance for IT-minded customers, which are seeking for a state-of-the-art video management and recording solution.

2. Restrictions; Known Issues

- SuperDoctor returns an unknown state of the included SSD mirror. Proper state monitoring can be done using the included Intel Rapid Storage tool.
- After login to BVRAdmin account (e.g. for OS or software updates) the system needs to be rebooted, which may result in a recording gap (depending on the amount of RAM-buffer of the used cameras). It is recommended to check recording functionality after system update and reboot. To change from BVRadmin to kiosk mode (limited user), a reboot is required. A reboot is also required, if the system network settings are changed.
- The system needs to have an active network link with a valid IP address during installation and system start. Make sure that the network switch you are connecting to is powered on and fully booted.
- BVMS Mobile Video Service (MVS) is not installed locally on this platform, as it is not required. The
 VRM web page (<a href="https://<system-IP">https://<system-IP) can be used for web-based access. In this version of the
 DIVAR IP all-in-one, the local MVS is anyhow displayed in the BVMS system configuration, but is
 not required. The local MVS can manually be removed from the BVMS configuration. For example,
 the video security client software can login to the system without requiring the MVS service.
- All functionality of included web interfaces (e.g. VRM monitor) are restricted on the local machine, due to browser security settings. It is recommended to access such web services from a remote

Security Systems



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workstation in the same network. In order to use the VRM monitor page, please use an alternative workstation.

- Bandwidth limits listed in the data sheet were measured with 20% headroom for playback. Proper system operation can only be ensured, if playback load doesn't exceed 20% of the defined maximum recording bandwidth.
- Changes of the IP address of the BVMS configuration client may not be transferred into the device certificate
- When performing dewarping via the transcoder, switching from any multiview layout to a single view layout, the dewarped video may be slightly distorted
- BVMS port forwarding must not be configured. The video track list in replay mode is available without additional port forwarding configuration in BVMS. Each configured BVMS user with sufficient rights can be used to logon to the system.
- The system was not tested in domain joined configuration.
- The IPMI BMC port shall not be connected to a public network permanently.
- The systems ships with a sticker showing the dedicated IPMI password. The sticker shall be either stored at a secure location or password shall be changed.
- iSCSI CHAP shall be configured on the storage target, to prevent unauthorized access.
- Check USB devices prior to attaching them. Make sure no malware/virus is injected.
- To prevent system from local manipulation, it is suggest to define a secure BIOS password.
- Built-in transcoding functionality can handle up to four H.264 source streams in 4K resolution.
 H.265 is not supported
- License file for MBV-XSITE-DIP is not included in the initial image and needs to be requested separately, if required.
- To expand the pre-installed BVMS beyond 8 channels, use MBV-BPLU-DIP license in a first step. This brings the system to 32 channels. Further channels can be added using MBV-1CHAN-DIP single channel licenses. Other BVMS channel expansion licenses are not supported on the system.
- The applicable BVMS licensing scheme differs from predecessor products. Only licenses which are explicitly listen in the product documentation can used.
- DIVAR IP software licenses are tied to hardware, on which they were initially activated. The licenses cannot be transferred to a different system afterwards.
- Included VGA port can used for configuration and health monitoring. A dedicated Operator Client Workstation (preferred) or the DIP-7GRSN-P6 expansion card shall be used for video viewing.
- DIP-7GRSN-P6 needs to be mounted carefully. System damage caused by improper mounting will affect system warranty.
- Microsoft Remote Desktop functionality may be used for configuration or occasional monitoring of the system, but shall stay connected permanently.
- Hard drives included in the supplier's platform compatibility list are in principal compatible, but
 performance was not tested in combination with the Bosch recording software and can therefore
 deviate from the provided data sheet specifications. Bosch is not liable for system failures of units

Security Systems



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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.

https://www.supermicro.com/support/resources/HDD/display.cfm?Category=AOC&sz=3.5&ctrl=62

HDDs listed below are or have been used in populated models (subject to change):

| SMC Part Number | Description | Supplier | Supplier Part # | Size | notes |
|------------------------|----------------------------------|----------|-----------------|------|----------------------------|
| HDD-T4000-ST4000NM0035 | Seagate 4TB SATA3 6Gb/s 7200RPM | Seagate | ST4000NM0035 | 4TB | |
| HDD-T4000-ST4000NM000A | Seagate 4TB SATA3 6Gb/s 7200RPM | Seagate | ST4000NM000A | 4TB | successor of ST4000NM0035 |
| HDD-T8000-ST8000NM0055 | Seagate 8TB SATA3 6Gb/s 7200RPM | Seagate | ST8000NM0055 | 8TB | |
| HDD-T8000-ST8000NM000A | Seagate 8TB SATA3 6Gb/s 7200RPM | Seagate | ST8000NM000A | 8TB | successor of ST8000NM0055 |
| HDD-T12T-ST12000NM0007 | Seagate 12TB SATA3 6Gb/s 7200RPM | Seagate | ST12000NM0007 | 12TB | |
| HDD-T12T-ST12000NM001G | Seagate 12TB SATA3 6Gb/s 7200RPM | Seagate | ST12000NM001G | 12TB | successor of ST12000NM0007 |

3. New subcomponent software versions

- Windows Storage Server 2016 Standard edition
- OS image 1.1.0.0003
- SuperDoctor 5 (5.7.0)
- BVMS 9.0.0.827
- Video Recording Manager 3.81.0054
- Video Streaming Gateway 6.45.0008
- Transcoder Service 6.44.0030

4. New Features

N/A - initial version

5. Applied Changes / Bug Fixes

N/A - initial version

6. Installation Notes

BVMS is enabled per default, but the system offers tools to disable respective services, if it shall be used as a pure iSCSI drive or a VRM appliance. Changes and restrictions are listed in the respective BVMS release notes and data sheets.

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.

Security Systems



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Even though Bosch BT is selling DIVAR IP based on standard IT Hardware, BIOS, UEFI, firmware and software versions installed on these systems are Bosch BT specific. Upgrading or updating the systems with non-Bosch BT certified and approved versions is strictly not recommended as it might impact proper system functionality and the Service & Support coverage, which then can be provided by Bosch in case and of technical issues. BIOS, UEFI, firmware and software versions of included system components shall only be upgraded with non-Bosch BIOS, UEFI, firmware and software versions if suggested and approved by Bosch BT. Support can only be provided on the latest approved versions.

Bosch strongly recommends to run the DIVAR IP in a perimeterized network, operated by trusted personnel only. Remote access is possible via defined ports with e.g. BOSCH Video Security Client / App. In addition to that, it is strongly suggested to keep the system up-to-date by installing latest operating system updates and BVMS versions (incl. patches and sub-components), once available.

OS patches can be obtained via Windows Update functionality or the Microsoft Update Catalog. BVMS versions (incl. patches and sub-components) are available in the Download Area: https://downloadstore.boschsecurity.com/index.php?type=DIPBVMS

The following steps have to be performed in order to upgrade an existing BVMS installation on a DIVAR IP all-in-one video management appliance:

- Download and unzip the latest BVMS archive from http://www.boschsecurity.com
- Copy the content to a USB drive
- When the BVMS default screen is shown, press CTRL + ALT + DEL
- Hold down the SHIFT key while clicking Log off
- Log in as BVRAdmin
- Transfer the BVMS installation folder from the USB drive to the BVRAdmin desktop
- Double click Setup.exe inside the transferred folder.
- Wait until the BVMS setup screen appears and select the upgrade option
- Follow the installation procedure without changing any settings

Notes:

- During initial boot and installation the system must be connected to a network.
- The system may request a reboot and re-login during the installation or upgrade procedure.
- The software upgrade requires a system reboot which results in a short recording gap.

7. History

N/A – initial version