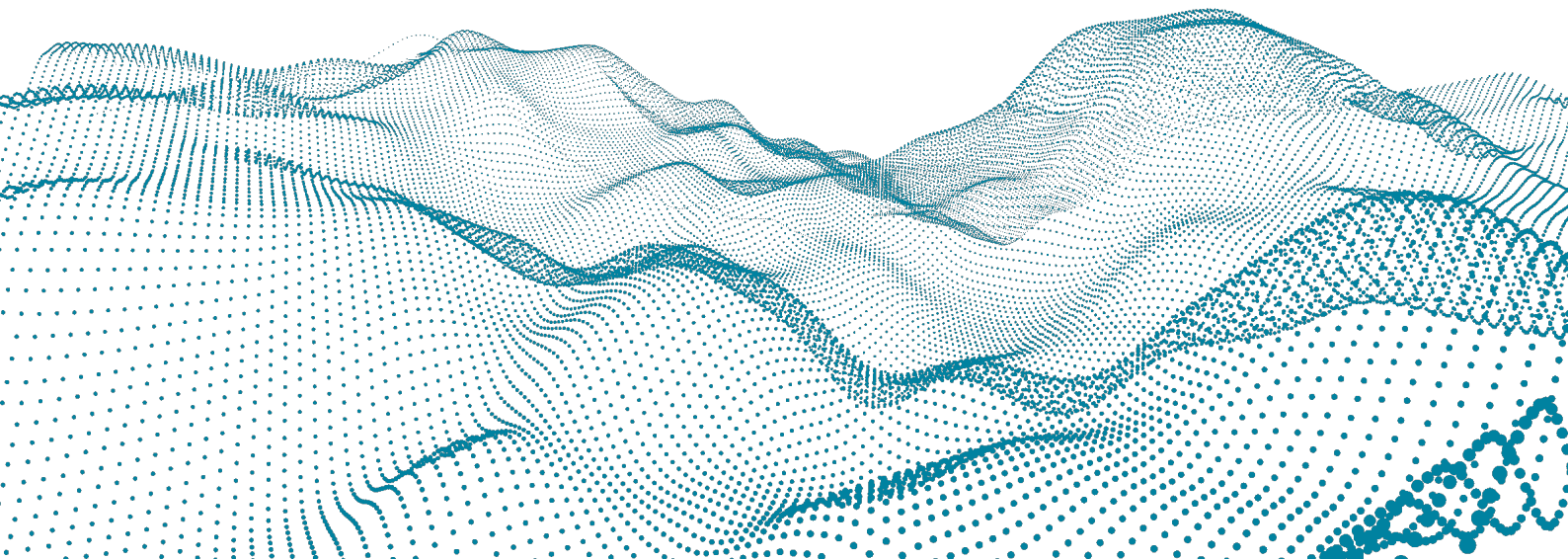
roboception

Roboception GmbH | April 2025

SGM® Producer

CHANGELOG



Contents

1 25.04.0 (2025-04-07)

1.1 Improvement and Fixes

- In HDR mode, brightness is computed for image with “middle” exposure time. This makes it more easy to adjust the Gain properly for HDR images.
- The calibration tool now chooses rectified focal length such that no pixels are out of bound, before it was possible to have interpolated pixels near the image border.
- Fixed device lost event node in local device nodemap
- Fixed disabling of RawCombined and Calibration components in synchronized multi-part mode
- Properly forwarding error codes and messages from underlying transport layer when connecting
- Added ChunkRcTiming values that report internal timings

2 25.01.0 (2025-01-13)

2.1 New Features

- Sending device lost as module event of the local device

2.2 Improvement and Fixes

- Fixed updating throughput and SCPD values whenever one of them is changed
- Do not report missing transport layer as error but as debug if ‘no-path’ is configured, which means that this is wanted
- Do not show grabbing errors any more when frame rate is set higher than camera can deliver

3 24.10.0 (2024-10-11)

3.1 Improvement and Fixes

- Under Windows without GPU, improving speed of stereo matching on the CPU by vectorization (this was already done under Linux)
- Making chunk parameters in the nodemap independent of general nodemap parameters

4 24.07.1 (2024-09-12)

4.1 Improvement and Fixes

- rc_calib: Improved auto exposure setting for calibration
- Locking throughput parameters during streaming
- Added streamable flag to most changable parameters and fixed some linking between parameters
- Added default throughput reduction in case of limited link speed for Windows

5 24.07.0 (2024-07-24)

5.1 Improvement and Fixes

- Fixed passing timeout for discovery of devices through SGM producer to transport layer
- Added invalidators for PTP offset and status parameters in GenICam nodemap
- Waiting for 200 ms until proceeding after unexpected exceptions to throttle down in case of errors
- Ensure that last error is properly set

6 24.04.1 (2024-05-27)

6.1 Improvement and Fixes

- Fixed applying self calibration offset also to manual calibration
- rc_calib now suggests recalibration if self-calibration counter > 0
- The stereo module now automatically re-triggers image acquisition when software trigger is enabled and if it skips images due to auto exposure adaptation
- Providing camera firmware version in DeviceFirmwareVersion parameter instead of duplicating DeviceVersion
- Fixed namespaces of custom parameters in nodemap and increased size of DeviceManufactureInfo to 48 bytes
- rc_viewer now uses low quality for computing depth images on startup when running without GPU and images are bigger than 3 Mpixel

7 24.04.0 (2024-04-19)

7.1 New Features

- Added binning for rc_viscore
- Added trigger support for rc_visard NG
- Added automatic software retriggering for getting internally needed images, e.g. for HDR or if Out1 is set to ExposureAlternateActive

7.2 Improvement and Fixes

- Increased image timeout for rc_visard to 1.1 s and report timeout as warning instead of error
- Suppress errors when setting TriggerActivation and ensure consistency by re-applying
- Change timeout message from error to trace level
- Renaming of manual and public changelog for consistency

8 24.01.0 (2024-01-09)

8.1 New Features

- Added SynchronizedAlternateComponents mode to parameter AcquisitionMultiPartMode
- Calibration (rc_viscore only)
  - Added parameters RcCalibrationFlip for mirroring the annotated calibration images
  - Added RcCalibrationAutoAccept and ChunkRcCalibrationNextPose to support calibration via robot
  - Added calibration image flipping, auto accept and next pose feedback to rc_calib tool
- Manual
  - Describing all proprietary GenICam parameters in manual
  - Added description of proprietary GenICam calibration interface

8.2 Improvement and Fixes

- Fixed not delivering images when HDR is turned on right after startup
- Added smoothing of input images for stereo when matching is done in full resolution, which reduces image noise and can lead to significant improvement
- Return PTP offset of left camera instead of worst case offset as also timestamp is taken from left camera
- Fixed wrong rpath in TGZ packages

9 23.10.0 (2023-10-24)

9.1 Improvement and Fixes

- Much faster adaptation of auto exposure from overexposed images for rc_viscore camera

10 23.07.0 (2023-07-25)

10.1 New Features

- rc_check: Added posibility to set some defaults for rc_viscore that is stored in calibration file on the camera

10.2 Improvement and Fixes

- rc_check, rc_calib and rc_viewer: Use relative rpath for finding libraries under Linux to permit relocating directory
- Fixed issues for using Matrix Vision producer as transport layer
- Added printing device version and info as debug on opening the connection
- Added printing used system filenames to debug log output

11 23.04.1 (2023-04-28)

11.1 New Features

- Added LineInverter, RcLineRatio and ChunkRcLineRatio for rc_viscore

11.2 Improvement and Fixes

- Fixed not loosing first SW/HW trigger after switching trigger mode on (rc_viscore)

12 23.04.0 (2023-04-20)

12.1 Improvement and Fixes

- rc_calib: Fixed sometimes not accepting save button in rc_calib tool
- rc_viewer changes for rc_viscore:
  - Added more controls for trigger
  - Added possibility to invert the out1 signal
  - Added possibility to reduce the output signal width

13 23.01.2 (2023-02-23)

13.1 Improvement and Fixes

- Fixing performance and memory issue of rc_viewer tool that occured with rc_viscore as sensor

14 23.01.1 (2023-02-23)

14.1 New Features

- Added hardware and software triggering for rc_viscore
- All tools (rc_check, rc_calib and rc_viewer) are now available as AppImage for Linux x86_64

14.2 Improvement and Fixes

- Pre-selecting depth computation in low quality for rc_viscore if no GPU is available
- Added storing backup of rc_viscore calibration and license with rc_check tool
- Minor fixes and updating of manual

15 23.01.0 (2023-01-25)

15.1 New Features

- Added rc_viewer tool for live 3D visualization and testing
- Allow changing gain when using HDR mode
- Added controlling HDR mode on rc_visard (only available with rc_visard firmware >= 23.01.0)

15.2 Improvement and Fixes

- Improved switching between HDR and other exposure control modes
- Fixed seeing sometimes projector pattern in images without projector in ExposureAlternateActive mode
- Fixed rc_check responding wrongly with no access instead of missing in some cases

16 22.10.1 (2022-11-22)

16.1 New Features

- HDR auto exposure mode for rc_viscore
- Added GenICam parameters to set link throughput limitation for rc_viscore
- Setting link throughput limit to current link speed as default (currently only for Linux)
- Added possibility to set link throughput limit in rc_calib tool

16.2 Improvement and Fixes

- Clarified output of rc_check tool

17 22.10.0 (2022-10-14)

17.1 New Features

- Added support for Ubuntu 22.04 LTS

17.2 Improvements and Fixes

- Minor performance improvements

18 22.07.2 (2022-08-11)

18.1 New Features

- Added TLDisplayName to the nodemap of the system module

18.2 Improvements and Fixes

- Added table with GPU memory and FPS to manual
- Increased default frame rate for rc_viscore from 8 Hz to 9 Hz
- Single and multi frame acquisition now returns with the correct number of requested images
- Under Windows, restrict search for transport layers by default to rc_genicam_api sub-directory

19 22.07.1 (2022-07-21)

19.1 Improvements and Fixes

- Increased limit for maximum exposure time from 20 ms to 30 ms in Out1High and AdaptiveOut1 auto exposure mode

20 22.07.0 (2022-07-15)

20.1 Improvements and Fixes

- Implemented gamma parameter for rc_visard (if rc_visard firware version >= 22.07.0)

21 22.04.2 (2022-05-30)

21.1 Improvements and Fixes

- Fixed finding libraries under Windows
- Added version for ARM64

22 22.04.1 (2022-05-11)

22.1 Improvements and Fixes

- Set Gamma to 1 in rc_calib program as calibration grid detection relies on linear mapping.

23 22.04.0 (2022-04-26)

23.1 New Features

- New tool for checking connection and configuration of rc_viscore sensor (`rc_check`)
- rc_visard and rc_viscore sensors serve as dongle, i.e. USB dongle not needed any more
- Added parameter Gamma for controlling gamma factor for rc_viscore sensors and using default of 0.5

23.2 Improvements and Fixes

- Make package installation relocatable by specifying the transport layer paths at runtime
- Fixed bug with changing calibration states, limited size of annotated calibration image and limited auto exposure time

- Showing min/max error during verification of calibration in rc_calib
- Fixed switching of calibration and monocalibration radio buttons
- Fixed possibility to change Gain during auto exposure
- Fixed TL type for rc_viscore

24 22.01.0 (2022-01-18)

24.1 New Features

- Support for new rc_viscore sensor
- Calibration program (`rc_calib`) for rc_viscore sensor

24.2 Improvements and Fixes

- Use AcquisitionAlternateFilter only if ExposureAlternateActive is set for out1
- Limiting maximum exposure time to 20 ms in Out1High and AdaptiveOut1 mode
- Changed way of limiting memory for stereo matching
- Explicitely testing rc_visard for IOControl license to improve error message in log file
- Fixed auto_exposure_adapting to report 0 if further adaptation is not possible

25 21.10.0 (2021-10-23)

25.1 New Features

- Added GenICam parameter DepthExposureAdaptTimeout

25.2 Improvements and Fixes

- Fixed internal single frame trigger timestamp
- Added some debug log output for single shot stereo
- Fixed always complaining about pending trigger
- Fixed crashing when connection to rc_visard is interrupted
- Fixed disabling of depth smoothing
- Removing prefix rc_ from IDs and combining internal interfaces of same type

26 21.07.0 (2021-07-16)

- First stable version of producer for rc_visard

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