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BVMS 11.1.1 - Release notes

Author: Wrobel Maciej (BT-VS/XSW-SEC)
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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
2022-06-02	BVMS 11.1.1	Initial release notes

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2 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.

2.1 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.

2.2 Removed functionality

ID	Description
-	

2.3 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.

2.4 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

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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	5.97.0013 (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2*	2.53.0005
Decoder firmware	
VJD 7000	54.8.2
Videojet decoder 7000	10.23.0002
Videojet decoder 8000	10.05.0001
Barco RCP+ Agent	0.9.61

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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	2.6.0 (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

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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
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.

2.5 DIVAR IP

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

DIVAR IP	Generation	CTN	Operating System	Minimum BVMS version	Maximum BVMS version
7000	2	DIP-71x	Windows Server 2012 R2	BVMS 6.0	See remarks below

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DIVAR IP	Generation	CTN	Operating System	Minimum BVMS version	Maximum BVMS version
AiO 5000	1	DIP-52x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	1	DIP-72x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	2	DIP-73x	Windows Server 2019	BVMS 10.1.1	See remarks below

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

2.6 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).

2.7 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

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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.

2.8 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
n/a	n/a	n/a	n/a	n/a

2.9 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

2.10 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.

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ID	Subject	Description
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.
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.

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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.
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

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3 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

3.1 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
354961	Increased bandwidth limit for "Other" storage type
358393	Show number of connected subsystems and cameras in Enterprise OC

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3.2 Removed functionality

ID	Description
257430	Removed routed access (port mapping)

3.3 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.

3.4 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	7.10.0095
Firmware CPP5	6.31.0010
Firmware CPP6	7.83.0027
Firmware CPP7	7.83.0027
Firmware CPP7.3	7.83.0027
Firmware CPP13	8.40.0029

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Firmware CPP14.1	8.30.0082
Firmware CPP14.2	8.20.0143
Firmware Aviotec	7.82.0025
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	
VJD 7000	54.8.2
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

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ONVIF Event driver tool	2.0.0.8
VideoSDK	6.36.232
RCP+	5.02.0040
DVRs and other devices	
DVR FW Version	2.6.0 (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

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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.

3.5 DIVAR IP

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

DIVAR IP	Generation	CTN	Operating System	Minimum BVMS version	Maximum BVMS version
7000	2	DIP-71x	Windows Server 2012 R2	BVMS 6.0	See remarks below
AiO 5000	1	DIP-52x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	1	DIP-72x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	2	DIP-73x	Windows Server 2019	BVMS 10.1.1	See remarks below

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

3.6 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

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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).

3.7 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.

3.8 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

3.9 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.

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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.

3.10 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.

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ID	Subject	Description
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.

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4 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

4.1 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

4.2 Removed functionality

ID	Description
261466	Removed map migration
268550	Removed SMS gateway
198093	Removed digital monitor wall functionality

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ID	Description
268674	Removed PIS (Protection Inspection Service) functionality
249424	Removed ASF export from BVMS SDK
222022	Removed Dibos / BRS functionality

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 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	7.10.0076
Firmware CPP5	6.31.0010
Firmware CPP6	7.80.0128
Firmware CPP7	7.80.0128
Firmware CPP7.3	7.80.0128

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Firmware CPP13	7.75.0006
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	
VJD 7000	54.8.2
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

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VideoSDK	6.36.220
RCP+	5.01.0030
DVRs and other devices	
DVR FW Version	2.6.0 (Divar AN 3000/5000) 3.1.0 (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)

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4.5 DIVAR IP

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

DIVAR IP	Generation	CTN	Operating System	Minimum BVMS version	Maximum BVMS version
7000	2	DIP-71x	Windows Server 2012 R2	BVMS 6.0	See remarks below
AiO 5000	1	DIP-52x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	1	DIP-72x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	2	DIP-73x	Windows Server 2019	BVMS 10.1.1	See remarks below

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

4.6 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).

4.7 Virtualization

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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.

4.8 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 368355 374266	**FIXED**: Device configuration of camera Flexidome IP 8000i not supported in BVMS. **FIXED**: Forensic Search not working properly after installation of patch 349597. **FIXED**: License source was set incorrectly, which might lead to problem with software licensing.	11.1.1	Yes	No
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
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

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ID	Description	Fixed in	BVMS	BVMS Viewer
350341 356020	**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
339917 336777	**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
353965 353995 337415 343590 343170 360438 357751	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.

4.9 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.

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ID	Description	
275914	Person Identification	**FIXED**: Empty (grey) pictures are shown when the TRS is unavailable while new persons are added using the *manage persons* 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

4.10 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
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

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ID	Subject	Description
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

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5 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.

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.

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6 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.

6.1 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

6.2 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.

6.3 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

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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)

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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
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

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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)

6.4 DIVAR IP

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

DIVAR IP	Generation	CTN	Operating System	Minimum BVMS version	Maximum BVMS version
7000	2	DIP-71x	Windows Server 2012 R2	BVMS 6.0	See remarks below
AiO 5000	1	DIP-52x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	1	DIP-72x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	2	DIP-73x	Windows Server 2019	BVMS 10.1.1	See remarks below

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.

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6.5 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)
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).

6.6 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.

6.7 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

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ID	Description	Fixed in	BVMS	BVMS Viewer
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

6.8 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.

6.9 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.

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ID	Subject	Description
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.
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 *manage persons* 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.

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

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7 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.

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.

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8 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.

8.1 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
245699	Import BVC native exports for Forensic Search
228629	ONVIF Camera Event Driver Tool
160518	General UX improvements for Forensic Search

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ID	Description
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

8.2 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.

8.3 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

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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

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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

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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)

8.4 DIVAR IP

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

DIVAR IP	Generation	CTN	Operating System	Minimum BVMS version	Maximum BVMS version
7000	2	DIP-71x	Windows Server 2012 R2	BVMS 6.0	See remarks below
AiO 5000	1	DIP-52x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	1	DIP-72x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	2	DIP-73x	Windows Server 2019	BVMS 10.1.1	See remarks below

8.5 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)
Intel	Intel Graphics Driver for Windows 10 (64bit) - 530 GPU - 26.20.100.7870 (2020-02-19)

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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).

8.6 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.

8.7 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 Downloadstore	Link to Downloadstore
239712 / 266928	**FIXED**: cropped view of a panoramic camera was reset to default. Additionally, an Operator Client crash was fixed.	10.1	Link to Downloadstore	Link to Downloadstore
264271	**FIXED**: exception during DVD export.	10.1	Link to Downloadstore	Link to Downloadstore
272951	**FIXED**: Inteox Camera: backward compatibility issues	10.1	Link to Downloadstore	Link to Downloadstore

8.8 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.

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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.
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.

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ID	Description
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:\ProgramData\Bosch\VMS\AppData\Bosch.Vms.BISProxy.settings.cxml* 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.
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.

8.9 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.

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ID	Subject	Description
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.
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.

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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.
251914	DVR	DIVAR Network and DIVAR Hybrid cannot be added to the BVMS configuration using the Configuration Wizard. Workaround: use the BVMS Configuration Client.

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ID	Subject	Description
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.
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).

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ID	Subject	Description
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.

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9 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.

9.1 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.
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.

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ID	Description
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.

9.2 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.

9.3 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 are 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.

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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
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

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Component	Version
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
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
RCPP	4.62.0059
Access Management System (AMS)	1.0
Barco RCP+ Agent	0.9.6.1

9.4 DIVAR IP

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

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DIVAR IP	Generation	CTN	Operating System	Minimum BVMS version	Maximum BVMS version
7000	2	DIP-71x	Windows Server 2012 R2	BVMS 6.0	See remarks below
AiO 5000	1	DIP-52x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	1	DIP-72x	Windows Server 2016 R2	BVMS 9.0	See remarks below
AiO 7000	2	DIP-73x	Windows Server 2019	BVMS 10.1.1	See remarks below

9.5 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).

9.6 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

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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

9.7 Resolved issues

ID	Description
230789	**FIXED**: PTZ control is not automatically activated when the setting "*Start PTZ mode when selecting PTZ Image pane with mouse*" 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.
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.

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9.8 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.
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.

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ID	Subject	Description
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:\ProgramData\Bosch\VMS\AppData\Bosch.Vms.BISProxy.settings.cxml* 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.
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 able to encrypt their multicast traffic.
234423	DVR	Changing the default HTTPS port on a Bosch DVR can lead to strange behaviour.

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ID	Subject	Description
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.
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.

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ID	Subject	Description
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.
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 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 contains the "$" character, the MVS cannot start replay or live video.
175476	Language	Even when the language settings of the system is 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 situation 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.

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ID	Subject	Description
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.
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.

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10 BVMS Version 9.0

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 9.0 introduces new features and resolved issues to BVMS.

10.1 New functionality

ID	Description
172164	Configure 800 iSCSI session and 1000Mbit/s on the "other" iSCSI device
160421	Safe delivery of software
163204	Enable B-frames in live and playback
165742	Add an unmanaged network device using hostname
187167	Test DL380 G10
165743	Add a DVR to the system with a deviating port
184368	Persistent alarms when management server is (gracefully) restarted
184396	BVMS operator client is able to replay exports from the VRM eXport Wizard
184363	Implement a state event when an export is running
184369	Configure a maximum retention time for the logbook
184364	Device icon blinks while an alarm is active
184376	Alarms cannot be cleared when originating state has not changed
184377	Prevent duplicated alarms from the same device and event
174321	Microsoft SQL Server 2017 Express integrated
134518	BVMS Dark color theme
172229	Enable GOPs up to 255 in live and playback
170202	Manual access control authorization [**hidden**]
191808	BVMS Plus licensing scheme

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ID	Description
163693	Replace a camera without loosing recording
191482	Move bonus documentation files from installation to https://community.boschsecurity.com
184373	Extended user and password management
184374	Several SDK extensions
184375	Enhancements and extensions of configuration reports
184367	Camera maintenance (deactivation) mode
184366	Restricted access to VRM monitor
190920	Update existing recording profiles to match recommended camera settings
184371	Permissioned configuration client
197341	Move Analog Monitor Group (AMG) control to the image-pane
182352	Optimize ePTZ handling for 180 degree panoramic cameras Adjust default zoom level for all panoramic cameras
180441	Limit the number of image panes per user group
155461	Allow non-BVMS clients (Video Security Apps) to access the BVMS user authentication service
160582	Configure CHAP passwords for cameras, enabling ANR and local replay.
191896	Barco agent 0.9.5.0 (tested with encoder passwords)
191194	Searching for access control events [**hidden**]

10.2 Installation Notes

For system design specifications the BVMS datasheet, configuration manual, pre-sales guide and 1uick 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.

10.3 Versions

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

Device Compatibility

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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
Bosch Video Stitcher	1.6.0.63
VideoSDK	6.31.0067
Firmware MPEG-4	4.15.0002
Firmware CPP3	5.74.0010
Firmware CPP4	6.50.0128 / 6.51.0026 / 6.51.0028 / 6.60.0065 / 6.61.0025
Firmware CPP5	6.30.0059
Firmware CPP6	6.50.0128 / 6.51.0026 / 6.51.0028 / 6.60.0065 / 6.61.0025
Firmware CPP7	6.50.0128 / 6.51.0026 / 6.51.0028 / 6.60.0065 / 6.61.0025
Firmware CPP7.3	6.50.0128 / 6.51.0026 / 6.51.0028 / 6.60.0065 / 6.61.0025
Firmware CPP-ENC	5.53.0004 (for VIP X1600 XFM4)
Firmware CPP-ENC	5.97.0005 / 5.97.0007 (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005
VIP XD HD	1.8
VIP XD	4.10.056
VJD 7000	54.8.2
VJD 8000	9.10.0029
VRM	3.81.0032 (32-bit) / 3.81.0038 (32-bit) / 3.81.0048 (32-bit)
VSG	6.44.0022 / 6.45.0005 / 6.45.0006 / 6.45.0008

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Component	Version
iOS	9.0.2 / 9.3.5 / 10.3.1 / 11.4
Web Client	11.165
BIS	4.4, 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) 2.5.0 (Divar AN 3000/5000) 1.4.0 (Divar Network/Hybrid)
SQL Server	2017
Operating systems Operator Client, Configuration Client.	Windows 10 Professional (64-bit) October 2018 update (1809) Windows 10 Professional (64-bit) Spring Creators update (1803) Windows 10 Professional (64-bit) Fall Creators update (1709) Windows 10 Enterprise (64-bit) LTSB 2016 (1607)
Operating systems Management Server, Mobile Video Service, Video Recording Manager	Windows (Storage) Server 2012 R2 (64-bit) Windows (Storage) Server 2016 (64-bit) Windows 10 Professional (64-bit) Spring Creators update (1803) Windows 10 Professional (64-bit) Fall Creators update (1709) Windows 10 Enterprise (64-bit) LTSB 2016 (1607)
Cameo SDK	1.3.0.0
BVMS SDK	1.9.0.0
RCPP	4.61.0028

10.4 Hardware drivers

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Component	Version
NVIDIA Quadro	Quadro Pro Driver for Microsoft Windows 10 (64-Bit) 385.69 (2017-09-21)
AMD	FirePro Unified Graphics Driver for Windows 10 (64-bit) 17.Q3 (2017-27-07)
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.

10.5 Patches issued

ID	Description	Fixed in	BVMS	BVMS Viewer
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 / 242334	**FIXED**: DIVAR IP AiO iSCIS load balancing are incorrect.	10.0.1	Download	Download
219067	**FIXED**: VRM was losing its license and recording was stopped if the "secure connection" was used between BVMS and the cameras.	10.0	Download	Download
208696 / 235489	**FIXED**: Rare Operator client crash when video stream was lost.	10.0	Download	Download
231649	**FIXED**: AUX command cannot be triggered twice in a row.	10.0	Download	Download
225178	**FIXED**: MVS web login failed.	10.0	Download	n/a
227171	**FIXED**: DVR Hybrid frame drops.	10.0	Download	Download

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ID	Description	Fixed in	BVMS	BVMS Viewer
223779	**FIXED**: An issue caused in some cases that recording parameters are not written correctly to the devices.	10.0	Download	Download
221394 / 221454	**FIXED**: Enhancing the change password mechanism to improve the behaviour in cases dual authorizations are used.	10.0	Download	Download
221373	**FIXED**: MOV export issues (black video, seeking).	10.0	Download	Download
208909	**FIXED**: Enabled access control integration.	10.0	Download	n/a
219829	**FIXED**: [CVE-2019-6957 / CVE-2019-6958] Buffer overflow and improper access control	10.0	Download	Download
218718	**FIXED**: Delayed actions which require user authentication, including taking control of PTZ cameras, logging into the system and SDK logins.	10.0	Download	Download
207457	**FIXED**: Inconsistent display of red dot recording state	10.0	Download	Download
216818	**FIXED**: Configuration client crash when malicious input was entered in the address book (DDOS)	10.0	Download	Download
212907	**FIXED**: Missing context menu on AMG control (clear/ disconnect, toggle quad mode, set volume).	10.0	Download	Download
209977	**FIXED**: GPU decoding is not functioning properly with Nvidia Quadro P600.	10.0	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

10.6 Resolved issues

ID	Description
69514	**FIXED**: Record AAC does not work. Encoders will automatically use G.711 to record audio.
183720	**FIXED**: improved GPU/CPU balancing for 60fps cameras.
189400	**FIXED**: removed memory indicator.

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ID	Description
182561	**FIXED**: silent login connection parameter.
109192	**FIXED**: edge-dewarping with panoramic camera.

10.7 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
250790	Decoder	The BVMS Operator Client 10.0 in Compatibility Mode with BVMS 9.0 Management Service is not able to control AMGs.
242334	Storage	Wrong values for the iSCSI "load balacing" for DIVAR IP AiO 7000.
241560	Setup	The SQL Server installation might fail if VS Shell 2015, VS Shell 2017, VC++ 2015, or VC++ 2017 are installed on the target system. Workaround: remove these components and restart the BVMS installation. After BVMS has been installed the components can be re-installed as well.
238185	SDK	Client SDK denies login if SDK user is not part of the same user group as the current operator user. Alternatively an account in the "Admin Group" can be used for ClientSDK access.
230789	Keyboard	PTZ control is not automatically activated when the setting "*Start PTZ mode when selecting PTZ Image pane with mouse*" is enabled for KBD-UXF (USB keyboard). Work-around: enable PTZ control with the designated button on the keyboard.
220536	Forensic Search	When using SSH connectivity Forensic Search is not available.
222090	Language	Once a BVMS language is set, the configuration is initiated and it cannot be changed without reconfiguring the entire system.
219769	Access Control	When multiple access management systems are configured, events from only one system will be processed.
219618	SNMP	Due to a change in Windows 10 "October 2018 update" (1809), the BVMS installer is not able to install the required SNMP components. This needs to be manually installed ("Settings" app, "Apps & Features", "Manage optional features", "Install SNMP".
211909	Alarms	Compound events should not be nested: cyclic references to compound events could prevent the management server from processing other events.

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ID	Subject	Description
216797	MVS	When an MVS is configured in the system (by default when using the Configuration Wizard on DIVAR IP appliances), but not installed, the software transcoder does not work.
208908	PTZ	Cannot move to the same preposition after manually controlling a PTZ camera.
214843	Configuration	BISProxy: app.config file contains user credentials of a BVMS user in plain text.
218284	Configuration	User data (including favourites) cannot be moved (exported/imported) from one server to another.
179879	Decoder	Decoders are not able to connect to cameras with an empty user password (even though the destination password is empty). Ensure the destination password on the decoders is matching with the user passwords on the cameras and this is not blank.
208326	Languages	The "OK" and "Cancel" buttons of the configuration client's settings dialogue are not displayed when it is running on an Operating System set with the Arabic language. The "ESC" button on the keyboard can be used to cancel, the "ENTER" button on the keyboard can be used to OK.
208193	Maps	In rare occasions the hotspots located on a map need to be re-aligned manually.
208286	DIP	BVMS 9.0 cannot be installed on first generation (DIP-70xx-xHD and DIP-30xx-xHD) DIVAR IP devices due to the outdated operating system.
207248 / 236468	Streaming	The MVS (Mobile Video Service) cannot process IBBP and IBP GOP structures. Additionally it is limited to an I-frame distance of 30. When using the MVS in a BVMS system, the image optimized profiles should be used. When using 4K cameras the MVS might respond slowly in replay.
208062	Storage	When the recordings of an old camera are attached to a new camera, a BVMS configuration rollback to a point in time before the attachment, will result in the loss of all related recordings. Please wait with the rollback until the recordings of the old camera are overwritten (retention time) or restore the configuration settings manually.
208087	Storage	When the recordings of an old camera are attached to a new camera, the recordings of the old camera are not available through encoder-replay.
207780	GPU	When using the recommended Nvidia Quadro Pro Driver (385.69) on Windows Server 2012 R2 systems, h.265 streams might be distorted.
206756	GPU	Intel Graphics Driver for Windows 10 24.20.100.6136 cannot be used for GPU decoding. Software decoding will be used.
207814	Streaming	Reverse playback does not work when using transcoding.

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ID	Subject	Description
207207	SSH	The connection between the operator client and the management server might be lost when using SSH and the (remote) connection is utilized over 90%.
204379	Storage	When importing the configuration from a VRM, which uses an E-Series 2800 dual controller device that is distributed across different pools, the storage device needs to removed and re-added to your configuration in order get the correct LUNs assigned to the pools.
203933	User management	When changing the password of an enterprise account, and the activation is activated with the "forced restart" option enabled, the connected operator clients do not restart. The operator clients need to be manually restarted.
205959	ANR	ANR replay is not working when the "access protection enforcement" and "password policy enforcement" options in the camera are enabled.
204968	GPU	A memory leak is observed when using not-recommended Nvidia driver versions, which could result in decreased system performance. Please use the recommended Nvidia drivers, as mentioned in the section above.
191527	General	Microsoft Support - Service does not start: BVMS set-up automatically sets *HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\ServicesPipeTimeout* to *60000* in order to ensure the BVMS services are started correctly.
182727	ONVIF	When using a multi-sensor ONVIF camera, motion detection events will be raised as an device alarm: sensor specific motion alarms cannot be processed.
205170 205166	Performance	Removing up to 9999 devices and/or items from the configuration can take up to 2 minutes.
203910	SDK	The DisplayCameraInInstantPlayback SDK function cannot be used in the BVMS Enterprise Client SDK.
200816	SDK	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.
189629	Audio	The G726 audio codec cannot be used combined with ONVIF cameras.
195810	Storage	Exports done by using the VRM eXport Wizard do not contain time-zone information. The time will be mapped to the UTC time-zone.
200514	Streaming	When using a very long GOP (up to 255) combined with a low frame-rate (1fps) the (time) distance between the i-frames is too large and playback cannot be displayed. Bosch recommends reducing the GOP length to 30 in this scenario.
172229	Streaming	When using a very long GOP (up to 255) the operator client needs to load the entire GOP in order to display the right image. This will cause an additional load on the network and storage, which makes long GOPs less suitable for low-

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ID	Subject	Description
		bandwidth environments in which the operator wants to quickly browse through video. Bosch recommends reducing the GOP length to 30 in this scenario.
195698	Decoder	The Analogue Monitor Group (AMG) control has been moved from an fixed area of the operator client to an image-pane based control. When a BVMS system is upgraded, and using AMG, the control should be added to the logical tree to ensure operators have access to the AMG functionality after the upgrade.
192510	General	Due to the upgrade to Microsoft SQL Server 2017 BVMS 9.0 cannot be installed on Microsoft Windows 7 and Windows Server 2008 R2. Additionally the BVMS set-up size has increased.
192510	General	When upgrading an existing BVMS version to BVMS 9.0, the set-up needs to be manually restarted after the installation of Microsoft SQL Server 2017 has completed and the server has been restarted.
196172	Decoder	Dome-presets in a sequence do not work when the sequence is controlled from the digital monitor wall. This only works when the sequence is controlled from the analog monitor group.
198610	Streaming	GOPs larger then 255 will not be decoded.
189289	Streaming	B-frames will only be enabled on encoders which explicitly support this and are running FW 6.40 or newer.
191197	Storage	All LUNs that are scanned on an iSCSI target are added to the configuration.
186267 / 189329	Security	HTTPS encryption between DVRs and BVMS system components is only applicable for "control" traffic, not for video streams.
189681	Connectivity	When connecting to a DIVAR Hybrid and Network in a routed/NAT setup, using a different port than 443 or 80, video (live and recording) will not be shown.
199271	Export	When exporting using MOV, the MOV playlist might not play. The individual files will play.
196239	Streaming	When using a very long GOP (up to 255) and using I-frame only recording, the video will not show smoothly or completely disappear.
190090	Alarms	The file in which alarms are stored (persistent alarms) is removed when upgrading the system.

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11 BVMS Version 8.0

11.1 Introduction

The latest version of the Release Notes is always available on the Bosch Security Systems Product Catalog. Version 8.0 introduces new features and resolved issues to the BVMS.

11.2 New functionality

ID	Description
165770	Move to 64-bit software architecture
146474	Favorites can be used in combination with unmanaged sites
172375	SSH connectivity can be used in combination with unmanaged sites
173425	The "Admin" username can be changed
158123	SDK: remove protection from recordings
169488	Support bi-directional audio for MIC 7000 combined with Videojet Connect 7000
144613	Improve operator client performance by Nvidia GPU decoding
144682	DSA E-series 2800 single controller preparations
134122	Live, playback, asf-, mov-, and native export of H.265 devices
160935	Implementation of MIC 9000 specific user interface options
156279	Microsoft Windows Server 2016 is added to the system test.
157936	Fault-tolerance based on Stratus Everrun
160516	Show IVA rule configuration in Operator Client (overlay)
174552	Barco agent 0.9.4.0 tested

11.3 Installation Notes

For system design specifications refer to the BVMS datasheet, Configuration Manual, pre-sales guide and Quick Installation Guide on http://www.boschsecurity.com. The datasheet is subject to change. Translated versions are not published instantly, for the latest version refer to the English version.

The installation manual and additional documentation of Bosch DSA E-Series iSCSI disk arrays can be found in Bosch on-line product catalogue on http://www.boschsecurity.com.

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11.4 Firmware

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 that are 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
Bosch Video Stitcher	1.6.0.63
VideoSDK	6.12.0078 / 6.15.0103
Firmware MPEG-4	4.15.0002
Firmware CPP3	5.74.0004
Firmware CPP4	6.41.0037 / 6.42.0021 / 6.43.0027 / 6.51.0026 / 6.44.0027 / 6.51.0028
Firmware CPP5	6.30.0047 / 6.30.0059
Firmware CPP6	6.41.0037 / 6.42.0021 / 6.43.0027 / 6.51.0026 / 6.44.0027 / 6.51.0028
Firmware CPP7	6.41.0037 / 6.42.0021 / 6.43.0027 / 6.51.0026 / 6.44.0027 / 6.51.0028
Firmware CPP7.3	6.41.0037 / 6.42.0021 / 6.43.0027 / 6.51.0026 / 6.44.0027 / 6.51.0028
Firmware CPP-ENC	5.53.0004 (for VIP X1600 XFM4)
Firmware CPP-ENC	5.97.0005 (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005
VIP XD HD	1.8
VJD 7000	54.8.2

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Component	Version
VJD 8000	9.00.0134
VRM	3.70.0056 / 3.71.0022 / 3.71.0029 / 3.71.0031
VSG	6.42.0010 / 6.43.0017
iOS	9.0.2 / 9.3.5 / 10.3.1
Web Client	11.0.96
BIS	4.3, 4.4, 4.5
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) 2.5.0 (Divar AN 3000/5000) 1.2.1 (Divar Network/Hybrid)
SQL Server	2014
Operating systems Operator Client	Windows 8.1 64-bit; Windows 10 64-bit creators update (1703)
Operating systems Config Client	Windows 8.1 64-bit; Windows 10 64-bit; Windows Server 2012 R2 64-bit; Windows Server 2016 64-bit.
Operating systems Management Server, Mobile Video Service	Windows Server 2008 R2 SP1 64-bit (DIVAR IP only); Windows Server 2012 R2 64-bit; Windows Server 2016 64-bit.
Cameo SDK	1.3.0.0
BVMS SDK	1.9.0.0
RCPP	4.53.0.35

11.5 Hardware drivers

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Component	Version
NVIDIA Quadro	Quadro Pro Driver for Microsoft Windows 7/8.1 (64-Bit) 385.08 (28.June 2017) Quadro Pro Driver for Microsoft Windows 10 (64-Bit) 385.69 (21.September 2017)
AMD	FirePro Unified Graphics Driver for Windows 8.1/10 (64-bit) 17.Q3 (27.July 2017)

Hardware requirements

Bosch strongly urges customers to use the driver versions mentioned above. This ensures that the software can perform its task reliably.

11.6 Patches issued

ID	Description	Fixed in	BVMS	BVMS Viewer
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
206026 / 207457	**FIXED**: inconsistent state display of red dot recording state overlay.	10.0	Download	Download
219829	**FIXED**: [CVE-2019-6957 / CVE-2019-6958] Buffer overflow and improper access control.	10.0	Download	Download
216927 / 190582	**FIXED**: inappropriate handling of inputs in the timeline date/ time edit box; out-of-sync replay for DVR cameras on replay position change with the UXF keyboard.	9.0	Download	Download
202562 / 205267 / 198002 / 195261	**FIXED**: Operator Client showed black images while replaying exports; ImageDecoder log directories with a constantly growing number of log files; video display issues with VIP 10 devices; missing IVAe overlays in CameoSDK applications.	9.0	Download	Download
205263 / 203669 / 199314	**FIXED**: Invalid display of maps in some cases, Configuration Client to crash on conversion of specific maps.	9.0	Download	Download
198854	**FIXED**: Missing favorites in offline situations.	9.0	Download	Download

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ID	Description	Fixed in	BVMS	BVMS Viewer
208696	**FIXED**: The Operator Client casrhed on video stream loss under certain circumstances.	9.0	Download	Download
216818	**FIXED**: Configuration client crash when malicious input was entered in the address book (DDOS)	10.0	Download	Download
216927	**FIXED**: Date selection for timeline is not valid if day or month is entered as single digit	9.0	Download	Download
185070	**FIXED**: Implemented multipathing for DSA E-series 2800	9.0	Download	Download
190582	**FIXED**: Out-of-sync replay for DVR cameras on replay position change with the UXF keyboard.	9.0	Download	Download
195380	**FIXED**: alarm recording stopped in some cases when triggering a configuration change.	9.0	Download	Download

11.7 Resolved issues

ID	Description
161444	**FIXED**: For some profiles, the default value for target bit rate is higher than the value of the maximum bit rate.
30130	**FIXED:** VRM System camera/encoder scan renames cameras
170208	**FIXED**: Instead of "freezing" the (live) video when the network experiences packet loss, the video will now be decoded on best-effort. As a result, network issues are shown to the operator as artifacts.

11.8 Known issues

ID	Description
215086	In some cases Bosch H.265 cameras cannot be added to the system configuration using the "Scan encoders" dialogue. Workaround: add the cameras manually based on their IP address.
217354	Configuration Client might crash when the scriptlet ID of a script is changed manually in the script editor.
205190	OPC xml file (exported from the BVMS Configuration Client) does not contain DVR devices.
VRM-2983	Possible Communication Issue between BVMS 8.0 and VRM 3.70 or 3.71

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ID	Description
183720	The performance estimations of some GPUs are not fully correct, which could lead to a performance decrease compared to CPU decoding. GPU decoding can be disabled as a work-around. The exact impact is listed in the BVMS project checklist.
183162	In some situations connecting to a DIVAR Hybrid or Network may take longer than 20 seconds.
172618	The Netapp FAS 2040 cannot be configured from the BVMS Configuration Client.
183179/183372	In some situations MPEG4 connected VSG cameras cannot be replayed anymore.
184192	The SSH tunneling protocol cannot be used to connect the BVMS Configuration Client to the BVMS Management server.
184327	When the language of the operating system is set to Turkish, the Bosch Video Stitcher cannot be licensed. Please set the operating system language to English.
182788	When firmware 6.40 or 6.41 is used on the camera, video authentication will not work. Keep firmware 6.32 if this functionality is used.
182804	The input states of a Bosch DIVAR 400 and DIVAR 600 are not monitored.
81663	ANR enabled cameras, or local storage cameras, are not able to replay video if any live or user password is set.
157312	Forensic search is not possible on video footage exported from BVMS.
179879	When the "access protection enforcement" of a Bosch encoder (running firmware 6.40 or newer) is enabled, the video cannot be displayed on decoders. In order to work-around the issue a "user" password needs to be set on the encoder, and the "destination" password needs to be set on the decoder. The user and destination password needs to match.
171880	When an encoder is configured with invalid (definition can be found in the configuration manual) password characters a pre-set will not be triggered.
n/a	The MVS is not able to transcode H.265 video.
170401	Due to the migration to the 64-bit software architecture 32-bit CameoSDK applications cannot connect to the BVMS 8.0 management server.
169982	The OIDs of SNMP traps might be shifted after upgrading to BVMS 8.0. The alarms configured in the receiving system need to be adjusted to the new OIDs.
171856	After locking the pc, and logging in again, the Operator Client can crash when using non-tested Nvidia drivers. This problems has been confirmed by Nvidia and Bosch strongly recommends using the tested Nvidia driver version mentioned earlier in this document.

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ID	Description
172049	The motion+ search algorithm is only available for analogue cameras connected to a DIVAR Network or Hybrid.
165214	Hotspots might be flickering when moving the map.
164871	DIVAR AN, Network and Hybrid devices show the wrong interval in the time-line for protected and restricted video.
156070	After changing the IP address of a camera from the BVMS Config Client the VRM service needs to be stopped, the VRM config.xml needs to be removed, and the VRM service needs to be restarted.
165472 / 173637	Authentication problems are known when using Axis cameras combined with BVMS. Axis has released new firmware to mitigate this problem. The recommended firmware can be found on http://ipp.boschsecurity.com/bvms
156105 / 167598	BVMS is not able to use the transcoding resources offered by the Videojet XTC transcoder.
167294	In some situations decoding problems might arise when trying to decode a Hirschmann encoder.
173162	In rare situations the Operator Client can crash when a camera is opened which is authenticated using invalid password-characters.

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12 BVMS Version 7.5

12.1 Introduction

The latest version of the Release Notes is always available on the Bosch Product Catalog (www.boschsecurity.com). Version 7.5 introduces new features and resolved issues to the BVMS.

12.2 New features

ID	Description
153834	DIVAR Network / Hybrid supported
69032	Map viewer improved
157938	Forensic Search license not needed any more
138588	Accelerated playback speed (I-frame only playback)
155351	Camera PTZ control via BIS
155352	Start and stop sequences via BIS
155353	Added "visibility" state to camera state
108262	The Operator Client can communicate with the full system using a single network port.
147027	Windows 10 and Windows Server 2016 supported for BVMS Management Server

12.3 Installation Notes

For system design specifications refer to the BVMS datasheet, Configuration Manual, pre-sales guide and Quick Installation Guide on http://www.boschsecurity.com. The datasheet is subject to change. Translated versions are not published instantly, for the latest version refer to the English version.

The installation manual and additional documentation of Bosch DSA E-Series iSCSI disk arrays can be found in Bosch on-line product catalogue on http://www.boschsecurity.com.

12.4 Firmware

Device Compatibility

Up until some years ago, new released cameras, encoders, domes and decoders that are 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

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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
VideoSDK	6.0.5.288
Firmware MPEG-4	4.15.0002
Firmware CPP3	5.74.0004
Firmware CPP4	6.32.0111 / 6.32.0111 / 6.40.0232 / 6.44.0027
Firmware CPP5	6.30.0047 / 6.31.0003 / 6.30.0059
Firmware CPP6	6.32.0111 / 6.32.0111 / 6.40.0232 / 6.44.0027
Firmware CPP7	6.32.0111 / 6.32.0111 / 6.40.0232 / 6.44.0027
Firmware CPP7.3	6.44.0027
Firmware CPP-ENC	5.53.0004 / 5.54.0004 (for VIP X1600 XFM4)
Firmware CPP-ENC	5.97.0005 / 5.97.0007 (for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.0005
VIP XD HD	1.8
VDJ 7000	54.8.2
VDJ 8000	8.21.0028
VRM	3.60.0053 / 3.70.0056 / 3.70.0062 / 3.71.0031
VSG	6.30.0055
iOS	7.1.1 / 8.3 / 9.0.2 / 9.3.5 / 10.0.1
Web Client	11.0.96
BIS	4.2 / 4.3
Bintelan Analytics Platform	5.7.5955.25388

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Component	Version
DiBos	8.7
BRS	8.10/8.11
Allegiant MCS	2.94
Intuikey Keyboard	1.96
VMWare	5.1.0
DVR	2.3.2 (DVR400 / 600) 3.60 (DIVAR 700) 1.1.2 (Divar Network/Hybrid)
Operating systems Operator Client	Windows 7 64-bit, Windows 8.1 64-bit; Windows 10 64-bit anniversary update
Operating systems Config Client	Windows 7 64-bit, Windows 8.1 64-bit; Windows 10 64-bit; Windows Server 2008 R2 SP1 64-bit; Windows Server 2012 R2 64-bit; Windows Server 2016
Operating systems Management Server, Mobile Video Service	Windows Server 2008 R2 SP1 64-bit; Windows Server 2012 R2 64-bit; Windows Server 2016
CameoSDK	1.3.0.0
BVMS SDK	1.9.0.0

12.5 Hardware

Hardware requirements

For the HW-requirements of other components like VRM, VSG, Allegiant MCS – Please refer to the documentation of these components

Component	Version
NVIDIA Quadro	Driver for Windows 7 and Windows 8.1 (64-bit): 381.65 Driver for Windows 10 (64-bit): 377.11
AMD	Driver for Windows 8.1 (64-bit) 17.Q1.1 Driver for Windows 10 (64-bit) 17.Q1.1

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12.6 Patches issued

ID	Description	Fixed in	BVMS	BVMS Viewer
219829	**FIXED**: [CVE-2019-6957 / CVE-2019-6958] Buffer overflow and improper access control	10.0	Download	Download
204822	**FIXED**: Memory leak on frequent CameoSDK connects/ disconnects and an operator client crash in some cases when opening cameras of a Videojet Multi 4000.	9.0	Download	Download
216818	**FIXED**: Configuration client crash when malicious input was entered in the address book (DDOS)	10.0	Download	Download
207457	**FIXED**: Inconsistent state display of red dot recording in Operator client.	10.0	Download	Download
190762	**FIXED**: Problems with retrieving ONVIF topics and subscribing ONVIF events.	9.0	Download	Download
176748	**FIXED**: Problems with topics and events of SightLogix NS-90 thermal camera.	8.0	Download	Download
191701	**FIXED**: Toggling relays with the IntuiKey keyboard does not work in some cases.	9.0	Download	Download
197578	**FIXED**: Configuration Client logins failed for systems with special IntuiKey keyboard login constellations.	9.0	Download	Download
194599	**FIXED**: Specific GSM modem models failed to send SMS messages.	9.0	Download	Download
173617	**FIXED**: Dome preview failures on Configuration Client..	8.0	Download	Download

12.7 Resolved issues

ID	Description
161444	**FIXED**: For some profiles, the default value for target bit rate is higher than the value of the maximum bit rate.
30130	**FIXED:** VRM System camera/encoder scan renames cameras
147278	**FIXED**: When using the Bosch VMS CameoSDK, frequent connect/disconnect can cause a memory leak. It is recommended to use a permanent connection when using the CameoSDK.

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12.8 Known issues

ID	Topic	Description
191832	MVS	Mobile Video App cannot use DDNS URL for login.
n.a.	SSH	The SSH service cannot be used in an BVMS Enterprise Management environment.
150009	Decoder	Videojet decoder 7000 / 8000 do not support audio in BVMS
n.a	Decoder	Videojet connect 7000 does not support audio out
165163	VRM	Changing name of a Video Recording Manager in BVMS does NOT change the "VRM Server Name" on the cmlib-page of the VRM
n.a.	VRM	When adding a VRM device to a BVMS Configuration, BVMS enables the RCP+ protocol
n.a.	VRM	When importing a VRM configuration, ONVIF or Bosch PTZ cameras configured under a VSG are not detected as PTZ cameras. PTZ configuration has to be done manually on camera and recording page
161813	BIS	When the BVMS SDK or OPC server is used for controlling Pan-Tilt-Zoom cameras, the zoom speed may differ between cameras.
152699	Streamlining	Automatic Stream Selection cannot be used when the Operator Client is connected to an unmanaged site, even though this is offered by the user interface.
155788	ANR	Audio is not working for ANR playback.
156342	Configuration	On all-in-one systems, configuring an iSCSI target requires the BVMS Config Client to have administrative rights.
157929	VSG	It is not possible to access an ONVIF device which is not configured as part of a Video Streaming Gateway in a remote access scenario.
154912	Maps	The total amount of hotspots open in one or multiple maps is 4.000.
142140	ANR	The video authenticity check is not working for cameras which are using ANR recording.
155514	Configuration	When using Windows 10, a device scan searching for the DIVAR AN 3000/5000 brings no result. The device(s) need to be added manually or the scan needs to be executed on another operating system.
160979	PTZ	Pan-Tilt-Zoom dome cameras that are connected via the Bosch Recording Station cannot be controlled using the BVMS SDK or BIS server.

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ID	Topic	Description
155706	Configuration	Changing the IP address of a password protected device in a different sub net is not working.
160930	MVS	When storing the Mobile Video Service certificate from Internet Explorer it should be stored in the "Other People / Certificates" store.
155532	MVS	Disabling the HTTP protocol (using HTTPS only) will prevent the Management Server to communicate with the Mobile Video Service.
39436	Recording	If a "user" password is set to a camera used for local recording, the Operator Client is not able to access the recording.
162254	Configuration	The installation of the .NET framework 4.6 is possible by following the MS instructions to install KB2919355 first.
145024 145026	External	The Barco Transform A series RCP+ agent does not work anymore. The Barco Transform N series will work with the corresponding RCP+ agent (0.9.0.7).
149922	Recording	When exporting recorded footage with changing FPS rates the display of frame rate may be wrong
155405	Configuration	The initial configuration of an Infortrend is not possible anymore.
135338	ONVIF	The ONVIF event subscription filtering does not work for all camera manufacturers.
164622	ONVIF	For the integration of Axis Cameras, the camera FW needs to be as specified in the list of BVMS 7.5 compatible 3rd party cameras. Newer Axis camera firmware versions such as 5.90 and 6.x are not supported.
160504	Recording	SD card recording can only be used when the specific cameras have not configured a password for the service, user and live account.
167599	IVA	When using IVA flow, forensic search might show an incomplete overview of results.
167626	Authentication	When the "user" or "live" user account is configured with an empty password, it is possible to see a live video despite the "service" user password is wrong.
165065	MVS	When using an iPhone SE, the mobile application crashes when trying to send live video to other mobile operators.
163927	VRM	When adding and importing a Video Recording Manager, with an DSA e-series and multiple ports, some ports may not be added.
160929	Configuration	It is recommended to add the MIC 550 (using the IP power supply) manually and configuring the device "MIC VIP" explicitly, instead of scanning it.

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ID	Topic	Description
160536	Maps	The map cannot be panned outside of the limits of the CAD graphic. Centering on a hotspot will behave different compared to earlier versions.
164767	Authentication	When configuring the "service" password of a camera, the "live" and "user" password needs to be configured as well.
151049	ANR	ANR playback will not work when a camera is configured to use the HTTPS protocol to communicate with the BVMS.
145023	VRM	The Video Recording Manager service will be restarted when the physical network adapter is online, after it has been offline.
154913 153044	Maps	Due to map loading times, it is recommended to not use more than 1000 hotspots in maps that are configured for alarm scenarios. • 500 hotspots: 1.5 seconds • 1000 hotspots: 2.5 seconds • 2000 hotspots: 5 seconds • 3000 hotspots: 9.5 seconds • 4000 hotspots: 14.5 seconds
156105	Transcoding	Videojet XTC Transcoder not longer supported
167598	Transcoding	For hardware transcoding in BVMS 7.5 the latest transcoder firmware must be installed
165214	Maps	In rare circumstances the hotspots on a CAD graphic might flicker, when moving a map

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13 Bosch Video Management System Version 7.0

13.1 Introduction

The latest version of the Release Notes is always available on the Bosch Product Catalog (www.boschsecurity.com). Version 7.0 introduces new features and resolved issues to your Bosch Video Management System.

13.2 New features

ID	Description
n/a	Video authentication based on 2048 bit public/private key certificates
n/a	Automated stream switching for live streams
n/a	Encryption of communication from the camera to: operator client; VRM; management server.
n/a	Simple motion search
n/a	Unmanaged sites: support for different time zones
n/a	Unmanaged sites: VSG camera support

13.3 Installation Notes

For system design specifications refer to the Bosch VMS datasheet, Configuration Manual, pre-sales guide and Quick Installation Guide on http://www.boschsecurity.com. The datasheet is subject to change. Translated versions are not published instantly, for the latest version refer to the English version.

The installation manual and additional documentation of Bosch DSA E-Series iSCSI disk arrays can be found in Bosch on-line product catalogue on http://www.boschsecurity.com.

13.4 Firmware

Component	Version
VideoSDK	5.92.0052
Firmware MPEG-4	4.15.02
Firmware CPP3	5.73.0046
Firmware CPP4	6.21.0008 / 6.32.0099 / 6.44.0027

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Component	Version
Firmware CPP5	5.92.0029
Firmware CPP6	6.21.0008 / 6.32.0099 / 6.44.0027
Firmware CPP7	6.21.0008 / 6.32.0099 / 6.44.0027
Firmware CPP7.3	6.44.0027
Firmware CPP-ENC	5.52.15(for VIP X1600 XFM4)
Firmware CPP-ENC	5.93.0023(for VJT XF E family, VIDEOJET decoder 3000)
Firmware X1/X2	2.53.05
VIP XD HD	1.8.1
VDJ 7000	54.8.2
VDJ 8000	8.10
VRM	3.55.0010 / 3.60.0043
VSG	6.17.0064
iOS	7.1.1 / 8.3 / 9.0.2
Web Client	11.0.96
BIS	4.0 / 4.1
Bintelan Analytics Platform	5.7.5955.25388
DiBos	8.7
BRS	8.10/8.11 / 5.92.0052
Allegiant MCS	2.94
Intuikey Keyboard	1.96
VMWare	5.1.0
DVR	2.3.2 / 3.60

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Component	Version
Operating systems Operator Client	Windows 8.1 64-bit; Windows 10 64-bit anniversary update
Operating systems Config Client	Windows 7 Professional or Ultimate SP1 64-bit; Windows 8.1 64-bit; Windows 10 64-bit; Windows Server 2008 R2 SP1 64-bit; Windows Server 2012 R2 64-bit
Operating systems Management Server, Mobile Video Service	Windows 7 SP1 and 8.1 64-bit; Windows Server 2008 R2 SP1 64-bit; Windows Server 2012 R2 64-bit
Cameo SDK	1.3.0.0
BVMS SDK	1.9.0.0

13.5 Hardware

Hardware requirements

For the HW-requirements of other components like VRM, VSG, Allegiant MCS – Please refer to the documentation of these components

Component	Version
Broadcom NetXtreme Gigabit	river for Microsoft Windows 7 and Windows 8.1 (64 bit) 16.8.4.1 Rev. A (14 Jan 2015)
Intel PRO-1000 Gigabit	Driver for Microsoft Windows 7 and Windows 8.1 (64 bit): R19_338993 Rev.M (2 Feb 2015)
NVIDIA Quadro	Driver for Windows 7 and Windows 8.1 (64-bit): 347.52 Rev.A (12 Feb 2015)
ATI FireGL	Unified Graphics Driver for Microsoft Windows 7 and Windows 8.1 (64-bit): 14.301.1014.1001 Rev.A (9 Feb 2015)

13.6 Resolved issues

ID	Description
133129	**FIXED**: In some rare cases it can happen that the export of video data from a DVR 700 does not work correctly.
145423	**FIXED**: When upgrading to Bosch VMS 6.5.0.325 on a system where there is a Barco Monitor Wall or a Bosch Monitor Wall configured, execute the following steps to avoid a Central Server crash during startup of the service:- Perform the upgrade to Bosch VMS 6.5.0.- Install Patch 145423 - Migration issue.For later Bosch VMS versions, this issue is resolved.

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13.7 Known issues

ID	Description
151294, 151296	Multiple domes connected to the same encoder cannot be controlled by more than one client simultaneously
144104	When a multi-channel encoder is used in Ganetec Bintelan, only video of the first camera will be used for analytics, even if the other cameras are being selected and configured.
148394, 152880	Direct iSCSI playback is not supported when using the Video Recording Manager large LUN feature.
145182	When upgrading the Video Streaming Gateway the message "" needs to be confirmed.
155234	When using the Enterprise Operator Client video by event search: when the video by event dialog is opened and the time zone is changed, the time does not change accordingly in the events that are already listed.
155234	When using the Enterprise Operator Client logbook: when the logbook dialog is opened and the time zone is changed, the time does not change accordingly in the logbook items that are already listed.
154765 / 154667	If Microsoft patch 3155464 is installed, Bosch VMS is not able to communicate to the intrusion panels GV4, B-Series US1B or B-Series US1A. Bosch VMS does not receive events and alarm from the panels and cannot control the intrusion panel. To avoid this issue the panel firmware of B-Series US1B and G-Series US1A has to be upgraded to version 3.03.014. In case of GV4 panels the Microsoft patch 3155464 could be disabled via recommended Microsoft procedure: https://support.microsoft.com/en-us/kb/3155464 Warning: These workarounds may make a computer or a network more vulnerable to attack by malicious users or by malicious software such as viruses. We do not recommend these workarounds but are providing this information so that you can implement these workarounds at your own discretion. Use these workarounds at your own risk.
153951	Unprotect / delete video will not work when the Operator Client is connected through a routed access environment.
142499	Authenticity check is not implemented for DIVAR AN 3000 and DIVAR AN 5000.
150009	VIDEOJET 7000/8000 does not support audio playback.
155415	When a DIVAR AN 3000 or DIVAR AN 5000 is added in unmanaged sites, the properties of the playback cameo do not contain the date and time.
143823	Instant playback may show a black cameo if an instant playback value of less than 10 seconds is configured.
147027	When Windows 10 64-bit is used as the operating system for the management server (which is not supported), the "Bosch VMS DVR Adapter" and "Bosch VMS Web Service Host" services are not started automatically.

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ID	Description
149922	When exporting video with changing FPS rates (for example, due to alarm recording), display of the framerate is only correct if you use Windows Media ASF viewer.
n/a	When using the Bosch VMS in a Hyper-V environment, the latest (network-card) drivers need to be installed.
n/a	When using the Bosch VMS CameoSDK, frequent connect/disconnect can cause a memory leak. It is recommended to use a permanent connection when using the CameoSDK.
n/a	When using the VRM 3.60 large lun feature, primary and secondary VRM have to have the same configuration of the LUN size.
142145	When removing a camera from the configuration, and later adding it again, Ganetec Bintelan will lose its relation to that specific camera. The camera then also needs to be reconfigured in Ganetec Bintelan.
144940	When using the remote Operator client, video export from devices added as a DVR will not work.
152454	When a completely configured VRM is added to the Bosch VMS configuration, Bosch VMS will overwrite the camera names with default values.
148551	When replacing an encoder the new encoder does not record any more. The camera has to be deleted from the Bosch VMS configuration and added again. The recording will continue and previous recordings will be available.
162254	When the installation of the .NET framework 4.6.1 fails, KB2919355 needs to be installed prior to installing the Bosch VMS.

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