

EIGER2 Release Notes

2021-03-01**release-2020.2.3**



Bugfix Version based on 2020.2.2. Will only be used for XE systems!

EIGER2 XE:

- Added new server configuration for XE systems

2021-02-12**release-2020.2.2**



Bugfix Version based on 2020.2.1

EIGER2 R 500K-S:

- Fixed readout issues
- Update to latest firmware version

General:

- Fixed *bit_depth* issue without *auto_summation*. In certain conditions, it is possible to get 32 bit images even when *auto_summation* is off (i.e. *counrate_correction*) but the *bit_depth* value didn't change accordingly.
- In *inte* and *exte* modes, *nimages* can only be set to 1 (required configuration for those modes).
- Add human readable error for trigger series exceeding maximal duration (max. duration 1 week). This is checked during *arm* and returns an appropriate error message.
- Improved logs for debugging
- Support for new hardware
- Don't allow negative TH sensor readings (value is always ≥ 0)

API (1.8.0) additions and fixes:

- Added *unit* to filewriter status *buffer_free*
- Added *allowed_values* to detector status
- Detector status now properly changes to error when detector is no longer powered or connected.
- Fixed issue where *photon_energy* wouldn't always return list of changed values.
- Re-added *detector/status/link_x* for backwards compatibility

- *bit_depth_readout* and *bit_depth_image* read rights are now properly available for EIGER(1) systems (see also "Legacy Server Support")

SIMPLON 1.6.0 changes:



Only active when sending API request with ".../api/1.6.0/..." instead of ".../api/1.8.0/..."

- *monitor_image_number* and *next_image_number* re-added
- *Key error* now visible in *monitor/status/state*

2020-10-23**release-2020.2.1**



Bugfix Version based on 2020.2

Additions:

- Added rollback feature for board firmwares

Fixes:

- Increased module flashing wait time
- Return *series end* message when using cancel or abort
- Added *min.* value for *detector_readout_time*
- Fixed counter reset issues with lines ROI
- *nil* value in network configurations no longer breaks communication with detector
- Initialize no longer fails after power cycling detector during operation
- Filewriter now properly calculates total number of images in *inte* and *exte* mode
 - Only *ntrigger* is to be used in those modes. Since total number of images is calculated with $nimages * ntrigger$ this could yield too many data files if *nimages* was not set to 1 as required.
- Improved E2 R 500K initialization stability

2020-09-18**release-2020.2**

Features:

- CdTe Support
- New high voltage status key available (see SIMPLON API documentation)
- High voltage reset command available (see SIMPLON API documentation)
- Updates and uses latest firmware versions
- Support for XE systems using fiber

Fixes & Changes:

- *detector/state/error* changed back to type *string* instead of *list* to match API 1.8.0 documentation and keep 1.6.0 backwards compatibility. This was an unwanted change and therefore classified as a bug in release-2020.1
- FileWriter and Monitor mode changes (enable / disabled) are only affected while the detector is in the idle stage (after disarm / end of series or before arm)
- Fixed HDF5 data file path if *name_pattern* contains path structure
- Unified "empty" return values (e.g initialize, trigger, hv_reset) to return {} instead of "" and {}. Generally, return values should not be parsed for nonspecific returns.
- Added *incident_energy* to tiff header
- Changing *photon_energy* didn't return all changed values in return
- Changing *count_time* didn't return all changed values in return
- Sending trigger before *arm* no longer requires re-initialize
- Corrected reported minimal times in all ROI and full readout modes on *GET* requests
- Countrate correction table didn't match SIMPLON 1.6.0 implementation (transposed table)
- Missing links now properly reported
- *detector_readout_time* now shows minimal possible value
- Restored *frame_time* and *count_time* interaction of SIMPLON 1.6.0
 - Setting *frame_time* < existing *count_time* now automatically adjusts *count_time* to "*frame_time* - (minus) *detector_readout_time*"
 - Setting *count_time* > existing *frame_time* now automatically adjusts *frame_time* to "*count_time* + (plus) *detector_readout_time*"
- Improved log files for debugging
- Monitor buffer fill behavior changed due to multi-threshold usage. The fill level decreases only after getting all the thresholds of a single exposure.
- Countrate correction cutoff now properly shown for the E2 R 500K-S
- WebUI now shows properly rounded values and updates readings after initialize
- Fixed bug report behavior where download link would be reported before file being available
- Bug report link will now only be returned after the file has been written

API changes:

detector config	
parameter	comment
compression	reordered to match SIMPLON 1.6.0 order ['lz4', 'bslz4', 'none']

element	added key “allowed values”
detector command	
parameter	comment
hv_reset	new key, see SIMPLON API documentation
detector status	
parameter	comment
high_voltage/state	new key, see SIMPLON API documentation
stream config	
parameter	comment
header_detail	reordered to match SIMPLON 1.6.0 order ['none', 'basic', 'all']
filewriter status	
parameter	comment
files	value type changed to string from list
monitor status	
parameter	comment
buffer_fill_level	value_type changed to uint from list

2020-05-15**release-2020.1**

Initial EIGER2 SW release. Previous versions were based on development versions and therefore manifold and without fully structured change management. Please consult the API Reference v1.8.0 for further details about currently available functionality. In case of any compatibility issues due to API changes please contact support@dectris.com.

Features:

- Use latest firmware versions
- Latest DCUs supported

Fixes:

- Goniometer parameters of *null* won't be written in the metadata. Valid float values (e.g. 0.0) will be written
- Fix *cable_check* and *initialize* in webUI
- Added missing 1.6.0 and 1.7.0 SIMPLON keys for:
 - *monitor/.../images*
 - *system/.../config/*
- Fixed custom flatfield and *pixel_mask* issue with lines ROI mode
- Fixed meta data issue when using ROI mode
- Improved initialization in case of errors
- Added possibility to disable TH sensor
- System command *restart* now blocking (returns after container has restarted)

Legacy Server Support



Note, this is in an experimental feature for listed EIGER(1) servers. Contact DECTRIS support for additional information.

- DELL PowerEdge R220
- DELL PowerEdge R230
- DELL PowerEdge R820
- DELL PowerEdge R820 – with additional user card (1 port) in slot 6

General Information

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