

USB FIRMWARE RELEASE NOTES

Alvium 1800 U cameras

 2022-Dec-19
 V00.11.00.9cf0c21e

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 Suite**
www.alliedvision.com/software

Latest firmware version for your Alvium USB model

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

Models	FW version	FW release date
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	FW 00.11.00.9cf0c21e updated notes	2022-Dec-19

Table 3: Latest firmware version by model

FW 00.11.00.9cf0c21e | updated notes

Date of **note updates**: 2022-Dec-19

Date of firmware 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 4: 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 5: 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 6: Known issues

FW 00.11.00.9cf0c21e

Release date: 2022-Nov-14

Note: Data of this note entry is outdated. Please see [FW 00.10.00.6c9062b1](#) | [updated notes](#) on page 4.

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 7: 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

- **To be 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 8: 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 9: Known issues

FW 00.10.00.6c9062b1 | updated notes

Date of **note updates**: 2022-Aug-16

Date of firmware 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 10: 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 ExposureActive 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 11: Known issues

FW 00.10.00.6c9062b1

Release date: 2022-Jul-20

Note: Data of this note entry is outdated. Please see [FW 00.10.00.6c9062b1 | updated notes](#) on page 4.

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 12: 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 ExposureActive 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 13: Known issues

FW 00.08.01.13f227a4

Release date: 2022-May-16

Supported models

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

Table 14: 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 <code>AutoWhiteBalance</code> measurement was fixed.

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 15: Known issues

FW 00.08.00.6727174b

Release date: 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 16: Supported models

New models

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

New features

- 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 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 17: Known issues

FW 00.07.00.81db3896

Release date: 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 18: 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 19: 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 20: Known issues

FW 00.06.00.35992

Release date: 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 21: 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 22: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If ShutterMode is changed after image acquisition, the ExposureActive 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 ExposureActive 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 23: Known issues

FW 00.04.00.34658

Release date: 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 24: 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 ExposureActive 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 ExposureActive 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 25: Known issues

FW 00.03.00.31919

Release date: 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 26: 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 27: Resolved issues

Known issues

Alvium ID	Affected models	Description
251	U-2050m/c	If ShutterMode is changed after image acquisition, the ExposureActive 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 ExposureActive 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 28: Known issues

FW 00.02.00.29974

Release date: 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 29: 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 ExposureActive 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 30: Known issues

FW 00.01.03.29025

Release date: 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 31: 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 32: 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 33: Known issues

FW 00.01.02.28100

Release date: 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 34: 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 35: Known issues

FW 00.01.01.27102

Release date: 2019-Oct-18

Supported models

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

Table 36: 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

Release date: 2019-Jul-01

Supported model

Camera family	Model
Alvium 1800	U-500m/c

Table 37: Supported models

New models

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

Known issues

No issues have been discovered.

Contact us

Website, email

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Current firmware and release notes

<https://www.alliedvision.com/en/support/firmware-downloads>

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