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**1. Introduction**

**1.1 Disclaimer of Warranty**

Bosch Security Systems, Inc. makes no representations or warranties, either expressed or implied, by or with respect to anything in this document, and shall not be liable for any implied warranties of merchantability or fitness for a particular purpose or for any indirect, special or consequential damages.

**1.2 Purpose**

The purpose of the *Firmware Release Letter* document is to communicate major new features and changes in this release of the BVIP Firmware 5.52.0015. It also documents component compatibility, workarounds, and any feature restrictions.

**1.3 Scope**

This document describes the BVIP Firmware 5.52.0015 which includes the following components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
<th>Applicable Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPP4_H.264_5.52.0015.fw</td>
<td>5.52.0015</td>
<td>AutoDome 800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AutoDome Junior PTZ HD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AutoDome Junior Fixed HD</td>
</tr>
<tr>
<td>CPP3_H.264_5.52.0015.fw</td>
<td>5.52.0015</td>
<td>AutoDome 700</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>AutoDome Easy II IP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AutoDome VG4 Series IP</td>
</tr>
</tbody>
</table>

**2. About This Service Pack Release**

This is an Engineering Release of the firmware components identified section 1.3.

**3. Hardware Changes**

None.
4. Software Changes

This section identifies enhancements and defect resolutions provided in BVIP firmware version 5.52.

4.1 Using Intelligent Tracking

The VG5-836-ECEV and the VG5 700 Series HD PTZ cameras with BVIP Firmware 5.52 utilize the built-in Intelligent Video Analytics (IVA) to continuously follow an individual or an object. The AutoDome uses objects detected by IVA in a stationary position to activate the Intelligent Tracking feature. Intelligent Tracking controls the pan/tilt/zoom actions of the camera to keep the selected object in the scene.

**Note:** Intelligent Tracking is not available on the following models:
- VG5-825-ECEV
- VG5-825-ETEV

**Known Behaviors**
- When the AUX 78 ON/OFF command is issued to activate/deactivate Intelligent Tracking, the AUX 78 ON command selects last known Intelligent Tracking mode (either Auto or Click). If the last user-selected mode for Intelligent Tracking is Click, and a user issues the AUX 78 OFF command to deactivate Intelligent Tracking, all subsequent AUX 78 ON commands will activate Intelligent Tracking in the Click mode.
- Intelligent Tracking remains in the IDLE state while the camera is moving due to a user action (for example, initiating AutoPan).
- IVA deactivates Intelligent Tracking on presets configured with Motion+ or IVA 5.5 Flow.
- When switching between the Auto and Click modes, allow for a transition time as the camera switches algorithms.

**Known Limitations:**
- The Click mode works only on the Livepage view. BVC 1.3.837 does not support the Intelligent Tracking Click mode. Support for the Click feature is planned for the BVC 1.4 release.
- Once Intelligent Tracking loses a tracked target and enters the IDLE state, Intelligent Tracking will not react to any other motion in the field of view. The feature requires a user action or an Inactivity Mode setting to recover from the IDLE state.
  - Workaround: Pair Intelligent Tracking with an Inactivity Mode setting (for example, moving to a preset) to automatically recover from the IDLE state.
- Motion from moving leaves/branches that present a persistent fixed motion cause Intelligent Tracking to track the motion of the leaves and branches. Once the Intelligent Tracker locks onto this type of movement it cannot break from the ACTIVE state unless the motion stops or a user issues a manual action.
  - Workaround: Cover persistent fixed motion with a privacy mask to mitigate false tracking.
- Intelligent Tracking may track two (or more) closely spaced moving elements (for example, two or more people) as a single motion object. When the path of the individuals begin to diverge creating two or more separate motion objects, Intelligent Tracking will follow one object at random.
  - Workaround: Use the Click option to select the desired object you want to track.
- While the camera is in active Night Mode, Intelligent Tracking exhibits a “hang” after motion is lost. The camera appears to be fixed in place. The camera may remain in place for extended periods of time (hours have been observed) until some other event occurs.
- Intermittent loss of tracking has been observed. While in the ACTIVE state Intelligent Tracking may suddenly divert to the opposite direction of the tracked motion (the motion track appears to take the shape of a small hook). Motion is then lost and Intelligent Tracking enters the IDLE state. There is no known cause or workaround.
4.2 Displaying the Compass Heading

The VG5 700 and 800 Series AutoDome allows a user to display the compass heading of the camera in the lower-right corner of the image display. The AutoDome displays the cardinal or intercardinal (N, NE, E, SE, S, SW, W, NW) heading in which the camera is pointing.

Note: The compass feature is not compatible with Bosch Intelligent Tracking. If Intelligent Tracking is activated, the camera automatically disables the display of the compass heading. Once Intelligent Tracking is deactivated, the camera returns the compass heading to the display.

You must first calibrate the AutoDome to North before the camera displays accurate compass headings. The AutoDome uses this calibration, usually set to magnetic North, as the zero degree pan position and as the North compass heading. The AutoDome then displays the compass heading based on the number of degrees from the North calibration point.

To set the North calibration point:
1. Determine the North compass heading, and then move the camera to that position.
2. Click the Set North Compass Point button to set the calibration point.
3. Click the On radio button for the Compass parameter.

4.3 Firmware Enhancements

The following ENHANCEMENTS have been resolved for this delivery.

<table>
<thead>
<tr>
<th>Change Request</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Added Intelligent Tracking capability to VG5 800 Series cameras.</td>
<td></td>
</tr>
<tr>
<td>Enhanced Privacy Masking algorithm to improve performance.</td>
<td></td>
</tr>
<tr>
<td>Provided support for 24 privacy masks for all AutoDome series cameras.</td>
<td></td>
</tr>
<tr>
<td>IMC00004077</td>
<td>Improved sharpness and noise reduction performance. Sharpness defaults changed for VG5 700 series cameras (36x: 8, 26x: 6).</td>
</tr>
<tr>
<td>IMC00003833</td>
<td>Compass feature added to VG5 700 and to VG5 800 Series cameras.</td>
</tr>
<tr>
<td>IMC00004215</td>
<td>Added support for 99 presets for camera control via ONVIF.</td>
</tr>
<tr>
<td>IMC00004285</td>
<td>VG5 700: Implemented low light noise suppression.</td>
</tr>
<tr>
<td>IMC00004323</td>
<td>VG5 800: Changed Auto Iris Level default from 5 to 8.</td>
</tr>
</tbody>
</table>

4.4 Defects Resolved

The following DEFECTS have been resolved for this delivery.

<table>
<thead>
<tr>
<th>Change Request</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMC0000418</td>
<td>Corrected performance to prevent Autopan from losing field of view when returning from Inactivity.</td>
</tr>
<tr>
<td>IMC00003955</td>
<td>Improved recorder tour performance so manual interactions do not break preset functionality.</td>
</tr>
<tr>
<td>IMC00003131</td>
<td>Blanked sectors no longer cause a false alarm while Bosch Intelligent Tracking is active.</td>
</tr>
<tr>
<td>IMC00004041</td>
<td>Corrected focus when switching between a preset with a far view and a preset with a near view.</td>
</tr>
<tr>
<td>IMC00004195</td>
<td>Improved the rate for updating sector titles.</td>
</tr>
</tbody>
</table>
4.5 Known Limitations and Restrictions

- If you are updating an IP-enabled AutoDome Series camera that is currently running BVIP Firmware 4.53 or earlier, you must first upgrade the AutoDome to BVIP Firmware 4.54 before installing BVIP Firmware 5.52.
- An issue with Video SDK version 5.4 (a component of BVIP firmware version 5.52) may cause Internet Explorer to crash under the following set of conditions (all conditions must be met):
  - Internet Explorer shows the Livepage view for an AutoDome camera running BVIP 5.52.
  - The Trajectory parameter is set to On.
  - The camera is actively tracking an object using Bosch Intelligent Tracking.
  - The image on the Livepage view shows the outline and trajectory of the tracked object.
  - A user performs a manual camera pan and the trajectory indicator leaves the field of view.
  - If Internet Explorer does crash, restart the browser and navigate to the URL for the camera.
- This firmware and its included platform firmware builds are not applicable to MPEG-4 products.

5. System Requirements

- Microsoft Internet Explorer 8.0 or higher
- Oracle Java Virtual Machine 1.6.0_26
- DirectX 9.0c
- MPEG-ActiveX 5.30.newer
- Configuration Manager 4.35 or newer

6. Feature Restrictions

None.

7. Uploading Firmware


8. History

8.1 Firmware Enhancements

The following ENHANCEMENTS have been resolved for this delivery.

<table>
<thead>
<tr>
<th>Change Request</th>
<th>Description</th>
<th>Firmware Version</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Added Intelligent Tracking capability to VG5 700 Series cameras.</td>
<td>5.51</td>
</tr>
</tbody>
</table>

8.2 Defects Resolved

The following DEFECTS have been resolved for this delivery.

<table>
<thead>
<tr>
<th>Change Request</th>
<th>Description</th>
<th>Firmware Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMC00003834</td>
<td>Corrects PTZ inactivity time during VCA configuration.</td>
<td>5.51</td>
</tr>
<tr>
<td>IMC00003888</td>
<td>Corrects playback functionality when a recording has a preset (VG5 700).</td>
<td>5.51</td>
</tr>
<tr>
<td>IMC00003900</td>
<td>Addresses the invalid shutter speed (1/10) (for VG5 800 and AutoDome Junior HD cameras).</td>
<td>5.51</td>
</tr>
<tr>
<td>IMC00003149</td>
<td>Corrects issue with repeating continuous playback commands.</td>
<td>5.51</td>
</tr>
<tr>
<td>IMC00004002</td>
<td>Adds ability to change Frame Format (AutoDome Junior HD)</td>
<td>5.51</td>
</tr>
</tbody>
</table>