

BVMS 14.0 - Release notes

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Table of contents

1. Document history	3
2. BVMS Version 14.0	4
3. BVMS Version 13.1	17
4. BVMS Version 13.0	30
5. BVMS Version 12.3	41
6. BVMS Version 12.2	52
7. BVMS Version 12.1	63
8. BVMS Version 12.0.1	74
9. BVMS Version 12.0	85
10. BVMS Version 11.1.1	96
11. BVMS Version 11.1	107
12. BVMS Version 11.0	116
13. BVMS Version 10.1.1	126
14. BVMS Version 10.1	127
15. BVMS Version 10.0.2	137
16. BVMS Version 10.0.1	138
17. BVMS Version 10.0	152

1. Document history

⊗ This document is valid for all BVMS versions. Only the release notes of the latest BVMS version are fully updated and contain updates for earlier versions as well.

Date	Version	Changes
2026-06-05	BVMS 14.0	Initial release notes
2026-06-09	BVMS 14.0	Updated versions and known issues

2. BVMS Version 14.0

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [IQSIGHT Product Catalog](#).
Version 14.0 introduces new features and resolves issues compared to BVMS 13.1.

2.1. New functionality

ID	Description
493578	Intelligent person tracking: following person of interest across multiple cameras Real-time person tracking within the Operator Client. Based on selected reference image of a person, following (including switching the cameras) will be done automatically. Tracking history is recorded and can be saved as a bookmark for evidence purposes. Note: this feature requires CPP14.2 or CPP16 cameras with min. FW version 9.81.
334403	Video watermarking: configurable, dynamic overlay to indicate user and time In order to prevent uncontrolled video leakage, it is possible to set up additional overlays on video, clearly indicating the actual BVMS user, workstation and timestamp.
320893	Dewarped export: Export to MP4 format for panoramic cameras can be dewarped and only selected, configured view will be exported.
479341	SNMPv3 support: Receiving and sending SNMP traps using SNMPv3 standard, including optional authentication and encryption.
488172	Stream selection permission: Ability to disable option to display different streams from cameras.
169224	Certificate validation: Operator Client's validation of server certificate now also available with SSH connection.
494905	Configuration of VSG devices: Possibility to select specific device relays (outputs) to be added into the configuration.
489033	LPR: Option to directly assign unknown vehicle to the list. Export to CSV.
489156	ADAM modules: Secured communication over MQTTS

ID	Description
500036	<p>VideoView+ for DIVAR IP: Preparation for Single Sign-on and mapping of Remote Portal users</p> <p>Note: This feature will be released at later point with planned Remote Portal and Video Security app upgrade</p>

2.2. Removed functionality

ID	Description

2.3. Changes

ID	Description
492030	Update device capabilities: Possibility to select devices to be updated, providing reason for update. For Monitor Groups, number of connected monitors is not automatically overwritten with the update.
497100	AI Search: search results are thumbnails are not displayed if recordings are not available (e.g. with alarm/schedule-based recording)
500855	Logbook: Clear indication whether camera was opened by the user in live or playback mode.

2.4. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), and [system design guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

MS Defender SmartScreen

As of June 2026, when installing or running BVMS 14.0, some users may encounter a Microsoft Defender SmartScreen warning dialog stating that the application is “unrecognized” or that “Windows protected your PC.” The warning identifies the publisher as “IQSIGHT B.V.” and appears because this publisher has not yet accumulated sufficient download-based reputation in Microsoft Defender Threat Intelligence database for BVMS 14.0.

When the Microsoft Defender SmartScreen dialog appears, follow these steps:

- Click “More info” in the lower-left area of the Microsoft Defender SmartScreen dialog.
- Verify the publisher shown is “IQSIGHT B.V.” and the application name is BVMS. This confirms that the installer is authentic.
- Click “Run anyway” to proceed with the installation.

The Microsoft Defender SmartScreen warning will resolve itself automatically as BVMS 14.0 gains wider adoption.

2.5. Disclaimer

BVMS is not designed, intended, or authorized for use in any type of system or application in which the failure of the Software could lead to a risk to health and safety. The user is responsible to verify that the Software and its specified functionalities are suitable for the intended application, in particular with respect to accuracy, safety and security.

2.6. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch/IQSIGHT video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Knowledge Base, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware CPP3*	5.75.0011
Firmware CPP4	7.10.0096
Firmware CPP5	6.31.0019
Firmware CPP6	7.93.0024
Firmware CPP7	7.93.0024
Firmware CPP7.3	7.93.0024
Firmware CPP13	8.94.0041
Firmware CPP14.1	9.11.0017
Firmware CPP14.2	9.82.0022
Firmware CPP14.3	9.82.0022
Firmware CPP14 (Thermal)	10.40.0130
Firmware CPP16	10.40.0102

Firmware Aviotec (CPP6)	<u>7.82.0025</u>
Firmware CPP-ENC*	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	<u>11.03.0004</u>
Videojet decoder VJD 7523	<u>11.03.0004</u>
Videojet decoder VJD 7533	<u>11.03.0004</u>
Videojet decoder 8000	<u>10.06.0001</u>
Barco RCP+ Agent	0.9.7.0
Monitor Wall	11.01.0095 (pre-configured from Configuration Manager)
Software	
VRM	4.80.0029
VSG	9.4.7.4
AI Video Processor Service	14.0.0.120
BIS	5.0.2110.0
Access Management System (AMS)	6.0.17
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Intuikey Keyboard	1.96
SQL Server	2022
ONVIF Event driver tool	2.1.2.1

VideoSDK	7.0.46
RCP+	5.10.18
DVRs and other devices	
DVR FW Version	2.6.0 (Divar AN 3000/5000) 3.4.0 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.15.110
NetApp E2800 SanTricity	11.90.R3
RPS	6.16.000
CMLib	7.78.136
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2, 25H2, 26H1) Windows 11 Enterprise (64-bit) (23H2, 25H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows (Storage) Server 2025 (64-bit) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2, 25H2, 26H1) Windows 11 Enterprise (64-bit) (23H2, 25H2)
Operating systems Video Recording Manager	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows (Storage) Server 2025 (64-bit)

✘ *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

2.7. BVMS Setup types and applicability

Two different types of BVMS setup are available:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay or **Intelligent person tracking** feature
- BVMS Setup with AI - including AI packages for Privacy overlay or **Intelligent person tracking** feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay or Intelligent person tracking features can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay or Intelligent person tracking features will be used.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay or Intelligent person tracking is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay or Intelligent person tracking feature that can be used on the client.

2.8. DIVAR IP


The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 When updating DIVAR IP appliance (DIVAR IP all-in-one 4000, DIVAR IP all-in-one 5000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen2 and Gen3), managed by DIVAR IP System Manager, special corresponding packages are required to upgrade BVMS on these devices.

Regular BVMS installer cannot be used anymore to update BVMS on DIVAR IP. Please note, that BVMS 12.0.1 release was the last version supported for DIVAR IP 7000 R2 (DIP-71xx) appliances.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

2.9. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 595
Intel	Intel® Graphics Driver 31.0.101.2137 for 7th-10th Gen Intel® Core™ Processor Graphics Intel® Graphics Driver 32.0.101.7085 for Intel® Arc™ Pro Series Graphics

Hardware requirements

We strongly recommend using the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

2.10. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

❌ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

❌ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

2.11. Patched issues for BVMS 14.0

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer

2.12. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description

2.13. Known issues

✘ Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.xml is deleted and has to be created again.

ID	Subject	Description
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
418415	Operator Client	Playback of video with very long GOPs (255) and low fps (15 or lower) might not work properly. In such case, it is advised to either reduce the GOP length or increase fps.
424935	Config Client	Schedule-based recording might not always work properly if configured for a holiday. As a workaround, camera should be recording using "exception day"
430103	Operator Client	When configuring VCA sensitive area using the Operator Client with 4K monitor, area drawing might not work correctly. It is advised to use standard (FullHD) resolution if VCA sensitive area is to be set using the Operator Client.
430793	Forensic Search	If combination of Motion+ and EVA/IVA/IVA Pro algorithms is used for a single Forensic Search action, search results might not be consistent and no error message is shown.
452046	DVR	Replay of the DIVAR network/hybrid recordings with x2 or higher speed will only display the I-frames
452936	Config Client	In some cases, when the License Manager dialog is opened shortly after the server start-up or restart, license information will not be retrieved. In such case, please close it and try again after a while.
483170	ONVIF Profile G	Recording status is not indicated with a red dot for ONVIF Profile G cameras with local storage recording
496661	Operator Client	AI Search might still show results (and thumbnails), even if there are no recordings available (are either deleted or because of the schedule/alarm based recording)
496655	Operator Client	After the change of retention time or camera password, AI service has to be reconfigured
496660	Operator Client	No state information or supervision for the AI Video Processor services
496976	Alarming	Context Event configuration (order) might change, if prompts are reconfigured (added or removed) in the camera
494820	Decoder	Assigning cameras with the FW 9.80.0087 to a decoder with the FW 11.02.0005 might take up to few seconds

ID	Subject	Description
494898	DVR	Adding DVR to the configuration using Scan option might fail - in such case, add the DVR manually
504019	Setup	Automatic firewall configuration during setup might fail on Windows 11 26H1
504270	Camera	Newly introduced CPP15 cameras might indicate CPP16 encoder platform
504787	LPR	When importing license plate information using CSV file, make sure ANSI formatting is used, even for a default template file

3. BVMS Version 13.1

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

Version 13.1 introduces new features and resolves issues compared to BVMS 13.0.

3.1. New functionality

ID	Description
489032	Vehicle list management: Based on IVA Pro LPR Multiple list (incl. allow, alarm, unknown, visitor) can be managed within BVMS to automatically define different reactions for detected vehicles. Vehicle management available within BVMS Operator Client. Based on IVA Pro LPR running in the camera and (optionally) IVA Pro Make&Model.
474797	Free-text search: AI-supported new recording search option available within the Operator Client Search can be performed using plain text and uses AI model for video and search query processing. Please see further notes below in the AI Search chapter.
482741	Context Alarms: New set of Context Alarms available for cameras. Requires capable camera equipped with Context alarm functionality. <u>Note:</u> Context Alarms are planned to be released at later point with a separate camera FW release.
395678	Default permissions for new devices: Possibility to define upfront target User Groups for which newly added devices will be assigned.
490801	DIP-74xx health monitoring: One-click option to enable health monitoring for DIVAR IP all-in-one 7000 gen 4.
493444	AMS integration: Integration updated to support AMS 6.0. <u>Note:</u> BVMS 13.1 is only compatible with AMS 6.0 version.

3.2. Removed functionality

ID	Description
493432	Due to the necessary update of GPU libraries, BVMS AI features (including Privacy overlay) might not be supported anymore on selected GPUs, including: Nvidia Quadro P620, Nvidia Quadro P2000, Nvidia Quadro P4000

3.3. Changes

ID	Description
496209	Logbook: New option for the search count of 10 000 for logbook search and export
494681	Licensing: Additional licenses below are not required anymore and are included as part of every base package: <ul style="list-style-type: none"> ▪ Keyboard expansion ▪ Intrusion panel expansion ▪ DVR expansion ▪ Privacy overlay feature

3.4. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), and [system design guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

3.5. Disclaimer

BVMS is not designed, intended, or authorized for use in any type of system or application in which the failure of the Software could lead to a risk to health and safety. The user is responsible to verify that the Software and its specified functionalities are suitable for the intended application, in particular with respect to accuracy, safety and security.

3.6. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras where not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware CPP3*	5.75.0011
Firmware CPP4	7.10.0096
Firmware CPP5	6.31.0019
Firmware CPP6	7.90.0098
Firmware CPP7	7.90.0098
Firmware CPP7.3	7.90.0098
Firmware CPP13	8.94.0026
Firmware CPP14.1	9.11.0009
Firmware CPP14.2	9.80.0087
Firmware CPP14.3	9.80.0087
Firmware CPP14 (Thermal)	10.40.0095
Firmware CPP16	10.40.0102

Firmware Aviotec (CPP6)	<u>7.82.0025</u>
Firmware CPP-ENC*	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	<u>11.02.0005</u>
Videojet decoder VJD 7523	<u>11.02.0005</u>
Videojet decoder VJD 7533	<u>11.02.0005</u>
Videojet decoder 8000	<u>10.06.0001</u>
Barco RCP+ Agent	0.9.7.0
Monitor Wall	10.00.0164 (pre-configured from Configuration Manager)
Software	
VRM	4.70.0009
VSG	9.4.3.1
AI Video Processor Service	13.1.0.255
BIS	5.0.2110.0
Access Management System (AMS)	6.0.17
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Intuikey Keyboard	1.96
SQL Server	2022
BVMS Hardening Tool	11.1.0.8

ONVIF Event driver tool	2.1.2.1
VideoSDK	7.0.46
RCP+	5.9.7
DVRs and other devices	
DVR FW Version	2.6.0 (Divar AN 3000/5000) 3.4.0 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.15.110
NetApp E2800 SanTricity	11.80.1R3
RPS	6.16.000
CMLib	7.77.82
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (24H2) Windows 11 Pro (64-bit) (23H2) Windows 11 Enterprise (64-bit) (23H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows (Storage) Server 2025 (64-bit) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2) Windows 11 Pro (64-bit) (24H2) Windows 11 Enterprise (64-bit) (23H2)

Operating systems Video Recording Manager	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows (Storage) Server 2025 (64-bit)
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✘ *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

3.7. BVMS Setup types and applicability

With BVMS 12.0 and Privacy overlay feature, two different types of setup are introduced:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay feature
- BVMS Setup with AI - including AI packages for Privacy overlay feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay feature can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay feature will be used.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay feature that can be used on the client.

BVMS 13.1 introduces another component called **AI Video Processor Service**, used for the AI (free-text) search functionality, introduced with this BVMS release. Please note, that this service is necessary to use the feature and it has to be installed using a separate installation package.

For further details, please refer to the **AI Search** chapter below.

3.8. DIVAR IP


The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 When updating DIVAR IP appliance (DIVAR IP all-in-one 4000, DIVAR IP all-in-one 5000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen2 and Gen3), managed by DIVAR IP System Manager, special corresponding packages are required to upgrade BVMS on these devices.

Regular BVMS installer cannot be used anymore to update BVMS on DIVAR IP. Please note, that BVMS 12.0.1 release was the last version supported for DIVAR IP 7000 R2 (DIP-71xx) appliances.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

3.9. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 580
Intel	Intel® Graphics Driver 31.0.101.2137 for 7th-10th Gen Intel® Core™ Processor Graphics Intel® Graphics Driver 32.0.101.6979 for Intel® Arc™ Pro Series Graphics

Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

3.10. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

⊗ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

⊗ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

3.11. Patched issues for BVMS 13.1

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer

3.12. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
495039	Setup	FIXED: No Touch Deployment (automated client update) not working properly
485818	Export	FIXED: Export of DIVAR Network connected cameras to MP4 might fail

ID	Description	
490635	Map	FIXED: Setting longitude >90 degrees is not possible
493460	Setup	FIXED: In some cases setup might fail with Error 1722
495617	PTZ	FIXED: Possible delay with PTZ control
486749	Schedule	FIXED: Task schedule cannot be deleted
493519	Decoder	FIXED: Video stream (UDP/TCP) setting not available if Monitor Wall software is added as a decoder
493556	Storage	FIXED: DSA E4000 configuration might not be possible due to the firmware changes
486389	VCA	FIXED: VCA overlays are not always shown when playing video backwards

3.13. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.


ID	Subject	Description
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.cxml is deleted and has to be created again.
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
418415	Operator Client	Playback of video with very long GOPs (255) and low fps (15 or lower) might not work properly. In such case, it is advised to either reduce the GOP length or increase fps.
424935	Config Client	Schedule-based recording might not always work properly if configured for a holiday. As a workaround, camera should be recording using "exception day"
430103	Operator Client	When configuring VCA sensitive area using the Operator Client with 4K monitor, area drawing might not work correctly. It is advised to use standard (FullHD) resolution if VCA sensitive area is to be set using the Operator Client.
430793	Forensic Search	If combination of Motion+ and EVA/IVA/IVA Pro algorithms is used for a single Forensic Search action, search results might not be consistent and no error message is shown.
452046	DVR	Replay of the DIVAR network/hybrid recordings with x2 or higher speed will only display the I-frames
452936	Config Client	In some cases, when the License Manager dialog is opened shortly after the server start-up or restart, license information will not be retrieved. In such case, please close it and try again after a while.
483170	ONVIF Profile G	Recording status is not indicated with a red dot for ONVIF Profile G cameras with local storage recording


ID	Subject	Description
496661	Operator Client	AI Search might still show results (and thumbnails), even if there are no recordings available (are either deleted or because of the schedule/alarm based recording)
496655	Operator Client	After the change of retention time or camera password, AI service has to be reconfigured
496660	Operator Client	No state information or supervision for the AI Video Processor services
496976	Alarming	Context Event configuration (order) might change, if prompts are reconfigured (added or removed) in the camera
494820	Decoder	Assigning cameras with the FW 9.80.0087 to a decoder with the FW 11.02.0005 might take up to few seconds
494898	DVR	Adding DVR to the configuration using Scan option might fail - in such case, add the DVR manually

3.14. Additional Information

3.14.1. AI Search

In order to use the AI Search (free-text search) feature, introduced with BVMS 13.1, additional **AI Video Processor Service** is required for the image processing. Please ensure, that one or more AI Video Processor Services are installed (using a separate installation package) up and running and properly configured in BVMS.

 AI Video Processor Service can only run on selected, capable Nvidia or Intel GPU models. Please refer to a separate document "**BVMS AI Search - explained**" for further details regarding system requirements and limitations.


 Always ensure that this feature is used in a responsible, ethical, and compliant manner.

Please consider the following restrictions for using this feature with BVMS 13.1:

- Alarm or schedule based recording is currently not fully supported - searching within the time period where recording was not active, might still produce search results, since video is processed in parallel to the standard recording path. Therefore, it is highly recommended to use it with continuous recording or limiting the search range to the periods, where recordings are available
- It is also not directly possible to remove specific thumbnails or for a specific period of time

- Configuration changes, like: changing the camera password or recording retention time settings might require AI Video Processor Service reconfiguration
- There's no status monitoring available for the AI Video Processor Service, so it has to be ensured that the service is constantly up and running so the image processing is done properly

Those limitations are subject to change in the upcoming BVMS releases.

 AI Search is not available for BVMS Viewer.

4. BVMS Version 13.0

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

Version 13.0 introduces new features and resolves issues compared to BVMS 12.3.

4.1. New functionality

ID	Description
464465	Maps: Enhanced visualization of detected persons or vehicles Clients visualizing detected IVA objects (person or vehicle) with the actual geolocation on a global map for all the cameras in the system
448988	ONVIF: Profile G support BVMS as ONVIF Profile G client to support playback for Profile G devices
239762	Certificate validation: New certificate creation method and certificate validation enhancements
321212	VideoView+ for DIVAR IP: Remote notifications available for BVMS alarms
469223	IVA alarm suppression: Possibility to deactivate BVMS alarms triggered by the IVA events for selected cameras
463311	Timeline: New handling of timeline selection in playback mode
469244	Online maps: It's not required anymore to provide unique API key for HERE maps
452198	MP4 export: New option available to enforce file consistency and remove gaps
383667	Help files: New HTML-based format of help files
464676	External IdP: Standard web browser used for authentication instead of embedded BVMS dialog

4.2. Removed functionality

ID	Description

4.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

4.4. Disclaimer

BVMS is not designed, intended, or authorized for use in any type of system or application in which the failure of the Software could lead to a risk to health and safety. The user is responsible to verify that the Software and its specified functionalities are suitable for the intended application, in particular with respect to accuracy, safety and security.

4.5. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility


Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware CPP3*	5.75.0011

Firmware CPP4	<u>7.10.0096</u>
Firmware CPP5	<u>6.31.0019</u>
Firmware CPP6	7.90.0098
Firmware CPP7	7.90.0098
Firmware CPP7.3	7.90.0098
Firmware CPP13	8.93.0031
Firmware CPP14.1	9.11.0009
Firmware CPP14.2	9.41.0018
Firmware CPP14.3	<u>9.41.0018</u>
Firmware Aviotec (CPP6)	<u>7.82.0025</u>
Firmware CPP-ENC*	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	<u>10.61.0006</u>
Videojet decoder VJD 7523	<u>10.61.0006</u>
Videojet decoder VJD 7533	11.00.0029
Videojet decoder 8000	<u>10.06.0001</u>
Barco RCP+ Agent	0.9.7.0
Monitor Wall	10.00.0164 (pre-configured from Configuration Manager)
Software	
VRM	4.60.0028 (64-bit)
VSG	9.4.0.13

BIS	5.0.2110.0
Access Management System (AMS)	5.0.20
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Intuikey Keyboard	1.96
SQL Server	2022
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.1.2.1
VideoSDK	6.90.0020
RCP+	5.7.1
DVRs and other devices	
DVR FW Version	2.6.0 (Divar AN 3000/5000) 3.4.0 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.14.012
NetApp E2800 SanTricity	11.80.1R3
RPS	6.14.001
CMLib	7.75.180
Operating systems	

Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (24H2) Windows 11 Pro (64-bit) (23H2) Windows 11 Enterprise (64-bit) (23H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows (Storage) Server 2025 (64-bit) Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2) Windows 11 Pro (64-bit) (24H2) Windows 11 Enterprise (64-bit) (23H2)
Operating systems Video Recording Manager	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows (Storage) Server 2025 (64-bit)

 *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

4.6. BVMS Setup types and applicability

With BVMS 12.0 and Privacy overlay feature, two different types of setup are introduced:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay feature
- BVMS Setup with AI - including AI packages for Privacy overlay feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay feature can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay feature will be used.
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay feature that can be used on the client.

4.7. DIVAR IP


The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 When updating DIVAR IP appliance (DIVAR IP all-in-one 4000, DIVAR IP all-in-one 5000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen2 and Gen3), managed by DIVAR IP System Manager, special corresponding packages are required to upgrade BVMS on these devices.

Regular BVMS installer cannot be used anymore to update BVMS on DIVAR IP. Please note, that BVMS 12.0.1 release was the last version supported for DIVAR IP 7000 R2 (DIP-71xx) appliances.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

4.8. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 550

Component	Version
Intel	Intel® Graphics Driver 31.0.101.2125 for 7th-10th Gen Intel® Core™ Processor Graphics Intel® Graphics Driver 31.0.101.4955 for Intel® Arc™ Pro Series Graphics

⊗ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

4.9. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

⊗ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

⊗ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

4.10. Patched issues for BVMS 13.0

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer

4.11. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
283766	Setup	FIXED: In some cases, temporary files are not removed from the %Temp% Windows folder when reboot is triggered directly after the setup. Please consider removing unnecessary files manually from the %Temp% folder after the setup or upgrade.
435020	Maps	FIXED: Cameras added using CSV-import might not be properly positioned on a map
	Setup	
	Audio	

4.12. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".

ID	Subject	Description
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.cxml is deleted and has to be created again.
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
416328	Setup	When installing MVS on a Windows 11 machine, additional step to install IIS 4.0 might be required. After reboot, the setup will continue.
418415	Operator Client	Playback of video with very long GOPs (255) and low fps (15 or lower) might not work properly. In such case, it is advised to either reduce the GOP length or increase fps.
424935	Configuration Client	Schedule-based recording might not always work properly if configured for a holiday. As a workaround, camera should be recording using "exception day"
429120	Configuration Client	Upgrading the firmware for CPP13 to the version 8.90 (or later) will result in unsecured ports closed in the camera. Please enable "Secured connection" option for the camera before upgrading the firmware in order to keep using it in BVMS. If unsecured connection is still expected, please make sure that corresponding ports and services are enabled again in the camera configuration.

ID	Subject	Description
430103	Operator Client	When configuring VCA sensitive area using the Operator Client with 4K monitor, area drawing might not work correctly. It is advised to use standard (FullHD) resolution if VCA sensitive area is to be set using the Operator Client.
430793	Forensic Search	If combination of Motion+ and EVA/IVA/IVA Pro algorithms is used for a single Forensic Search action, search results might not be consistent and no error message is shown.
452046	DVR	Replay of the DIVAR network/hybrid recordings with x2 or higher speed will only display the I-frames
452936	Configuration Client	In some cases, when the License Manager dialog is opened shortly after the server start-up or restart, license information will not be retrieved. In such case, please close it and try again after a while.
483170	ONVIF Profile G	Recording status is not indicated with a red dot for ONVIF Profile G cameras with local storage recording

5. BVMS Version 12.3

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

Version 12.3 introduces new features and resolves issues compared to BVMS 12.2.

5.1. New functionality

ID	Description
386815	LPR: Support for Bosch IVA Pro LPR and Make&Model New camera event to receive license plate or make&model information as well as possibility to search the recordings for specific license plate, country, manufacturer, model and type.
406557	ONVIF: Multi-stream support for ONVIF cameras VSG to support two different quality streams from a single ONVIF camera*
407464	Maps: Visualization of detected IVA objects Operator Client allows showing detected IVA objects (person or vehicle) with the actual geolocation on a global map.
412641	Monitor Group: Possibility to retain last layout Option in the BVMS Configuration Client to keep the last used layout for Monitor Group (decoders) which will be retained also in case of server restart or configuration change.
439692	VSG: Special video limitation mode for live access to RTSP streams
446173	Reports: One button export for all the available configuration reports
447313	Operator Client: Icon indicating currently logged-in User and User Group information
453989	Forensic Search: Support for IVA Pro Appearance and IVA Pro PPE New tasks available in BVMS Forensic Search: search for person's appearance based on attributes and search for PPE violation.

i Multi-stream support for ONVIF

*Alarm or schedule-based stream switching is not yet available with the released BVMS 12.3 / VSG 9.3 version and will become available with the VSG version released later.

5.2. Removed functionality

ID	Description
438779	<p>End of life: Mobile Video Service (MVS)</p> <p>Important: MVS is removed from this release, it won't be possible to install it anymore for new installations and in case of update it will be removed. As a result, features dependent on MVS (web browser access) will not be available anymore.</p>

5.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

5.4. Disclaimer

BVMS is not designed, intended, or authorized for use in any type of system or application in which the failure of the Software could lead to a risk to health and safety. The user is responsible to verify that the Software and its specified functionalities are suitable for the intended application, in particular with respect to accuracy, safety and security.

5.5. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.


Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware CPP3*	5.75.0011
Firmware CPP4	7.10.0096
Firmware CPP5	6.31.0019
Firmware CPP6	7.89.0045
Firmware CPP7	7.89.0045
Firmware CPP7.3	7.89.0045
Firmware CPP13	8.92.0048
Firmware CPP14.1	9.11.0009
Firmware CPP14.2	9.40.0132 ; 9.40.0134
Firmware CPP14.3	9.40.0132 ; 9.40.0134
Firmware Aviotec (CPP6)	7.82.0025
Firmware CPP-ENC*	5.54.0012

Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	<u>10.61.0006</u>
Videojet decoder VJD 7523	<u>10.61.0006</u>
Videojet decoder 8000	<u>10.06.0001</u>
Barco RCP+ Agent	0.9.7.0
Monitor Wall	10.00.0164 (pre-configured from Configuration Manager)
Software	
VRM	4.50.0042 (64-bit)
VSG	9.3.0.208
BIS	5.0.2110.0
Access Management System (AMS)	5.0.20
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Intuikey Keyboard	1.96
SQL Server	2022
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.1.2.1
VideoSDK	6.70.0015
RCP+	5.05.0085
DVRs and other devices	

DVR FW Version	2.6.0 (Divar AN 3000/5000) 3.4.0 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.14.012
NetApp E2800 SanTricity	11.80GA
RPS	6.14.001
CMLib	7.74.120
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2) Windows 11 Pro (64-bit) (24H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2) Windows 11 Pro (64-bit) (24H2)
Operating systems Video Recording Manager	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit)

 *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

5.6. BVMS Setup types and applicability

With BVMS 12.0 and Privacy overlay feature, two different types of setup are introduced:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay feature
- BVMS Setup with AI - including AI packages for Privacy overlay feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay feature can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay feature will be used.
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay feature that can be used on the client.


5.7. DIVAR IP

The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 When updating DIVAR IP appliance (DIVAR IP all-in-one 4000, DIVAR IP all-in-one 5000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen2 and Gen3), managed by DIVAR IP System Manager, special corresponding packages are required to upgrade BVMS on these devices.

Regular BVMS installer cannot be used anymore to update BVMS on DIVAR IP. Please note, that BVMS 12.0.1 release was the last version supported for DIVAR IP 7000 R2 (DIP-71xx) appliances.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

5.8. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 550
Intel	Intel® Graphics Driver 31.0.101.2125 for 7th-10th Gen Intel® Core™ Processor Graphics Intel® Graphics Driver 31.0.101.4955 for Intel® Arc™ Pro Series Graphics

✘ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

5.9. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

✘ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

✘ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

5.10. Patched issues for BVMS 12.3

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer

5.11. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
452376	Operator Client	FIXED: In some cases, when new configuration is activated and multiple clients are forced to reload, it might happen, that some users will be logged off with an indication, that the license limit is reached. In such cases, those users should try to log in once again after a while.
454392	Manual	FIXED: Configuration Manual incorrectly states 5323 as the Authorization Service port, while 5422 is used

5.12. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
283766	Setup	In some cases, temporary files are not removed from the %Temp% Windows folder when reboot is triggered directly after the setup. Please consider removing unnecessary files manually from the %Temp% folder after the setup or upgrade.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.

ID	Subject	Description
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.cxml is deleted and has to be created again.
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
416328	Setup	When installing MVS on a Windows 11 machine, additional step to install IIS 4.0 might be required. After reboot, the setup will continue.
418415	Operator Client	Playback of video with very long GOPs (255) and low fps (15 or lower) might not work properly. In such case, it is advised to either reduce the GOP length or increase fps.
424935	Configuration Client	Schedule-based recording might not always work properly if configured for a holiday. As a workaround, camera should be recording using "exception day"

ID	Subject	Description
429120	Configuration Client	Upgrading the firmware for CPP13 to the version 8.90 (or later) will result in unsecured ports closed in the camera. Please enable "Secured connection" option for the camera before upgrading the firmware in order to keep using it in BVMS. If unsecured connection is still expected, please make sure that corresponding ports and services are enabled again in the camera configuration.
430103	Operator Client	When configuring VCA sensitive area using the Operator Client with 4K monitor, area drawing might not work correctly. It is advised to use standard (FullHD) resolution if VCA sensitive area is to be set using the Operator Client.
430793	Forensic Search	If combination of Motion+ and EVA/IVA/IVA Pro algorithms is used for a single Forensic Search action, search results might not be consistent and no error message is shown.
452046	DVR	Replay of the DIVAR network/hybrid recordings with x2 or higher speed will only display the I-frames
452936	Configuration Client	In some cases, when the License Manager dialog is opened shortly after the server start-up or restart, license information will not be retrieved. In such case, please close it and try again after a while.

6. BVMS Version 12.2

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

Version 12.2 introduces new features and resolves issues compared to BVMS 12.1.

6.1. New functionality

ID	Description
415525	External IdP integration for the Operator Client login using OpenID Connect
443051	Upgrade to the SQL Server 2022
434879	Audio linking between the devices (for live audio and intercom)
316080	Update of the web control to WebView2

⊗ BVMS 12.2 requires *WebView2 Runtime* to be available on the machine where the client application is running in order to properly display the content which requires *WebView2* control (ie. HTML, TXT, MHT files, external webpages and widgets, External IdP login window).

Therefore, if such files will be used or if integration with the external IdP is configured, please ensure that the *WebView2 Runtime* is available, as it is **not deployed** with the standard BVMS setup.

Please note:

- Windows 11: *WebView2 Runtime* should be available by default as one of the OS components.
- Windows 10: *WebView2 Runtime* is available with the most recent versions or installed with the Windows Updates. Therefore, it is strongly recommended to apply all the **Windows Updates** before installing BVMS 12.2 on the client machine.
- Other Windows versions or Windows Server: *WebView2 Runtime* is not deployed by default and should be installed manually on the target machine.
- DIVAR IP appliances: *WebView2 Runtime* is installed together with the System Manager package of BVMS 12.2. No further actions are required.

6.2. Removed functionality

ID	Description
n.a.	

6.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

6.4. Disclaimer

BVMS is not designed, intended, or authorized for use in any type of system or application in which the failure of the Software could lead to a risk to health and safety. The user is responsible to verify that the Software and its specified functionalities are suitable for the intended application, in particular with respect to accuracy, safety and security.

6.5. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility


Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware CPP3*	5.75.0011

Firmware CPP4	<u>7.10.0096</u>
Firmware CPP5	<u>6.31.0019</u>
Firmware CPP6	<u>7.89.0030</u>
Firmware CPP7	<u>7.89.0030</u>
Firmware CPP7.3	<u>7.89.0030</u>
Firmware CPP13	<u>8.91.0028</u>
Firmware CPP14.1	<u>9.10.0192</u>
Firmware CPP14.2	<u>9.10.0192</u>
Firmware CPP14.3	<u>9.10.0192</u>
Firmware Aviotec (CPP6)	<u>7.82.0025</u>
Firmware CPP-ENC*	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	<u>10.60.0025</u>
Videojet decoder VJD 7523	<u>10.60.0025</u>
Videojet decoder 8000	<u>10.06.0001</u>
Barco RCP+ Agent	0.9.7.0
Monitor Wall	10.00.0164 (pre-configured from Configuration Manager)
Software	
VRM	4.40.0014 (64-bit)
VSG	9.2.0.10
BIS	5.0.21100

Access Management System (AMS)	5.0.20
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Intuikey Keyboard	1.96
SQL Server	2022
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.1.2.1
VideoSDK	6.70.0015
RCP+	5.05.0085
DVRs and other devices	
DVR FW Version	2.6.0 (Divar AN 3000/5000) 3.4.0 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.14.012
NetApp E2800 SanTricity	11.80GA
RPS	6.14.001
CMLib	7.72.0106
Operating systems	

Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC 2021 Windows 11 Pro (64-bit) (23H2)
Operating systems Video Recording Manager	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit)

 *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

6.6. BVMS Setup types and applicability

With BVMS 12.0 and Privacy overlay feature, two different types of setup are introduced:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay feature
- BVMS Setup with AI - including AI packages for Privacy overlay feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay feature can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay feature will be used.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay feature that can be used on the client.

6.7. DIVAR IP


The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 When updating DIVAR IP appliance (DIVAR IP all-in-one 4000, DIVAR IP all-in-one 5000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen2 and Gen3), managed by DIVAR IP System Manager, special corresponding packages are required to upgrade BVMS on these devices.

Regular BVMS installer cannot be used anymore to update BVMS on DIVAR IP. Please note, that BVMS 12.0.1 release was the last version supported for DIVAR IP 7000 R2 (DIP-71xx) appliances.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

6.8. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 550
Intel	Intel® Graphics Driver 31.0.101.2125 for 7th-10th Gen Intel® Core™ Processor Graphics Intel® Graphics Driver 31.0.101.4955 for Intel® Arc™ Pro Series Graphics

Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

6.9. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

❌ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

❌ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

6.10. Patched issues for BVMS 12.2

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer
434867	FIXED: Problems with video display for instant playback on alarm	BVMS 13.0	yes	n/a
454258	FIXED: State of virtual inputs might not be updated correctly	BVMS 13.0	yes	n/a

6.11. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
439196	Configuration Client	FIXED: When BVMS user password configured in the Configuration Client is longer than 32 characters, login will not be possible again.
435034	Decoder	FIXED: Videojet decoder 8000 firmware 10.05 is not compatible with CPP14 camera FW 9.00 or higher. Please use the tested firmware versions for both cameras and decoders.
439569	Forensic Search	FIXED: Metadata is not deleted when video recordings are manually deleted. As a result, metadata indication might still be visible when Forensic Search is performed even though recordings were manually deleted before.
448966	Configuration Client	FIXED: In some cases adding new E-Series storage to the system might result in removing the previously added storage from the Device Tree.

6.12. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
283766	Setup	In some cases, temporary files are not removed from the %Temp% Windows folder when reboot is triggered directly after the setup. Please consider removing unnecessary files manually from the %Temp% folder after the setup or upgrade.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.

ID	Subject	Description
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.cxml is deleted and has to be created again.
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
416328	Setup	When installing MVS on a Windows 11 machine, additional step to install IIS 4.0 might be required. After reboot, the setup will continue.
418415	Operator Client	Playback of video with very long GOPs (255) and low fps (15 or lower) might not work properly. In such case, it is advised to either reduce the GOP length or increase fps.
424935	Configuration Client	Schedule-based recording might not always work properly if configured for a holiday. As a workaround, camera should be recording using "exception day"
429120	Configuration Client	Upgrading the firmware for CPP13 to the version 8.90 (or later) will result in unsecured ports closed in the camera. Please enable "Secured connection" option for the camera before upgrading the firmware in order to keep using it in BVMS. If unsecured connection is still expected, please make sure that corresponding ports and services are enabled again in the camera configuration.
430103	Operator Client	When configuring VCA sensitive area using the Operator Client with 4K monitor, area drawing might not work correctly. It is advised to use standard (FullHD) resolution if VCA sensitive area is to be set using the Operator Client.

ID	Subject	Description
430793	Forensic Search	If combination of Motion+ and EVA/IVA/IVA Pro algorithms is used for a single Forensic Search action, search results might not be consistent and no error message is shown.
452376	Operator Client	In some cases, when new configuration is activated and multiple clients are forced to reload, it might happen, that some users will be logged off with an indication, that the license limit is reached. In such cases, those users should try to log in once again after a while.
452046	DVR	Replay of the DIVAR network/hybrid recordings with x2 or higher speed will only display the I-frames
454392	Manual	Configuration Manual incorrectly states 5323 as the Authorization Service port, while 5422 is used
452936	Configuration Client	In some cases, when the License Manager dialog is opened shortly after the server start-up or restart, license information will not be retrieved. In such case, please close it and try again after a while.
445189	Operator Client	For the external .MHT files pictures will not be displayed properly anymore. Please use other file format instead.
452298	External IdP	If the Operator Client is closed without using the Log Off option, if "Keep me signed in" option was used for the authentication, another user might be logged in without providing credentials. In such cases, please make sure, that the Log Off option is always used.

7. BVMS Version 12.1

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

Version 12.1 introduces new features and resolves issues compared to BVMS 12.0.1.

7.1. New functionality

ID	Description
261898	Improved hashing algorithm for stored passwords
368172	Multi-camera Forensic Search - two modes available (individual or common camera search). Improved task configuration and search status indication for Forensic Search. Unsynced playback available for individual cameras in playback mode. Bookmarks supporting unsynced playback cameras, including new way of exporting video for bookmarks
383139	Improved logging of the VRM
394089	Import device configuration from the CSV file
400388	Sharing favorites and bookmarks to file with the password protection
411761	Number of VRM playback sessions increased to 128
419722	Last used view for the panoramic camera will be stored when this camera is opened again
419738	Import and export of favorites and bookmarks to the file available as User Group permission
419908	GPS-based positioning for supporting moving cameras available for BVMS Server SDK
421106	Integration of new Tattile Stark camera models

7.2. Removed functionality

ID	Description
427964	Support of DVR600

7.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

7.4. Disclaimer

BVMS is not designed, intended, or authorized for use in any type of system or application in which the failure of the Software could lead to a risk to health and safety. The user is responsible to verify that the Software and its specified functionalities are suitable for the intended application, in particular with respect to accuracy, safety and security.

7.5. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility


Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware MPEG-4*	4.15.0002

Firmware CPP3*	<u>5.75.0011</u>
Firmware CPP4	<u>7.10.0096</u>
Firmware CPP5	<u>6.31.0019</u>
Firmware CPP6	7.85.0016, <u>7.87.0029</u> (recommended), 7.89.0030
Firmware CPP7	7.85.0016, <u>7.87.0029</u> (recommended), 7.89.0030
Firmware CPP7.3	7.85.0016, <u>7.87.0029</u> (recommended), 7.89.0030
Firmware CPP13	8.40.0029, 8.45.0032, <u>8.91.0028</u> (recommended)
Firmware CPP14.1	8.50.0138, <u>8.80.0090</u> , <u>9.00.0210</u> (recommended), 9.10.0192
Firmware CPP14.2	8.50.0138, <u>8.80.0090</u> , <u>9.00.0210</u> (recommended), 9.10.0192
Firmware CPP14.3	9.00.0210 (recommended), 9.10.0192
Firmware Aviotec (CPP6)	<u>7.82.0025</u>
Firmware CPP-ENC*	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	10.40.0061
Videojet decoder VJD 7523	10.40.0061; 10.61.0006 ⁽¹⁾

Videojet decoder VJD 7533	11.00.0029 ⁽¹⁾
Videojet decoder 8000	10.05.0001 (Important note: this decoder firmware version is not compatible with CPP14 firmware 9.00.0210. In combination with CPP14 please use the firmware version 8.80.0090 for cameras)
Barco RCP+ Agent	0.9.7.0
Monitor Wall	10.00.0164 (pre-configured from Configuration Manager)
Software	
VRM	4.30.0015 (64-bit)
VSG	9.1.1.1
BIS	5.0.21100
Access Management System (AMS)	5.0.20
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2019
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.1.2.1
VideoSDK	6.60.0037
RCP+	5.03.0063
DVRs and other devices	
DVR FW Version	<u>2.6.0</u> (Divar AN 3000/5000) 3.3.1 (Divar Network/Hybrid)
Allegiant MCS	2.95

Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.14.012
NetApp E2800 SanTricity	11.80GA
RPS	6.14.001
CMLib	7.71.169
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC (21H2) Windows 11 Pro (64-bit) (22H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC (21H2) Windows 11 Pro (64-bit) (22H2)
Operating systems Video Recording Manager	Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit)

 *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

¹⁾ Due to the security improvements with FW 10.61 or later for VJD-7523 and VJD-7533 decoders, additional configuration steps might be required when adding those devices to the system: once device is authenticated and added, it should be renamed manually and device capabilities should be refreshed.

7.6. BVMS Setup types and applicability

With BVMS 12.0 and Privacy overlay feature, two different types of setup are introduced:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay feature

- BVMS Setup with AI - including AI packages for Privacy overlay feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay feature can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay feature will be used.
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay feature that can be used on the client.


7.7. DIVAR IP

The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 When updating DIVAR IP appliance (DIVAR IP all-in-one 4000, DIVAR IP all-in-one 5000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen2 and Gen3), managed by DIVAR IP System Manager, special corresponding packages are required to upgrade BVMS on these devices.

Regular BVMS installer cannot be used anymore to update BVMS on DIVAR IP. Please note, that previous BVMS release (12.0.1) was the last version supported for DIVAR IP 7000 R2 (DIP-71xx) appliances.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

7.8. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 525
Intel	Intel® Graphics - Windows® DCH Drivers HD Graphics 530/ UHD Graphics 630

⊗ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

7.9. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

⊗ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

⊗ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

7.10. Patched issues for BVMS 12.1

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer

7.11. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
334635	Operator Client	FIXED: An OC showing GPU decoded cameos may run into an overload situation after a few hours as in some cases cameos may switch to CPU decoded mode.
366660	Logbook	FIXED: Alarm Title is cut off in Logbook after 64 characters.
400326	Configuration Client	FIXED: Newly added AUX commands to "Predefined positions and AUX commands" cannot be executed before saving the configuration.

7.12. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
283766	Setup	In some cases, temporary files are not removed from the %Temp% Windows folder when reboot is triggered directly after the setup. Please consider removing unnecessary files manually from the %Temp% folder after the setup or upgrade.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".

ID	Subject	Description
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.cxml is deleted and has to be created again.
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
416328	Setup	When installing MVS on a Windows 11 machine, additional step to install IIS 4.0 might be required. After reboot, the setup will continue.
418415	Operator Client	Playback of video with very long GOPs (255) and low fps (15 or lower) might not work properly. In such case, it is advised to either reduce the GOP length or increase fps.
424935	Configuration Client	Schedule-based recording might not always work properly if configured for a holiday. As a workaround, camera should be recording using "exception day"
429120	Configuration Client	Upgrading the firmware for CPP13 to the version 8.90 (or later) will result in unsecured ports closed in the camera. Please enable "Secured connection" option for the camera before upgrading the firmware in order to keep using it in BVMS. If unsecured connection is still expected, please make sure that corresponding ports and services are enabled again in the camera configuration.

ID	Subject	Description
430103	Operator Client	When configuring VCA sensitive area using the Operator Client with 4K monitor, area drawing might not work correctly. It is advised to use standard (FullHD) resolution if VCA sensitive area is to be set using the Operator Client.
430793	Forensic Search	If combination of Motion+ and EVA/IVA/IVA Pro algorithms is used for a single Forensic Search action, search results might not be consistent and no error message is shown.
431190	AI Audio alarm	If audio alarm "Name" is empty in the camera configuration menu, AI audio alarm will not be triggered correctly by the camera.
434856	Operator Client	Some embedded external applications might not start anymore on Windows 11.
435034	Decoder	Videojet decoder 8000 firmware 10.05 is not compatible with CPP14 camera FW 9.00 or higher. If VJD 8000 decoders are used, please consider using FW 8.80 for the cameras or wait for the upcoming VJD 8000 firmware before upgrading the cameras to the FW 9.00.
435020	Map	If camera is added to the map using new CSV file import feature, it will be by default set to invisible. Please enable visibility for each camera and position it as needed on the map.
439196	Configuration Client	When BVMS user password configured in the Configuration Client is longer than 32 characters, login will not be possible again. Please do not use password longer than 32 characters.
439569	Forensic Search	Metadata is not deleted when video recordings are manually deleted. As a result, metadata indication might still be visible when Forensic Search is performed even though recordings were manually deleted before.

8. BVMS Version 12.0.1

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

Version 12.0.1 introduces new features and resolves issues compared to BVMS 12.0.

8.1. New functionality

ID	Description
234992	Configuration Audit Trail
366566	REST API integration interface for BVMS Virtual Inputs
397447	Rework of the camera adding dialogs to adjust to the camera firmware changes
405774	Client dewarping for VSG cameras
400388	Favorites and Bookmarks - password protection available for exported files
413231	Setup adjustments for DIVAR IP

8.1.1. Audit Trail

BVMS 12.0.1 introduces new Audit Trail feature. It allows storing configuration changes (performed in BVMS Configuration Client) for the audit purposes and for the later review.

In order to use the Audit Trail feature, please make sure to install the additional component of "Audit Trail database" (deselected by default) during BVMS installation. Installing Audit Trail database will require additional 10GB HDD space to be reserved.

Once installed, Audit Trail has to be enabled in the BVMS Configuration Client settings. It is advised to enable it after performing initial system configuration.

Audit Trail feature is **not supported** and cannot be installed on DIVAR IP 7000 R2 (DIP-71xx) appliance, running Windows (Storage) Server 2012 operating system.

8.2. Removed functionality

ID	Description
-	

8.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

8.4. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras where not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware MPEG-4*	4.15.0002
Firmware CPP3*	5.75.0011
Firmware CPP4	7.10.0096
Firmware CPP5	6.31.0019
Firmware CPP6	7.87.0029

Firmware CPP7	<u>7.87.0029</u>
Firmware CPP7.3	<u>7.87.0029</u>
Firmware CPP13	<u>8.48.0017</u>
Firmware CPP14.1	<u>8.80.0090</u>
Firmware CPP14.2	<u>8.80.0090</u>
Firmware Aviotec	<u>7.82.0025</u>
Firmware CPP-ENC*	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2*	2.53.0005
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	10.31.0005
Videojet decoder VJD 7523	10.40.0055; 10.61.0006 ⁽²⁾
Videojet decoder VJD 7533	11.00.0029 ⁽²⁾
Videojet decoder 8000	10.05.0001
Barco RCP+ Agent	0.9.7.0
Monitor Wall	10.0 (pre-configured from Configuration Manager)
Software	
VRM	4.20.0016 (64-bit)
VSG	9.1.0.12
BIS	5.0.21100
Access Management System (AMS)	5.0.20

Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2019
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.0.0.8
VideoSDK	6.50.0030
RCP+	5.03.0063
DVRs and other devices	
DVR FW Version	2.6.0 (Divar AN 3000/5000) 3.3.1 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.14.012
NetApp E2800 SanTricity	11.70.3P1
RPS	6.14.001
CMLib	7.70.88
Operating systems	

Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC (21H2) Windows 11 Pro (64-bit) (22H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2012 R2 (64-bit) ⁽¹⁾ Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC (21H2) Windows 11 Pro (64-bit) (22H2)
Operating systems Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit)

✘ *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

¹⁾ Windows (Storage) Server 2012 R2 (64-bit) is only supported when updating your BVMS on DIVAR IP 7000R2 (DIP-71xx) from version 10.1 or lower. MS SQL Server 2019, used as a standard version for BVMS 11.0 or higher, is not supported anymore on Windows (Storage) Server 2012 R2 (64-bit). Therefore, in case of an upgrade scenario, MS SQL Server will remain on version 2017 and such combination is still supported with BVMS 11.0 or higher. However, for this reason it is not possible to deploy new BVMS 11.0 or higher installation on Windows (Storage) Server 2012 R2, as MS SQL 2019 installation will fail. Audit Trail feature is not supported for Windows (Storage) Server 2012 operating system.

²⁾ Due to the security improvements with FW 10.61 or later for VJD-7523 and VJD-7533 decoders, additional configuration steps might be required when adding those devices to the system: once device is authenticated and added, it should be renamed manually and device capabilities should be refreshed.

8.5. BVMS Setup types and applicability

With BVMS 12.0 and Privacy overlay feature, two different types of setup are introduced:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay feature
- BVMS Setup with AI - including AI packages for Privacy overlay feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay feature can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay feature will be used.
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay feature that can be used on the client.

8.6. DIVAR IP


The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 When updating DIVAR IP appliance, regular BVMS installer should only be used for DIVAR IP 7000 R2 (DIP-71xx). Please note, that for DIVAR IP all-in-one 4000, DIVAR IP all-in-one 5000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen2 and Gen3, managed by DIVAR IP System Manager, special corresponding packages are required to upgrade BVMS on these devices.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

8.7. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 525

Component	Version
Intel	Intel® Graphics - Windows® DCH Drivers HD Graphics 530/ UHD Graphics 630

✘ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

8.8. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

✘ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

✘ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

8.9. Patched issues for BVMS 12.0.1

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer

8.10. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
367240	Camera	FIXED: CPP14 might not always return to original fps when closing the second stream. To be resolved with firmware release.
414506	User manual	FIXED: User manual indicates incorrect port numbers, used by Workstation Monitoring service. The correct values are: 5410 and 5411.
428521	Security fix	FIXED: Security fix in RCP+ SDK (CVE-2023-35867)

8.11. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
334635	Operator Client	An OC showing GPU decoded cameos may run into an overload situation after a few hours as in some cases cameos may switch to CPU decoded mode.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".
351924	SQL Server	MS SQL Server update to 2019 silently fails on Windows Server 2012 R2 and stays on MS SQL Server 2017.
366660	Logbook	Alarm Title is cut off in Logbook after 64 characters.

ID	Subject	Description
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
398300	Tattile LPR camera	<p>If using Tattile LPR camera, after upgrading to BVMS 12.0 the following steps are required, due to changes in the camera firmware:</p> <ul style="list-style-type: none"> ▪ Upload new "LPR_Event_Template.txt" file to the camera ▪ Open "Edit" dialog for Tattile camera and press "Authenticate" to retrieve updated information from the camera ▪ Verify, that correct "Device Serial Number" is displayed on Properties tab.
400326	Configuration Client	Newly added AUX commands to "Predefined positions and AUX commands" cannot be executed before saving the configuration.
408235	Keyboard	IntuiKey keyboards cannot address logical numbers >999 for Monitor Group
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.cxml is deleted and has to be created again.
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
413287	Decoder	Panoramic presets are not working on decoder, if camera mounting position is set to "Floor"
413824	Setup	In some cases, update setup on Windows Server might fail, due to known OS bug (KB #4506040). In such case, please reboot the system and try running the setup again.

ID	Subject	Description
416328	Setup	When installing MVS on a Windows 11 machine, additional step to install IIS 4.0 might be required. After reboot, the setup will continue.
418066	Configuration Client	Audit Trail: single Audit Trail entry cannot contain more than 100 000 lines.
418415	Operator Client	Playback of video with very long GOPs (255) and low fps (15 or lower) might not work properly. In such case, it is advised to either reduce the GOP length or increase fps.
422324	Configuration Client	When manually adding a new camera, the process of adding might in some cases take up to 3-5 seconds.
424935	Configuration Client	Schedule-based recording might not always work properly if configured for a holiday. As a workaround, camera should be recording using "exception day"
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.

9. BVMS Version 12.0

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

Version 12.0 introduces new features and resolves issues compared to BVMS 11.1.1.

9.1. New functionality

ID	Description
320894	Privacy overlay: AI based anonymization
358395	Threat Level Management: dynamic changes of user permissions
358394	Global protect/restrict/delete recordings actions available for Logical Tree elements
353383	Possibility to limit access to SDK or various applications for BVMS users
251481	ONVIF Profile T conformance changes: support of metadata from ONVIF Profile T cameras and two-way audio
400066	Displaying of VCA metadata for alarm can be enabled/disabled by user
332919	Renaming of root node of Logical Tree possible
393169	Panoramic presets call-up on decoder available using Server SDK
396093	Support of new IVA detectors
383464	Support for VJD-7523 decoders
228604	Import/export mechanism for favorites and bookmarks
377909	Availability of recent (60s) recordings limited for users without permission for live view
383465	SDK Logbook Export is now able to provide a local time
394791	Device based licensing - extended for CPP6 and CPP7 cameras

ID	Description
352573	Workstation Monitoring interface (Note: using new ports 5410 and 5411)
395165	Live/playback webpage available for VRM
345974	Number of alarm rows for Enterprise Operator Client follows the max. value for configured subsystems

9.2. Removed functionality

ID	Description
-	

9.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

9.4. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras where not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	

Firmware MPEG-4*	4.15.0002
Firmware CPP3*	<u>5.75.0011</u>
Firmware CPP4	<u>7.10.0096</u>
Firmware CPP5	<u>6.31.0019</u>
Firmware CPP6	<u>7.86.0019</u>
Firmware CPP7	<u>7.86.0019</u>
Firmware CPP7.3	<u>7.86.0019</u>
Firmware CPP13	<u>8.47.0026</u>
Firmware CPP14.1	<u>8.71.0066</u>
Firmware CPP14.2	<u>8.71.0066</u>
Firmware Aviotec	<u>7.82.0025</u>
Firmware CPP-ENC*	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2*	2.53.0005
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder VJD 7513	10.31.0005
Videojet decoder VJD 7523	10.40.0055
Videojet decoder 8000	10.05.0001
Barco RCP+ Agent	0.9.7.0
Monitor Wall	10.0 (pre-configured from Configuration Manager)
Software	
VRM	4.10.0079 (64-bit)

VSG	9.0.0.178
BIS	4.9.1200
Access Management System (AMS)	5.0.20
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2019
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.0.0.8
VideoSDK	6.50.0028
RCP+	5.03.0063
DVRs and other devices	
DVR FW Version	<u>2.6.0</u> (Divar AN 3000/5000) 3.3.1 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.12.024
NetApp E2800 SanTricity	11.70.3P1
RPS	6.10.001

CMLib	7.62.0176
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC (21H2) Windows 11 Pro (64-bit) (22H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2012 R2 (64-bit)** Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows 10 Professional (64-bit) (22H2) Windows 10 Enterprise (64-bit) LTSC (21H2) Windows 11 Pro (64-bit) (22H2)
Operating systems Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit)

✘ *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.

**Windows (Storage) Server 2012 R2 (64-bit) is only supported when updating your BVMS from version 10.1 or lower. MS SQL Server 2019, used as a standard version for BVMS 11.0 or higher, is not supported anymore on Windows (Storage) Server 2012 R2 (64-bit). Therefore, in case of an upgrade scenario, MS SQL Server will remain on version 2017 and such combination is still supported with BVMS 11.0 or higher. However, for this reason it is not possible to deploy new BVMS 11.0 or higher installation on Windows (Storage) Server 2012 R2, as MS SQL 2019 installation will fail.

9.5. BVMS Setup types and applicability

With BVMS 12.0 and Privacy overlay feature, two different types of setup are introduced:

- BVMS Setup (standard) - not containing AI packages for Privacy overlay feature
- BVMS Setup with AI - including AI packages for Privacy overlay feature

Please refer to the table below for applicability of setup packages.

Component	BVMS Setup (standard)	BVMS Setup with AI	Comments
BVMS server (standalone)	yes	yes	BVMS Setup with AI can be used to allow No-Touch Deployment of AI packages for connected clients, while standard setup is generally sufficient for the server.
DIVAR IP	yes	no	BVMS Setup with AI is not supported on DIVAR IP. Privacy overlay feature can only be used on workstations connected to DIVAR IP.
BVMS Operator Client with Privacy overlay	no	yes	BVMS Setup with AI is required for all the workstations, where Privacy overlay feature will be used.
BVMS Operator Client without Privacy overlay	yes	yes	BVMS Setup with AI can also be used if Privacy overlay is not in use, while standard setup would be sufficient.

BVMS setup compatibility

BVMS setup versions with and without AI packages are fully compatible with each other. For example, in case of:

- BVMS Setup (standard) installed on DIVAR IP acting as a server
- BVMS Setup with AI installed on workstation, connecting to this DIVAR IP

BVMS running on this workstation will be fully functional, including Privacy overlay feature that can be used on the client.

9.6. DIVAR IP


The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

-  For BVMS 11.1.1 and BVMS 12.0.0, no additional steps are required when upgrading BVMS on a DIVAR IP with regular BVMS installer. Please note, that for DIVAR IP all-in-one 4000, DIVAR IP all-in-one 6000, and DIVAR IP all-in-one 7000 Gen3, managed by DIVAR IP System Manager or DIVAR IP Software Center utilities, special corresponding packages are required to upgrade BVMS on these devices.

Please refer to the document "DIVAR IP Software Info Brief" published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

9.7. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 525

Component	Version
Intel	Intel® Graphics - Windows® DCH Drivers HD Graphics 530/ UHD Graphics 630

✘ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

9.8. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

✘ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

✘ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

9.9. Patched issues for BVMS 12.0

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer
	FIXED:			

9.10. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
345746	Operator Client	FIXED: Timeline search might fail with very few alarms over a very long period of time for some devices.
381138	MVS	FIXED: CPP13 and CPP14 cameras might not work with Mobile Video Service
380121	Operator Client	FIXED: Timeline event search for Motion and Alarm for DVR 600/700 recorders does not deliver results.
377286	Operator Client	FIXED: Colored timeline: it might happen sporadically, that alarm recording indication extends between two consecutive alarms.
355155	Keyboard	FIXED: Keyboard connected to VJD-7513 decoder in BVMS environment is not supported yet.
360387	Camera	FIXED: CPP14 camera might not show live video under certain circumstances for lower resolution streams.
368190	Camera	FIXED: Playback jumps during alarm recording with stream switching for CPP13 and CPP14 cameras.
375281	Camera	FIXED: If using Bosch CPP13 or CPP14 based cameras, multicast stream is self-configured by the camera, even if not configured in the camera menu before. It might result in network issues if network infrastructure is not prepared for multicast. This issue is visible for fw 8.45.0017 or lower (CPP13), 8.30.0082 or lower (CPP14.1), 8.50.0138 or lower (CPP14.2).
375149	Configuration Client	FIXED: Performing factory default ("Restore settings") for CPP13 cameras might result in BVMS Configuration Client crash.
368140	Configuration Client	FIXED: Not all mounting position options available for configuration with CPP14.2 cameras. As a workaround, Configuration Manager should be used.
378413	Operator Client	FIXED: If manually positioned timeline into the alarm period of recordings (after the moment when alarm started), Text Data might not be displayed properly for CPP13 or CPP14 cameras recordings.

9.11. Known issues

✘ Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
334635	Operator Client	An OC showing GPU decoded cameos may run into an overload situation after a few hours as in some cases cameos may switch to CPU decoded mode.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
346464	Camera	Local storage replay and ANR playback are not working when the video is stored encrypted and if camera connection is set to "secured".
351924	SQL Server	MS SQL Server update to 2019 silently fails on Windows Server 2012 R2 and stays on MS SQL Server 2017.
359472	VSG	In some cases misleading "Configuration mismatch" information displayed for VSG cameras, while system is fully operational.
366660	Logbook	Alarm Title is cut off in Logbook after 64 characters.
367240	Camera	CPP14 might not always return to original fps when closing the second stream. To be resolved with firmware release.
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.

ID	Subject	Description
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
380845	Operator Client	Colored timeline: when observing timeline with ongoing recording, it might sporadically happen, that colored markings exceed actual recording range.
392522	Operator Client	Export with Privacy overlay of camera with G.726 audio codec might fail.
398300	Tattile LPR camera	<p>If using Tattile LPR camera, after upgrading to BVMS 12.0 the following steps are required, due to changes in the camera firmware:</p> <ul style="list-style-type: none"> ▪ Upload new "LPR_Event_Template.txt" file to the camera ▪ Open "Edit" dialog for Tattile camera and press "Authenticate" to retrieve updated information from the camera ▪ Verify, that correct "Device Serial Number" is displayed on Properties tab.
400326	Configuration Client	Newly added AUX commands to "Predefined positions and AUX commands" cannot be executed before saving the configuration.
408235	Keyboard	IntuiKey keyboards cannot address logical numbers >999 for Monitor Group
409659	Central server	After upgrading from BVMS 10.1 or lower, the file Bosch.VMS.BISProxy.settings.cxml is deleted and has to be created again.
410592	Operator Client	Refreshing the recordings protection state on the timeline might take up to 1 minute in some cases, if no further actions with timeline are done in the meantime (zoom in, zoom out)
413287	Decoder	Panoramic presets are not working on decoder, if camera mounting position is set to "Floor"
413824	Setup	In some cases, update setup on Windows Server might fail, due to known OS bug (KB #4506040). In such case, please reboot the system and try running the setup again.
414506	User manual	User manual indicates incorrect port numbers, used by Workstation Monitoring service. The correct values are: 5410 and 5411.

10. BVMS Version 11.1.1

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#). Version 11.1.1 introduces new features and resolves issues compared to BVMS 11.1.

Please note: Since BVMS 11.1 version was not made available publicly, please see BVMS 11.1 Release Notes below to review all the changes comparing to BVMS 11.0.

10.1. New functionality

ID	Description
343011	Colored timeline enabled for VRM and DVR recordings
359901	Support of encrypted multicast streaming and SRTP for CPP13 / CPP14 cameras
343024	Date/time stamp as subtitles available for MP4/MOV exported recordings

⊗ Since BVMS 11.1 version was not made available publicly, please see BVMS 11.1 Release Notes below to review all the new functionalities, compared to BVMS 11.0.

10.2. Removed functionality

ID	Description
-	

10.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

10.4. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware MPEG-4*	4.15.0002
Firmware CPP3	5.75.0011
Firmware CPP4	7.10.0095
Firmware CPP5	6.31.0010
Firmware CPP6	7.84.0023
Firmware CPP7	7.84.0023
Firmware CPP7.3	7.84.0023
Firmware CPP13	8.41.0029 , 8.45.0018
Firmware CPP14.1	8.30.0082
Firmware CPP14.2	8.50.0138
Firmware Aviotec	7.82.0025
Firmware CPP-ENC*	5.54.0012

Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2*	2.53.0005
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder 7000	10.23.0002 10.40.0061 (for VJD-7523, limited support - note limitations mentioned below***)
Videojet decoder 8000	10.05.0001
Barco RCP+ Agent	0.9.61
Monitor Wall	10.0 (pre-configured from Configuration Manager)
Software	
VRM	4.03.0025 (64-bit)
VSG	8.1.0.59
BIS	4.9.11200
Access Management System (AMS)	4.9.10020
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2019
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.0.0.8
VideoSDK	6.40.0021

RCP+	5.02.0040
DVRs and other devices	
DVR FW Version	<u>2.6.0</u> (Divar AN 3000/5000) 3.3.0 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.12.020
NetApp E2800 SanTricity	11.70.1 R1
RPS	6.10.001
CMLib	7.51.0092
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (20H2) Windows 10 Professional (64-bit) (21H1) Windows 10 Professional (64-bit) (21H2) Windows 10 Enterprise (64-bit) LTSC build 1809 Windows 11 Pro (64-bit) (21H2)
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2012 R2 (64-bit)** Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows 10 Professional (64-bit) (20H2) Windows 10 Professional (64-bit) (21H1) Windows 10 Professional (64-bit) (21H2) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit)

- ✘ *Supported as legacy devices - since those devices reached End of Service phase, full functionality cannot be guaranteed.
- **Windows (Storage) Server 2012 R2 (64-bit) is only supported when updating your BVMS from version 10.1 or lower. MS SQL Server 2019, used as a standard version for BVMS 11.0 and 11.1, is not supported anymore on Windows (Storage) Server 2012 R2 (64-bit). Therefore, in case of an upgrade scenario, MS SQL Server will remain on version 2017 and such combination is still supported with BVMS 11.0 and 11.1. However, for this reason it is not possible to deploy new BVMS 11.0 or 11.1 installation on Windows (Storage) Server 2012 R2, as MS SQL 2019 installation will fail.
- ***VJD-7523 can be added to BVMS 11.1.1 system for core functionality of decoder, but some limitations should be expected (ie. device is not recognized correctly in the Configuration Client).

10.5. DIVAR IP

The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

- ✘ Since BVMS 11.1.1, no additional steps are required anymore when upgrading BVMS on a DIVAR IP. The only exception is DIVAR IP all-in-one 7000 Gen3, where dedicated Software Center package should be provided.

Please refer to the document BVMS_on_DIVAR_IP_Version_Note published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

10.6. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 470 NVIDIA RTX / Quadro Desktop and Notebook Driver Release 500
Intel	Intel® Graphics - Windows® 10 DCH Drivers HD Graphics 530/ UHD Graphics 630

✘ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

10.7. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)

Manufacturer	Fail-over mode	Version
VMware	High availability	vSphere 6.0, 7.0

✘ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

✘ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

10.8. Patched issues for BVMS 11.1.1

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer
382306	FIXED: Dragging camera from OC image pane to MG image pane	11.1.1	yes	n/a
390503 , 392474	FIXED: Some SDK features not working correctly in the alarm scenario	11.1.1	yes	yes
393486 , 393949 , 405734	FIXED: Max. clients reached error after several forced activations, SSH connection issues caused by latency with low bandwidth network, security fix (CVE-2023-28175)	11.1.1	yes	n/a
393966	FIXED: SDK events missing in SDK EventReceiver	11.1.1	yes	n/a
395229 , 431696	FIXED: Audio streaming issues with SSH connection, delayed start of the video stream with the first connection to a camera	11.1.1	yes	yes

ID	Description	Fixed in	BVMS	BVMS Viewer
395791	FIXED: Export from DVR might fail	11.1.1	yes	yes
398299 , 398300 , 398396	FIXED: Problems with connectivity to Tattile cameras	11.1.1	yes	n/a
398760 , 432547	FIXED: Delay in controlling ONVIF PTZ, focus near/far PTZ commands for ONVIF cameras not always sent properly	11.1.1	yes	yes
399322	FIXED: Videojet 4000 multi with disabled Audio not configurable	11.1.1	yes	yes
406338	FIXED: Forensic Search support for camera with FW 8.70 or higher	11.1.1	yes	yes
411732	FIXED: Workflow dialog not always shown on top in full screen mode	11.1.1	yes	no
413786	FIXED: In some cases frame rate configuration might not be properly applied to the camera	11.1.1	yes	no
410438 , 422838	FIXED: Improved playback speed for long GOP settings. Operator Client might crash with playback x8 or higher	11.1.1	yes	yes
416177 , 429433	FIXED: Enabling PTZ mode for USB keyboard, continuous recorder tour of PTZ camera stops when selecting another camera	11.1.1	yes	yes
416329	FIXED: Central Server might crash in specific scenario with text data recording	11.1.1	yes	no
424238	FIXED: CPP6, CPP7 and CPP7.3 cameras with the firmware 7.87 or later cannot be properly added to BVMS	11.1.1	yes	yes
428521 , 434923	FIXED: Secured communication issues with FW 9.00 cameras	11.1.1	yes	yes

10.9. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
368190	Camera	FIXED: Playback jumps during alarm recording with stream switching for CPP14 cameras. Resolved with fw: 8.50.0138

10.10. Known issues

✖ Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
319002	Operator Client	An operator cannot restrict more than 10 slices per block for alarm recording.
322846	Password	Change password dialog accepts a password with invalid characters but removes invalid characters of new passwords without any notification.
323952	Microsoft Visual C++	In some cases, the installation of the Microsoft Visual C++ redistributable fails.
326773	Security	No video when displaying a camera connected to XFM 1600 using SSH connection.
334635	Operator Client	An OC showing GPU decoded cameos may run into an overload situation after a few hours as in some cases cameos may switch to CPU decoded mode.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
345746	Operator Client	Timeline search might fail with very few alarms over a very long period of time for some devices.

ID	Subject	Description
348893	Configuration Client	Setting password enforcement does not work in some cases for CPP14 cameras.
351924	SQL Server	MS SQL Server update to 2019 silently fails on Windows Server 2012 R2 and stays on MS SQL Server 2017.
359472	VSG	In some cases misleading "Configuration mismatch" information displayed for VSG cameras, while system is fully operational.
359503	Online maps	CPP3 based cameras moving into wrong direction when controlled from Online Maps.
360387	Camera	CPP14 camera might not show live video under certain circumstances for lower resolution streams. To be resolved with the next firmware release.
366660	Logbook	Alarm Title is cut off in Logbook after 64 characters.
367142	DIVAR IP	'Basic Config' is not available for DIP-71 as iSCSI device from a remote server.
367240	Camera	CPP14 might not always return to original fps when closing the second stream. To be resolved with firmware release.
368140	Configuration Client	Not all mounting position options available for configuration with CPP14.2 cameras. As a workaround, Configuration Manager should be used.
368190	Camera	Playback jumps during alarm recording with stream switching for CPP13 and CPP14 cameras. To be resolved with the next firmware release. Please note: as a workaround it is not recommended to configure switching streaming profiles during alarm recording for those camera platforms.
369359	Operator Client	Using high resolution monitor with DIVAR IP all-in-one 5000 might result in improper scaling.
355155	Keyboard	Keyboard connected to VJD-7513 decoder in BVMS environment is not supported yet.
371804	Operator Client	Colored timeline: Depending on the timeline scale and number of events, loading of colored markings for events might take some time.

ID	Subject	Description
375281	Camera	If using Bosch CPP13 or CPP14 based cameras, multicast stream is self-configured by the camera, even if not configured in the camera menu before. It might result in network issues if network infrastructure is not prepared for multicast. This issue is visible for fw 8.45.0017 or lower (CPP13), 8.30.0082 or lower (CPP14.1), 8.50.0138 or lower (CPP14.2). It is planned to be fixed with the next firmware release for respective platforms. As a mitigation, if network infrastructure is not prepared for multicast, it is strongly advised to switch to TCP streaming in the BVMS Operator Client or in the BVMS Configuration Client (as a workstation setting).
375149	Configuration Client	Performing factory default ("Restore settings") for CPP13 cameras might result in BVMS Configuration Client crash.
375596	Operator Client	Colored timeline: When importing block export video recordings, colored markings might exceed actual available recordings range.
377286	Operator Client	Colored timeline: it might happen sporadically, that alarm recording indication extends between two consecutive alarms.
378184	Configuration Client	Occasionally, opening VRM Monitor page from BVMS Configuration Client results in displaying blank page.
378413	Operator Client	If manually positioned timeline into the alarm period of recordings (after the moment when alarm started), Text Data might not be displayed properly for CPP13 or CPP14 cameras recordings. To be fixed with the next camera firmware release.
378719	Operator Client	Colored timeline: Alarm recording markings might sporadically disappear and appear again after short period of time.
379560	Operator Client	It might sporadically happen, that opening old recordings from the timeline results in jumping forward in time to more recent recordings.
380121	Operator Client	Timeline event search for Motion and Alarm for DVR 600/700 recorders does not deliver results.
380845	Operator Client	Colored timeline: when observing timeline with ongoing recording, it might sporadically happen, that colored markings exceed actual recording range.
381138	MVS	CPP13 and CPP14 cameras might not work with Mobile Video Service
386348	VRM and VSC	Please ensure, that VRM is configured with a password for the service level account. Otherwise, permission handling for camera view access using Video Security might not work properly.

11. BVMS Version 11.1

✘ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#). Version 11.1 introduces new features and resolves issues compared to BVMS 11.0

11.1. New functionality

ID	Description
193168	Online help documentation replaced to HTML5
199675	Multi-floor support for online maps
208390	New white style for Configuration Client
226896	New Person Identification solution - detect unauthorized and unknown persons
316840	Introduced REST API service for batch renaming of cameras
320241	New event timeline search in the recordings
320888	Changed licensing scheme to device-based
321208	Support 3rd camera stream for live view
323360	Live multicast encryption for decoders (UDP)
325610	Token-based authentication for Enterprise Access
326580	Adapt recording profile settings for CPP13 and CPP14 cameras
337698	Enable Multicast PIM-SSM support for ONVIF devices via VSG
347387	Support DIVAR IP deployment using standard setup
350389	Increase total limit of MJPEG framerate for VSG
352571	Allow presets call up for panoramic cameras using SDK

ID	Description
354961	Increased bandwidth limit for "Other" storage type
358393	Show number of connected subsystems and cameras in Enterprise OC

11.2. Removed functionality

ID	Description
257430	Removed routed access (port mapping)

11.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

11.4. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware MPEG-4	4.15.0002
Firmware CPP3	5.75.0011

Firmware CPP4	<u>7.10.0095</u>
Firmware CPP5	<u>6.31.0010</u>
Firmware CPP6	<u>7.83.0027</u>
Firmware CPP7	<u>7.83.0027</u>
Firmware CPP7.3	<u>7.83.0027</u>
Firmware CPP13	<u>8.40.0029</u>
Firmware CPP14.1	<u>8.30.0082</u>
Firmware CPP14.2	<u>8.20.0143</u>
Firmware Aviotec	<u>7.82.0025</u>
Firmware CPP-ENC	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder 7000	10.23.0002
Videojet decoder 8000	10.05.0036
Barco RCP+ Agent	0.9.61
Monitor Wall	10.0 (pre-configured from Configuration Manager)
Software	
VRM	4.02.0014 (64-bit)
VSG	8.1.0.59
BIS	4.9.11200

Access Management System (AMS)	4.9.10020
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2019
BVMS Hardening Tool	11.1.0.8
ONVIF Event driver tool	2.0.0.8
VideoSDK	6.36.232
RCP+	5.02.0040
DVRs and other devices	
DVR FW Version	<u>2.6.0</u> (Divar AN 3000/5000) 3.2.0 (Divar Network/Hybrid)
Allegiant MCS	2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.12.020
NetApp E2800 SanTricity	11.70.1 R1
RPS	6.10.001
CMLib	7.51.0091
Operating systems	

Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) (20H2) Windows 10 Professional (64-bit) (21H1) Windows 10 Professional (64-bit) (21H2) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2012 R2 (64-bit)* Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows (Storage) Server 2022 (64-bit) Windows 10 Professional (64-bit) (20H2) Windows 10 Professional (64-bit) (21H1) Windows 10 Professional (64-bit) (21H2) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit)

✘ *Windows (Storage) Server 2012 R2 (64-bit) is only supported when updating your BVMS from version 10.1 or lower. MS SQL Server 2019, used as a standard version for BVMS 11.0 and 11.1, is not supported anymore on Windows (Storage) Server 2012 R2 (64-bit). Therefore, in case of an upgrade scenario, MS SQL Server will remain on version 2017 and such combination is still supported with BVMS 11.0 and 11.1. However, for this reason it is not possible to deploy new BVMS 11.0 or 11.1 installation on Windows (Storage) Server 2012 R2, as MS SQL 2019 installation will fail.

11.5. DIVAR IP


The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

 Since BVMS 11.1, no additional steps are required anymore when upgrading BVMS on a DIVAR IP. The only exception is DIVAR IP all-in-one 7000 Gen3, where dedicated Software Center package should be provided.

Please refer to the document BVMS_on_DIVAR_IP_Version_Note published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

11.6. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 470 NVIDIA RTX / Quadro Desktop and Notebook Driver Release 500
Intel	Intel® Graphics - Windows® 10 DCH Drivers HD Graphics 530/ UHD Graphics 630

Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

11.7. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2022 (Hyper-V version 7)
VMware	High availability	vSphere 6.0, 7.0

✘ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

✘ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

11.8. Patched issues for BVMS 11.1

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer
n/a	n/a	n/a	n/a	n/a

11.9. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
249915	Export	FIXED: In rare occasions an export might hang when trying to export video and audio into an MP4 file.
254839	Maps	FIXED: The zoom-level of maps in the Operator Client differs from the default zoom-level in the Configuration Client.

ID	Description	
257032	VSG	FIXED: The monitor group control shows a connection loss icon for ONVIF cameras, even though the cameras are online.
284238	Operator Client	FIXED: Jump to next or previous event does not always work
326208	License Manager	FIXED: Non-ASCII characters might not be displayed correctly in License Manager
329891	Operator Client	FIXED: ATM/Text data might not be displayed correctly in the image pane during playback when using camera with fw 7.80. In such cases it is recommended to use fw 7.60 instead
334228	DVR	(Obsolete) For some cameras connected to a DVR (3000, 2000) button 'jump to oldest recording' does not work properly
353966	Operator Client	FIXED: Export recordings dialog window does not allow modifying specific export start/end time.

11.10. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273546	Operator Client	In some cases, playback of audio for cameras attached to DVR might be distorted.
319002	Operator Client	An operator cannot restrict more than 10 slices per block for alarm recording.
322846	Password	Change password dialog accepts a password with invalid characters but removes invalid characters of new passwords without any notification.
323952	Microsoft Visual C++	In some cases, the installation of the Microsoft Visual C++ redistributable fails.
326773	Security	No video when displaying a camera connected to XFM 1600 using SSH connection.

ID	Subject	Description
334635	Operator Client	An OC showing GPU decoded cameos may run into an overload situation after a few hours as in some cases cameos may switch to CPU decoded mode.
339032	Operator Client	Transcoding a cameo of a sequence does not use transcoded streams, but non-transcoded streams instead.
345746	Operator Client	Timeline search might fail with very few alarms over a very long period of time for some devices.
348893	Configuration Client	Setting password enforcement does not work in some cases for CPP14 cameras.
351924	SQL Server	MS SQL Server update to 2019 silently fails on Windows Server 2012 R2 and stays on MS SQL Server 2017.
359472	VSG	In some cases misleading "Configuration mismatch" information displayed for VSG cameras, while system is fully operational.
359503	Online maps	CPP3 based cameras moving into wrong direction when controlled from Online Maps.
360387	Camera	CPP14 camera might not show live video under certain circumstances for lower resolution streams. To be resolved with the next firmware release.
366660	Logbook	Alarm Title is cut off in Logbook after 64 characters.
367142	DIVAR IP	'Basic Config' is not available for DIP-71 as iSCSI device from a remote server.
367240	Camera	CPP14 might not always return to original fps when closing the second stream. To be resolved with firmware release.
368140	Configuration Client	Not all mounting position options available for configuration with CPP14.2 cameras. As a workaround, Configuration Manager should be used.
368190	Camera	Playback jumps during alarm recording with stream switching for CPP13 and CPP14 cameras. To be resolved with the next firmware release. Please note: as a workaround it is not recommended to configure switching streaming profiles during alarm recording for those camera platforms.
369359	Operator Client	Using high resolution monitor with DIVAR IP all-in-one 5000 might result in improper scaling.

12. BVMS Version 11.0

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#). Version 11.0 introduces new features and resolves issues compared to BVMS 10.1.1

12.1. New functionality

ID	Description
250378	Introduction of the Map-based tracking assistant for live and playback cameras (Bosch and ONVIF cameras)
242826	Introduction of the use of online GIS maps (HERE) with new camera icons and view cones
206391	Introduction of new licensing with the Bosch Remote Portal as new user interface
261465	New RCP+ events (NTP lost and SD life)
233893	Support of generic event as peak event from the VSG
256342	Automatic event message in the BVMS operating client when a camera is losing recording
183249	Configurable file size split for exported video
231473	Introduce panoramic dewarping mode in the BVMS CameoSDK
280378	Events for quality assurance reports
237358	Enable a global CHAP password (secure devices) for devices in the system
193353	Automatic health monitoring for DIVAR IP devices via SNMP
266215	Restrict and unrestrict video capabilities for VRM devices

12.2. Removed functionality

ID	Description
261466	Removed map migration
268550	Removed SMS gateway
198093	Removed digital monitor wall functionality
268674	Removed PIS (Protection Inspection Service) functionality
249424	Removed ASF export from BVMS SDK
222022	Removed Dibos / BRS functionality

12.3. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

12.4. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras where not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	

Firmware MPEG-4	4.15.0002
Firmware CPP3	<u>5.75.0011</u>
Firmware CPP4	<u>7.10.0076</u>
Firmware CPP5	<u>6.31.0010</u>
Firmware CPP6	7.80.0128
Firmware CPP7	7.80.0128
Firmware CPP7.3	7.80.0128
Firmware CPP13	7.75.0006
Firmware Aviotec	<u>7.61.0023</u>
Firmware CPP-ENC	<u>5.54.0012</u>
Firmware CPP-ENC	<u>5.97.0013</u> (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005
Decoder firmware	
VJD 7000	<u>54.8.2</u>
Videojet decoder 7000/8000	10.01.0036
Barco RCP+ Agent	0.9.6.1
Monitor Wall	10.0 (pre-configured from Configuration Manager)
Software	
VRM	4.00.0070 (64-bit), 04.01.0012 (64-bit)
VSG	8.0.0.155, 8.0.6.1
BIS	4.8.10900
Access Management System (AMS)	3.0.1

Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
iOS	13.0
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2019
BVMS Hardening Tool	11.0.0.9
ONVIF Event driver tool	2.0.0.8
VideoSDK	6.36.220
RCP+	5.01.0030
DVRs and other devices	
DVR FW Version	<u>2.6.0</u> (Divar AN 3000/5000) <u>3.1.0</u> (Divar Network/Hybrid)
Allegiant MCS	2.94 / 2.95
Cameo SDK	1.4.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Bosch B- and G-Series Intrusion Panel	3.10.034
NetApp E2800 SanTricity	11.70R2
RPS	6.10.001
CMLib	7.41.0075
Operating systems	

Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) October 2020 update (20H2) Windows 10 Professional (64-bit) April 2020 update (2004) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows 10 Professional (64-bit) October 2020 update (20H2) Windows 10 Professional (64-bit) April 2020 update (2004) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit)

12.5. DIVAR IP

The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

⚠ BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

✖ When you upgrade BVMS on a DIVAR IP, additional steps are needed to complete the upgrade. Please refer to the document BVMS_on_DIVAR_IP_Version_Note published on <https://downloadstore.boschsecurity.com/?type=DIPBVMS>

12.6. Hardware drivers

Component	Version
NVIDIA Quadro	NVIDIA RTX / Quadro Desktop and Notebook Driver Release 460
Intel	Intel Graphics Driver for Windows 10 (64bit) - 4600 GPU - 26.20.100.7870 (2020-02-19)
Intel	Intel® Graphics - Windows® 10 DCH Drivers HD Graphics 530/ UHD Graphics 630

✖ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

12.7. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2016 (Hyper-V version 7)

Manufacturer	Fail-over mode	Version
VMware	High availability	vSphere 6.0

✘ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

✘ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

12.8. Patched issues for BVMS 11.0

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer
355270	FIXED: Export to MOV and MP4 from old devices (VIP X1, CPP3, ...) might lead to split images.	11.1	Yes	Yes
354548	FIXED: Configuration Client alarm settings are sometimes visible for events not having an alarm after activating iSCSI Monitoring.	11.1	Yes	Yes
358822	FIXED: SDK method GetScheduleStateTransitions providing wrong calculation for different time zones.	11.1	Yes	Yes
349597	FIXED: Device configuration of camera Flexidome IP 8000i not supported in BVMS.	11.1.1	Yes	No
368355	FIXED: Forensic Search not working properly after installation of patch 349597.			
374266	FIXED: License source was set incorrectly, which might lead to problem with software licensing.			
377531 354124	FIXED: Video not displayed correctly during 8x playback backwards. FIXED: Some characters not displayed properly in Forensic Search view.	12.0	Yes	Yes

ID	Description	Fixed in	BVMS	BVMS Viewer
357258	FIXED: Image saved using CameoSDK contains additional text and properties.	11.1.1	Yes	Yes
350403	FIXED: (CVE-2021-23859) Resolved security issue.	11.1	Yes	Yes
350341356020	FIXED: Universal XF Keyboard not working correctly in EMS mode. FIXED: Using Intui Keyboard in EMS to control Monitor Group, which is not support, leads to internal error.	11.1	Yes	No
346015	FIXED: Setting the reference image sensitive area in Operator Client not saved correctly.	11.1	Yes	Yes
339917336777	FIXED: Operator Client crash in Enterprise, when Management Server is offline and credentials have been changes FIXED: Operator Client random crashes.	11.1	Yes	No
346573	FIXED: In some cases black pane is displayed in alarm.	11.1	Yes	Yes
353965353995337415343590343170360438357751	Combined patch to support CPP14.1 and CPP14.2 cameras in BVMS 11.0. FIXED: Wrong calculation of active platform for CPP14 cameras. FIXED: Incorrect encoder profiles are set for CPP14 cameras. FIXED: General support of Flexidome IP multi 7000i and Flexidome IP panoramic 5100i cameras. FIXED: BVMS Operator Client crash during login. FIXED: Error adding a camera while previous camera is offline and large LUN support is enabled. FIXED: Device Monitor might show device config mismatch when triggering alarm recording. FIXED: Inconsistent state of recording profiles set for CPP14 cameras.	11.1.1	Yes	No
346819	FIXED: System slowdown when configuring events and alarms.	11.1	Yes	No

Hotfixes related to specific Security Advisory, are marked with Assigned CVE ID. However, not every Security Advisory results in a hotfix or patch created. Please always refer to detailed description of Security Advisories, available on [Bosch PSIRT Security Advisories webpage](#), where additional explanations or mitigation steps might be described.

12.9. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behavior.

ID	Description	
273523	Alarm management	FIXED: BVMS Enterprise alarms are always presented as multi-rows alarms in the operator client.
272951	INTEOX	FIXED: Backward compatibility issues for 10.01, 10.0.0 and 9.0
275714	Person Identification	FIXED: The order of the logical tree in the Person Identification configuration differs from the order of the logical tree configuration.
275914	Person Identification	FIXED: Empty (grey) pictures are shown when the TRS is unavailable while new persons are added using the <i>manage persons</i> dialogue. There is no indication the TRS is unavailable. Workaround: re-open the dialogue.
276500	SDK	FIXED: CameraManager.StartAlarmRecording parameters "protect", "alarmId" and "metadata" do not work.
320195	VRM	FIXED: The error message 'could not configure the connection between Failover VRM and its Master VRM' may appear after adding a new failover VRM to the Master

12.10. Known issues

Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
279257	Operator Client	In some cases, recording monitor state events are coming with a delay
319002	Operator Client	An operator cannot restrict more than 10 slices per block for alarm recording

ID	Subject	Description
334635	Operator Client	An OC showing GPU decoded cameos may run into an overload situation after a few hours as in some cases cameos may switch to CPU decoded mode
335190	Ports	The new firewall rules no longer include the RCP+ ports 1756 and 1757
334228	DVR	For some cameras connected to a DVR (3000, 2000) button 'jump to oldest recording' does not work properly
322846	Password	Change password dialog accepts a password with invalid characters but removes invalid characters of new passwords without any notification
284238	Operator Client	Jump to next or previous event does not always work
332788	Restricted Video	Restricted video from CPP3 cameras is played in playback mode via a transcoding stream if the user has no restrict permission
315917	Map-based tracking assistant	CPP3 and CPP4 for devices cannot be used in the map-based tracking assistant when configured via ONVIF using HTTPS
323952	Microsoft Visual C++	In some cases, the installation of the Microsoft Visual C++ redistributable fails
326149	MVS	Taking away live view permissions for a camera in the BVMS configuration client might lead to an access denied error in MVS for playback as well. As a workaround, you need to drag and drop the camera again.
319020	Restricted video	Restricted video cannot be exported via remote export for enterprise users
326208	License Manager	Non-ASCII characters might not be displayed correctly in License Manager
326773	Security	No video when displaying a camera connected to XFM 1600 using SSH connection
329891	Operator Client	ATM/Text data might not be displayed correctly in the image pane during playback when using camera with fw 7.80. In such cases it is recommended to use fw 7.60 instead

13. BVMS Version 10.1.1

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

i Version 10.1.1 is Technical Update release only. It doesn't introduce any new features compared to BVMS 10.1 and there are no changes in technical requirements. Please follow to BVMS 10.1 Release Notes below.

14. BVMS Version 10.1

⊗ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#). Version 10.1 introduces new features and resolves issues compared to BVMS 10.0.1.

14.1. New functionality

ID	Description
246759	Enable/disable audio export
232670	Integrate Tattile LPR camera to facilitate forensic search on license plates
229434	Several small enhancements for the BVMS - AMS 3.0 integration
226866	200 Person identification cameras per BVMS management server
264520	Remove DIP specific Firewall rules from setup
108245	BVMS Management server acts as bridge between video and corporate network
204308	SSH access in Enterprise environment
255109	LDAP group priorities - multi group membership (customer specific implementation)
244915	Single-Sign-On based on LDAP
269032	Prepare BVMS for Bosch Inteox (CPP13) cameras

14.2. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

14.3. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Camera firmware	
Firmware MPEG-4	4.15.0002
Firmware CPP3	5.75.0011
Firmware CPP4	7.10.0076
Firmware CPP5	6.31.0010
Firmware CPP6	7.61.0023
Firmware CPP7	7.61.0023
Firmware CPP7.3	7.61.0023
Firmware CPP13	7.70.0052
Firmware Aviotec	7.61.0023
Firmware CPP-ENC	5.54.0012
Firmware CPP-ENC	5.97.0013 (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005

Decoder firmware	
VIP XD HD	1.8
VIP XD	4.10.056
VJD 7000	54.8.2 (click to download)
Videojet decoder 7000/8000	9.60.0017 (click to download)
Barco RCP+ Agent	0.9.6.1
Monitor Wall	10.0 (pre-configured from Configuration Manager)
Software	
VRM	3.83.0021 (64-bit)
VSG	7.2.0.44
BIS	4.6.x, 4.7.x
Access Management System (AMS)	3.0
BRS	8.10/8.11
Tracking and Recognition Service (TRS)	2.0.0.12
Embedded components	
iOS	13.0
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2017
BVMS Hardening Tool	10.1.0.2
ONVIF Event driver tool	1.1.0.22
VideoSDK	6.34.0184

RCP	4.64.70
DVRs	
DiBos	8.7
DVR FW Version	2.1.3 (DVR400 / 600) 3.61 (DIVAR 700) 2.6.0 (Divar AN 3000/5000) 3.1.0 (Divar Network/Hybrid)
Allegiant MCS	2.94 / 2.95
Cameo SDK	1.3.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) April 2020 update (2004) Windows 10 Professional (64-bit) November 2019 update (1909) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows 10 Professional (64-bit) April 2020 update (2004) Windows 10 Professional (64-bit) November 2019 update (1909) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit)

14.4. DIVAR IP

The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

⚠ BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

✖ When you upgrade a DIVAR IP to BVMS 10.1, additional steps might be needed to complete the upgrade. Please refer to the knowledge base for the latest articles, which helps you to do the upgrade.

14.5. Hardware drivers

Component	Version
NVIDIA Quadro	Quadro Pro Driver for Microsoft Windows 10 (64-Bit) 442.50 (February 2020)
Intel	Intel Graphics Driver for Windows 10 (64bit) - 4600 GPU - 26.20.100.7870 (2020-02-19)

Component	Version
Intel	Intel Graphics Driver for Windows 10 (64bit) - 530 GPU - 26.20.100.7870 (2020-02-19)

⊗ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

14.6. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	Fail-over cluster	Windows Server 2016 (Hyper-V version 7)
VMware	High availability	vSphere 6.0

⊗ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism that should be used. Virtualization-based fail-over mechanisms are not supported for the Video Recording Manager. The release notes of the Video Recording Manager provide information on the specific virtualization platforms that are supported considering this limitation.

⊗ Video Streaming Gateway

If the VSG runs on a Hyper-V fail-over cluster, and the hardware fails, recording is stopped for ~30 seconds. Live streaming via the VSG might cause a small interruption.

14.7. Patched issues for BVMS 10.1

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer
283619	FIXED: Allegiant CCL Emulation commands causing system instability	11.0	Link to Downloadstore	n/a
317617	FIXED: Occasional black screens during playback mode	11.0	Link to Downloadstore	Link to Downloadstore
313844	FIXED: PTZ for camera connected to Dibos 8.7 not working	11.0	Link to Downloadstore	Link to Downloadstore
316150	FIXED: OC client filter box issues	11.0	Link to Downloadstore	Link to Downloadstore
281029, 283149	FIXED: OC login IP Address missing drag & drop information not completely encrypted	10.1.1	Link to Downloadstore	Link to Downloadstore
320037	FIXED: OC 10.1 stuck at alarm handling	11.0	Link to Downloadstore	Link to Downloadstore

14.8. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted it's behaviour.

ID	Description
262502	FIXED: The "Cancel" button in the export dialogue does not change to "Done" when the export has finished.
243256	FIXED: Cameras with empty passwords cannot be added to a person identification device (TRS).
239129 / 239222	FIXED: The ONVIF camera needs to be on-line and accessible when it is added to the BVMS configuration.

14.9. Known issues

⊗ Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
273379	Windows	Windows 10 build 1607 causes, in some situations, an issue that results in missing visual elements in the Operator Client. Please upgrade your Windows version.
268428	Transcoding	In some scenarios the Operator Client might crash when using a combination of custom display scaling (for example, 129%) and looking at transcoded video.
276500	SDK	CameraManager.StartAlarmRecording parameters "protect", "alarmId" and "metadata" do not work.
273523	Alarm management	BVMS Enterprise alarms are always presented as multi-rows alarms in the operator client.
269038	Configuration Client	Configuration Client IP grayed out after BVMS is de-installed and BVMS Viewer is installed. Work-around: clear the registry entries in \Computer\HKEY_CURRENT_USER\Software\Bosch Sicherheitssysteme GmbH\
274173	Configuration Client	"Import configuration from VRM" does not import the name of the added iSCSI devices. Work-around: manually configure the iSCSI name.
274904 / 272951	Cameras	Encrypted multicast is not working for Inteox (CPP13) cameras. We are planning to fix this with camera FW version 7.80.
269970	Person Identification	There is no indication if the BVMS Configuration Client fails to add an edge TRS to the configuration.
274743	Help	In rare situations the BVMS Operator Client might crash while browsing the build-in help sections.

ID	Subject	Description
267100	Security	After changing the password on a Tattile camera, and BVMS generates an authentication failure, BVMS still receives LPR detection events from the camera. Work-around: remove the BVMS Management Server as event receiver from the camera configuration.
269632	Security	SSH connectivity does not work for users with an empty password. We don't recommend using accounts that have an empty password.
266124	Person Identification	When the central server starts up the first connection to a TRS causes a disconnect error. This error produces per default a disconnect alarm for the TRS visible within the OpClient alarm list. After 5 sec the central server reconnects to the TRS. This time the connection is successful.
276385	Person Identification	There is no overview which shows the cameras that are assigned to a specific (core/edge) TRS.
275914	Person Identification	Empty (grey) pictures are shown when the TRS is unavailable while new persons are added using the <i>manage persons</i> dialogue. There is no indication the TRS is unavailable. Workaround: re-open the dialogue.
264269	Configuration Wizard	Config Wizard crashes when pasting password of encoder.
266945	Export	Space check of DVD happens after export to temp folder.
256523	Resilience	A fail-over VRM might take up to 30 seconds to build-up the timeline, even when the recorded video is already visible in the image pane.
276429	ANR	It is not possible to associate the recordings of a replaced ANR camera with a new ANR camera.
257445	Security	Encrypted video that is exported using the VRM eXport Wizard cannot be replayed and results in a black image pane.
277300	Security	Direct iSCSI playback is not working over SSH. The system will automatically fall-back to VRM playback.
271949	Security	LDAP does not work with SSH when the password contains an umlaut.
275222	Security	Connecting via SSH to an unmanaged site using LDAP authentication to the site is not working.

ID	Subject	Description
275714	Person Identification	The order of the logical tree in the Person Identification configuration differs from the order of the logical tree configuration.

15. BVMS Version 10.0.2

✘ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#).

i Version 10.0.2 is Technical Update release only. It doesn't introduce any new features compared to BVMS 10.0.1 and there are no changes in technical requirements. Please follow to BVMS 10.0.1 Release Notes below.

16. BVMS Version 10.0.1

✘ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#). Version 10.0.1 introduces new features and resolves issues compared to BVMS 10.0. BVMS 10.0 is not available for download any longer.

16.1. New functionality

ID	Description
183538	Facelift for Timeline Control
174546	Operator Client and Configuration Client shall support High resolution screens
229915	Encrypted multicast from VSG to OC
193007	Export player should not have to be installed
218193	50 Monitor Groups per MS
206566	SDK applications are subjected to device permissions
172117	Automatically configure firewall during BVMS setup
201942	BVMS should not crash when FIPS-140 is enabled (Windows setting)
223693	Disable audio recording while intercom is enabled
242567	Upgrade SDK environment to .NET version 4.8
226895	Dewarping pre-set for panoramic cameras can be activated in the operator client in an alarm scenario
205515	Dewarping pre-set for panoramic cameras can be activated on a decoder in an alarm scenario
240228	Enable IVA overlays by default in alarm scenario
180405	Enable the use of PDF and PNG/JPG maps

ID	Description
245699	Import BVC native exports for Forensic Search
228629	ONVIF Camera Event Driver Tool
160518	General UX improvements for Forensic Search
235594	MP4 as export format, removed ASF export format
252110	Do not change server ID on export of configuration (to enable the export and import of user settings)
207733	Get capabilities from devices in batch
243681	Switch between ONVIF Profile S/T on camera level
238163	Handle brute-force attack in a gracefull manner with a time-out mechanism
245238	Audio event from Bosch cameras
256819	Enhanced security for sensitive configuration data

16.2. Installation Notes

For system design specifications the BVMS [architects and engineering specifications](#), [system design guide](#) and [quick installation guide](#) should be used. The [BVMS upgrade guide](#) helps you to upgrade an existing installation, and the [BVMS security guide](#) helps you to increase the security of your installation. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

16.3. Versions

The table below lists the firmware versions which are used in the BVMS system test. When available, the version contains a clickable download link.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras where not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Multicast issue with camera firmware 7.60.0118

Issue 257256 prevents camera firmware to work in a multicast environment. This issue can be observed when you combine BVMS 10.0.1 and earlier BVMS versions with firmware 7.60.x. Firmware 7.61.0023 solves this issue.

Component	Version
Camera firmware	
Firmware MPEG-4	4.15.0002
Firmware CPP3	5.75.0011
Firmware CPP4	7.10.0076
Firmware CPP5	6.31.0010
Firmware CPP6	7.60.0118 , 7.61.0023
Firmware CPP7	7.60.0118 , 7.61.0023
Firmware CPP7.3	7.60.0118 , 7.61.0023
Firmware Aviotec	7.50.0079 , 7.61.0023
Firmware CPP-ENC	5.54.0012

Firmware CPP-ENC	5.97.0013 (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005
Decoder firmware	
VIP XD HD	1.8
VIP XD	4.10.056
VJD 7000	54.8.2 (click to download)
Videojet decoder 7000/8000	9.60.0017 (click to download)
Barco RCP+ Agent	0.9.6.1
Monitor Wall	8.0
Software	
VRM	3.82.0052 (64-bit)
VSG	7.1.0.43 (ONVIF VDP 3.0.4.0)
BIS	4.6.x, 4.7.x
Access Management System (AMS)	n/a
BRS	8.10/8.11
Tracking and Recognition Service (TRS)	1.0
Embedded components	
iOS	13.0
Web Client	11.165
Intuikey Keyboard	1.96
SQL Server	2017
BVMS Hardening Tool	1.83.0

ONVIF Event driver tool	1.0.0.202
VideoSDK	6.34.0184
RCPP	4.64.70
DVRs	
DiBos	8.7
DVR FW Version	2.1.3 (DVR400 / 600) 3.61 (DIVAR 700) 2.6.0 (Divar AN 3000/5000) 3.1.0 (Divar Network/Hybrid)
Allegiant MCS	2.94 / 2.95
Cameo SDK	1.3.0.0
BVMS SDK	1.9.0.0
.NET framework	4.8
Operating systems	
Operating systems Operator Client, Configuration Client	Windows 10 Professional (64-bit) November 2019 update (1909) Windows 10 Professional (64-bit) May 2019 update (1903) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Management Server, Mobile Video Service	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows 10 Professional (64-bit) November 2019 update (1909) Windows 10 Professional (64-bit) May 2019 update (1903) Windows 10 Enterprise (64-bit) LTSC build 1809
Operating systems Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit)

16.4. DIVAR IP

The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

⚠ BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

16.5. Hardware drivers

Component	Version
NVIDIA Quadro	Quadro Pro Driver for Microsoft Windows 10 (64-Bit) 442.50 (February 2020)
Intel	Intel Graphics Driver for Windows 10 (64bit) - 4600 GPU - 26.20.100.7870 (2020-02-19)

Component	Version
Intel	Intel Graphics Driver for Windows 10 (64bit) - 530 GPU - 26.20.100.7870 (2020-02-19)

✘ Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

16.6. Virtualization

Manufacturer	Fail-over mode	Version
Microsoft	HA	Windows Server 2016 (Hyper-V version 7)
VMware	High availability	vSphere 6.0

✘ Hardware requirements

The Video Recording Manager has an application specific fail-over mechanism (Failover VRM). Virtualizing the VRM is supported. Using virtualization fail-over mechanisms is not supported. When VRM virtualization and fail-over is required, we recommend running the Master VRM and Failover VRM in separate virtual machines and disable virtualization fail-over mechanisms for these virtual machines.

16.7. Patched issues for BVMS 10.0.1

A patch solves a very specific issue. Do not hesitate to reach out to our technical support teams in case you are experiencing an issue that is not described in these release notes.

ID	Description	Fixed in	BVMS	BVMS Viewer
268300	FIXED: NetApp devices with Firmware version equal or higher than 11.60 cannot be added to BVMS.	10.1	Link to Download	Link to Download

ID	Description	Fixed in	BVMS	BVMS Viewer
239712 / 266928	FIXED: cropped view of a panoramic camera was reset to default. Additionally, an Operator Client crash was fixed.	10.1	Link to Download	Link to Download
264271	FIXED: exception during DVD export.	10.1	Link to Download	Link to Download
272951	FIXED: Inteox Camera: backward compatibility issues	10.1	Link to Download	Link to Download

16.8. Resolved issues

The table below lists the issues that are resolved from previous releases. If an issue is known, but not described as resolved, it will not be fixed and we have accepted its behaviour.

ID	Description
200816	FIXED: The RemoteClientApi SDK functions in the BVMS script engine cannot be used from the BVMS Server. An external application needs to be used to control the client using the RemoteClientApi.
161813	FIXED: When the BVMS SDK or OPC server is used for controlling Pan-Tilt-Zoom cameras, the zoom speed may differ between cameras.
246052	FIXED: The operator client suffers from a small memory leak when opening 25 monitor group controls simultaneously.
243056	FIXED: When adding a new decoder to BVMS, the "secure connection" is not enabled by default. Cameras are added by default with the "secure connection" enabled, which causes issues displaying cameras on decoders. Workaround: deselect "secure connection" for the cameras which need to be displayed on decoders or select the "secure connection" for the decoder.
242334	FIXED: The loadbalancing parameters for the DIVAR IP AiO 7000 are incorrect. Workaround: correct the values manually: 256 iSCSI sessions and 550Mbit/s.
232050	FIXED: Some dialogues are malformed when display scaling is used in Windows.

ID	Description
224413	FIXED: After de-activating the "Set time automatically" flag in the Windows (10) time settings, the BVMS time synchronization mechanism stops working and the time within the system (including the connected cameras) might start drifting. BVMS generates a system warning if the time synchronization mechanism stops working.
211909	FIXED: Compound events should not be nested: cyclic references to compound events could prevent the management server from processing other events.
233738	FIXED: BVMS is able to lock-out an account after a configurable amount of failed password entries. This functionality is not enabled by default for the default "Admin" account. For security reasons Bosch strongly recommends enabling this option for the user-group "Admin Group", changing the name of the "Admin" user-account, and adding a second user-account to the user-group "Admin Group". This minimizes the chance that the system administrator is fully locked-out of the system.
191197	FIXED: All LUNs that are scanned on an iSCSI target are added to the configuration.
238286	FIXED: Executing a BVMS Client script, located in the logical tree of a sub-system, from an Enterprise Operator Client is not working.
239102	FIXED: VSG 7.0.2 cannot use large LUNs.
236047	FIXED: If the Operator Client crashes the system will automatically create a dump file. During the dump file creation process no progress is shown to the user, which might take several minutes. We have fixed this bug by showing a dialogue that indicates the progress of the dump file creation process.
129648	FIXED: Automatic distribution of LUNs on multi-port iSCSI (eSeries) does not work correctly when a basic configuration is performed. Please remove the iSCSI device and add it again to your system. Then the LUNs are evenly distributed.
239593	FIXED: When Operator Client and Management Server are installed on one single system the BIS communication might not work properly. Workaround: ensure that, on the Management Server, the "IsServerMode" setting in the C: <code> ProgramData\Bosch\VMS\AppData\Bosch.Vms.BISProxy.settings.cxml</code> is set to 1.
225871	FIXED: False alarms: storage state failure events
246706	FIXED: SDK applications are able to overwrite existing files. To prevent SDK applications to overwrite existing files a whitelist needs to be defined. Without the whitelist existing SDK application might not be able to export video footage. The details are described in the SDK documentation.
240124	FIXED: When using 1080p cameras with 60 frames per second the GPU can be overloaded, which can cause frame-drops.

ID	Description
243150	FIXED: Camera firmware 7.5x or newer does not support the use of the "+" in passwords. BVMS does not display a warning message, but the device will not apply the new password. We have fixed this by displaying a warning message when a "+" is used in the device password.
206756	FIXED: Intel Graphics Driver for Windows 10 24.20.100.6136 cannot be used for GPU decoding. Software decoding will be used.
237381	FIXED: Intel Driver 26.20.100.6912 (igfx_win10_100.6912.exe) does not offer GPU decoding for H.265.
262372	FIXED: An ANR camera configured for continuous recording will do alarm recording when it is running firmware 7.60.0118. Please use firmware 7.61.0023 or newer.
257258	FIXED: UDP multicast is no longer working when using camera firmware 7.60.0118. Please use firmware 7.61.0023 or newer.

16.9. Known issues

✘ Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
262338	VRM Fail-over	When the system has activated the fail-over VRM, it might be possible, during a very short time-interval, to delete protected recordings before the fail-over VRM is fully synchronized.
261644	Language	Changing the language of a user group after it has been set initially does not have an effect in the Operator Client.
261826	Forensic Search	Forensic Search is not working when the VRM "secure connection" is not set, but the recording encryption is turned on.
257017	Reference image	The reference image cannot be set from the Operator Client if an initial reference image is not configured in the Configuration Client or Configuration Manager.
262502	Export	The "Cancel" button in the export dialogue does not change to "Done" when the export has finished.

ID	Subject	Description
262372	ANR	An ANR camera configured for continuous recording will do alarm recording when it is running firmware 7.60.0204 or 7.60.0118.
262421	Decoder	Cameras running firmware 7.60.0204 or 7.60.0118 cannot connect to Videojet Decoder 3000 running firmware 5.97.0013.
258858	Panoramic cameras	Videojet Decoder 3000 is not able to dewarp panoramic cameras.
249561	Panoramic cameras	In some situations it can take up to 10 seconds before a dewarped panoramic camera shows up on the decoder.
257032	VSG	The monitor group control shows a connection loss icon for ONVIF cameras, even though the cameras are online.
258696	VSG	Text-data recording does not work for ONVIF cameras.
260201	IVA	In some situations the IVA rules are not displayed in the correct way.
257017	Reference image	Access to the reference image stream failed when using camera firmware 7.60.0118.
257258	Multicast	UDP multicast is no longer working when using camera firmware 7.60.0118.
259644	Security	When the primary VRM fails, the fail-over VRM does not take over playback functionality. Work-around: when the system uses a fail-over VRM, and the communication with the VRMs is secured, the fail-over VRMs need to be removed from the configuration and re-added.
254695 / 255278	Replay	In some combinations of the operating system (Windows) and a specific TPM-module, the VRM replay functionality and VRM monitor are unreliable. Please report issues to the after-sales support teams.
255944	SDK	A configuration change will lead to a disconnect of SDK applications. The SDK application should reconnect after a configuration change.
254839	Maps	The zoom-level of maps in the Operator Client differs from the default zoom-level in the Configuration Client.
257036	VSG	RTSP and JPEG cameras are always retrieved from the VSG, regardless of the workstation configuration.

ID	Subject	Description
257370	Security	The automated firewall configuration embedded in the BVMS setup does not configure the routing and remote access service. We will remove this functionality in the next BVMS release.
249289	Security	A Videojet Decoder 8000 firmware update can only be done if the "secure connection" checkbox of that specific decoder is disabled.
257039	Configuration	In some situations, when the configuration client is running in a windows session and remote desktop is used to connect to that session, the Configuration Client might crash. Workaround: re-open the Configuration Client in the active remote desktop session.
243256	Security	Cameras with empty passwords cannot be added to a person identification device (TRS).
255963	MVS	Push notifications (that indicate that another mobile user has shared a video) from the MVS to mobile devices are disabled.
255160	Security	The VSG has an open HTTP port. Workaround: use https and block the http port in the Windows firewall. Comment: we will close this port in the next BVMS release.
255159	Security	The VRM has an open HTTP port. Workaround: use https and block the http port in the Windows firewall. Comment: we will close this port in the next BVMS release.
255166	Security	The MVS has an open HTTP port. Workaround: use https and disable the http protocol in IIS or block the http port in the Windows firewall. Comment: we will close this port in the next BVMS release.
256818	Compatibility	The BVMS 10.0.1 Operator Client cannot connect to BVMS 5.0 or older Management Servers.
241806	VSG	Manual recording (started from the Operator Client) does not work for cameras connected to a VSG.
237838	Setup	VRM and VSG always installed in the default path. Work-around: do not install VRM and VSG from the BVMS installer, but use the installers located in the BVMS zip\ISSetupPrerequisites and select the installation path manually. We do not recommend this work-around for DIVAR IP.
248508	Logbook	A high event load on the logbook (average 125 events per second) might decrease the SSD lifetime.
225194	Video Security Client	No access to recorded video in the Video Security Client when logged in via a BVMS user and when port-mapping in BVMS is configured. Workaround: disable port-mapping.

ID	Subject	Description
251914	DVR	DIVAR Network and DIVAR Hybrid cannot be added to the BVMS configuration using the Configuration Wizard. Workaround: use the BVMS Configuration Client.
242480	Security	Configuration Client: live video shows "Error: Frame could not be parsed!". Workaround: save and activate the configuration after checking or unchecking the "secure connection" setting for this camera.
250879	Panoramic cameras	Alarm pre-sets cannot be configured for a panoramic camera connected to a DIVAR Hybrid or DIVAR Network.
244483	DVR	In rare occasions, the Operator Client might crash when using a DVR-700 and the BVMS Configuration is activated.
248096	DVR	Searching for motion detection events for IP cameras connected to a DIVAR Network or DIVAR Hybrid is not working.
247385	Configuration	The BVMS automated firewall rules do not consider the Bosch Configuration Manager (this is an separate tool, separate firewall rules need to be configured).
249915	Export	In rare occasions an export might hang when trying to export video and audio into an MP4 file.
250548	Panoramic cameras	The dewarping of panoramic cameras on a decoder is not working when the camera is not calibrated (wall, floor, or ceiling).
250945	Export	The BVMS Operator Client cannot be used to import regular MP4 files. Only Bosch (BVC) native exports using the MP4 extension can be used.
250952	Export	When an ASX file (playlist) is created out of a bookmark, VLC might miss a second camera (related to VLC bug 19594)
250947	Timeline	After protecting the recordings on a DIVAR Hybrid or DIVAR Network, the timeline might take more than 30 seconds to visualize the protected recording.
250894	Export	The MP4 export of a (M)JPEG camera cannot be replayed in Windows Media Player. Please use VLC for this.
253831	Export	Exports triggered by SDK might fail due to the lack of a whitelist definition. The SDK documentation of the export related methods contains more detailed information.

ID	Subject	Description
248948	Panoramic cameras	The dewarping of panoramic cameras on decoders is only possible with the VIDEOJET 8000 or decoders launched after that.
250950	Audio	When audio recording is switched on, the recording needs to be manually restarted.
245932	Setup	The firewall settings are not updated after modifying or repairing the installation using the BVMS setup.
249294	SNMP	Due to changes in the Windows operating system, SNMP functionality needs to be installed before the BVMS setup is started (if SNMP functionality is required).
245313	Export	Trying to export video that includes a time range in which the encoder has been rebooted might not be possible (Error message: "The target has insufficient capacity"). Workaround: export video before and after the encoder reboot in separate files.

17. BVMS Version 10.0

✘ This document is distributed within the installation package, but is updated from time to time. The latest version of the Release Notes is always available on the [Bosch Security Systems Product Catalog](#). Version 10.0 introduces new features and resolves issues compared to BVMS 9.0.

17.1. New functionality

ID	Description
205243	The default name of exports has changed: [Logical-Number]-[Enterprise-Srv].[Site].[Camera]-[n]-[TimeStamp].
226405	The global password enforces the use of complex passwords.
184399	Automatically stop alarm based recording after a configurable timeout.
199186	GPU decoding is enabled for PTZ cameras and cameras configured for Region-of-Interest (ROI).
165625	Increased scalability in BVMS Enterprise to 100 sites and 10.000 cameras in total.
206244	Switch VRM to 64-bit.
208286	System test on Hyper-V (Windows Server 2016).
198715	Enabled Access Management System integration.
219182	Configure TCP/Unicast/Multicast selection for ONVIF cameras.
161333	Migrate Digital Monitor Wall (DMW) functionality to Monitor Groups.
172108	Dewarping of Bosch Panoramic Cameras connected to a DVR for live and replay.
201531	SDK extensions (listed in the SDK manual).
207743	Partial redesign of the BVMS Configuration Client.
207103	Enable displaying of Intelligent Insights Widgets in a BVMS Image Pane.

ID	Description
226426	Enforce the configurator to set a fixed IP address for the DIVAR IP (Configuration Wizard).
156280	Display secure multicast streams.
226567	Extended LDAP settings to include an Anonymous user.
198646	Ease the maintenance of passwords for multiple devices.
207731	Change the IP address of ADAM devices.
155213	Encrypted video recording for Bosch cameras.
157864	Encrypt communication between all Bosch components.
119113	Trigger relays for ONVIF cameras.
224734	Dynamic Disk Pool (DDP) for Netapp E2800.
207101	Person Identification - Blacklisting of subjects
206392	Move ONVIF event management from BVMS Management Server to VSG.
124280	AUX commands for PTZ ONVIF cameras.
229914	Encrypted recording for ONVIF cameras.
243144	The virtual input icon has been inverted compared to BVMS 9.0 (open/off = white, closed/on = blue)
220922	Increased number of Monitor Groups in configuration to 50.

17.2. Installation Notes

For system design specifications the BVMS datasheet, configuration manual, pre-sales guide and quick installation guide should be used. These can be found on <http://www.boschsecurity.com> and <http://knowledge.boschsecurity.com>. The datasheet is subject to change. Translated versions are not published instantly; the English version is always up-to-date.

17.3. Versions

The table below lists the firmware versions which are used in the BVMS system test.

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders were introduced into market after a BVMS release could not be connected to an existing BVMS version because these cameras were not known to the BVMS. In the BVMS 4.5.1, a new concept was introduced. This concept treats Bosch video encoders and decoders as generic devices, and automatically recognizes specific device functionality (for example the number of streams, relays and inputs). Based on this information the, at that time, unknown device is added to the system and can be used by the operator. This document, which can be found in the Bosch Building Technologies community, provides a detailed description of this functionality: [BVMS - Device compatibility](#).

Component	Version
Bosch Video Stitcher	1.6.0.63
VideoSDK	6.33.0138
Firmware MPEG-4	4.15.0002
Firmware CPP3	5.74.0010, 5.75.0011
Firmware CPP4	7.10.0076
Firmware CPP5	6.30.0059, 6.31.0010
Firmware CPP6	7.10.0074, 7.50.0079
Firmware CPP7	7.10.0074, 7.50.0079
Firmware CPP7.3	7.10.0074, 7.50.0079
Firmware Aviotec	6.61.0021
Firmware CPP-ENC	5.54.0004, 5.54.0012 (for VIP X1600 XFM4)
Firmware CPP-ENC	5.97.0007 (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005

Component	Version
VIP XD HD	1.8
VIP XD	4.10.056
VJD 7000	54.8.2
VJD 8000	9.51.0058
Monitor Wall	8.0
VRM	3.82.0038 (64-bit)
VSG	7.0.2 (64-bit)
iOS	12.3.1
Web Client	11.165
BIS	4.5, 4.6
DiBos	8.7
BRS	8.10/8.11
Allegiant MCS	2.94 / 2.95
Intuikey Keyboard	1.96
DVR FW Version	2.1.3 (DVR400 / 600) 3.61 (DIVAR 700) 2.6.0 (Divar AN 3000/5000) 3.0.0 (Divar Network/Hybrid)
SQL Server	2017
Operating systems Operator Client, Configuration Client.	Windows 10 Professional (64-bit) May 2019 update (1903) Windows 10 Professional (64-bit) October 2018 update (1809) Windows 10 Enterprise (64-bit) LTSC build 1809

Component	Version
Operating systems Management Server, Mobile Video Service, Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows (Storage) Server 2019 (64-bit) Windows 10 Professional (64-bit) May 2019 update (1903) Windows 10 Professional (64-bit) October 2018 update (1809) Windows 10 Enterprise (64-bit) LTSC build 1809
Cameo SDK	1.3.0.0
BVMS SDK	1.9.0.0
RCP+ Agent	4.62.0059
Access Management System (AMS)	1.0
Barco RCP+ Agent	0.9.6.1

17.4. DIVAR IP

The following BVMS versions are supported on the specific DIVAR IP devices.

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 5000	DIP-52xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
AiO 7000	DIP-72xx	Windows Server 2016 R2	9.0	System Manager package	Installation of System Manager 2.1 required as prerequisite.
	DIP-73x	Windows Server 2019	10.1.1	System Manager package	Upgrade from Software Center to System Manager required as prerequisite.
	DIP-74xx	Windows Server 2022	12.0.1	System Manager package	
AiO 4000	DIP-44xx	Windows Server 2022	11.1.1	System Manager package	

DIVAR IP	CTN	Operating System	Min. BVMS version	Update method	Remarks
AiO 6000	DIP-64xx	Windows Server 2022	11.1.1	System Manager package	

BVMS Viewer

Installing BVMS Viewer directly on DIVAR IP is not supported.

17.5. Hardware drivers

Component	Version
NVIDIA Quadro	Quadro Pro Driver for Microsoft Windows 10 (64-Bit) 430.64 (May 2019)
Intel	Intel Graphics Driver for Windows 10 (64bit) - 4600 GPU - 15.40.38.4963 (5. April 2018)
Intel	Intel Graphics Driver for Windows 10 (64bit) - 530 GPU - 15.46.05.4771 (30. August 2017)

Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably and the specified performance (Recent Intel drivers show issues with H.265 decoding).

17.6. Patched issues for BVMS 10.0

ID	Description	Fixed in	BVMS	BVMS Viewer
268300	FIXED: NetApp devices with Firmware version equal or higher than 11.60 cannot be added to BVMS	10.1	Download	Download
224524	FIXED: Configuration Client Improvements For Read-only Users	10.0.1	Download	Download

ID	Description	Fixed in	BVMS	BVMS Viewer
248195 / 243363	FIXED: Improving the Alarm Cameo handling, improving the command execution on a map in the Alarm pane via double click.	10.0.1	Download	Download
255156 / 255329	FIXED: Selecting an image pane doesn't trigger the Keyboard to go into PTZ mode. The OC is no longer reacting on Keyboard actions for instant playback.	10.0.1	Download	Download
243748	FIXED: [CVE-2020-6770] Attackers are able to execute arbitrary code.	10.0.1	Download	n/a
211404 / 241463	FIXED: [CVE-2020-6768 / CVE-2020-6767] Attackers are able to retrieve files from the Management Servers without permission.	10.0.1	Download	Download
241707	FIXED: DIP AiO iSCSI Load Balancing and Config Tabs	10.0.1	Download	Download
232054 / 232229	FIXED: Improvements in Forensic Search results and Video Export	10.0.1	Download	Download
224524	FIXED: Users are able to save changes in the Configuration Client when they only have read-only rights.	10.0.1	Download	Download
272951	FIXED: Inteox Camera: backward compatibility issues	10.1	Link to Downloadstore	Link to Downloadstore

17.7. Resolved issues

ID	Description
230789	FIXED: PTZ control is not automatically activated when the setting " <i>Start PTZ mode when selecting PTZ Image pane with mouse</i> " is enabled for KBD-UXF (USB keyboard). Work-around: enable PTZ control with the designated button on the keyboard.
219769	FIXED: When multiple access management systems are configured, events from only one system will be processed.

ID	Description
214843	FIXED: BISProxy: app.config file contains user credentials of a BVMS user in plain text.
208908	FIXED: Cannot move to the same preposition after manually controlling a PTZ camera.
205190	FIXED: OPC xml file (exported from the BVMS Configuration Client) does not contain DVR devices.

17.8. Known issues

✖ Known issues

Known issues are inherited by previous versions. If an issue is fixed, it will appear in the list of resolved issues. The issue IDs can be used to relate an issue to a resolution.

ID	Subject	Description
256278	Decoder	Decoders that are running firmware 9.60 (or newer) might be detected as encoder. Workaround: configure the decoder using the Configuration Manager before adding it to BVMS.
251059	Security	Camera firmware 7.6x or newer requires VRM 3.82.0045 (or newer) for encrypted recording.
246052	Monitor Groups	The operator client suffers from a small memory leak when opening 25 monitor group controls simultaneously.
241806	VSG	Manual recording for VSG cameras is not implemented, even though there is a user permission for this.
242334 / 242723	DIVAR IP	The loadbalancing parameters for the DIVAR IP AiO 7000 are incorrect. Workaround: correct the values manually: 256 iSCSI sessions and 550Mbit/s.
243056	Security	When adding a new decoder to BVMS, the "secure connection" is not enabled by default. Cameras are added by default with the "secure connection" enabled, which causes issues displaying cameras on decoders. Workaround: deselect "secure connection" for the cameras which need to be displayed on decoders or select the "secure connection" for the decoder.

ID	Subject	Description
242209	DIVAR IP	The transcoding service is removed from the DIVAR IP AiO 5000 after upgrading the device to BVMS 10.0. Workaround: manually install the transcoding service (which is part of the VRM installation package, located in the https://downloadstore.boschsecurity.com).
243150	Security	Camera firmware 7.5x or newer does not support the use of the "+" in passwords. BVMS does not display a warning message, but the device will not apply the new password.
240124	GPU Decoding	When using 1080p cameras with 60 frames per second the GPU can be overloaded, which can cause frame-drops.
240193	Audio	Receiving multicast audio streams is not working. Work-around: use unicast audio streams.
239841	VSG	Recording packets might be dropped when VSG is writing to a multi-path enabled iSCSI target and the patch is switch-over.
239682	Security	In order to prevent recording losses: when a camera is set to encrypted recording it will fill up its current block with unencrypted recording. Encrypted recording will start in the next block.
239102	VSG	VSG 7.0.2 cannot use large LUNs.
231028	Security	Additional data is retrieved using VRM Playback, even when direct iSCSI playback is configured.
239593	BIS	When Operator Client and Management Server are installed on one single system the BIS communication might not work properly. Workaround: ensure that, on the Management Server, the "IsServerMode" setting in the C: <code> ProgramData Bosch VMS AppData Bosch.Vms.BISProxy.settings.xml</code> is set to 1.
237509	Security	Encoder playback and ANR is not working when the video is stored encrypted. ANR is not working when the camera connection is set to "secured".
236047	Log file collection	If the Operator Client crashes the system will automatically create a dump file. During the dump file creation process no progress is shown to the user, which might take several minutes.
232050	User Interface	Some dialogues are malformed when display scaling is used in Windows.
239129 / 239222	ONVIF	The ONVIF camera needs to be on-line and accessible when it is added to the BVMS configuration.

ID	Subject	Description
237628	Security	All devices should be either configured "secured" or "unsecured". Using a combination of "secured" connections with "unsecured" connections might lead to unexpected issues.
237292	DVR	In rare situations the Operator Client might freeze (temporarily) when opening a DVR camera in replay mode.
238286	SDK	Executing a BVMS Client script, located in the logical tree of a sub-system, from an Enterprise Operator Client is not working.
237381	GPU Decoding	Intel Driver 26.20.100.6912 (igfx_win10_100.6912.exe) does not offer GPU decoding for H.265.
236200	Security	The encryption status of a camera might be inconsistent when a fail-over VRM is used. There is no impact on the functionality itself.
238159	Security	Bosch cameras produced before January 2014 (with Crypto-Coprocessor version older than 3) may not be able to encrypt their multicast traffic.
234423	DVR	Changing the default HTTPS port on a Bosch DVR can lead to strange behaviour.
235857 / 234423	ONVIF	When changing the configuration of a VSG the recording of all cameras related to the specific VSG is briefly interrupted.
236795	Forensic Search	Forensic Search is unavailable when the VRM is configured using an unsecured connection and the recording is encrypted.
231707	Forensic Search	When a local storage encoder is configured using a secure connection, Forensic Search is unavailable for that encoder.
226720	Security	When the VRM is configured using a secure connection, direct iSCSI playback will not work and is automatically falling back to VRM playback.
236389	Transcoding	For HW-based transcoding the HTTP service needs to be enabled on the camera OR the camera needs to be configured using a secured connection (HTTPS).
232057	Security	If an encoder is reset to factory default, the user and live passwords are not cleared from the BVMS configuration.
225801	DVR	Exporting panoramic cameras connected to a DIVAR Network or Hybrid might result in gaps in the export.

ID	Subject	Description
229915	Security	It is not possible to encrypt multicast traffic from the VSG to the Operator Client.
233480	Audio	AAC audio decoding is limited to 16bit-16kHz (single channel).
226817 / 224793	Security	When direct iSCSI playback is enabled, encrypted recordings cannot be replayed (black screen).
n/a	Security	When the VRM back-up (encryption) key is lost, recordings encrypted with this key cannot be decrypted and this data needs to be considered as lost.
229480	Windows	In rare cases, when using a large amount (~50) image panes displaying HTTP(s) content simultaneously, the operator client might crash after a forced activation of the configuration.
229550	Decoder	Cameras located in an unmanaged site cannot be displayed on a decoder.
224413	Windows	After de-activating the "Set time automatically" flag in the Windows (10) time settings, the BVMS time synchronization mechanism stops working and the time within the system (including the connected cameras) might start drifting.
233738	Security	BVMS is able to lock-out an account after a configurable amount of failed password entries. This functionality is not enabled by default for the default "Admin" account. For security reasons Bosch strongly recommends enabling this option for the user-group "Admin Group", changing the name of the "Admin" user-account, and adding a second user-account to the user-group "Admin Group". This minimizes the chance that the system administrator is fully locked-out of the system.
230526	Operator Client	The Operator Client start-up process was adjusted. Please use the Operator.Supervisor.exe to start the operator client. This might also impact a BVMS 10.0 system connected to an older BIS version: the operator client might not be automatically started.
231675	VRM	A fail-over VRM can no longer be added via scan if the Master VRM is already password protected and the fail-over VRM does not yet have a password set. Workaround: use the manual add dialogue.
224608	VRM	When VRM is using secured communication, the port of the fail-over VRM cannot be changed.
228584	ONVIF	In some cases the VSG does not recognize the Bosch camera when RCP+ is used. When adding a Bosch camera to the VSG, it should be added as an ONVIF camera, not as an RCP+(Bosch) camera.

ID	Subject	Description
224493	Security	Dual Authorization is only supported for the BVMS Operator Client and is not working for the (mobile) Video Security Client or other clients.
232199	Security	When encrypted video blocks are exported using the VRM eXport Wizard, they cannot be replayed in the BVMS Operator Client.
231245	Security	Bosch cameras produced before January 2014 (with Crypto-Coprocessor version older than 3) may not be able to encrypt their recordings. The VSG can encrypt the recordings for these cameras if this is required.
230540	ONVIF	New ONVIF cameras cannot be added to DIVAR IP 2000 or DIVAR IP 5000 devices after the device is added to BVMS 10.
224544	Decoder	Only the Videojet Decoder 80xx/75xx (or newer) running the specified firmware is able to secure its communication to other system components. Other (older) decoders do not support this functionality.
229873	MVS	When the VRM passwords contain the "\$" character, the MVS cannot start replay or live video.
175476	Language	Even when the language settings of the system are changed, the language of the alarms and events will not be translated and stay in the originally configured language.
211966	DIVAR IP 5000	DIVAR IP 5000 is added with HTTPS connection by default. Earlier BVMS systems need to be migrated to HTTPS manually and RCP+ needs to be disabled in the DIVAR IP 5000 configuration.
223720	Intelligent Insights	In some situations the Operator Client can crash when BVMS is combined with Intelligent Insights and the Operator Client is running on Windows 10 (1803 and older). Work-around: upgrade Windows 10 to at least version 1809.
228756	Security	When an ONVIF encoder is changed from secure communication to insecure communication the ONVIF encoder might not be reachable. Work-around: remove the ONVIF encoder from the configuration and re-add it.
218509	Migration	User-data is not included in the "export" configuration functionality. Work-around: BVMS - Migrate configuration and user settings on https://community.boschsecurity.com .

ID	Subject	Description
223898	LDAP	When using LDAP based authentication, LDAP users which are only member of the "Domain User" group are not allowed to login. Work-around: create a separate group for BVMS users in the LDAP configuration.
227152	ONVIF	The Bosch Videojet X40 does not appear in the ONVIF scan wizard. Work-around: add it to the system manually.
226724	Person Identification	Starting the "Manage Persons" dialogue on multiple Operator Clients might lead to an inconsistent state. Work-around: close the "Manage Persons" dialogue on all Operator Clients and re-open it. Bosch recommends assigning this user-permission to security manager roles only to prevent this issue.
220350	ONVIF	In some situation the Operator Client can crash when G726 or AAC audio codecs are enabled on Samsung cameras.
220835	Windows	The "Pin to taskbar" functionality cannot be used for the Operator Client. Work-around: drag and drop the shortcut from the desktop into the taskbar.
214132	Windows	The .NET framework 4.7.2 is required for BVMS 10.0. It is not possible to install this version of the .NET framework on older Windows 10 versions (1511 and older).
220539	Forensic Search	When using SSH connectivity Forensic Search is not available.
215234	Logbook	When an external logbook database is used "Autogrowth" should be disabled. If "Autogrowth" is enabled the server log file is "spammed". Work-around: consider disabling "Autogrowth" .
223383	Logbook	When an external logbook database is used Microsoft SQL Server 2017 is the minimum version.
222471	Alarms	If the "suppress" alarm functionality is used, the related alarm recording settings and scripts will not be executed.