USB FIRMWARE RELEASE NOTES

Alvium 1800 U cameras

Helpful downloads

- Operating and updating cameras: Alvium USB Cameras User Guide
- Features: Alvium Features Reference
  www.alliedvision.com/en/support/technical-documentation/alvium-usb-documentation

- Firmware files
  www.alliedvision.com/en/support/firmware

- Firmware updater, included in **Vimba X**
  www.alliedvision.com/en/products/software/vimba-x-sdk

Latest firmware version for your Alvium USB model

The following table lists the latest firmware version for your Alvium USB camera.

Models	FW version	Document release
1800 U-030 VSWIR, -040m/c, -052m/c, -120m/c, -130 VSWIR, -131m/c, -158m/c, -192m/c, -203m/c, -234m/c, -235m/c, -240m/c, -291m/c, -319m/c, -500m/c, -501m/c NIR, -507m/c, -507m/c Pol, -508m/c, -508m/c Pol, -510m/c, -511m/c, -811m/c, -812 UV, -895m/c, -1236m/c, -1240m/c, -1242m/c, -1620m/c, -2040m/c, -2050m/c, -2460m/c	FW 00.13.00.71d891fe | 2nd update	2024-Feb-26
1800 U-050m/c[1]	FW 00.11.00.9cf0c21e | updated notes	2022-Dec-19

[1] Alvium 1800 U-050 models are delivered with firmware 00.11.00.9cf0c21e. The firmware version cannot be updated to later versions.

Table 3: Latest firmware version by model

FW 00.13.00.71d891fe | 2nd update

Date of **2nd document update**: 2024-Feb-26
Date of 1st document update: 2024-Jan-04
Date of document release: 2023-Dec-14

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, -040m/c, -052m/c, -120m/c, -131m/c, -130 VSWIR, -158m/c, -192m/c, -203m/c, -234m/c, -235m/c, -240m/c, -291m/c, -319m/c, -500m/c, -501m/c NIR, -507m/c, **-507m/c Pol**, -508m/c, **508m/c Pol**, -510m/c, -511m/c, -811m/c, -812 UV, -895m/c, -1236m/c, -1240m/c, -1242m/c, -1620m/c, -2040m/c, -2050m/c, -2460m/c

Table 4: Supported models

New model

Alvium 1800 U-507m/c Pol, -508m/c Pol

Changed features

- Alvium 1800 U-1240m/c and -2050m/c: For triggered acquisition in rolling shutter mode, maximum frame rates have been increased from ~50% to >99% of the values reached in freerun mode.
- Minimum exposure times have been reduced for all Alvium 1800 U models, except for 1800 U-120, -500, -501 NIR, -1240, and -2050 models.
- Sensor binning has been added for 1800 U-158m, -203m, -240m, -291m, and -508m models.
- Related to known issue Alvium ID 253: Removed IntensityControllerOutliersBright and IntensityControllerOutliersDark from AutoModeControl.

New features

- `ChunkDataControl` features
- `DeviceTemperatureStatus` as an indicator to take measures before the camera is shut off when the maximum operating temperature is exceeded
- `LensShadingCorrection` features to compensate for a decrease in brightness towards the image corners
- `LUTLoadAll` and `LUTSaveAll` for 1-step access to RGB LUTs

Resolved issues

Alvium ID	Affected models	Description
1151	All	If binning is activated after an ROI is set, the camera returns invalid values for `Height` and `OffsetY`.
1171	Alvium 1800 U-2050m/c	If user sets are loaded where `ReverseY` = *True* and `OffsetY` is configured, the output image is distorted.

Table 5: Resolved issues

Known issues

Alvium ID	Affected models	Description
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
978	All	If an `AcquisitionStop` command is executed at the same point in time as a change for a sequencer set, the sequencer cannot be started again.
1016	All	Alvium USB cameras may return wrong temperature values, with a sporadic offset up to 20 °K.
1324	**U-500m/c, U-501 NIR, U-1240m/c, U-2050m/c**	**This applies with AcquisitionMode set to MultiFrame: If cameras have been triggered by AcquisitionStart, the streaming stops when parameters are changed.**

Table 6: Known issues

FW 00.13.00.71d891fe | 1st update

Date of **1st document update**: 2024-Jan-04
Date of document release: 2023-Dec-14

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-052m/c, U-120m/c, U-131m/c, U-130 VSWIR, U-158m/c, U-192m/c, U-203m/c, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, U-895m/c, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 7: Supported models

New model

No new models were added.

Changed features

- Alvium 1800 U-1240m/c and -2050m/c: For triggered acquisition in rolling shutter mode, maximum frame rates have been increased from ~50% to >99% of the values reached in freerun mode.
- **Minimum exposure times have been reduced for all Alvium 1800 U models, except for 1800 U-120, -500, -501 NIR, -1240, and -2050 models.**
- Sensor binning has been added for 1800 U-158m, **-203m**, -240m, -291m, and -508m models.
- Related to known issue Alvium ID 253: Removed `IntensityControllerOutliersBright` and `IntensityControllerOutliersDark` from `AutoModeControl`.

New features

- `ChunkDataControl` features
- `DeviceTemperatureStatus` as an indicator to take measures before the camera is shut off when the maximum operating temperature is exceeded

- `LensShadingCorrection` features to compensate for a decrease in brightness towards the image corners
- `LUTLoadAll` and `LUTSaveAll` for 1-step access to RGB LUTs

Resolved issues

Alvium ID	Affected models	Description
1151	All	If binning is activated after an ROI is set, the camera returns invalid values for `Height` and `OffsetY`.
1171	Alvium 1800 U-2050m/c	If user sets are loaded where `ReverseY` = *True* and `OffsetY` is configured, the output image is distorted.

Table 8: Resolved issues

Known issues

Alvium ID	Affected models	Description
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
978	All	If an `AcquisitionStop` command is executed at the same point in time as a change for a sequencer set, the sequencer cannot be started again.
1016	All	Alvium USB cameras may return wrong temperature values, with a sporadic offset up to 20 °K.

Table 9: Known issues

FW 00.13.00.71d891fe

Date of document release: 2023-Dec-14

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-052m/c, U-120m/c, U-131m/c, U-130 VSWIR, U-158m/c, U-192m/c, U-203m/c, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, U-895m/c, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 10: Supported models

New model

No new models were added.

Changed features

- Alvium 1800 U-1240m/c and -2050m/c: For triggered acquisition in rolling shutter mode, maximum frame rates have been increased from ~50% to >99% of the values reached in freerun mode.
- Sensor binning has been added for 1800 U-158m, -240m, -291m, and -508m models.

- Related to known issue Alvium ID 253: Removed `IntensityControllerOutliersBright` and `IntensityControllerOutliersDark` from `AutoModeControl`.

New features

- `ChunkDataControl` features
- `DeviceTemperatureStatus` as an indicator to take measures before the camera is shut off when the maximum operating temperature is exceeded
- `LensShadingCorrection` features to compensate for a decrease in brightness towards the image corners
- `LUTLoadAll` and `LUTSaveAll` for 1-step access to RGB LUTs

Resolved issues

Alvium ID	Affected models	Description
1151	All	If binning is activated after an ROI is set, the camera returns invalid values for `Height` and `OffsetY`.
1171	Alvium 1800 U-2050m/c	If user sets are loaded where `ReverseY` = *True* and `OffsetY` is configured, the output image is distorted.

Table 11: Resolved issues

Known issues

Alvium ID	Affected models	Description
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
978	All	If an `AcquisitionStop` command is executed at the same point in time as a change for a sequencer set, the sequencer cannot be started again.
1016	All	Alvium USB cameras may return wrong temperature values, with a sporadic offset up to 20 °K.

Table 12: Known issues

FW 00.12.00.00611a22 | 3rd update

Date of **3rd document update**: 2023-Nov-21
Date of 2nd document update: 2023-Sep-27
Date of 1st document update: 2023-Jul-05
Date of document release: 2023-Jun-15

Removed contents

- 12-bit pixel formats for cameras with 10-bit sensors were already added with FW 00.08.00.6727174b on page 16.
- 12-bit Packed pixel formats were added only for Alvium G1 and G5.

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-052m/c, U-120m/c, U-131m/c, U-130 VSWIR, U-158m/c, U-192m/c, U-203m/c, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, U-895m/c, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 13: Supported models

New models

Alvium 1800 U-131m/c, U-192m/c, U-203m/c

Changed features

- Added `Sensor` option for `BinningSelector`. The existence of this option depends on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.
- Added 12-bit sensor formats for cameras with 10-bit sensors for `PixelFormat`.
- Added *Mono12Packed* and *BayerGR12Packed* (1800 U-120c,-500c, 501c NIR) or *BayerRG12Packed* (other models) for `PixelFormat`.

New features

- Support for mandatory features according to GenICam SFNC V2.7
- `LutValueAll` to write a complete LUT in one access
- `MultipleRegions` subcategory in the `ImageFormatControl` category. The existence of this feature and available arrangement modes depend on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.

Resolved issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
967	All	`BlackLevel` is wrongly set after loading settings file: The camera incorrectly reports a `BlackLevel` value of `0`, requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of `0`.
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when `ReverseY` is turned on: For rolling shutter models, defect pixels may appear after turning on `ReverseY`.

Table 14: Resolved issues

Known issues

Alvium ID	Affected models	Description
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
1016	All	Alvium USB cameras may return wrong temperature values, with a sporadic offset up to 20 °K.

Table 15: Known issues

FW 00.12.00.00611a22 | 2nd update

Date of **2nd document update**: 2023-Sep-27
Date of 1st document update: 2023-Jul-05
Date of document release: 2023-Jun-15

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-052m/c, U-120m/c, **U-131m/c**, U-130 VSWIR, U-158m/c, **U-192m/c**, **U-203m/c**, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, U-895m/c, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 16: Supported models

New models
Alvium 1800 U-131m/c, U-192m/c, U-203m/c

Changed features

• Added `Sensor` option for `BinningSelector`. The existence of this option depends on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.

- Added 12-bit sensor formats for cameras with 10-bit sensors for `PixelFormat`.
- Added *Mono12Packed* and *BayerGR12Packed* (1800 U-120c,-500c, 501c NIR) or *BayerRG12Packed* (other models) for `PixelFormat`.

New features

- Support for mandatory features according to GenICam SFNC V2.7
- `LutValueAll` to write a complete LUT in one access
- `MultipleRegions` subcategory in the `ImageFormatControl` category. The existence of this feature and available arrangement modes depend on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.

Resolved issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
967	All	`BlackLevel` is wrongly set after loading settings file: The camera incorrectly reports a `BlackLevel` value of `0`, requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of `0`.
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when `ReverseY` is turned on: For rolling shutter models, defect pixels may appear after turning on `ReverseY`.

Table 17: Resolved issues

Known issues

Alvium ID	Affected models	Description
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
1016	All	Alvium USB cameras may return wrong temperature values, with a sporadic offset up to 20 °K.

Table 18: Known issues

FW 00.12.00.00611a22 | 1st update

Date of **1st document update**: 2023-Jul-05
Date of document release: 2023-Jun-15

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-052m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, **U-895m/c**, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 19: Supported models

New models

Alvium 1800 U-895m/c

Changed features

- Added `Sensor` option for `BinningSelector`. The existence of this option depends on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.
- **Added 12-bit sensor formats for cameras with 10-bit sensors for `PixelFormat`.**
- **Added Mono12Packed and BayerGR12Packed (1800 U-120c, -500c, 501c NIR) or BayerRG12Packed (other models) for `PixelFormat`.**

New features

- Support for mandatory features according to GenICam SFNC V2.7
- `LutValueAll` to write a complete LUT in one access
- `MultipleRegions` subcategory in the `ImageFormatControl` category. The existence of this feature and available arrangement modes depend on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.

Resolved issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
967	All	`BlackLevel` is wrongly set after loading settings file: The camera incorrectly reports a `BlackLevel` value of *0*, requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of *0*.
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when `ReverseY` is turned on: For rolling shutter models, defect pixels may appear after turning on `ReverseY`.

Table 20: Resolved issues

Known issues

Alvium ID	Affected models	Description
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
1016	All	Alvium USB cameras may return wrong temperature values, with a sporadic offset up to 20 °K.

Table 21: Known issues

FW 00.12.00.00611a22

Date of document release: 2023-Jun-15

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-052m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 22: Supported models

New models

No new models were added.

Changed features

- Added `Sensor` option for `BinningSelector`. The existence of this option depends on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.

New features

- Support for mandatory features according to GenICam SFNC V2.7
- `LutValueAll` to write a complete LUT in one access
- `MultipleRegions` subcategory in the `ImageFormatControl` category. The existence of this feature and available arrangement modes depend on the sensor. Please see the Alvium USB Cameras User Guide or model data sheets.

Resolved issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
967	All	`BlackLevel` is wrongly set after loading settings file: The camera incorrectly reports a `BlackLevel` value of `0`, requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of `0`.
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when `ReverseY` is turned on: For rolling shutter models, defect pixels may appear after turning on `ReverseY`.

Table 23: Resolved issues

Known issues

Alvium ID	Affected models	Description
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
1016	All	Alvium USB cameras may return wrong temperature values, with a sporadic offset up to 20 °K.

Table 24: Known issues

FW 00.11.00.9cf0c21e | updated notes

Date of **document update**: 2022-Dec-19
Date of document release: 2022-Nov-14

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-050m/c, U-052m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 25: Supported models

New models

Alvium 1800 U-510m/c

Changed features

- Increments for `OffsetX` and `OffsetY` for camera models with Sony IMX global shutter sensor
- Removed the `ChunkDataControl` category
- Reduced options for `SoftwareSignalSelector`

New features

- Counter features in the `CounterAndTimerControl` category
- `LineDebounceDuration` and `LineDebounceMode` in the `DeviceControl` category

Resolved issues

Alvium ID	Affected models	Description
806	Color models	Error in color transformation has been fixed.

Table 26: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.

Table 27: Known issues

FW 00.11.00.9cf0c21e

Date of document release: 2022-Nov-14

Note: Data of this note entry is outdated. Please see

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-050m/c, U-052m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-234m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-510m/c, U-511m/c, U-811m/c, U-812 UV, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 28: Supported models

New models

Alvium 1800 U-510m/c

Changed features

- Increments for `OffsetX` and `OffsetY` for camera models with Sony IMX global shutter sensor
- Removed the `ChunkDataControl` category
- Reduced options for `SoftwareSignalSelector`

New features

- **Removed**: `ActionControl` category
- Counter features in the `CounterAndTimerControl` category

- `LineDebounceDuration` and `LineDebounceMode` in the `DeviceControl` category

Resolved issues

Alvium ID	Affected models	Description
806	Color models	Error in color transformation has been fixed.

Table 29: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.

Table 30: Known issues

FW 00.10.00.6c9062b1 | updated notes

Date of **document update**: 2022-Aug-16
Date of document release: 2022-Jul-20

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-050m/c, U-052m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-511m/c, U-811m/c, U-812 UV, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 31: Supported models

New models

Alvium 1800 U-235m/c, U-812 UV

Changed features

In previous firmware versions, `BlackLevel` values were adjusted to the pixel formats: 8-bit values for 8-bit pixel formats, 10 for 10, and 12 for 12. With this firmware update, the representation of `BlackLevel` is independent from the pixel format: 12-bit values are used for all pixel formats. Therefore, you may have to adjust your settings used with previous firmware versions.

The maximum value for `Gain` was increased from 24 to 48 dB for all models with Sony IMX global shutter sensors.The maximum value for Gain was increased from 24 to 48 dB for all models with Sony IMX global shutter sensors. **Added information**: For Alvium 1800 C-030 VSWIR and C-130 VSWIR, the maximum `Gain` value was increased to 42 dB.

Added information: FPNC was disabled for Alvium 1800 U-030 VSWIR and 1800 U-130 VSWIR models.

New features

- ChunkDataControl category
- SequencerControl category (The features in this category are still in the testing phase and not fully validated.)
- SerialHub subcategory for I/O control by UART
- SoftwareSignalControl subcategory to enable external devices to trigger actions within the camera by software commands (The features in this category are still in the testing phase and not fully validated.)

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If ShutterMode is changed after image acquisition, the ExpsoureActive signal disappears.
253	All	Auto mode feature IntensityControllerOutliersDark does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If AcquisitionStop is executed shortly after AcquisitionStart, no image is transmitted.

Table 32: Known issues

FW 00.10.00.6c9062b1

Date of document release: 2022-Jul-20

Note: Data of this note entry is outdated. Please see

Supported models

Camera family	Model
Alvium 1800	1800 U-030 VSWIR, U-040m/c, U-050m/c, U-052m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-235m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-511m/c, U-811m/c, U-812 UV, U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 33: Supported models

New models

Alvium 1800 U-235m/c, U-812 UV

Changed features

In previous firmware versions, BlackLevel values were adjusted to the pixel formats: 8-bit values for 8-bit pixel formats, 10 for 10, and 12 for 12. With this firmware update, the representation of BlackLevel is independent from the pixel format: 12-bit values are used for all pixel formats. Therefore, you may have to adjust your settings used with previous firmware versions.

The maximum value for Gain was increased from 24 to 48 dB for all models with Sony IMX global shutter sensors.

New features

- `ChunkDataControl` category
- `SequencerControl` category (The features in this category are still in the testing phase and not fully validated.)
- `SerialHub` subcategory for I/O control by UART
- `SoftwareSignalControl` subcategory to enable external devices to trigger actions within the camera by software commands (The features in this category are still in the testing phase and not fully validated.)

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.

Table 34: Known issues

FW 00.08.01.13f227a4

Date of document release: 2022-May-16

Supported models

Camera family	Model
Alvium 1800	Alvium 1800 U-120m/c, U-500m/c, U-501m/c NIR

Table 35: Supported models

New models

No new models were added.

New features

No features were added.

Resolved issues

Alvium ID	Affected models	Description
775	U-120c, U-500c, U-501c NIR	Wrong `AutoWhiteBalance` measurement was fixed.

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.

Table 36: Known issues

FW 00.08.00.6727174b

Date of document release: 2022-Mar-21

Supported models

Camera family	Model
Alvium 1800	U-030 VSWIR, U-040m/c, U-050m/c, U-052m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-240m/c, U-291m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-511m/c, U-811m/c, U-1236m/c, U-1240Um/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 37: Supported models

New models

Alvium 1800 U-052m/c, U-291m/c

New features

Contents updated subsequently

The information on support for 12-bit pixel formats for cameras with 10-bit sensors was added on 2023-Nov-21.

- 12-bit for `PixelFormat` for cameras with 10-bit sensors
- Convolution filters in the `ImageProcessingControl` category
- Enabled all integer values from 1× to 8× for Digital Binning.
- `CounterAndTimerControl` category
- `ExposureActiveMode` (Rolling shutter (RS) models)
- `SensorBitDepth` (selected models)
- `UserSetControl`: Added individual user set options

Resolved issues

- No issues were fixed.

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.

Table 38: Known issues

FW 00.07.00.81db3896

Date of document release: 2021-Dec-10

Supported models

Camera family	Model
Alvium 1800	U-030 VSWIR, U-040m/c, U-050m/c, U-120m/c, U-130 VSWIR, U-158m/c, U-240m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-511m/c, U-811m/c, U-1236m/c, U-1240Um/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 39: Supported models

New models

Alvium 1800 U-030 VSWIR, U-130 VSWIR

New features

- `Look-up tables (LUTs) features`
- `Sharpness/Blur`
- `TriggerDelay`

Resolved issues

Alvium ID	Affected models	Description
400	U-1240m/c, U-2050m/c	If the `TriggerSelector` value is changed after acquisition, the `ExpsoureActive` signal disappears.
401	U-1240m/c, U-2050m/c	If `TriggerSelector` = *FrameStart* is turned off after streaming with `TriggerSelector` = *FrameStart* turned on, the camera shows an error code after stopping the stream. The camera must be rebooted.

Table 40: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.

Table 41: Known issues

FW 00.06.00.35992

Date of document release: 2021-Aug-13

Supported models

Camera family	Model
Alvium 1800	U-040m/c, U-050m/c, U-120m/c, U-158m/c, U-240m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-511m/c, U-811m/c, U-1236m/c, U-1240Um/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 42: Supported models

New models

Alvium 1800 U-511m/c, U-811m/c, U-1242m/c

New features

- `Binning` features
- `DevicePowerSavingMode`

Resolved issues

Alvium ID	Affected models	Description
553	U-1620m/c, U-2040m/c, U-2460m/c	Calculated frame rates for small ROIs are not exact.

Table 43: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.

Table 44: Known issues (sheet 1 of 2)

Alvium ID	Affected models	Description
400	U-1240m/c, U-2050m/c	If the `TriggerSelector` value is changed after acquisition, the *ExpsoureActive* signal disappears.
401	U-1240m/c, U-2050m/c	If trigger selector frame start is turned off after streaming with trigger selector frame start on, the camera will show an error code after stopping the stream. The camera must be rebooted.

Table 44: Known issues (sheet 2 of 2)

FW 00.04.00.34658

Date of document release: 2021-May-03

Supported models

Camera family	Model
Alvium 1800	U-040m/c, U-120m/c, U-158m/c, U-240m/c, U-319m/c, U-500m/c, U-501m/c NIR, U-507m/c, U-508m/c, U-1236m/c, U-1240Um/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 45: Supported models

New models

Alvium 1800 U-501c NIR, U-1620m/c, U-2040m/c, U-2460m/c

New features

- `DeviceLinkCommandTimeout`
- `DeviceTLVersionMajor`, `DeviceTLVersionMinor`
- `Timestamp` features

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
400	U-1240m/c, U-2050m/c	If the `TriggerSelector` value is changed after acquisition, the *ExpsoureActive* signal disappears.
401	U-1240m/c, U-2050m/c	If trigger selector frame start is turned off after streaming with trigger selector frame start on, the camera will show an error code after stopping the stream. The camera must be rebooted.
553	U-1620m/c, U-2040m/c, U-2460m/c	Calculated frame rates for small ROIs are not exact.

Table 46: Known issues

FW 00.03.00.31919

Date of document release: 2020-Dec-08

Supported models

Camera family	Model
Alvium 1800	U-040m/c, U-050m/c, U-120m/c, U-158m/c, U-240m/c, U-319m/c, U-500m/c, U-501m NIR, U-507m/c, U-508m/c, U-1236m/c, U-1240Um/c, U-2050m/c

Table 47: Supported models

New models

No models were added.

New features

- Sensor timing optimizations increase maximum frame rates for selected models
- Updated default values for auto white balance
- Fixed pattern noise correction (FPNC) support for all models, except Alvium 1800 U-2050m/c
- Defect pixel correction (DPC, factory calibrated) for 1800 U-2050m/c models

Resolved issues

Alvium ID	Affected models	Description
289	All	Fixed wrong behavior of software triggers.
299	U-1236m/c, U-1240m/c, U-2050m/c	Fixed issue with `AcquisitionStop` command.

Table 48: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the `ExpsoureActive` signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
338	U-500m/c, U-501 m NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, no image is transmitted.
400	U-1240m/c, U-2050m/c	If the `TriggerSelector` value is changed after acquisition, the `ExpsoureActive` signal disappears.
401	U-1240m/c, U-2050m/c	If trigger selector frame start is turned off after streaming with trigger selector frame start on, the camera will show an error code after stopping the stream. The camera must be rebooted.

Table 49: Known issues

FW 00.02.00.29974

Date of document release: 2020-Jul-23

Supported models

Camera family	Model
Alvium 1800	U-040m/c, U-050m/c, U-120m/c, U-158m/c, U-240m/c, U-319m/c, U-500m/c, U-501m NIR, U-507m/c, U-508m/c, U-1236m/c, U-1240Um/c, U-2050m/c

Table 50: Supported models

New models

Alvium 1800 U-240m/c, U-508m/c, U-1240m/c

New features

No features were added.

Resolved issues

No issues were fixed.

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
253	All	Auto mode feature `IntensityControllerOutliersDark` does not work properly.
289	All	With default settings for software triggers, triggers can be missed.
299	U-1236m/c, U-1240m/c, U-2050m/c	`AcquisitionStop` command during sensor readout can stop camera.
338	U-500m/c, U-501 m NIR, U-1240m/c, U-2050m/c	If `AcquisitionStop` is executed shortly after `AcquisitionStart`, the captured frame is discarded.

Table 51: Known issues

FW 00.01.03.29025

Date of document release: 2020-Mar-04

Supported models

Camera family	Model
Alvium 1800	U-040m/c, U-050m/c, U-120m/c, U-158m/c, U-319, U-500m/c, U-501m NIR, U-507, U-1236, U-2050

Table 52: Supported models

New models

Alvium 1800 U-319m/c, U-507m/c, U-1236m/c, U-2050m/c

New features

Defect pixel correction (DPC, factory calibrated, except for 1800 U-2050m/c models)

Resolved issues

Alvium ID	Affected models	Description
79	All	Fixed issues for `OffsetX` for `OffsetY`.

Table 53: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If `ShutterMode` is changed after image acquisition, the *ExpsoureActive* signal disappears.
289	All	With default settings for software triggers, triggers can be missed.
299	U-1236m/c, U-1240m/c, U-2050m/c	`AcquisitionStop` command during sensor readout can stop camera.

Table 54: Known issues

FW 00.01.02.28100

Date of document release: 2019-Dec-03

Supported models

Camera family	Model
Alvium 1800	U-040m/c, U-050m/c, U-120m/c, U-158m/c, U-500m/c, U-501m NIR

Table 55: Supported models

New models

Alvium 1800 U-040m/c, U-158m/c, U-501m NIR

New features

- `ColorTransformationMatrix`
- `Contrast`
- `ExposureActive` signal
- `Gamma`
- `Hue`
- `Saturation`

Resolved issues

No issues were fixed.

Known issues

Alvium ID	Affected models	Description
79	All	Large values for `OffsetX` for `OffsetY` may not work properly.

Table 56: Known issues

FW 00.01.01.27102

Date of document release: 2019-Oct-18

Supported models

Camera family	Model
Alvium 1800	U-050m/c, U-120m/c, U-500m/c

Table 57: Supported models

New models

Alvium 1800 U-050m/c, U-120m/c

Resolved issues

No issues were fixed.

Known issues

No issues have been discovered.

FW 00.01.00.26405

Date of document release: 2019-Jul-01

Supported model

Camera family	Model
Alvium 1800	U-500m/c

Table 58: Supported models

New models

Initial commercial release of Alvium 1800 U-500m/c

Known issues

No issues have been discovered.

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Current firmware and release notes
https://www.alliedvision.com/en/support/firmware-downloads

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