FLEXIDOME multi 7000i (IR) and FLEXIDOME panoramic 5100i (IR) support patch - Release Notes

Author: Wrobel Maciej (BT-VS/XSW-SEC)
Date: 23 December, 2021

1 Patch for FLEXIDOME multi 7000i (IR) and FLEXIDOME panoramic 5100i (IR) support in BVMS 11.0   3

1 Patch for FLEXIDOME multi 7000i (IR) and FLEXIDOME panoramic 5100i (IR) support in BVMS 11.0

1.1 Introduction

With the introduction of new cameras, based on CPP14 platform:

- FLEXIDOME multi 7000i (IR)
- FLEXIDOME panoramic 5100i (IR)

more configuration possibilities were added in terms of camera stream/profiles settings. As a result, it was not possible to effectively configure and use those cameras in BVMS 11.0 systems.

This patch allows to configure recording / profile settings in BVMS 11.0 in a way, that those cameras are officially supported. Implemented changes are also applicable to CPP13 based cameras.

1.2 Resolved issues

BVMS	ID	
11.0.0.10 25	337415	(**FIXED**) FLEXIDOME multi 7000i and FLEXIDOME panoramic 5100i cameras are not working with BVMS.
11.0.0.10 25	343170	(**FIXED**) Error adding a camera while previous camera is offline and large LUN support is enabled.
11.0.0.10 25	343590	(**FIXED**) Crash of the Operator Client during log in.
11.0.0.10 25	353965	(**FIXED**) Wrong bandwidth calculation for active platform.
11.0.0.10 25	353995	(**FIXED**) Wrong setting of encoder profiles.
11.0.0.10 25	357751	(**FIXED**) Inconsistent state of camera.
11.0.0.10 25	360438	(**FIXED**) Device Monitor showing device config mismatch when triggering an alarm recording.

1.3 Recommended profile settings

In order to ensure optimal camera and BVMS configuration, please follow the recommendations below.

1) Set the proper stream limits using camera web interface or Configuration Manager:
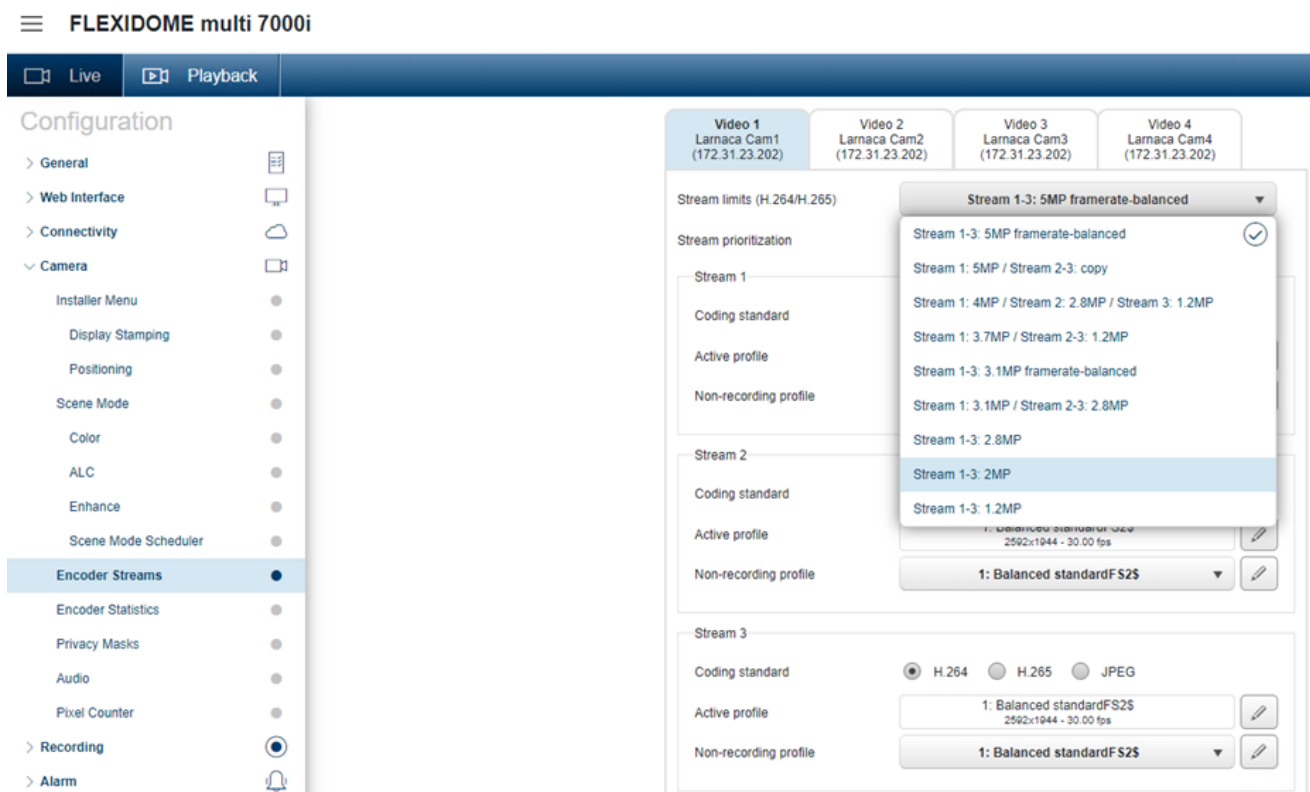
2) Add the camera to BVMS Configuration Client device tree or use Refresh Capabilities (⟳) option for cameras already added to BVMS.

3) Create new profiles in "Stream Quality Settings" dialog window
- Select one of the existing profile groups that you want to reuse (ie. Image Optimized quiet) and press the **+** ("Add recording quality") button
- Rename the new profile group
- Adapt the *CPP 7.3/13/14* settings that will be used, depending on resolution settings (ie. MP5, 1080p60, etc.) for both streams (Stream 1 and Stream 2)
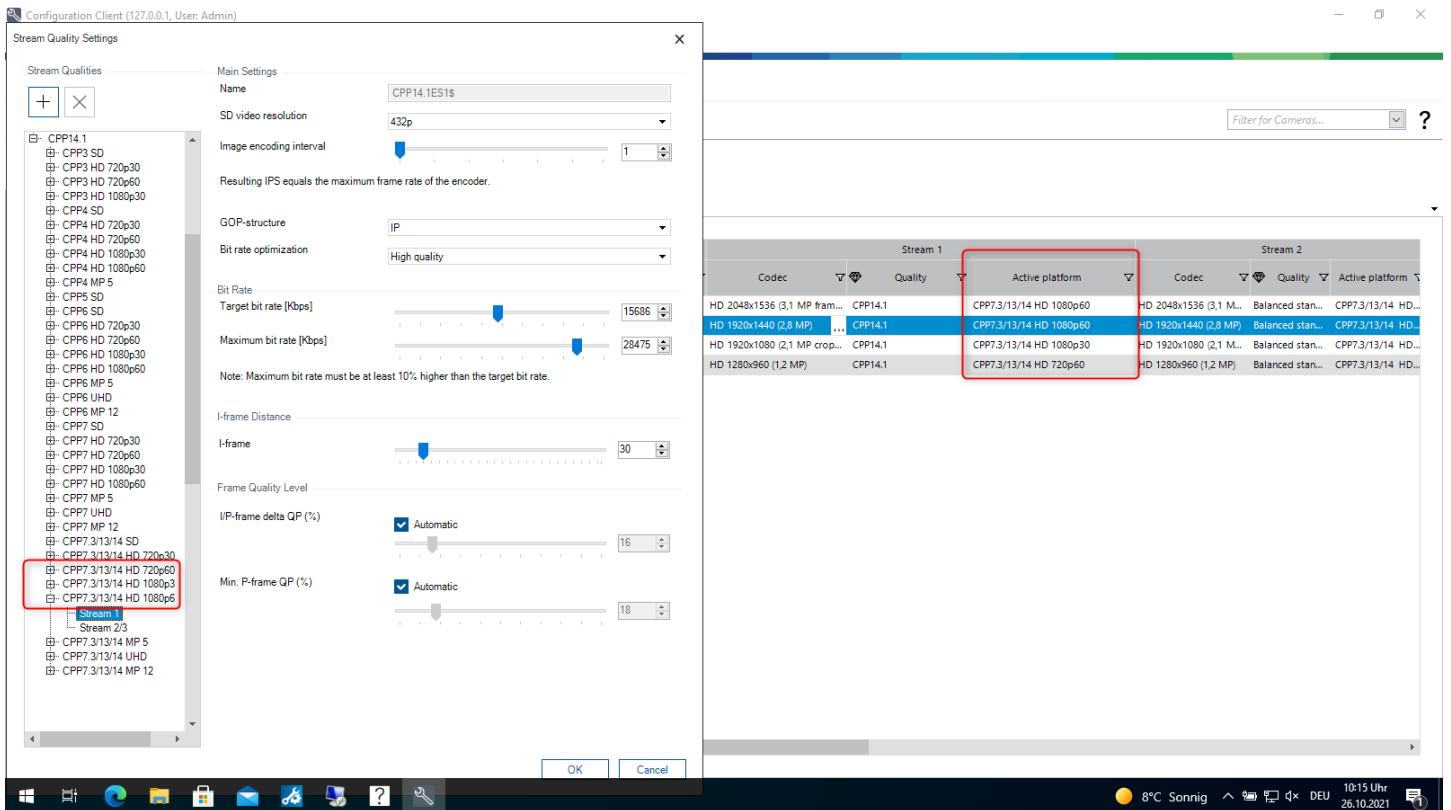- **Note:** always set bit rate optimization value to **Medium**.

- **Note:** it is highly recommended to use **"Balanced standard"** profile settings.

4) Assign new camera profiles to all CPP14 (FLEXIDOME multi 7000i) **cameras for both Stream 1 and Stream 2**
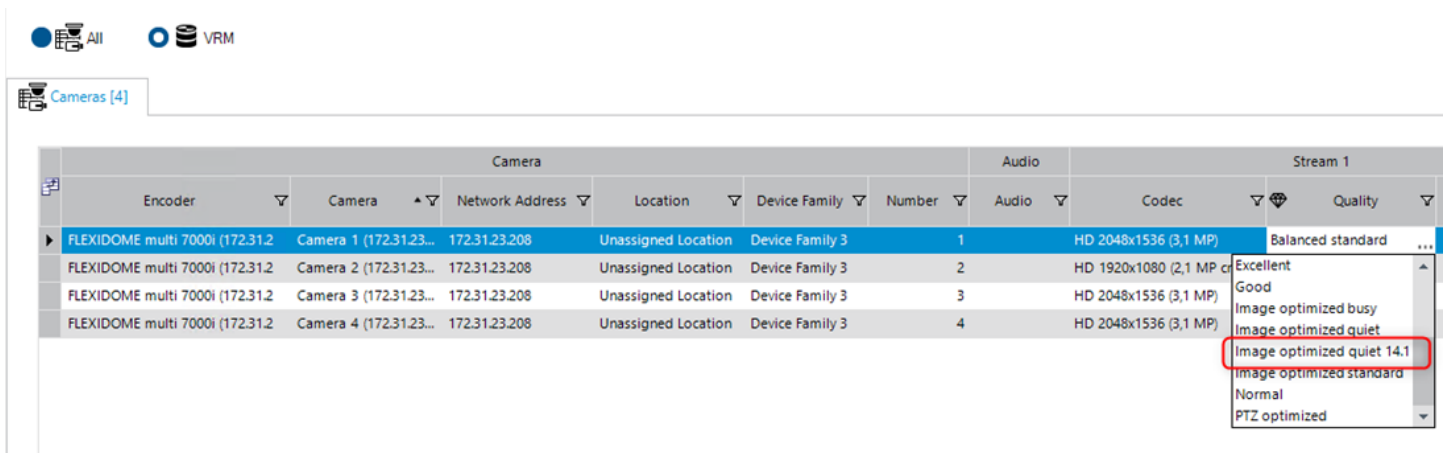
After setting the stream quality, please double check if camera "Active platform" matches the configured stream profile settings:

5) Save and activate the configuration.

In the table below, you can find recommended stream settings for CPP13 and CPP14 based cameras:

Scene profiles	Rec. quality	GOP	I-Frame dist.	Fps	Width	Height	Video Standard	Target bitrate [kbit/s]	Max bitrate [kbit/s]	Bitrate optim.
Balanced standard										
medium	Balanced	IBP	60	30	768	432	h_264	438	610	medium

medium	Balanced	IBP	60	30	1280	720	h_264	1181	1644	medium
medium	Balanced	IBP	60	60	1280	720	h_264	2177	2760	medium
medium	Balanced	IBP	60	30	1920	1080	h_264	2595	3613	medium
medium	Balanced	IBP	60	60	1920	1080	h_264	4784	6065	medium
medium	Balanced	IBP	60	30	2592	1680	h_264	5333	7425	medium
medium	Balanced	IBP	60	30	3840	2160	h_264	9969	13879	medium
medium	Balanced	IBP	60	20	4000	3000	h_264	10257	15371	medium
Balanced quiet										
static	Balanced	IBP	60	30	768	432	h_264	427	610	medium
static	Balanced	IBP	60	30	1280	720	h_264	1152	1644	medium
static	Balanced	IBP	60	60	1280	720	h_264	2252	2760	medium
static	Balanced	IBP	60	30	1920	1080	h_264	2532	3613	medium
static	Balanced	IBP	60	60	1920	1080	h_264	4948	6065	medium
static	Balanced	IBP	60	30	2592	1680	h_264	5203	7425	medium
static	Balanced	IBP	60	30	3840	2160	h_264	9727	13879	medium
static	Balanced	IBP	60	20	4000	3000	h_264	9494	15371	medium
Balanced busy										
busy	Balanced	IBP	60	30	768	432	h_264	886	1380	medium
busy	Balanced	IBP	60	30	1280	720	h_264	2388	3721	medium
busy	Balanced	IBP	60	60	1280	720	h_264	3349	4847	medium
busy	Balanced	IBP	60	30	1920	1080	h_264	5248	8178	medium
busy	Balanced	IBP	60	60	1920	1080	h_264	7360	10651	medium
busy	Balanced	IBP	60	30	2592	1680	h_264	10786	16806	medium
busy	Balanced	IBP	60	30	3840	2160	h_264	20163	31250	medium
busy	Balanced	IBP	60	20	4000	3000	h_264	24989	31250	medium
Image optimized standard										
medium	image optimized	IP	30	30	768	432	h_264	1033	1283	high qual
medium	image optimized	IP	30	30	1280	720	h_264	2784	3458	high qual

medium	image optimized	IP	30	60	1280	720	h_264	5376	6367	high qual
medium	image optimized	IP	30	30	1920	1080	h_264	6119	7600	high qual
medium	image optimized	IP	30	60	1920	1080	h_264	11814	13991	high qual
medium	image optimized	IP	30	30	2592	1680	h_264	12574	15618	high qual
medium	image optimized	IP	30	30	3840	2160	h_264	23505	29195	high qual
medium	image optimized	IP	30	20	4000	3000	h_264	23203	30073	high qual
Image optimized quiet										
static	image optimized	IP	30	30	768	432	h_264	1072	1283	high qual
static	image optimized	IP	30	30	1280	720	h_264	2890	3458	high qual
static	image optimized	IP	30	60	1280	720	h_264	5725	6367	high qual
static	image optimized	IP	30	30	1920	1080	h_264	6351	7600	high qual
static	image optimized	IP	30	60	1920	1080	h_264	12581	13991	high qual
static	image optimized	IP	30	30	2592	1680	h_264	13052	15618	high qual
static	image optimized	IP	30	30	3840	2160	h_264	24398	29195	high qual
static	image optimized	IP	30	20	4000	3000	h_264	23502	30073	high qual
Image optimized busy										
busy	image optimized	IP	30	30	768	432	h_264	1504	2128	high qual
busy	image optimized	IP	30	30	1280	720	h_264	4056	5738	high qual
busy	image optimized	IP	30	60	1280	720	h_264	6599	8726	high qual
busy	image optimized	IP	30	30	1920	1080	h_264	8913	12608	high qual

busy	image optimized	IP	30	60	1920	1080	h_264	14502	19174	high qual
busy	image optimized	IP	30	30	2592	1680	h_264	18316	25911	high qual
busy	image optimized	IP	30	30	3840	2160	h_264	31250	31250	high qual
busy	image optimized	IP	30	20	4000	3000	h_264	31250	31250	high qual
Bitrate optimized standard										
medium	bitrate optimized	IBBP	255	30	768	432	h_264	92	175	medium
medium	bitrate optimized	IBBP	255	30	1280	720	h_264	247	473	medium
medium	bitrate optimized	IBBP	255	60	1280	720	h_264	381	622	medium
medium	bitrate optimized	IBBP	255	30	1920	1080	h_264	543	1039	medium
medium	bitrate optimized	IBBP	255	60	1920	1080	h_264	838	1366	medium
medium	bitrate optimized	IBBP	255	30	2592	1680	h_264	1117	2135	medium
medium	bitrate optimized	IBBP	255	30	3840	2160	h_264	2088	3991	medium
medium	bitrate optimized	IBBP	255	20	4000	3000	h_264	2449	5113	medium
Bitrate optimized quiet										
static	bitrate optimized	IBBP	255	30	768	432	h_264	66	175	medium
static	bitrate optimized	IBBP	255	30	1280	720	h_264	177	473	medium
static	bitrate optimized	IBBP	255	60	1280	720	h_264	322	622	medium
static	bitrate optimized	IBBP	255	30	1920	1080	h_264	390	1039	medium
static	bitrate optimized	IBBP	255	60	1920	1080	h_264	709	1366	medium
static	bitrate optimized	IBBP	255	30	2592	1680	h_264	801	2135	medium

static	bitrate optimized	IBBP	255	30	3840	2160	h_264	1498	3991	medium
static	bitrate optimized	IBBP	255	20	4000	3000	h_264	1560	5113	medium
Bitrate optimized busy										
busy	bitrate optimized	IBBP	255	30	768	432	h_264	367	635	medium
busy	bitrate optimized	IBBP	255	30	1280	720	h_264	989	1711	medium
busy	bitrate optimized	IBBP	255	60	1280	720	h_264	1121	1864	medium
busy	bitrate optimized	IBBP	255	30	1920	1080	h_264	2174	3760	medium
busy	bitrate optimized	IBBP	255	60	1920	1080	h_264	2464	4097	medium
busy	bitrate optimized	IBBP	255	30	2592	1680	h_264	4467	7728	medium
busy	bitrate optimized	IBBP	255	30	3840	2160	h_264	8350	14446	medium
busy	bitrate optimized	IBBP	255	20	4000	3000	h_264	11419	20060	medium

1.4 Additional recommendations

If Intelligent Video Analytics features are not used for the application (to trigger alarm, switch recordings profiles or for Forensic Search purposes, etc.), it is advised to disable VCA (VCA mode set to "Off"). Please note: in case of FLEXIDOME multi 7000i it is possible to do that on single sensor level (so should be done separately for each sensor).

1.5 Known restrictions

- Currently resolution on streams cannot be decreased further via BVMS (below the stream limit). This will only be possible in upcoming BVMS 11.1 release.
- Stream 3 and Stream 4 are not supported in BVMS. With upcoming BVMS 11.1 release Stream 3 will be supported.
- BVMS 11.0 patch does not support to change to H.265 codec. This should be done manually, using the camera web interface or Configuration Manager (in such case, correct profile settings should be used). In plans for upcoming BVMS 11.1 release.
- This patch does not change licensing model in BVMS 11.0 so single multisensor camera would require up to 4 BVMS channel licenses. Licensing logic will be changed in BVMS 11.1.
- CPP13, CPP14.x devices configured before patch is installed must be deleted and added again.
- Due to a firmware issue in version 8.0.0.155 it can happen that the "None-Recording" profile gets changed when triggering alarm recordings.
- Due to the above mentioned firmware issue BVMS Device Monitor can show a configuration mismatch.
- CPP13, CPP14.x configuration using Configuration Wizard is not supported.