


# C-BLUE One

## Firmware release notes

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## Initial Release


Issue	Author	Date	Details
001	TRO	01/10/2021	Initial release

## Revision history

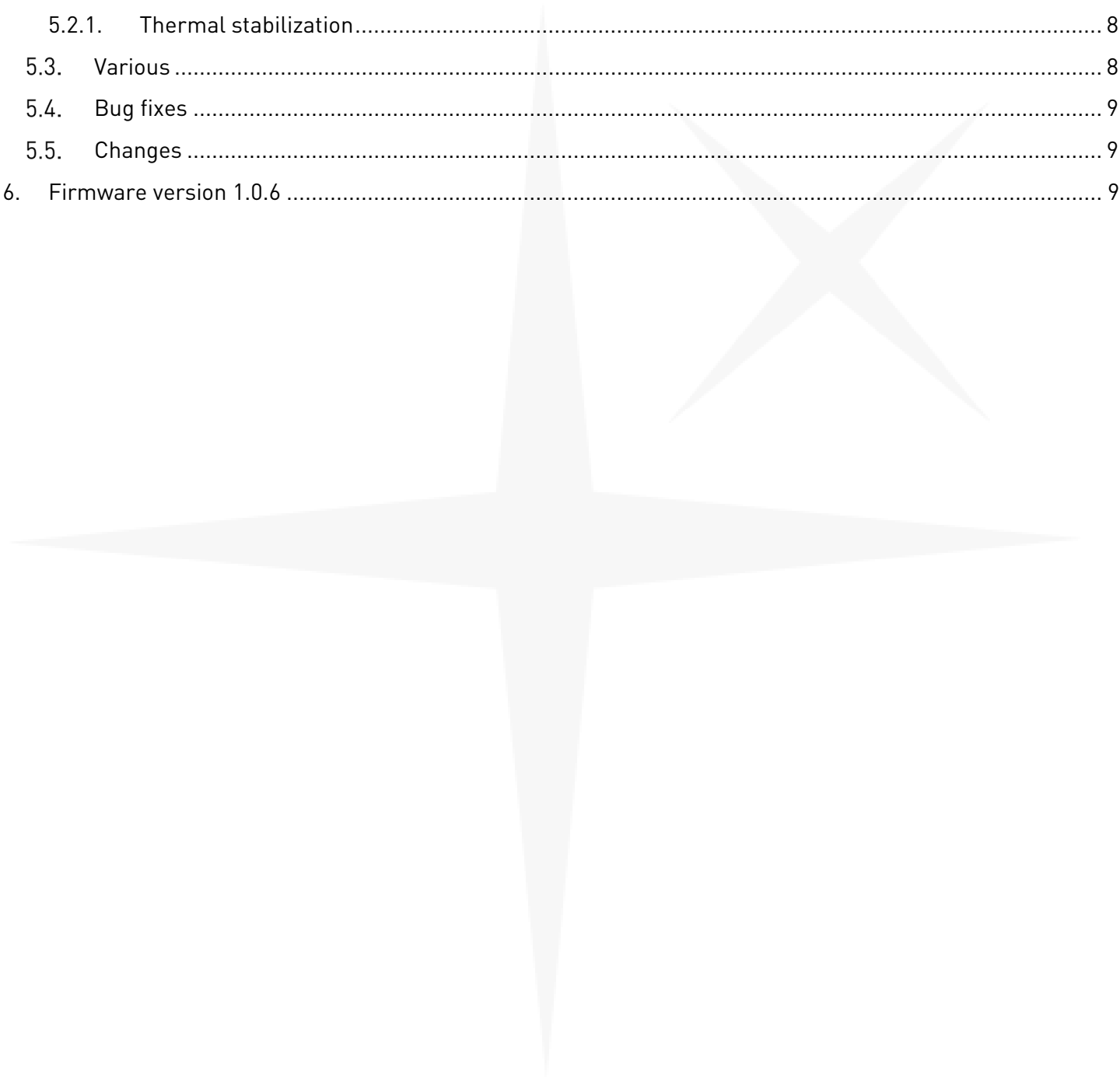
Issue	Author	Date	Para	Details
001	TRO	01/10/2021		Initial release + 1.2.0 version
002	TRO	28/10/2021		1.3.0 version
002	YWA	15/09/2022		Release 2.0.0
003	YWA	17/03/2023		Release 2.2.3
004	TRO	21/09/2023		Release 2.2.4
005	YWA	30/01/2024		Release 2.3.0


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## 1. Firmware version 2.3.0

### 1.1.Prominent features

#### 1.1.1. HDR standard mode

The HDR standard mode is now available and is enabled by default when entering HDR mode.

### 1.2.Changes

#### 1.2.1. Feature visibility

Fixed various features visibility level to provide a more consistent interface for beginner and expert modes. Guru mode is not impacted.

### 1.3.Fixes

- Only enable binning mode selection for IMX420 sensor.
- Fixed image transmission after transition from simulator mode to a sensor pattern mode.

## 2. Firmware version 2.2.4

This is a short release, that blocks a non-working feature from previous versions.

### 2.1.Prominent features


#### 2.1.1. HDR standard mode disabled.

The HDR standard mode is disabled in this version. It will be enabled when fixed later.

## 3. Firmware version 2.2.3

This is a major release that supersedes all previous firmware versions. Please refer to the camera user manual for an exhaustive description of the camera features.

### 3.1.Prominent features

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### 3.1.1. C-BLUE One UV support

The firmware now supports the IMX487, used in the C-BLUE One UV cameras. Sensor's 8 bits, 12 bits and dual ADC (HDR mode) are fully supported.

### 3.1.2. HDR support

The firmware now supports dual ADC feature of the sensors.

The dual ADC allows to implement an HDR mode, by combining the pixels acquired with low and high gain.

The camera built-in pixel combination can be enabled (normal HDR mode) or disabled (raw HDR mode), allowing the user to implement a custom HDR mode if needed.

For IMX420, IMX425 and IMX426 sensors the dual ADC mode allows to generate 14-bits pixels values. For IMX487, the dual ADC mode allows to generate 16-bits pixels values.

## 3.2. Various

### 3.2.1. Configuration of the camera synchro output signals.

The synchro output signals of the camera are now configurable. The default values correspond to the previous camera behavior.

### 3.2.2. Preliminary multicast support

The camera now supports streaming to multicast IP addresses. This support has not been extensively tested and should be considered as experimental.

### 3.2.3. New hardware support

Added support of new board revisions. This change has no impact for the users.


## 3.3. Bug fixes

Improved camera reliability.

## 3.4. Changes

- Due to possible hardware damaging, the cooling is no longer supported when the camera is powered through PoCXP.

## 4. Firmware version 2.0.0

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This is a major release that supersedes all previous firmware versions. Please refer to the camera user manual for an exhaustive description of the camera features.

## 4.1. Prominent features

### 4.1.1. GigE support

The camera can now be operated either using CoaXpress or GigE vision protocols.

The protocol selection is done during boot, depending on the presence of a SFP+ transceiver module in the camera.

### 4.1.2. IMX420 support

Added IMX420 support

### 4.1.3. Bias and flat support

Added on-the-fly bias and flat non uniformity corrections. The correction tables can either be computed by the camera or computed externally and uploaded in the camera.

## 4.2. Fixes

- The gain of the first frame was not correct
- Various trigger fixes
- Random camera crashes

## 5. Firmware version 1.3.0


### 5.1. Prominent features

In addition to the IMX425 sensor, firmware now supports the IMX426 sensor, for the C-BLUE One 0.5 Mp series.

### 5.2. Performance improvement

No performance improvement

### 5.3. Various

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- Now displays the correct maximum supported framerate when triggering through FrameStart or ExposureStart/End.
- New registers to get the steps of ROI cropping, on both X and Y axis.

#### 5.4. Bug fixes

- Fixed a bug that allowed users to permanently destroy IP configuration using exploitation boot.

#### 5.5. Changes

- No changes to notice

### 6. Firmware version 1.2.0

#### 6.1. Prominent features

##### 6.1.1. Acquisition triggers

This firmware now supports the use of triggers to control acquisition.

Triggers can be used using three different type of trigger sources:

1. Internal firmware triggers, accessible using camera's SFNC registers.
2. CoaXPress normed trigger, available according to CoaXPress grabbers.
3. LEMO back port of the camera.

##### 6.1.2. Heating

This firmware can now heat the sensor to stabilize the sensor in cold environments.

#### 6.2. Performance improvement


##### 6.2.1. Thermal stabilization

The stability of the thermal regulation of the sensor has been enhanced.

#### 6.3. Various

- No various changes to notice.



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#### 6.4. Bug fixes

- No bug fixes added in this version.

#### 6.5. Changes

- Anti-glow and dark levels are now automatically enabled when changing bit depth of the acquisition.

### 7. Firmware version 1.0.6

Initial release.