



From

ST-VS/MKP1

Product Management

Nuremberg

17.08.2016

Release Letter

Products:	<i>Combined H.264 Firmware for CPP7 HD/MP cameras CPP6 UHD/MP cameras CPP5 encoders CPP4 HD cameras CPP3 cameras and encoders CPP-ENC H.264 encoders</i>
Version:	6.30.0816

This letter contains latest information about the above mentioned firmware version.

1 General

This firmware release 6.30.0816 is a combined firmware package, applicable to H.264 products based on one of the following platforms.

The platforms have been renamed for a more generic recognition to “Common Product Platform”, short CPP, followed by the architecture-related number or suffix. The filenames are adapted accordingly.

Changes since last release are marked in [blue](#).



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This firmware supports:

- CPP7 UHD cameras
 - [update from FW 6.30 to latest maintenance release](#)
- CPP6 UHD cameras
 - [update from FW 6.10 or newer to FW 6.30](#)
- CPP5 encoders
 - [update from FW 5.91 or newer to FW 6.30](#)
- CPP4 HD cameras
 - [update from FW 6.10 or newer to FW 6.30](#)
- CPP3 cameras and encoders
 - update from FW 4.54.0026 or newer to FW 5.73
- CPP-ENC
 - VIP-X1600-XFM4 encoders: update from FW 4.2x or newer to FW 5.52
 - [VJT XF and VJD-3000 update to latest FW 5.93](#)

The combined firmware package includes the following build versions:

- [CPP7 H.264 6.30.0140](#)
- [CPP6 H.264 6.30.0140](#)
- [CPP5 H.264 6.30.0047](#)
- [CPP4 H.264 6.30.0140](#)
- [CPP3 H.264 5.73.0046](#)
- [CPP-ENC H.264 5.93.0026 for VJT XF family, VJD-3000 and VJC-7000](#)
- [CPP-ENC H.264 5.52.0015 for VIP X1600 XFM4](#)

For detailed description please refer to the separate release letters.

Note:

Due to an internal file system being introduced to CPP4 and CPP6 since firmware 6.1x and architectural changes thereof, an upgrade to firmware 6.20 and higher is only possible from firmware 6.1x versions or higher.

Cameras with previous firmware versions below 6.1x first need to upgrade to firmware 6.1x.

Note:

To upgrade to a newer firmware version using this combined firmware package, firmware versions before 5.5x require an intermediate update cycle using the respective platform firmware version mentioned above.

Note:

This combined firmware cannot be applied to CPP5 products with firmware version older than 5.91. It is required to upgrade to intermediate firmware 5.91 first.



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2 Applicable products:

CPP7

- DINION IP starlight 6000
- DINION IP starlight 7000
- FLEXIDOME IP starlight 6000
- FLEXIDOME IP starlight 7000

CPP6

- DINION IP starlight 8000 12MP
- DINION IP ultra 8000 12MP
- DINION IP ultra 8000 12MP with C/CS mount telephoto lens
- FLEXIDOME IP panoramic 7000 12MP 180
- FLEXIDOME IP panoramic 7000 12MP 360
- FLEXIDOME IP panoramic 7000 12MP 180 IVA
- FLEXIDOME IP panoramic 7000 12MP 360 IVA

CPP5

- VIDEOJET multi 4000
- VIP-X16XF-E



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CPP4 (formerly IPBE4)

- AUTODOME IP 4000 HD
- AUTODOME IP 5000 HD
- AUTODOME IP 5000 IR
- AUTODOME 7000 series
- DINION HD 1080p
- DINION HD 1080p HDR
- DINION HD 720p
- DINION imager 9000 HD
- DINION IP bullet 4000
- DINION IP bullet 5000
- DINION IP 4000 HD
- DINION IP 5000 HD
- DINION IP 5000 MP
- DINION IP starlight 7000 HD
- EXTEGRA IP dynamic 9000
- EXTEGRA IP starlight 9000
- FLEXIDOME corner 9000 MP
- FLEXIDOME HD 1080p
- FLEXIDOME HD 1080p HDR
- FLEXIDOME HD 720p
- Vandal-proof FLEXIDOME HD 1080p
- Vandal-proof FLEXIDOME HD 1080p HDR
- Vandal-proof FLEXIDOME HD 720p
- FLEXIDOME IP panoramic 5000
- FLEXIDOME IP indoor 5000 HD
- FLEXIDOME IP indoor 5000 MP
- FLEXIDOME IP indoor 4000 HD
- FLEXIDOME IP indoor 4000 IR
- FLEXIDOME IP outdoor 4000 HD
- FLEXIDOME IP outdoor 4000 IR
- FLEXIDOME IP micro 5000 HD
- FLEXIDOME IP micro 5000 MP
- FLEXIDOME IP outdoor 5000 HD
- FLEXIDOME IP outdoor 5000 MP
- FLEXIDOME IP micro 2000 HD
- FLEXIDOME IP micro 2000 IP
- IP bullet 4000 HD
- IP bullet 5000 HD
- IP micro 2000
- IP micro 2000 HD
- MIC IP dynamic 7000
- MIC IP starlight 7000
- TINYON IP 2000 family
- MIC IP dynamic 7000
- MIC IP starlight 7000
- TINYON IP 2000 family



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CPP3 (formerly IPBE3)

- AUTODOME Easy II IP series
- AUTODOME Junior HD, Jr HD fix
- AUTODOME 700 IP IVA
- AUTODOME 800
- AUTODOME Junior 800
- VG4 AUTODOME IP series
- VG5 AUTODOME IP series
- DINION XF 720p+, NBN-921-P
- DINION XF, NBC-455-P
- DINION 2X, NBN-498-P
- FLEXIDOME XF 720p+, NDN-921-P
- FLEXIDOME XF, NDC-455-P
- FLEXIDOME 2X, NDN-498-P
- Economy Box Cameras, NBC-225 series, NBC-255 series, NTC-255-PI
- Economy Dome Cameras, NDC-225 series, NDC-255 series
- Economy HD Box Cameras, NBC-265 series, NTC-265-PI
- Economy HD Dome Cameras, NDC-265 series, NDN-265-PIO
- Extreme series EX30 IR, NEI-30 IR Imager
- Far Infra-Red camera, VOT-320
- VIP X1 XF Single-Channel H.264 Encoder
- ~~○ WLAN cameras NBC-255-W and NBC-265-W~~
- Economic version VIP-X1XF-E
- Video Conference Dome IVA
- REG 1.5 IP and REG L2
- MIC IP PSU

CPP-ENC (formerly VIPX H.264)

- VIP-X1600-XFM4
- VJT-X20/X40XF-E
- VJT-XTCXF
- VIDEOJET decoder 3000, VJD-3000
- VIDEOJET connect 7000, VJC-7000



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3 New Main Features for CPP7 products

The feature set of this CPP7 platform firmware is aligned with the feature set of CPP4 and CPP6 platforms. See below the latest feature additions in relation to former firmware 6.2x and new features specific to CPP7.

For earlier feature additions please refer to CPP4 or CPP6 release notes.

Imaging

- Flexible video input orientation handling, including mirror and rotate (90°, 180° and 270°) allows corridor view applications using full resolution.
- A 1.3 MP crop is available on stream 2 on 1080p variants.
- Built-in gyro sensor is supported for automatic orientation detection.

Security

- The user management allows free assignment of usernames. Each user can be assigned a user group representing live, user, or service level.
- New user management system allows to dynamically create a user for whom the password can be treated as token. Also timeout before user account expires is possible.
- Token-based authentication implemented to allow user management based on communication with Microsoft Active Directory Federation Services.
- Secure FTP connection (FTP over TLS) is implemented.
- ICMP redirect messages are not accepted by default. Acceptance can be re-enabled via RCP+ command, if needed.
- Video authentication is also possible on RTSP streaming. It can be enabled with CGI parameter 'auth=1' which requests picture info packets (payload type 97).

Recording

- Recording to iSCSI supports LUN size up to 64 TB.
- A PTZ preposition can be stored in a recording profile, allowing to record only a 'region of interest' (ROI) of the full image.

ONVIF

- ONVIF encoder profile settings can be verified via http://<ipaddress>/onvif_encoder_profiles.
- Manual focus and iris control is supported via ONVIF command.
- Tamper detection alarms are forwarded to and included in ONVIF event services.



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VCA

- 6000 series cameras support Essential Video Analytics.
- 7000 series cameras support Intelligent Video Analytics.

For details on VCA 6.30 please refer to the release notes of Essential Video Analytics or Intelligent Video Analytics.

Miscellaneous

- HTML5 video tag is used to display a continuous MP4 video file from the camera on browsers not supporting NPAPI plug-ins (MPEG-ActiveX) like Firefox, Chrome and MS Edge.
- A “Links” section in the main navigation (blue top bar) leads to a DownloadStore page providing latest tools, apps and supportive software.
- Unicode characters are also possible on all configuration strings.
- Time server IP address can be accepted to be overwritten by DHCP.
- Display of preposition widget on Live page can be configured.

3.1 Changes

- Fixed a potential recording issue which could cause recording to stop due to insufficient storage error handling under rare error conditions, like e.g. massive irregular network connection interrupts to storage system.
- Fixed an issue with placed/taken objects generating no alarms within fields.
- Improved handling of FPGA boot-up.

Please check the release letter of CPP7 FW 6.30.0140 for completeness and details.



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4 New Main Features for CPP6 products

Imaging

- Flexible video input orientation handling has been added, including mirror and rotate (90°, 180° and 270°). This allows corridor view applications using full resolution.
- [CPP4] Flexible video input orientation handling has been added, including mirroring and 180° rotation. This allows to correct the view of e.g. panoramic cameras if wall-mounted headfirst.
- FLEXIDOME IP panoramic 7000 cameras now allow reduced base frame rate of 12.5 fps to increase streaming capabilities for the second stream.
- [CPP4] A 1.3 MP application variant is now selectable for DINION IP bullet 4000 cameras.
- [CPP7] Built-in gyro sensor is supported for automatic orientation detection.

Security

- The user management has been extended to allow free assignment of usernames. Each user can be assigned a user group representing live, user, or service level.
- New user management system allows to dynamically create a user for whom the password can be treated as token. Also timeout before user account expires is possible.
- Token-based authentication implemented to allow user management based on communication with Microsoft Active Directory Federation Services.
- Secure FTP connection (FTP over TLS) is implemented.
- ICMP redirect messages are not accepted anymore by default. Acceptance can be re-enabled via RCP+ command, if needed.
- Video authentication is now also possible on RTSP streaming. It can be enabled with CGI parameter 'auth=1' which requests picture info packets (payload type 97).

Recording

- Recording to iSCSI now supports LUN size up to 64 TB.
- A PTZ preposition can be stored in a recording profile, allowing to record only a 'region of interest' (ROI) of the full image.

ONVIF

- ONVIF encoder profile settings can be verified via http://<ipaddress>/onvif_encoder_profiles.
- Manual focus and iris control is now supported via ONVIF command.
- Tamper detection alarms are now forwarded to and included in ONVIF event services.



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Video Fire Detection

- Automatic mask detection has been added to AVIOTEC IP starlight 8000 camera.
- Relay 1 automatically follows video fire detection alarm on AVIOTEC IP starlight 8000 camera.

VCA

- Web page layout has been improved for better usability and larger video for configuration.
- Video analytics now fully support 16 tasks in RCP+ and IVA Task Script Language.
- Intelligent Tracking is now also available on cameras 2 and 3 of FLEXIDOME IP panoramic 7000 cameras in dewarping mode.
- JPEGs can now include VCA overlays in Live page, alarm e-mails and JPEG Posting. For JPEG snapshot a new query parameter 'VCAOverlay' can be added to the URL, e.g. <http://<ipaddress>/snap.jpg?VCAOverlay=1>.
- Video can now be paused during VCA configuration.
- Reference image is now stored as JPEG instead of TIFF for broader compatibility.
- Tamper detection "too bright / too dark" was no more functional due to too high dynamic on our cameras.

To solve this issue, sliders for the brightness level have been added for manual adjustment.

For details on VCA 6.30 please refer to the release notes of Essential Video Analytics or Intelligent Video Analytics.

Miscellaneous

- HTML5 video tag is used to display a continuous MP4 video file from the camera on browsers not supporting NPAPI plug-ins (MPEG-ActiveX) like Firefox, Chrome and MS Edge.
- A "Links" section in the main navigation (blue top bar) has been added, leading to a DownloadStore page providing latest tools, apps and supportive software.
- Unicode characters are now also possible on all configuration strings.
- Time server IP address can be accepted to be overwritten by DHCP.
- Display of preposition widget on Live page can be configured.



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4.1 Changes for CPP6 products

- Due to the introduction of image rotation, the high-resolution/low-framerate capability for stream 2 is conflicting and thus no more available on FLEXIDOME IP panoramic 7000 cameras.
- "Image too noisy" is removed as it never occurs due to the high dynamic of image processing.
- Downscaled images 4CIF/CIF are now encoded as PAL resolution (704x576 resp. 352x288) when camera is set to 25/50 fps base frame rate.
- Fixed a potential recording issue which could cause recording to stop due to insufficient storage error handling under rare error conditions, like e.g. massive irregular network connection interrupts to storage system.
- Removed non-supported mirroring option from FLEXIDOME IP panoramic 7000 MP cameras in dewarping mode.

Please check the release letter of CPP6 FW 6.30.0140 for completeness and details.



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5 New Features for CPP5 products

Security

- The user management has been extended to allow free assignment of usernames. Each user can be assigned a user group representing live, user, or service level.
- New user management system allows to dynamically create a user for whom the password can be treated as token. Also timeout before user account expires is possible.
- Token-based authentication implemented to allow user management based on communication with Microsoft Active Directory Federation Services.
- Secure FTP connection (FTP over TLS) is implemented.
- ICMP redirect messages are not accepted anymore by default. Acceptance can be re-enabled via RCP+ command, if needed.
- Video authentication is now also possible on RTSP streaming. It can be enabled with CGI parameter 'auth=1' which requests picture info packets (payload type 97).

Recording

- Recording to iSCSI now supports LUN size up to 64 TB.

ONVIF

- ONVIF encoder profile settings can be verified via http://<ipaddress>/onvif_encoder_profiles.
- Manual focus and iris control is now supported via ONVIF command.
- Tamper detection alarms are now forwarded to and included in ONVIF event services.

VCA

- Web page layout has been improved for better usability and larger video for configuration.
- Video can now be paused during VCA configuration.
- Reference image is now stored as JPEG instead of TIFF for broader compatibility.
- JPEGs can now include VCA overlays in Live page, alarm e-mails and JPEG Posting. For JPEG snapshot a new query parameter 'VCAOverlay' can be added to the URL, e.g. <http://<ipaddress>/snap.jpg?VCAOverlay=1>.



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Miscellaneous

- HTML5 video tag is used to display a continuous MP4 video file from the camera on browsers not supporting NPAPI plug-ins (MPEG-ActiveX) like Firefox, Chrome and MS Edge.
- A “Links” section in the main navigation (blue top bar) has been added, leading to a DownloadStore page providing latest tools, apps and supportive software.
- Unicode characters are now also possible on all configuration strings.
- Time server IP address can be accepted to be overwritten by DHCP.

Please check the release letter of CPP5 FW 6.30.0047 for completeness and details.



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6 New Main Features for CPP4 products

Imaging

- A 1.3 MP application variant is now selectable for DINION IP bullet 4000 cameras.

Security

- The user management has been extended to allow free assignment of usernames. Each user can be assigned a user group representing live, user, or service level.
- New user management system allows to dynamically create a user for whom the password can be treated as token. Also timeout before user account expires is possible.
- Token-based authentication implemented to allow user management based on communication with Microsoft Active Directory Federation Services.
- Secure FTP connection (FTP over TLS) is implemented.
- ICMP redirect messages are not accepted anymore by default. Acceptance can be re-enabled via RCP+ command, if needed.
- Video authentication is now also possible on RTSP streaming. It can be enabled with CGI parameter 'auth=1' which requests picture info packets (payload type 97).

Recording

- Recording to iSCSI now supports LUN size up to 64 TB.
- A PTZ preposition can be stored in a recording profile, allowing to record only a 'region of interest' (ROI) of the full image.

ONVIF

- ONVIF encoder profile settings can be verified via http://<ipaddress>/onvif_encoder_profiles.
- Manual focus and iris control is now supported via ONVIF command.
- Tamper detection alarms are now forwarded to and included in ONVIF event services.



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VCA

- Web page layout has been improved for better usability and larger video for configuration.
- Video analytics now fully support 16 tasks in RCP+ and IVA Task Script Language.
- JPEGs can now include VCA overlays in Live page, alarm e-mails and JPEG Posting. For JPEG snapshot a new query parameter 'VCAOverlay' can be added to the URL, e.g. <http://<ipaddress>/snap.jpg?VCAOverlay=1>.
- Video can now be paused during VCA configuration.
- Reference image is now stored as JPEG instead of TIFF for broader compatibility.
- Tamper detection "too bright / too dark" was no more functional due to too high dynamic on our cameras.
To solve this issue, sliders for the brightness level have been added for manual adjustment.

For details on VCA please refer to the release notes of Essential Video Analytics or Intelligent Video Analytics.

Miscellaneous

- HTML5 video tag is used to display a continuous MP4 video file from the camera on browsers not supporting NPAPI plug-ins (MPEG-ActiveX) like Firefox, Chrome and MS Edge.
- A "Links" section in the main navigation (blue top bar) has been added, leading to a DownloadStore page providing latest tools, apps and supportive software.
- Unicode characters are now also possible on all configuration strings.
- Time server IP address can be accepted to be overwritten by DHCP.
- Display of preposition widget on Live page can be configured.
- MIC washer has been added to preset mapping functions.

6.1 Changes for CPP4 products

- "Image too noisy" is removed as it never occurs due to the high dynamic of image processing.
- Downscaled images 4CIF/CIF are now encoded as PAL resolution (704x576 resp. 352x288) when camera is set to 25/50 fps base frame rate.
- Fixed a potential recording issue which could cause recording to stop due to insufficient storage error handling under rare error conditions, like e.g. massive irregular network connection interrupts to storage system.
- Fixed an issue in ONVIF signaling of SD resolution.

Please check the release letter of CPP4 FW 6.30.0140 for completeness and details.



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7 Changes for CPP3 products

- An issue of terminating a RTSP connection when a client sends a SET_PARAMETER keep-alive while streaming with RTP over RTSP over TCP has been fixed.
- An issue with Daylight Saving Table being off by 1 or 2 hours in time zones with more than 9 hours away from GMT has been fixed.

Please check the release letter of CPP3 FW 5.73.0046 for completeness and details.

8 Changes for CPP-ENC products

- Replay not working in BVC and BVMS clients for negative time zones has been fixed.
- An issue with cameras from multiple VIDEOJET decoder 4000, in multi-cast configuration using identical ports, flickering on VIDEOJET decoder 3000 has been fixed.
- An issue with iSCSI password with 128kB sequence size has been fixed.
- A rare issue with camera inputs interchanged on encoders has been fixed.

Please check the release letter of CPP-ENC FW 5.93.0026 respectively FW 5.52.0015 for completeness and details.



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9 Restrictions; Known Issues

- This firmware and its included platform firmware builds are not applicable to MPEG-4 products.
- The final firmware version for VIP-X1600-XFM4 modules is FW 5.52.
No newer firmware can be loaded onto these modules.
- The final firmware version for CPP3 devices is FW 5.73.
No newer firmware can be loaded onto these modules.
- The Combined Firmware file does not load onto VG4 AutoDome or AutoDome Easy II via the browser when running a firmware version before 5.52.0017. The specific platform file should be used instead.
- Cameras or encoders with a minimum firmware version that is higher than the lowest firmware version in the combined firmware file may show error 0x0b in the upload history which can be ignored. Firmware upload is not affected by this.
- Due to an internal file system being introduced to CPP4 and CPP6 since firmware 6.1x and architectural changes thereof, an upgrade to firmware 6.20 and higher is only possible from firmware 6.1x versions or higher.
Cameras with previous firmware versions below 6.1x first need to upgrade to firmware 6.1x.

Please check the respective release letter of a camera or encoder for further device-specific restrictions.



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10 System Requirements

Possible clients for configuration purposes:

- Configuration Manager 5.42 or newer
- Web Browsers:
 - Microsoft Internet Explorer 11.0 or higher
 - Mozilla Firefox

Possible clients for operation purposes:

- Bosch Video Security iPad App 1.2
- Web Browsers:
 - Microsoft Internet Explorer 11.0 or higher
 - Mozilla Firefox
- BVC 1.7 or newer
- ~~Oracle Java Virtual Machine 1.6.0_35~~
- DirectX 9.0c
- MPEG-ActiveX 6.02 or newer