Security Systems

BOSCH

From		Nuremberg
ST-VS/MKP1	Product Management	22.12.2015

Release Letter

Product:	**_MPEG-ActiveX_**
Version:	**_5.90._**_0086_

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

MPEG-ActiveX 5.90.0086 is a feature release based on the former release 5.83, introducing support of multiple rendering windows from a single decoded stream including dewarping of panoramic video.

It is required for live viewing, playback and configuration via Web browser interface for CPP4 and CPP6 cameras with firmware versions 6.20 and beyond.

Changes since last release are marked in blue.

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1   New Features

- Performance optimizations when displaying the same stream multiple times.
  This optimization only decodes a stream once even if it is displayed multiple times, which is particularly interesting when showing different views from the same panoramic camera.
  This feature applies to both live and replay video.

- A new dewarping mode has been added, allowing to zoom out further in dewarped scenes ("panorama dewarping").

- Video fire and smoke detection support has been added.

- Switch for latency mode settings via Web browser has been added.

2   Changes

- Fix for jerky video has been incorporated.

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3   System Requirements

Minimum configuration with the following specifications:

- Intel Pentium Dual Core, 3.0 GHz
- 2 GB RAM
- 100 Mbps Ethernet
- No sound card installed
- Graphics card: NVIDIA GeForce 8600 (PCI Express)

High performance configuration with the following specifications:

- Intel® Core™2 Duo E8500 3.16 6MB/1333 CPU
- 6 MB L2 Cache
- 1333 MHz Front-Side-Bus (FSB)
- 2 GB DDR2 800 ECC Dual Channel Memory
- Integrated 10/100/1000 Mbps Gigabit-Ethernet
- Integrated audio chip for full-duplex audio (1x Mic, 1x LSP, 1x Lin-in)
- 160 GB SATA hard drive 7200 r.p.m.
- Graphics card: NVIDIA Quadro FX 4800 PCIe (512 MB, driver version 91.85)
- Dual Monitor

Supported platforms are:

- Windows XP SP3 (32-bit)
- Windows 7 SP1 (Business, Home; 32-bit, 64bit in emulation mode)
- Windows 8 (32bit, 64bit in 32bit emulation mode)
- Windows 10 (32bit, 64bit in 32bit emulation mode)

Note: .Net framework 3.5 required

For supported graphic cards please refer to Video SDK documentation.

All Microsoft updates and hotfixes are expected to be installed on target PCs, graphics card drivers are also expected to have the latest officially released version.

4   Restrictions; Known Issues

- This version only supports Bosch IP encoders/cameras which are based on firmware 4.10 or higher. To ensure smooth and consistent replay the recordings must have been created with these firmware versions.

- The Web GUI of BVIP products with FW 4.10 and below is not fully functional with this MPEG-ActiveX version. MPEG-ActiveX 4.4x must be used instead.

- VIDOS-NVR, VJ800x, VIP-X1 and VIP-X2 devices are not supported.

- Bosch MPEG-2 encoders are not supported.

- For 32-bit color mode the PC must support YUV overlay.

- Streaming works only if a RCP+ connection is established. If multicast streaming is enabled, a device can only connect to the stream if a RCP+ connection exists. Although the multicast address is enabled, the IP address must be set in addition.

- Size estimation does not work properly if there are gaps in recording.

- Replay on limited bandwidth connections (e.g. DSL) does not work reliably.

- File open commands when loading exports fail under rare conditions. In these cases the operation fails without delivering a return code.

- If application runs out of memory calling up cameos might result in crashes. Hosting applications must prevent these conditions, e.g. by limiting the number of cameos that can be instantiated.

- MPEG-ActiveX 4.4x used to decode 2CIF content even if the stream was delivering 4CIF content when the display area of a cameo was less or equal than 2CIF. This mode is not supported by MPEG-ActiveX 5.x.

- The methods for setting the Databits and the BaudRate for PTZ cameras are not supported by BVIP devices.

- Time synchronization between multiple cameos might deviate some seconds during fast forward/backwards operation. Switching back to real time restores accurate synchronization.

- Cameos might flicker during resize operations.

- MPEG-ActiveX 4.x and MPEG-ActiveX 5.x cannot be installed on the same PC.

- Critical sections are showing slow performance under Windows XP, especially with multi core PCs. In general it is recommended to use Windows 7 for optimized performance.

- New watermarking not available on WinXP

- No watermarking (neither old nor new) for replay on webpage

- When viewing transcoded replay with video content analysis (VCA) overlays, the VCA overlays may be faded out after 10s in pause-mode (VSDK-2789)

- If AAC does not work for firmware 5.50 devices, use G.711

- Matrox Parhelia (and all other non-Direct3D 9 adapters) are not supported (Matrox Parhelia 128MB does not support dynamic textures and Radeon 9200 has only DirectX 8.1 support)

- H.263 half-decode mode is not supported

- Internet Explorer 6 has a leaky JavaScript engine - supported only with restrictions

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- NVIDIA drivers < 191.87 not supported with multiple graphics adapters
- On Windows XP (does not apply to Windows 7), there are extreme performance penalties on QuadCore CPUs (both ADM and Intel) due to heavy kernel calls when taking and releasing CRITICAL sections
- Smooth reverse replay is only supported up to a maximum GOP length of 30 frames, for larger GOPs some frames will not be shown in reverse replay
- The simplified forensic search for any motion and motion in field may return more results when the search is executed on the device because only then all motion data (Flow, IVA, and Motion+) is available in parallel
- When viewing transcoded replay with video content analysis (VCA) overlays, the VCA overlays may be faded out after 10s in pause-mode
- Continuous timeline searches on local recordings of BVIP devices with firmware 5.60 may flicker for alarm recordings when an http or https URL is used for device proxy connection
- Image Adjustment does not work for panoramic cameras.
- Click-on mode does not work for ROI Intelligent Tracking.

5 Previous Revisions

5.1 New Features with 5.83.0047

- Adds support for BVIP firmware 6.10 devices, including ePTZ control of edge-dewarping cameras and IVA configuration support.

5.2 Changes with 5.83.0047

- Fix for randomly failing connections with RTSP devices.
- Fix for hang when receiving certain malformed ONVIF SOAP device discovery messages.
- Fix for silence when switching audio from 48 kbit/s to 80 kbit/s while streaming.
- The certificate of previously released MPEG-ActiveX expires in June 2015, thus certificate has been updated.
- Latest IVA plug-in has been incorporated.

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5.3 New Features with 5.82.0052

- Added support for Bosch panoramic cameras.
- New products supported:
    - VIDEOJET connect 7000
    - FLEXIDOME indoor 5000 IR
    - FLEXIDOME outdoor 5000 IR
    - DINION IP bullet 4000 HD
    - DINION IP bullet 5000 HD
    - DINION IP bullet 5000 MP
    - FLEXIDOME panoramic 7000 12MP 180
    - FLEXIDOME panoramic 7000 12MP 360
    - FLEXIDOME IP 4000 HD
    - FLEXIDOME IP 5000 HD
    - FLEXIDOME IP 5000 IR

5.4 Changes with 5.82.0052

- Snapshots of the cameo will now replicate what is seen on the screen, notably digital zoom settings are applied to the generated picture.

5.5 Features with *5. 81.0019*

- Improved decoding performance for UHD video streams.

5.6 Changes with *5. 81.0019*

- Enable VCA overlay flag is now set by default when connecting a BVIP device to a VIP XD HD hardware decoder through its video output channel.
- Enhanced zoom feature that uses the region of interest encoding capabilities of BVIP devices now working correctly in conjunction with PTZ commands send from other clients.
- The last GOP in a slice is now always played out correctly in reverse direction, regardless of the order in which it is provided from the server.

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5.7   New Features with 5.80.0100

- Support of devices with video resolutions up to 12MP
- Multi-threaded decoding with low latency for video streams with more than 5MP resolution
- Reduced overall CPU power consumption for decoding in general
- Improved stability when decoding corrupted or malformed streams
- Updated legal notices, license for FFmpeg decoder usage has been added (LGPL 2.1 or later)
- Improved behavior when experiencing out of memory situations. If no more virtual space is available to decode frames, a black video frame with the text "Error: Out of memory!" is shown. Two possible scenarios can lead to this situation: The total amount of available virtual memory underruns a certain threshold or there is not enough contiguous memory for the required new memory segment. The latter can happen due to memory fragmentation caused by the application using the Video SDK. To avoid a high switching frequency between normal and out-of-memory modes, a hysteresis is used with fixed threshold values. Since it is not predictable which decoder instance will encounter an out-of-memory situation at first, arbitrary frames may be dropped in that case. If the out-of-memory mode is active and the memory consumption falls below a certain threshold, it automatically recovers and starts to run in the normal mode again.
- Updated ONVIF-VDP concept page documentation
- Support for raw events from ONVIF devices
- Support HTTP authentication for ONVIF devices (if supported by device)
- IPv6 support for ONVIF devices
- Improved interoperability with ONVIF devices in general
- Support for audio streams (G.711 and AAC) from ONVIF devices
- Support for RTSP audio streams (G.711 and AAC)

5.8   Changes with 5.80.0100

- PTZ presets can now be set for AXIS domes (VSDK-3736)

5.9 New Features with 5.71.00.14

- CPP4 cameras with firmware 5.90 are supported.
- Network device detection.
- Concurrent network connections to multiple devices.
- Live video rendering from multiple devices including in-window pan / tilt / zoom (PTZ) control.
- Playback video rendering from multiple devices including direction, speed, and stepping control.
- Live and playback audio rendering.
- Audio streaming to capable devices.
- Direct audio and video streaming to client applications.
- Recording of live video and rendering of recorded video.
- Still image capture.
- Device event searching including input alarms and motion alarms.
- Enhanced and improved load balancing for efficient use of the PC processing power.

5.10 New Features with 5.61.00.46

- BVIP devices with firmware 5.70 and 5.80 are supported.
- New IVA plug-ins to support remote forensic search.

5.11 New Features with 5.60.00.50

- BVIP devices with firmware 5.52 and 5.60 are supported.
- BVIP devices with firmware 5.60 including Intelligent Tracking based on region of interest encoders are supported.
- BVIP devices with firmware 4.50-5.60 in scenarios with limited bandwidth are supported.
- Real-time video post-processing for live and recorded video (contrast, brightness, gamma correction, sharpness).
- Support for text overlay on videos.
- Extended support for BVIP dome cameras that support automatic object tracking.
- NetApp E-Series drives are supported.
- Added custom vertex and color format to account for Intel 82945G Express graphics chipset family.

5.12 New Features with 5.30.00.14

- Selection of objects for the automatic object tracking dome feature.
- Support of 720p, 1080p, and 5MP cameras.
- Enhanced and improved load balancing for efficient use of the PC processing power.

5.13 Changes with 5.20.00.46

- A problem with the audio back channel has been fixed.

5.14 New Features with 5.20.00.45

- Firmware 5.50 and IVA 5.5 support
- Access to encoded live and recorded media data
- AAC codec support for TCP connections
- IPv6 support for live streams from devices with firmware 5.50

5.15 New Features with 5.10.00.74

- Support of Dinion HD 1080p cameras
- Improved responsiveness in overload situations

5.16 New Features with 5.06.00.13

- Support of H.264 B-Frames
- Support of 720p and 1080p cameras