

## Release Notes Firmware Version 1.52.7

We welcome any suggestions, questions, and bug reports.

Please send your enquiries to: [support@chromasens.de](mailto:support@chromasens.de)

### General Notes

- Downloading this package requires at least GCT version 1.0.4a
- Do not use applications newer than 3.21.0 with bitstreams older than 3.50.0!  
The camera might be unable to boot!

### Important Note (see Incompatibilities):

- This package provides an additional list file to perform a package consistency check and reboot of the device. The list file is marked by an "-rst" (reset) appendix. Even though this is part of the package it is not supported by GCT version 2.0.x
- Please note that the gain values saved with user sets with firmware versions below 1.52.0 cannot be used with firmware versions 1.52.0 and newer. You must perform gain calibration (GainAuto=Once) and recreate DSNU/PRNU data sets.  
The reason for that is, that the calculation of the gain values has changed with the introduction of the new feature named SensorSensitivity.

### Changes and new Features

- Now analog and digital gain is stored in user set to guarantee stability.
- Introduced GainAutoStatus feature to check the status of automatic gain control.
- GainControlRegion parameters are based on sensor pixel, offset and width are independent of Binning, ReverseX.
- The DSNU/PRNU plane size can vary now. It depends on the amount of correction values being part of the LUT. Before it was fixed to 15360.
- Feature "ImageCalibrationMode" implemented for preparing internal image processing for generation calibration image (DSNU or PRNU)
- Introduced sensor sensitivity feature to set the sensor sensitivity.
- Introduced FrameActiveExtendLines feature.
- Added two new features SensorRegionWidth and SensorRegionOffsetX to read the sensor coordinates.
- Added led flash control
- When ColorTransformation "RGB -> sRGB" is active always returns gamma is disabled
- Extended the length of user set comment to 128 chars
- Introduced feature to display the last loaded user set
- File download (close operation) is more responsive now. Large control channel timeout values of 90s are not required anymore. Please check the feature reference for timeout specification.
- Added NoCache and pInvalidator to xml in order to support new GCT

## Bug Fixes

- Discovery problem fixed
- Fixed system stall bug during image acquisition if encoder stops. It has been fixed by finishing the current image in case of encoder stop. All lines will be transmitted.
- Bug fixes in Color Transformation Unit
- Fixed bug: Camera was appearing as 5K for some conditions.
- Fixed Bug: The FileOperationStatus was not set for Read/Write operations
- Fixed Bug: Device error code was set if the gain selector was valid and not invalid!
- Fixed Bug: There was problem using GCT 2.0 and firmware package 1.52.2 when loading file from camera to PC. The bug has been fixed.
- Fixed Bug: In case of mono camera the "GainControlRegionCurrentValue" feature was set to zero.
- Fixed Bug: In Xml the GainControlRegionCurrentValue was not set to NoCache as it should be.

### 1.52.6:

- Fixed Bug: The "MeasuredLineTime" feature reported wrong value with GCT2
- Fixed Bug: "ImageCalibrationMode" was erroneous in case of mono camera.
- Bug fixes in camera description xml.

### 1.52.7:

- Fixed Bug: The last loaded user set was not implemented correctly. It was changed when changing the User Set selector due to user set load when reading the user set comment.
- Fixed Bug: The stream channel packet delay was not configured correctly. Now it should work for single link. For Dual link it is not verified.

## Incompatibilities

- There is a new feature named SensorSensitivity. By default this feature is set to maximum sensitivity. This is not compatible to former packages. You must perform gain calibration (GainAuto=Once) and recreate DSNU/PRNU data sets.
- The behaviour of reverseX has changed. Before the sensor content was reversed and the OffsetX feature kept the same. Now when enabling/disabling the reverseX feature the OffsetX is adapted to keep the region of interest coordinates on the sensor the same.
- The gain settings (linear gain) of former user settings will be lost. This is up to improvements done in gain control.
- Removed compatibility for old DSNU/PRNU reference format when first valid pixel was starting from 1.
- Removed FileValidateCommand and special customer update mechanism. (Does not apply for evo camera)
- Increased the gap between LineTime and ExposureTime for the ax Sensor from 1.0us to 1.5us

## Errata

- Problems are expected for the first captured image when using TriggerDelayLines or AcquisitionFrameRate feature