

## USB FIRMWARE RELEASE NOTES

### Alvium 1800 U cameras

2024-Mar-22  
V00.13.01.794391f9



#### 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](http://www.alliedvision.com/en/support/technical-documentation/alvium-usb-documentation)
- Firmware files  
[www.alliedvision.com/en/support/firmware](http://www.alliedvision.com/en/support/firmware)
- Firmware updater, included in **Vimba X**  
[www.alliedvision.com/en/products/software/vimba-x-sdk](http://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	<a href="#">FW 00.13.01.794391f9</a>	2024-Mar-22
1800 U-050m/c <sup>1</sup>	<a href="#">FW 00.11.00.9cf0c21e</a>   <a href="#">updated notes</a>	2022-Dec-19

<sup>1</sup> 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 00.13.01.794391f9

Date of document release: 2024-Mar-22

### 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

No new models have been added.

### Changed features

- *FrameActive* and *ReadOutActive* options have been added for *LineSource* in *DigitalIIOControl*.
- *StandbyMode* option has been added for *DevicePowerSavingMode* in *DeviceControl*.

### New features

- *EventControl*
- *TestPattern* in *ImageFormatControl*

### Resolved issues

No known issues have been resolved.

### Known issues

Alvium ID	Affected models	Description
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If <i>AcquisitionStop</i> is executed shortly after <i>AcquisitionStart</i> , no image is transmitted.
978	All	If an <i>AcquisitionStop</i> 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 <i>AcquisitionMode</i> set to <i>MultiFrame</i> : If cameras have been triggered by <i>AcquisitionStart</i> , the streaming stops when parameters are changed.

Table 5: Known issues

## 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, <b>-507m/c Pol</b> , -508m/c, <b>-508m/c Pol</b> , -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 6: 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 <b>Height</b> and <b>OffsetY</b> .
1171	Alvium 1800 U-2050m/c	If user sets are loaded where <b>ReverseY</b> = <i>True</i> and <b>OffsetY</b> is configured, the output image is distorted.

Table 7: 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 <b>AcquisitionStop</b> is executed shortly after <b>AcquisitionStart</b> , no image is transmitted.
978	All	If an <b>AcquisitionStop</b> 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.
<b>1324</b>	<b>U-500m/c, U-501 NIR, U-1240m/c, U-2050m/c</b>	<b>This applies with AcquisitionMode set to MultiFrame: If cameras have been triggered by AcquisitionStart, the streaming stops when parameters are changed.</b>

Table 8: 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 9: 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
- `LUTLoadA11` and `LUTSaveA11` 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 <code>Height</code> and <code>OffsetY</code> .
1171	Alvium 1800 U-2050m/c	If user sets are loaded where <code>ReverseY = True</code> and <code>OffsetY</code> is configured, the output image is distorted.

Table 10: 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 <code>AcquisitionStop</code> is executed shortly after <code>AcquisitionStart</code> , no image is transmitted.
978	All	If an <code>AcquisitionStop</code> 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 11: 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 12: 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 <code>Height</code> and <code>OffsetY</code> .
1171	Alvium 1800 U-2050m/c	If user sets are loaded where <code>ReverseY = True</code> and <code>OffsetY</code> is configured, the output image is distorted.

Table 13: 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 <code>AcquisitionStop</code> is executed shortly after <code>AcquisitionStart</code> , no image is transmitted.
978	All	If an <code>AcquisitionStop</code> 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 14: 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 17.
- 12-bit Packed pixel formats were added only for Alvim 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 15: 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
967	All	<b>BlackLevel</b> is wrongly set after loading settings file: The camera incorrectly reports a <b>BlackLevel</b> value of $\emptyset$ , requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of $\emptyset$ .
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when <b>ReverseY</b> is turned on: For rolling shutter models, defect pixels may appear after turning on <b>ReverseY</b> .

Table 16: Resolved issues

## Known issues

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

Table 17: 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, <b>U-131m/c</b> , U-130 VSWIR, U-158m/c, <b>U-192m/c</b> , <b>U-203m/c</b> , 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 18: 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
967	All	<b>BlackLevel</b> is wrongly set after loading settings file: The camera incorrectly reports a <b>BlackLevel</b> value of <b>0</b> , requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of <b>0</b> .
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when <b>ReverseY</b> is turned on: For rolling shutter models, defect pixels may appear after turning on <b>ReverseY</b> .

Table 19: Resolved issues

## Known issues

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

Table 20: 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, <b>U-895m/c</b> , U-1236m/c, U-1240m/c, U-1242m/c, U-1620m/c, U-2040m/c, U-2050m/c, U-2460m/c

Table 21: 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
967	All	<b>BlackLevel</b> is wrongly set after loading settings file: The camera incorrectly reports a <b>BlackLevel</b> value of $\emptyset$ , requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of $\emptyset$ .
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when <b>ReverseY</b> is turned on: For rolling shutter models, defect pixels may appear after turning on <b>ReverseY</b> .

Table 22: Resolved issues

## Known issues

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

Table 23: 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 24: 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
967	All	<b>BlackLevel1</b> is wrongly set after loading settings file: The camera incorrectly reports a <b>BlackLevel</b> value of $\emptyset$ , requiring it to be set to a different value and then reset to 0 in order to actually achieve a value of $\emptyset$ .
1041	U-500m/c, U-501m/c NIR, U-1240m/c, U-2050m/c	DPC (defect pixel correction) is not working when <b>ReverseY</b> is turned on: For rolling shutter models, defect pixels may appear after turning on <b>ReverseY</b> .

Table 25: Resolved issues

## Known issues

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

Table 26: 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 27: 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 28: Resolved issues

## Known issues

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

Table 29: Known issues

## FW 00.11.00.9cf0c21e

Date of document release: 2022-Nov-14

**Note:** Data of this note entry is outdated. Please see [FW 00.10.00.6c9062b1](#) | updated notes on page 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 30: 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 31: Resolved issues

## Known issues

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

Table 32: 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 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. 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
253	All	Auto mode feature <b>IntensityControllerOutliersDark</b> does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If <b>AcquisitionStop</b> is executed shortly after <b>AcquisitionStart</b> , no image is transmitted.

Table 34: Known issues

## FW 00.10.00.6c9062b1

Date of document release: 2022-Jul-20

**Note:** Data of this note entry is outdated. Please see [FW 00.10.00.6c9062b1 | updated notes](#) on page 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-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 35: 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
253	All	Auto mode feature <b>IntensityControllerOutliersDark</b> does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If <b>AcquisitionStop</b> is executed shortly after <b>AcquisitionStart</b> , no image is transmitted.

Table 36: 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 37: 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 <b>AutoWhiteBalance</b> measurement was fixed.



## Known issues

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

Table 38: 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 39: 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 1x to 8x for Digital Binning.
- **CounterAndTimerControl** category
- **ExposureActiveMode** (Rolling shutter (RS) models)
- **SensorBitDepth** (selected models)
- **UserSetControl1**: Added individual user set options

## Resolved issues

- No issues were fixed.

## Known issues

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

Table 40: 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 41: 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 <b>TriggerSelector</b> value is changed after acquisition, the <b>ExpsoureActive</b> signal disappears.
401	U-1240m/c, U-2050m/c	If <b>TriggerSelector = FrameStart</b> is turned off after streaming with <b>TriggerSelector = FrameStart</b> turned on, the camera shows an error code after stopping the stream. The camera must be rebooted.

Table 42: Resolved issues

## Known issues

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

Table 43: 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 44: 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 45: Resolved issues

## Known issues

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

Table 46: Known issues (sheet 1 of 2)

Alvium ID	Affected models	Description
400	U-1240m/c, U-2050m/c	If the <b>TriggerSelector</b> value is changed after acquisition, the <b>ExpsoureActive</b> 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 46: 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 47: 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExpsoureActive</b> signal disappears.
253	All	Auto mode feature <b>IntensityControllerOutliersDark</b> does not work properly.
338	U-500m/c, U-501 m/c NIR, U-1240m/c, U-2050m/c	If <b>AcquisitionStop</b> is executed shortly after <b>AcquisitionStart</b> , no image is transmitted.
400	U-1240m/c, U-2050m/c	If the <b>TriggerSelector</b> value is changed after acquisition, the <b>ExpsoureActive</b> 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 48: 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 49: 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 <b>AcquisitionStop</b> command.

Table 50: Resolved issues

### Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
253	All	Auto mode feature <b>IntensityControllerOutliersDark</b> does not work properly.
338	U-500m/c, U-501 m NIR, U-1240m/c, U-2050m/c	If <b>AcquisitionStop</b> is executed shortly after <b>AcquisitionStart</b> , no image is transmitted.
400	U-1240m/c, U-2050m/c	If the <b>TriggerSelector</b> value is changed after acquisition, the <b>ExposureActive</b> 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 51: 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 52: 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 <b>ShutterMode</b> is changed after image acquisition, the <b>ExposureActive</b> signal disappears.
253	All	Auto mode feature <b>IntensityControllerOutliersDark</b> 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	<b>AcquisitionStop</b> command during sensor readout can stop camera.
338	U-500m/c, U-501 m NIR, U-1240m/c, U-2050m/c	If <b>AcquisitionStop</b> is executed shortly after <b>AcquisitionStart</b> , the captured frame is discarded.

Table 53: 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 54: 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 <code>OffsetX</code> for <code>OffsetY</code> .

Table 55: Resolved issues

## Known issues

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

Table 56: 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 57: 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 58: 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 59: 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 60: Supported models

### New models

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

### Known issues

No issues have been discovered.



## Contact us

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