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 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-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	FW 00.10.00.6c9062b1	2022-Jul-20

Table 3: Latest firmware version by model

FW 00.10.00.6c9062b1

Release date: 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 4: 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 5: 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 6: 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 7: 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 8: 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 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 9: 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 10: 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 11: 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 12: 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 13: 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 14: 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.
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 15: 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 16: 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 17: 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 18: 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 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 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 20: 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 21: 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 22: 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 23: 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 24: 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 25: 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 26: 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 27: 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 28: 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 29: Supported models

New models

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

Known issues

No issues have been discovered.

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www.alliedvision.com/en/avt-locations/avt-distributors

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www.alliedvision.com/en/support
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Current firmware and release notes

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

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