

MIPI CSI-2 | USB3.1. GEN1

Alvium Cameras Hardware Options

V3.4.1

This document at a glance

Alvium cameras are offered as CSI-2 and USB models with various sensors. Moreover, multiple hardware options provide the best match for your application needs. Select between bare board or housed cameras, including the lens mount of your choice. For USB cameras, decide upon the angle for the USB connector.

What else do you need?



At the following links, the reader can find information for Alvium cameras, accessories, and software.

- MIPI CSI-2 cameras
www.alliedvision.com/en/support/technical-documentation/alvium-csi-2-documentation.
- USB3 Vision cameras
www.alliedvision.com/en/support/technical-documentation/alvium-usb-documentation.

Customs classification

You can use this document to classify Alvium cameras and to identify individual sub models, based on the available hardware options.

[Camera specifications overview](#) on page 14 provide data to determine the tax rate and to exclude dual use. [Compliance notifications](#) on page 11 informs about compliance.

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Document history and conventions



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Document history

Version	Date	Remarks
V3.4.1	2021-Aug-20	<ul style="list-style-type: none"> Added Alvium 1500 C-501m/c NIR, 1800 C-511m/c, 1800 C-811m/c, 1800 C-1242m/c, 1800 C-1620m/c, and 1800 C-2040m/c models. Added Alvium 1800 U-511m/c, 1800 U-811m/c, and 1800 U-1242m/c models. Removed link to product codes document.
V3.4.0	2021-Mar-12	<ul style="list-style-type: none"> Added Alvium 1800 C-2460m/c models. Added Alvium 1800 U-501c NIR, 1800 U-1620m/c, 1800 U-2040m/c, and 1800 U-2640m/c models. Added link to separate document with product codes and removed product codes section from this document. Updated mass values in tables for dimensions and mass. Applied editorial changes.
V3.3.0	2020-Dec-01	<ul style="list-style-type: none"> Added Compliance on page 10. Added Camera specifications overview on page 14 for customs classification. Updated drawings and dimensions for bare board cameras. Created Chinese and German translations. Applied editorial changes.
V3.2.0	2020-Jul-09	<ul style="list-style-type: none"> Added Alvium 1800 C-240m/c, 1800 C-508, and 1800 C-1240m/c models. Added Alvium 1800 U-240m/c, 1800 U-508m/c, and 1800 U-1240m/c models. Added CS-Mount sub models to Alvium 1800 C/U-507m/c cameras Updated product codes. Applied editorial changes.
V3.1.4	2020-Mar-10	Removed CS-Mount options for large-sensor cameras.
V3.1.3	2020-Mar-04	Updated product codes.
V3.1.2	2020-Feb-26	Updated product codes.
V3.1.1	2020-Feb-25	Applied minor changes.
V3.1.0	2020-Feb-19	<ul style="list-style-type: none"> Added Alvium 1800 C-319m/c, 1800 C-507m/c, 1800 C-1236m/c, and 1800 C-2050m/c models. Added Alvium 1800 U-319m/c, 1800 U-507m/c, 1800 U-1236m/c, and 1800 U-2050m/c models.

Table 1: Document history (sheet 1 of 2)

Version	Date	Remarks
V3.0.0	2020-Jan-06	<ul style="list-style-type: none"> Added Alvium 1800 C-040m/c, 1800 C-158m/c, and 1500 C-210m/c models. Added Alvium 1800 U-040m/c, 1800 U-158m/c, and 1800 U-501m NIR models.
V2.0.0	2019-Oct-18	<ul style="list-style-type: none"> Added Alvium 1800 U-050m/c and 1800 U-120m/c models. Updated drawings and dimension tables for bare board cameras. Partly renamed and restructured hardware options. Applied editorial changes.
V.1.0.0	2019-May-20	Release document

Table 1: Document history (sheet 2 of 2)

Conventions used in this hardware guide

To give this document an easily understood layout and to emphasize important information, the following typographical styles and symbols are used:

Typographic styles

Style	Function
Emphasis	Programs, or highlighting important things
Web addresses and references	Links to webpages and internal cross references

Table 2: Typographic styles

Symbols and notes



Practical tip

Additional information helps to understand or ease handling the camera.



Additional information

Web address or reference to an external source with more information is shown.

Camera model naming

Alvium cameras are named to identify model properties.

For example, **Alvium 1800 U-500c** is composed of:

	Alvium	1800	U	500	c
Content	Camera series	Camera series details	Interface	Resolution ¹	Color/ monochrome
Examples	Alvium	1500: Basic feature set 1800: Advanced feature set or high-performance sensors	C: MIPI CSI-2 U: USB	500: 5.0 MP 050: 0.5 MP	c: color m: monochrome m NIR: monochrome near infrared

¹Model resolutions may slightly deviate from model naming.

Table 3: Camera model naming

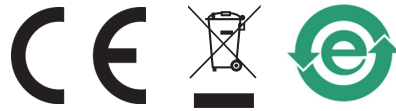
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Compliance notifications



National regulations on disposal must be followed.

For customers in the USA

Closed housing USB cameras only: FCC Class B digital device

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

United States of America: Supplier Declaration of Conformity

Alvium USB cameras comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Party issuing Supplier's Declaration of Conformity

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quality@alliedvision.com

Responsible Party - U.S. Contact Information

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USA
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Note: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For customers in Canada

Closed housing USB cameras only

This apparatus complies with the Class B limits for radio noise emissions set out in the Radio Interference Regulations.

CAN ICES-3 (B) / NMB-3 (B)

Pour utilisateurs au Canada

Caméras USB à boîtier fermé uniquement

Cet appareil est conforme aux normes classe B pour bruits radioélectriques, spécifiées dans le Règlement sur le brouillage radioélectrique.

CAN ICES-3 (B) / NMB-3 (B)

Bare board and open housing cameras

Bare board and open housing cameras are designed for integration and are delivered with open camera back or without housing on customer's request. Housing design is critical for electromagnetic compatibility (EMC) of the camera.



Requirements for EMC housings

See the Electromagnetic Compatibility for Open Housing Alvium Cameras application note at www.alliedvision.com/en/support/technical-documentation under Alvium documentation.

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Camera specifications overview



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About this chapter

This chapter provides data for the customs classification of Alvium cameras.

Where values vary between models, only maximum values are provided. For example, maximum frame rates depend on the image sensor. This document provides the maximum frame rate achievable for the corresponding series.

Cameras are divided into:

- Alvium CSI-2 cameras: Alvium 1500 C and 1800 C series
- Alvium USB cameras: Alvium 1800 U series.

Alvium 1500 C and 1800 C series

Small sized Alvium 1500 C and 1800 C cameras have a MIPI CSI-2 interface and low power consumption to enable various applications on embedded systems.

Alvium 1500 C and 1800 C cameras are available as bare board or with open housing with three different lens mounts.

Applications

Typical applications for Alvium 1500 C and 1800 C cameras are:

- Embedded vision
- Quality control
- Inspection, surveillance
- Industrial imaging.

Selected specifications

Feature	Specification
Sensor type	CMOS
Maximum sensor resolution	24.6 MP
Maximum frame rate	289 fps
Spectral range	380 to 1100 nm (visible spectrum, with extended NIR sensitivity)
Non-volatile memory (Flash)	1024 Kbyte, sufficient for 16 frames at 640 × 480 pixels
Video recording	Not supported by the camera, can be realized only on a connected host system.
Housing material	Metal

Table 4: Alvium 1500 C and 1800 C selected specifications

Alvium 1800 U series

Alvium 1800 U cameras with USB 3.1 Gen 1 interface enable various PC-based applications. Small size and low power consumption make these cameras the ideal match for embedded systems.

Alvium 1800 U cameras are available as bare board, with open housing, or closed housing, equipped with three different lens mounts and two different USB connector positions.

Applications

Typical applications for Alvium USB cameras are:

- Machine vision
- Embedded vision
- Quality control
- Inspection, surveillance
- Industrial imaging.

Selected specifications

Feature	Specification
Sensor type	CMOS
Maximum sensor resolution	24.6 MP
Maximum frame rate	289 fps
Spectral range	380 to 1100 nm (visible spectrum, with extended NIR sensitivity)
Non-volatile memory (Flash)	1024 Kbyte, sufficient for 16 frames at 640 × 480 pixels
Video recording	Not supported by the camera, can be realized only on a connected host system
Housing material	Metal

Table 5: Alvium 1800 U selected specifications

1500 C and 1800 C hardware options



Hardware options for Alvium 1500 C and 1800 C cameras:

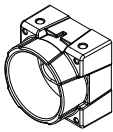
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Hardware options overview

Housing options

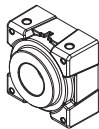


Bare Board: enables maximum design flexibility.

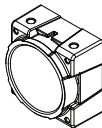


Open Housing: provides a metal housing including a lens mount.

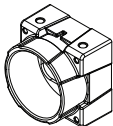
Lens mount options



S-Mount (M12-Mount): enables small size, for lenses available at reasonable prices.



CS-Mount: combines the use of accurate and sensitive lenses like for C-Mount, but with a shorter lens mount.



C-Mount: enables to pick from a large variety of lenses for high quality imaging.



Mounting the camera

To mount the camera properly, see the **Installing the camera** chapter of the user guide.



Tripod adapter

For more information, see the Alvium Cameras Accessory Guide at www.alliedvision.com/en/support/technical-documentation/alvium-usb-documentation.html.

Available options

CSI-2 Bare Board

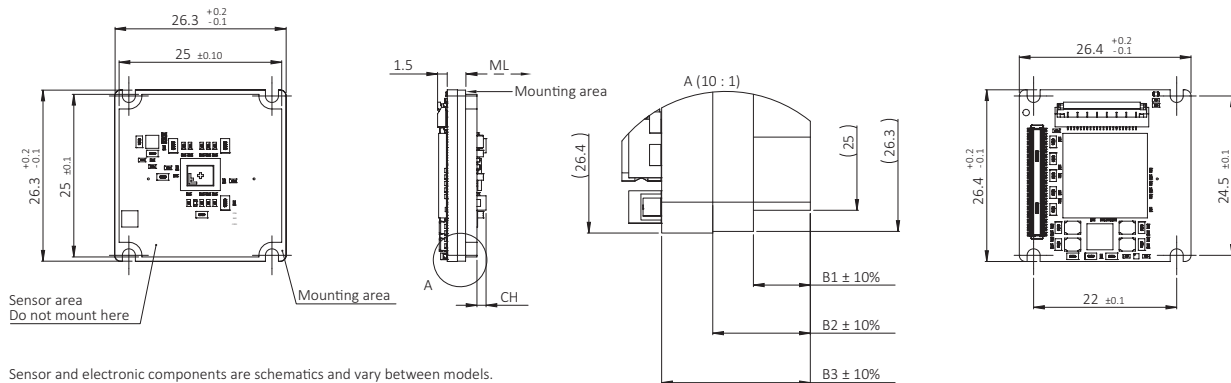


Figure 1: CSI-2 Bare Board dimensions

Dimensions that are common between different models are displayed in Figure 1, model specific dimensions are listed in Table 6. **Mechanical length** (ML) defines the mechanical distance from the mounting area to the lens mount front flange. **Components height** (CH) relates to the electronic components with maximum height, in some cases the sensor.

Camera model	ML: Mechanical Length* for C-Mount	CH: Components Height, incl. the sensor	B1: Board Thickness	B2: Board Thickness	B3: Board Thickness
Alvium 1500 C-050m/c	19.604 mm	1.40 mm	1.75 mm	3.00 mm	4.55 mm
Alvium 1500 C-120m/c	19.689 mm	1.44 mm	1.25 mm	2.40 mm	3.95 mm
Alvium 1500 C-210m/c	19.739 mm	1.67 mm	1.30 mm	2.40 mm	3.95 mm
Alvium 1500 C-500m/c	19.739 mm	1.67 mm	1.30 mm	2.40 mm	3.95 mm
Alvium 1500 C-501m/c NIR	19.739 mm	1.67 mm	1.30 mm	2.40 mm	3.95 mm
Alvium 1800 C-040m/c	19.897 mm	2.27 mm	1.20 mm	2.20 mm	3.75 mm
Alvium 1800 C-158m/c	19.897 mm	2.27 mm	1.20 mm	2.20 mm	3.75 mm
Alvium 1800 C-240m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 C-319m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 C-507m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 C-508m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 C-511m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
*Theoretical values					

Table 6: CSI-2 Bare Board model specific dimensions and nominal values (sheet 1 of 2)

Camera model	ML: Mechanical Length* for C-Mount	CH: Components Height, incl. the sensor	B1: Board Thickness	B2: Board Thickness	B3: Board Thickness
Alvium 1800 C-811m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 C-1236m/c	19.829 mm	2.27 mm	1.15 mm	2.20 mm	3.75 mm
Alvium 1800 C-1240m/c	19.763 mm	2.20 mm	1.15 mm	2.20 mm	3.75 mm
Alvium 1800 C-1242m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 C-1620m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 C-2040m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 C-2050m/c	19.663 mm	2.87 mm	1.05 mm	2.20 mm	3.75 mm
Alvium 1800 C-2460m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm

*Theoretical values

Table 6: CSI-2 Bare Board model specific dimensions and nominal values (sheet 2 of 2)



Mechanical Length for S-Mount and CS-Mount

Mechanical Length for other mounts is:

- CS-Mount: [C-Mount value] – 5 mm
- S-Mount: depending on your design.

Dimensions and mass

Camera model	Dimensions (L × W × H [mm])	Mass
CSI-2 Bare Board	[Model dependent] × 26 × 26	10 g

Table 7: CSI-2 Bare Board dimensions and mass

CSI-2 Open Housing S-Mount

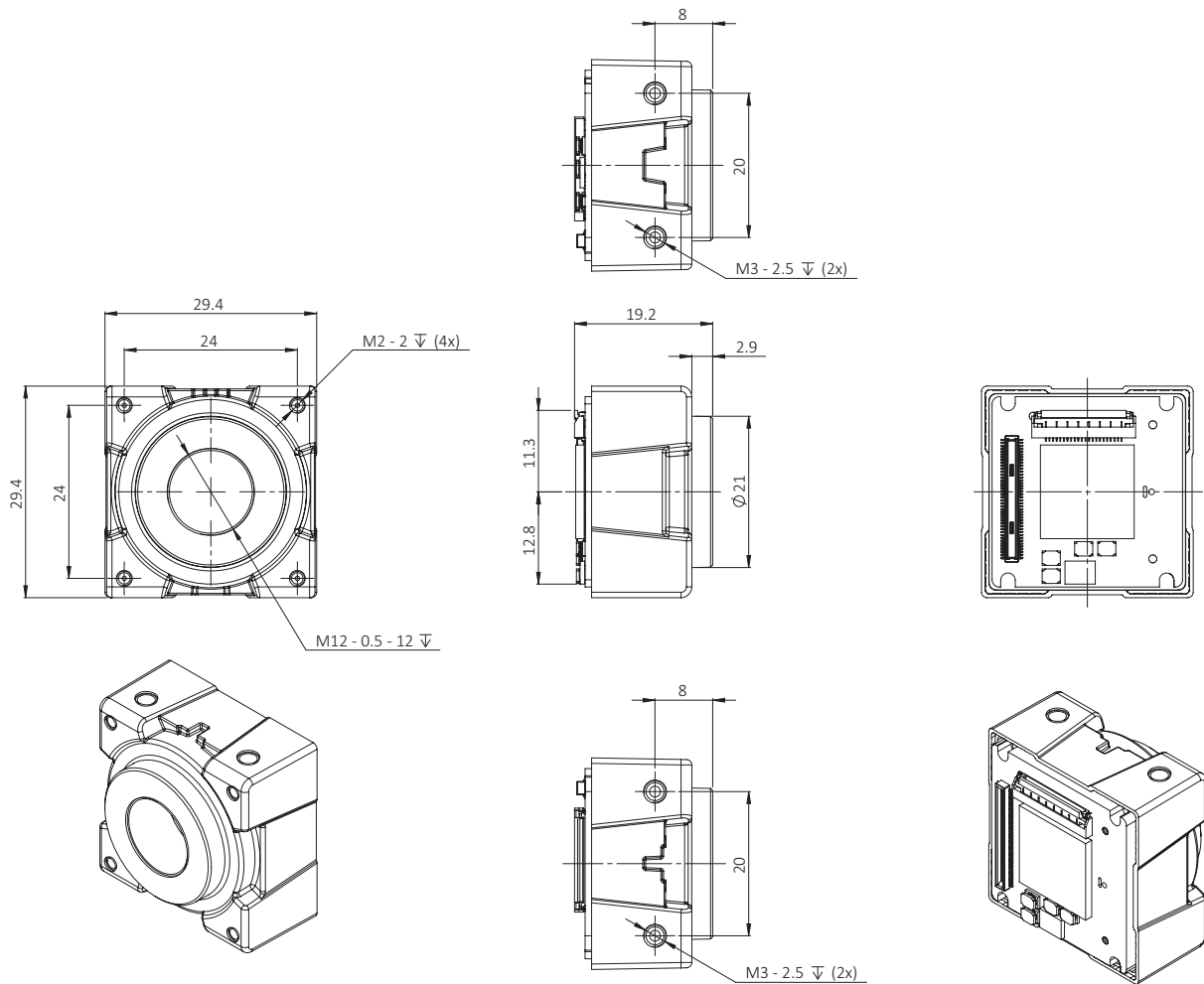


Figure 2: CSI-2 Open Housing S-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	20 × 29 × 29
Mass	40 g

Table 8: CSI-2 Open Housing S-Mount dimensions and mass

CSI-2 Open Housing CS-Mount

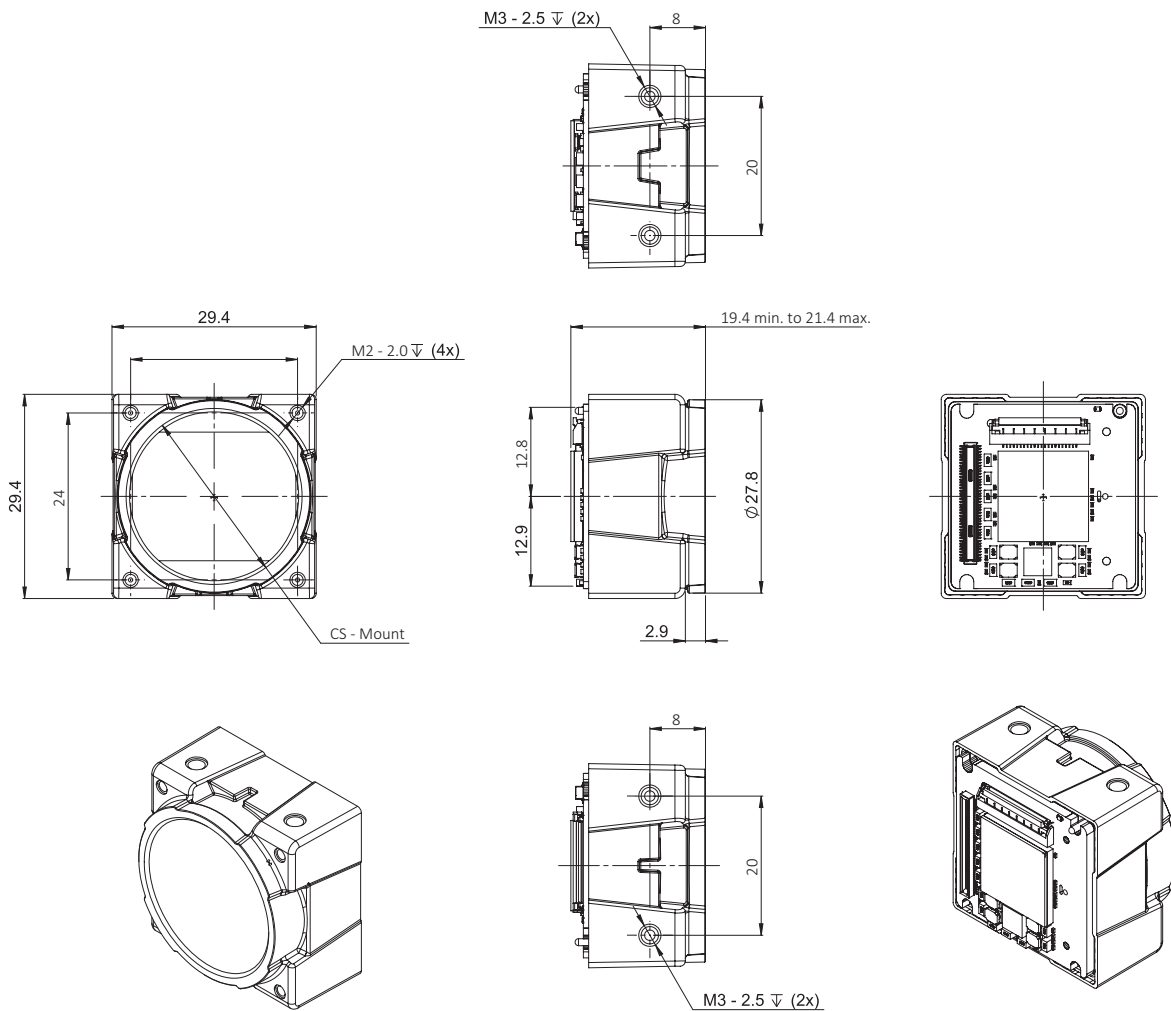


Figure 3: CSI-2 Open Housing CS-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	21 × 29 × 29
Mass	40 g

Table 9: CSI-2 Open Housing CS-Mount dimensions and mass

CSI-2 Open Housing C-Mount

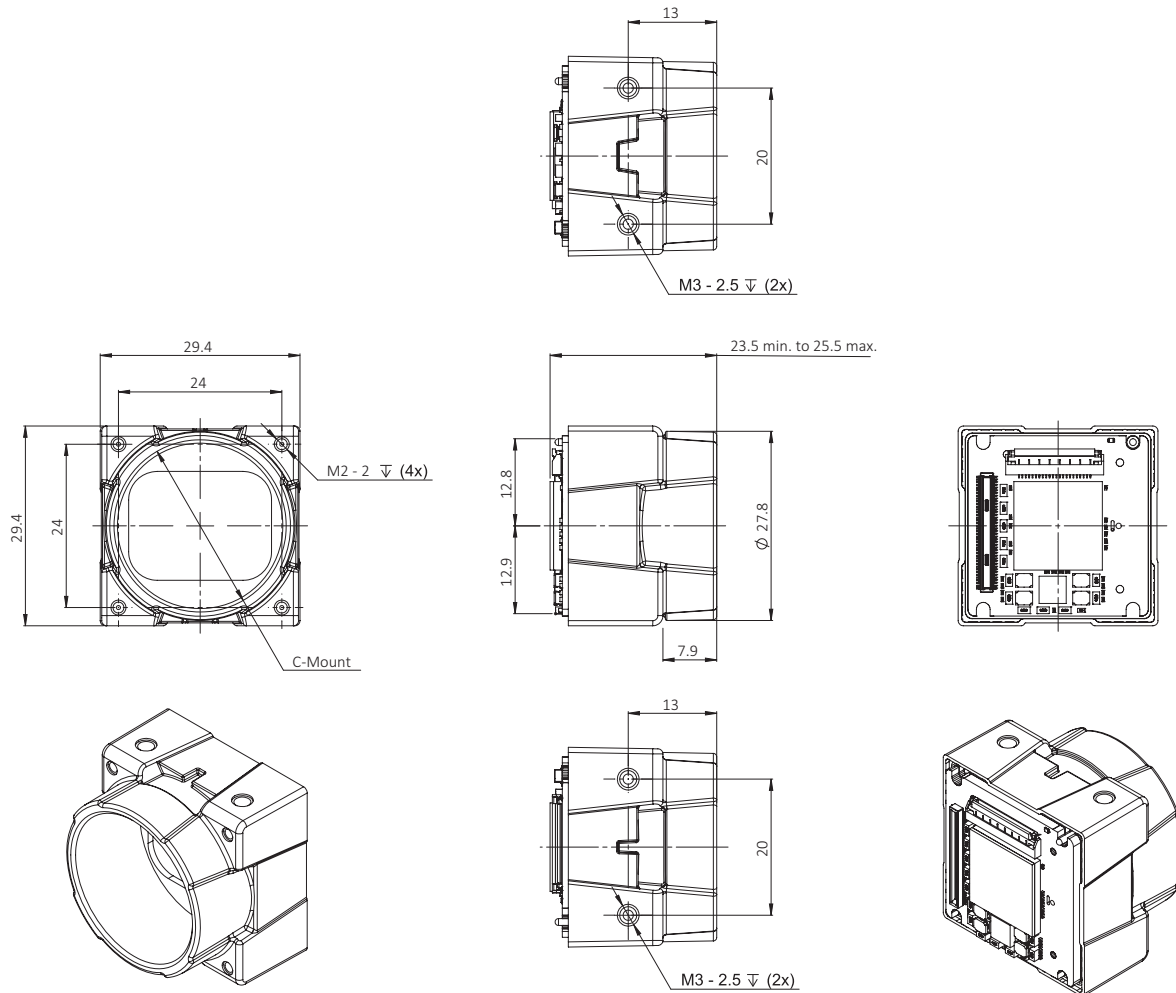


Figure 4: CSI-2 Open Housing C-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L x W x H [mm])	26 x 29 x 29
Mass	40 g

Table 10: CSI-2 Open Housing C-Mount dimensions and mass

1800 U hardware options



Hardware options for Alvium 1800 U cameras:

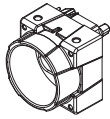
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Hardware options overview

Housing options



Bare Board: enables maximum design flexibility.

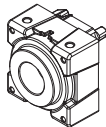


Open Housing: provides a metal housing including a lens mount.

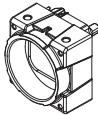


Closed Housing: closed at the back to provide additional protection against electromagnetic interference.

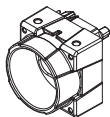
Lens mount options



S-Mount (M12-Mount): enables small size, for lenses available at reasonable prices.

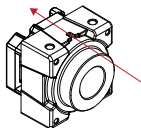


CS-Mount: combines the use of accurate and sensitive lenses like for C-Mount, but with a shorter lens mount.

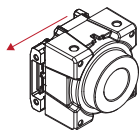


C-Mount: enables to pick from a large variety of lenses for high quality imaging.

USB connector positions



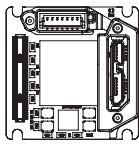
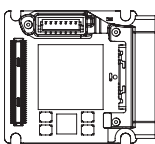

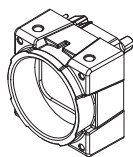
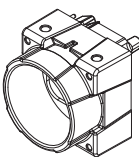
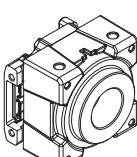
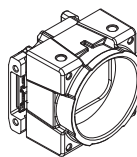
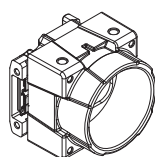
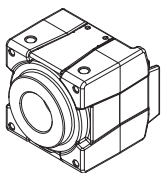
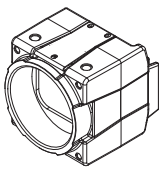
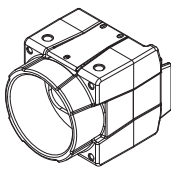
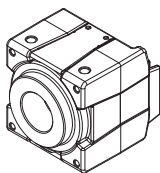
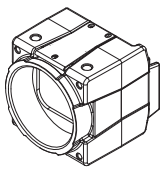
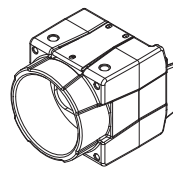
Standard: The connector is at the camera backside. This option is not mentioned in the naming for camera hardware options.



90°: The connector is at the camera left side, as seen from the lens mount. This option is named **90°**.

Available options

Alvium USB cameras are available as shown in the following table:

Bare Board					
Standard			90°		
					
page 27			page 29		
Open Housing					
Standard			90°		
S-Mount	CS-Mount	C-Mount	S-Mount	CS-Mount	C-Mount
					
page 31	page 32	page 33	page 34	page 35	page 36
Closed Housing					
Standard			90°		
S-Mount	CS-Mount	C-Mount	S-Mount	CS-Mount	C-Mount
					
page 37	page 38	page 39	page 40	page 41	page 42



Mounting the camera

To mount the camera properly, see the **Installing the camera** chapter of the user guide.



Tripod adapter

For more information, see the Alvium Cameras Accessory Guide at www.alliedvision.com/en/support/technical-documentation/alvium-usb-documentation.html.

USB Bare Board

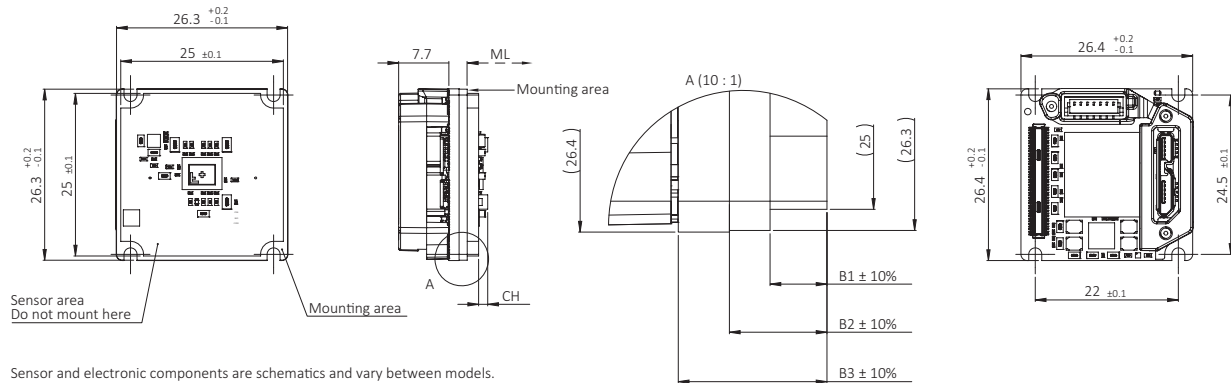


Figure 5: USB Bare Board dimensions

Dimensions that are common between different models are shown in [Figure 5](#), model specific dimensions are listed in [Table 11](#). **Mechanical length (ML)** defines the mechanical distance from the mounting area to the lens mount front flange. **Components height (CH)** relates to the electronic components with maximum height, in some cases the sensor.

Camera model	ML: Mechanical Length* for C-Mount	CH: Components Height, incl. the sensor	B1: Board Thickness	B2: Board Thickness	B3: Board Thickness
Alvium 1800 U-040m/c	19.897 mm	2.27 mm	1.20 mm	2.20 mm	3.75 mm
Alvium 1800 U-050m/c	19.604 mm	1.40 mm	1.75 mm	3.00 mm	4.55 mm
Alvium 1800 U-120m/c	19.689 mm	1.44 mm	1.25 mm	2.40 mm	3.95 mm
Alvium 1800 U-158m/c	19.897 mm	2.27 mm	1.20 mm	2.20 mm	3.75 mm
Alvium 1800 U-240m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-319m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-500m/c	19.739 mm	1.67 mm	1.30 mm	2.40 mm	3.95 mm
Alvium 1800 U-501m/c NIR	19.739 mm	1.67 mm	1.30 mm	2.40 mm	3.95 mm
Alvium 1800 U-507m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-508m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-511m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-811m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-1236m/c	19.829 mm	2.27 mm	1.15 mm	2.20 mm	3.75 mm
Alvium 1800 U-1240m/c	19.763 mm	2.20 mm	1.15 mm	2.20 mm	3.75 mm
Alvium 1800 U-1242m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-1620m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm

*Theoretical values

Table 11: USB Bare Board model specific dimensions and nominal values (Sheet 1 of 2)

Camera model	ML: Mechanical Length* for C-Mount	CH: Components Height, incl. the sensor	B1: Board Thickness	B2: Board Thickness	B3: Board Thickness
Alvium 1800 U-2040m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-2050m/c	19.663 mm	2.87 mm	1.05 mm	2.20 mm	3.75 mm
Alvium 1800 U-2460m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm

*Theoretical values

Table 11: USB Bare Board model specific dimensions and nominal values (Sheet 2 of 2)



Mechanical Length for S-Mount and CS-Mount

Mechanical Length for other mounts is:

- CS-Mount: [C-Mount value] – 5 mm
- S-Mount: depending on your design.

Dimensions and mass

Camera model	Dimensions (L × W × H [mm])	Mass
USB Bare Board	[Model dependent] × 26 × 26	15 g

Table 12: USB Bare Board dimensions and mass

USB Bare Board 90°

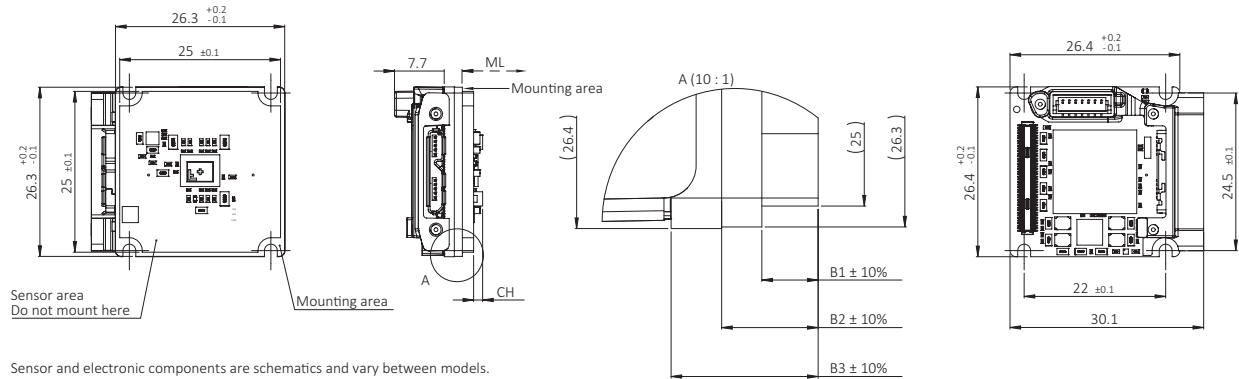


Figure 6: USB Bare Board 90° dimensions

Dimensions that are common between different models are shown in [Figure 6](#), model specific dimensions are listed in [Table 13](#). **Mechanical length (ML)** defines the mechanical distance from the mounting area to the lens mount front flange. **Components height (CH)** relates to the electronic components with maximum height, in some cases the sensor.

Camera model	ML: Mechanical Length* for C-Mount	CH: Components Height, incl. the sensor	B1: Board Thickness	B2: Board Thickness	B3: Board Thickness
Alvium 1800 U-040m/c	19.897 mm	2.27 mm	1.20 mm	2.20 mm	3.75 mm
Alvium 1800 U-050m/c	19.604 mm	1.40 mm	1.75 mm	3.00 mm	4.55 mm
Alvium 1800 U-120m/c	19.689 mm	1.44 mm	1.25 mm	2.40 mm	3.95 mm
Alvium 1800 U-158m/c	19.897 mm	2.27 mm	1.20 mm	2.20 mm	3.75 mm
Alvium 1800 U-240m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-319m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-500m/c	19.739 mm	1.67 mm	1.30 mm	2.40 mm	3.95 mm
Alvium 1800 U-501m/c NIR	19.739 mm	1.67 mm	1.30 mm	2.40 mm	3.95 mm
Alvium 1800 U-507m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-508m/c	19.929 mm	2.27 mm	1.25 mm	2.20 mm	3.75 mm
Alvium 1800 U-511m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-811m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-1236m/c	19.829 mm	2.27 mm	1.15 mm	2.20 mm	3.75 mm
Alvium 1800 U-1240m/c	19.763 mm	2.20 mm	1.15 mm	2.20 mm	3.75 mm
Alvium 1800 U-1242m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-1620m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm

*Theoretical values

Table 13: Bare Board 90° model specific dimensions and nominal values (Sheet 1 of 2)

Camera model	ML: Mechanical Length* for C-Mount	CH: Components Height, incl. the sensor	B1: Board Thickness	B2: Board Thickness	B3: Board Thickness
Alvium 1800 U-2040m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm
Alvium 1800 U-2050m/c	19.663 mm	2.87 mm	1.05 mm	2.20 mm	3.75 mm
Alvium 1800 U-2460m/c	19.613 mm	2.88 mm	1.00 mm	2.20 mm	3.75 mm

*Theoretical values

Table 13: Bare Board 90° model specific dimensions and nominal values (Sheet 2 of 2)



Mechanical Length for S-Mount and CS-Mount

Mechanical Length for other mounts is:

- CS-Mount: [C-Mount value] – 5 mm
- S-Mount: depending on your design.

Dimensions and mass

Camera model	Dimensions (L × W × H [mm])	Mass
USB Bare Board 90°	[Model dependent] × 30 × 26	15 g

Table 14: USB Bare Board 90° dimensions and mass

USB Open Housing S-Mount

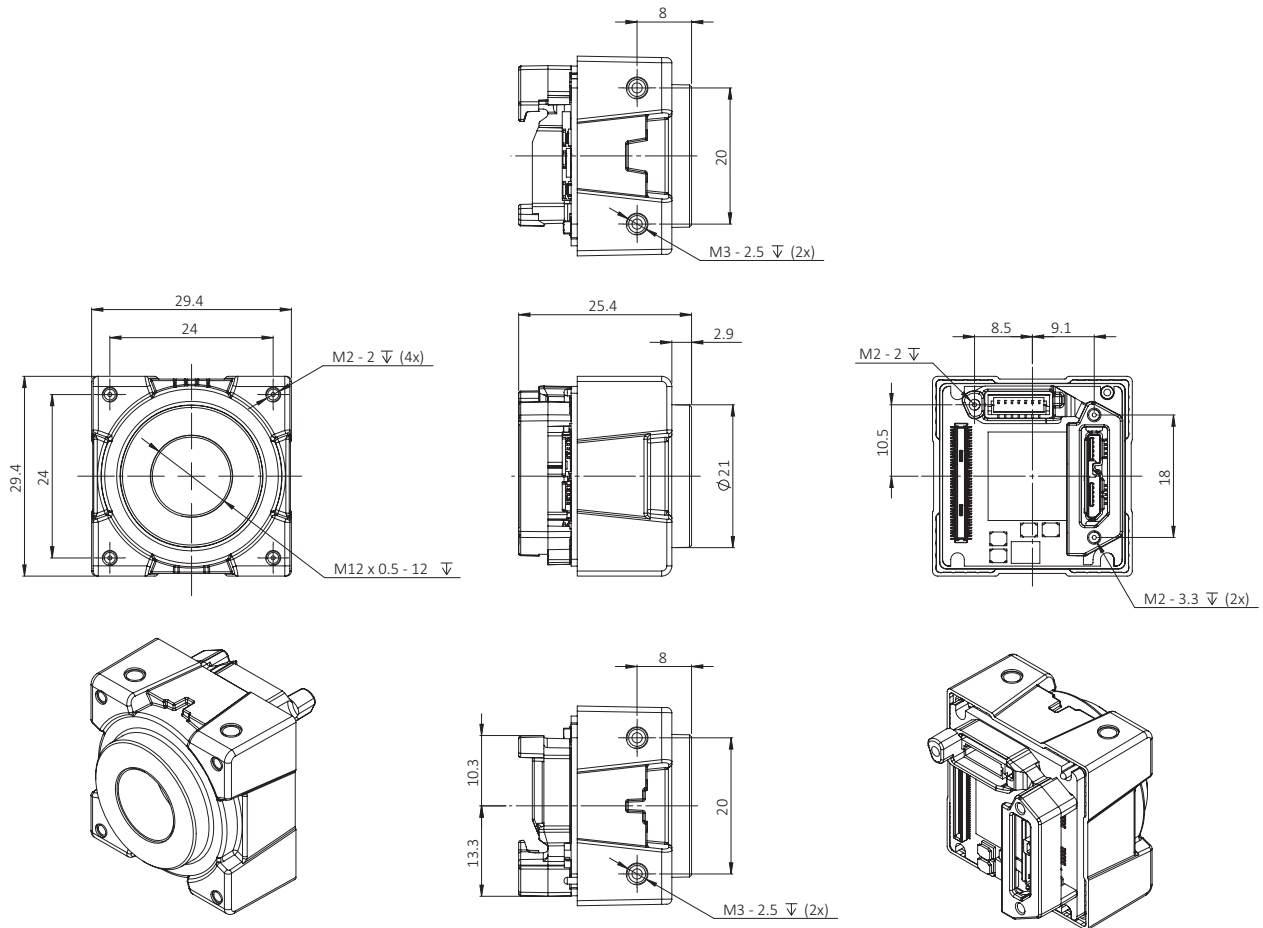


Figure 7: USB Open Housing S-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L x W x H [mm])	25 x 29 x 29
Mass	45 g

Table 15: USB Open Housing S-Mount dimensions and mass

USB Open Housing CS-Mount

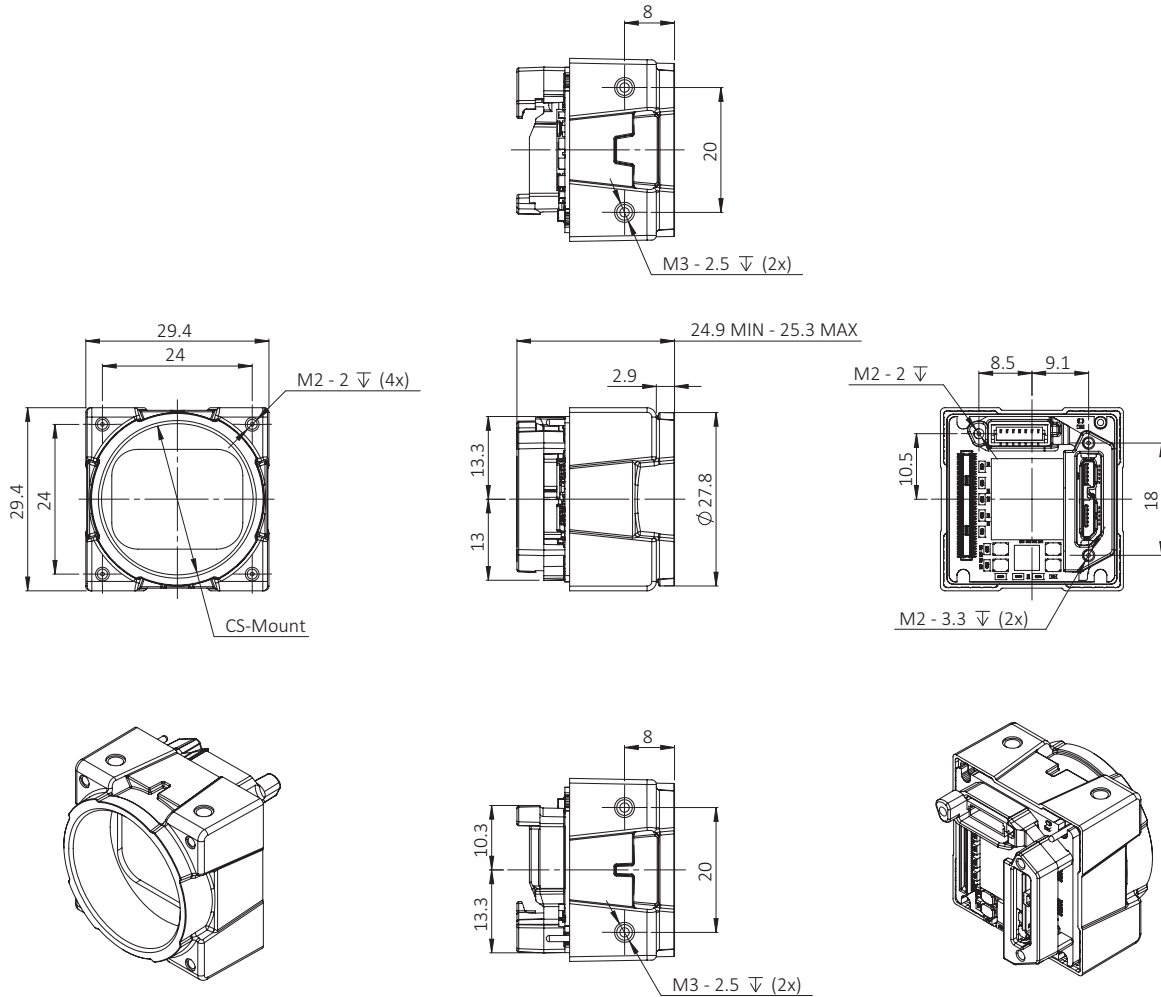


Figure 8: USB Open Housing CS-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	25 × 29 × 29
Mass	45 g

Table 16: USB Open Housing CS-Mount dimensions and mass

USB Open Housing C-Mount

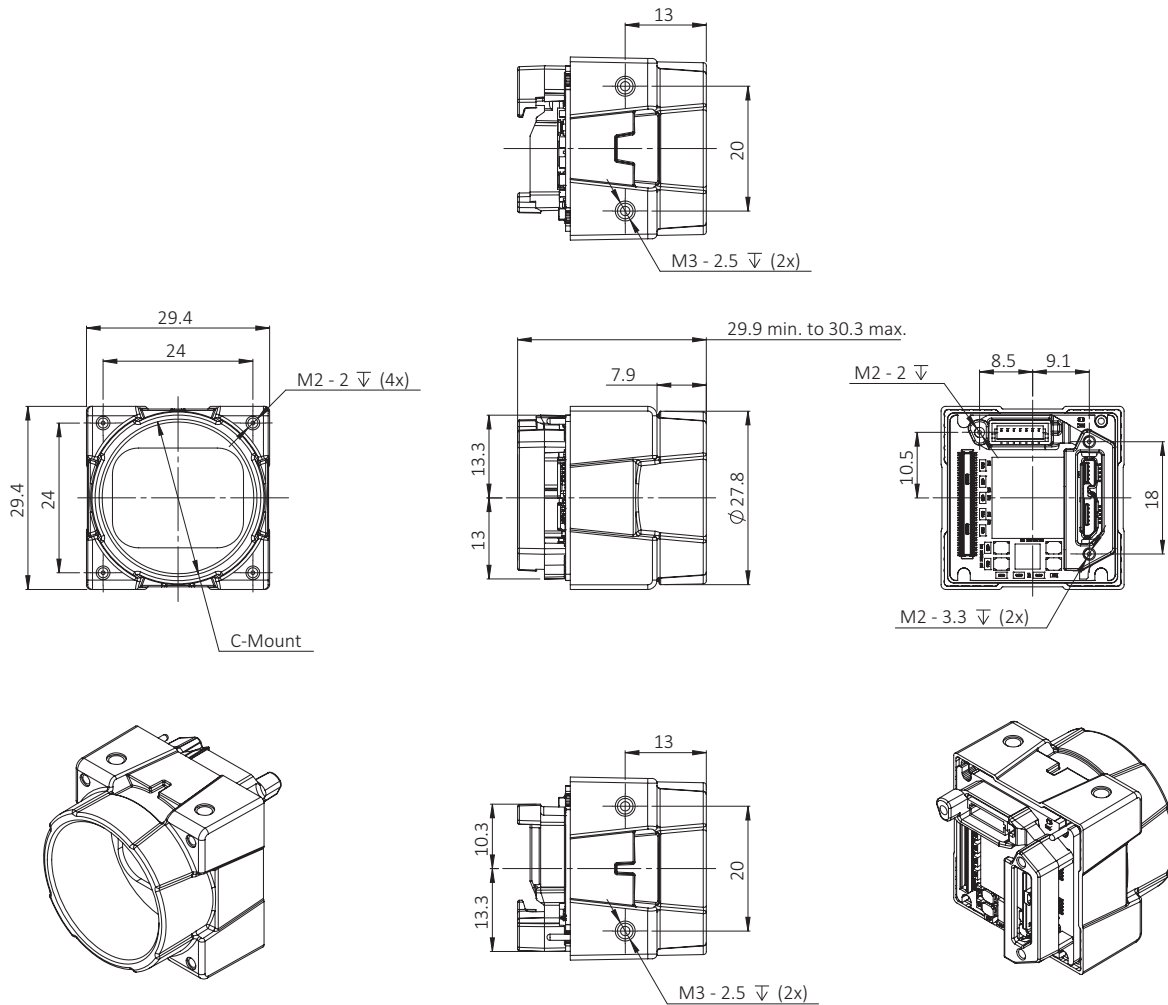


Figure 9: USB Open Housing C-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	30 × 29 × 29
Mass	45 g

Table 17: USB Open Housing C-Mount dimensions and mass

USB Open Housing S-Mount 90°

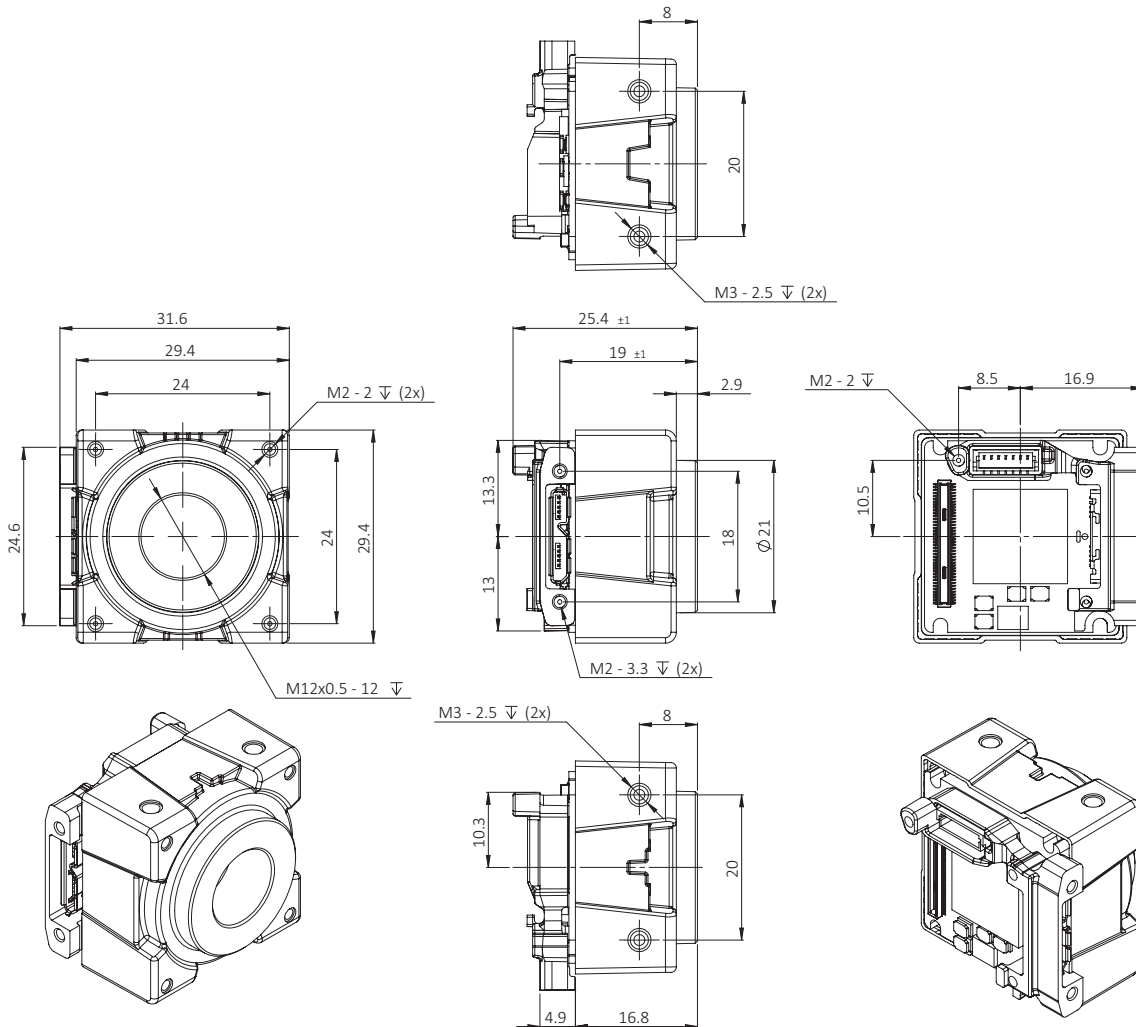


Figure 10: USB Open Housing S-Mount 90° dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	25 × 32 × 29
Mass	50 g

Table 18: USB Open Housing S-Mount 90° dimensions and mass

USB Open Housing CS-Mount 90°

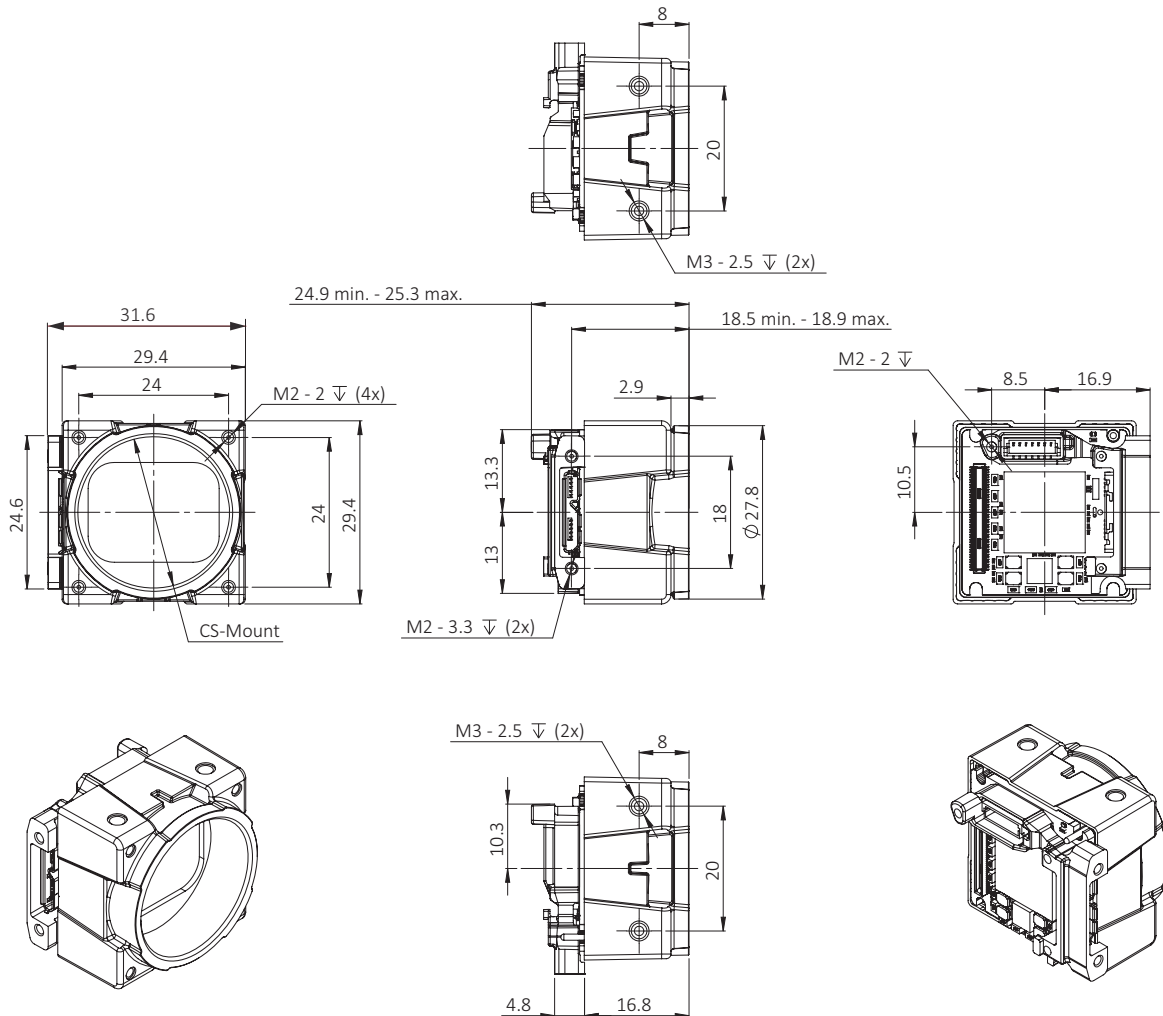


Figure 11: USB Open Housing CS-Mount 90° dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	25 × 32 × 29
Mass	50 g

Table 19: USB Open Housing CS-Mount 90° dimensions and mass

USB Open Housing C-Mount 90°

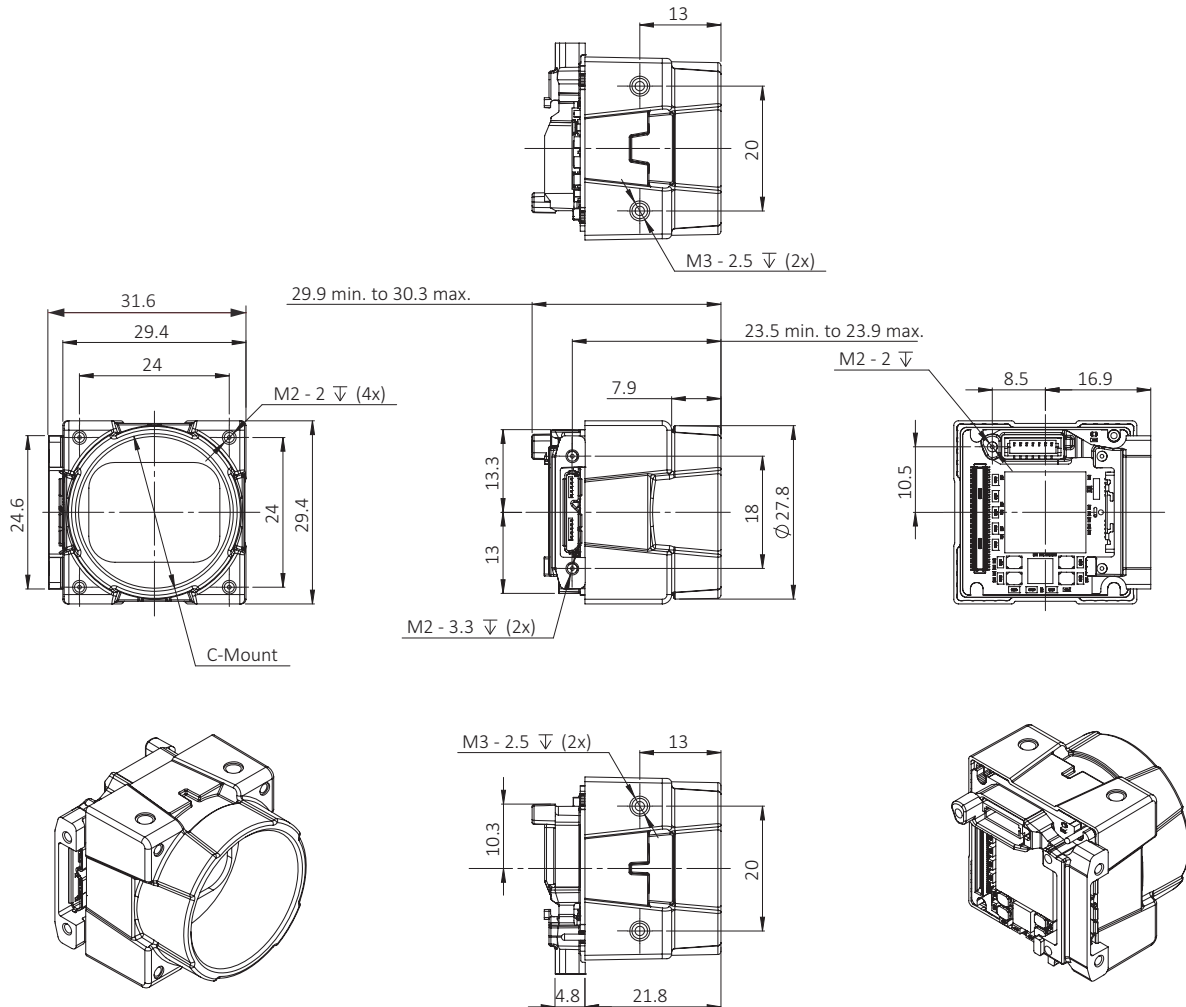


Figure 12: USB Open Housing C-Mount 90° dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	30 × 32 × 29
Mass	50 g

Table 20: USB Open Housing C-Mount 90° dimensions and mass

USB Closed Housing S-Mount

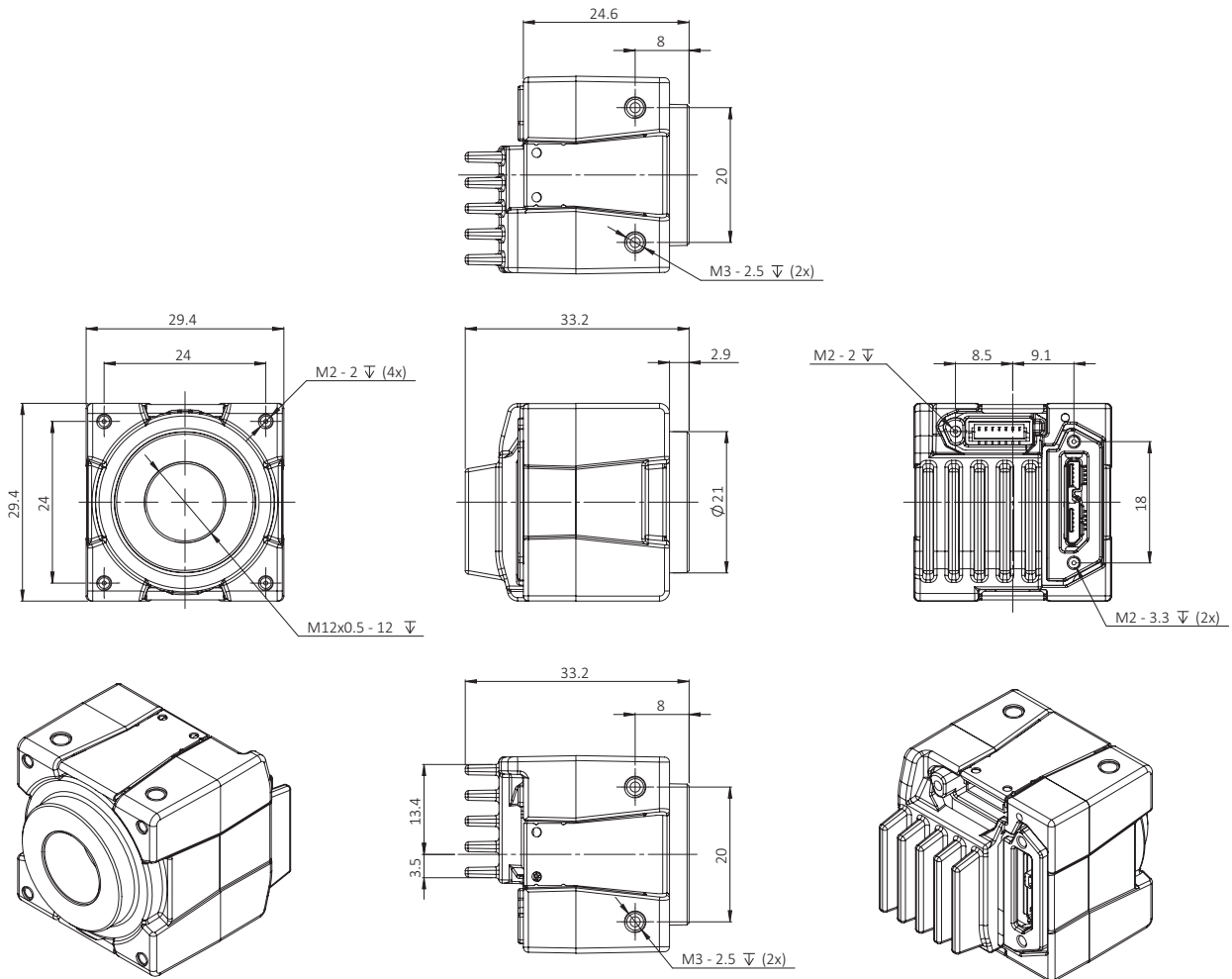


Figure 13: USB Closed Housing S-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	33 × 29 × 29
Mass ¹	60 g
Mass ²	65 g
¹ Alvium 1800 U-040,-050,-120,-158,-319,-500,-501,-507	
² Alvium 1800 U-240,-508,-511,-811,-1236,-1240,-1242,-1620,-2040,-2050,-2460	

Table 21: USB Closed Housing S-Mount dimensions and mass

USB Closed Housing CS-Mount

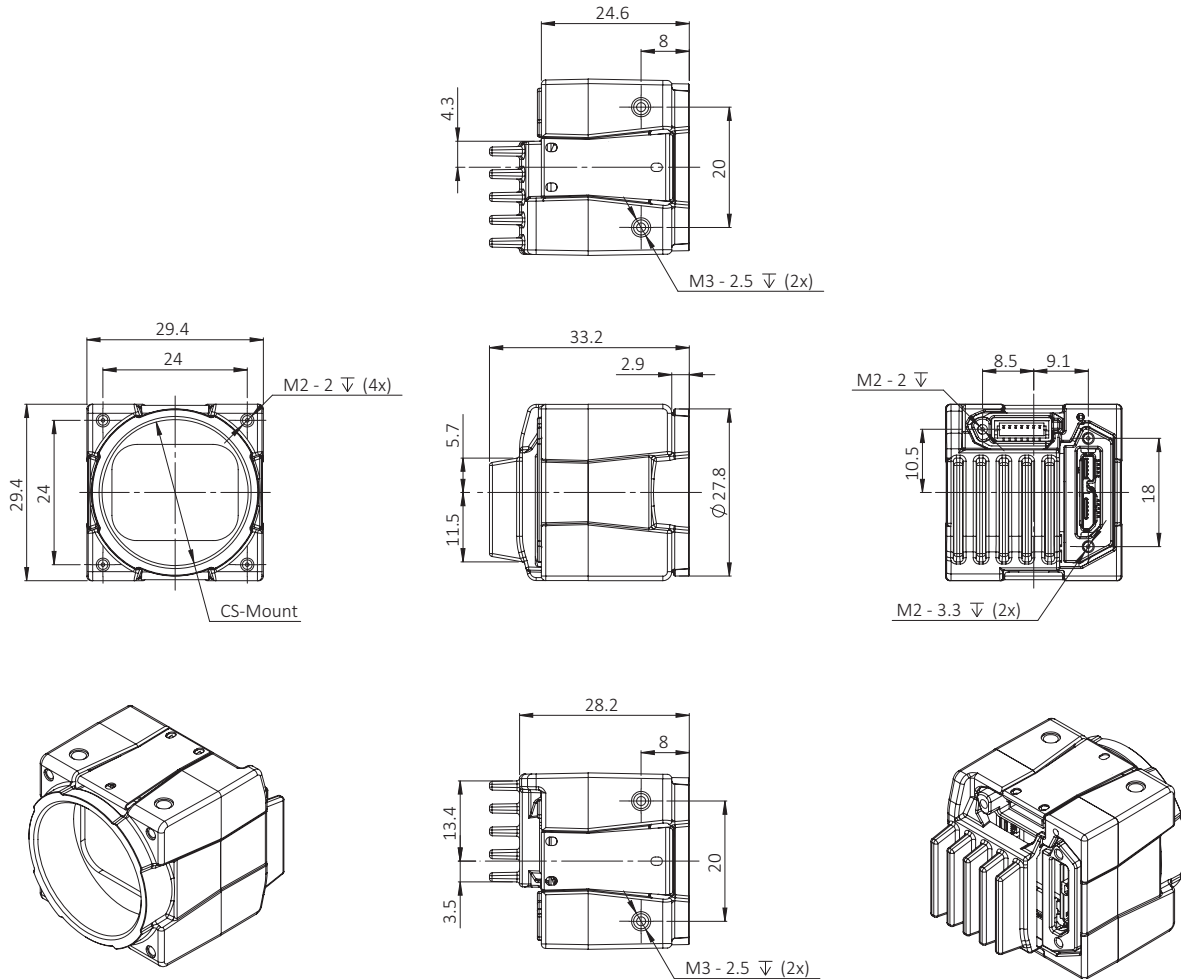


Figure 14: USB Closed Housing CS-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	33 × 29 × 29
Mass ¹	60 g
Mass ²	65 g
¹ Alvium 1800 U-040,-050,-120,-158,-319,-500,-501,-507	
² Alvium 1800 U-240,-508,-511,-811,-1236,-1240,-1242,-1620,-2040,-2050,-2460	

Table 22: USB Closed Housing CS-Mount dimensions and mass

USB Closed Housing C-Mount

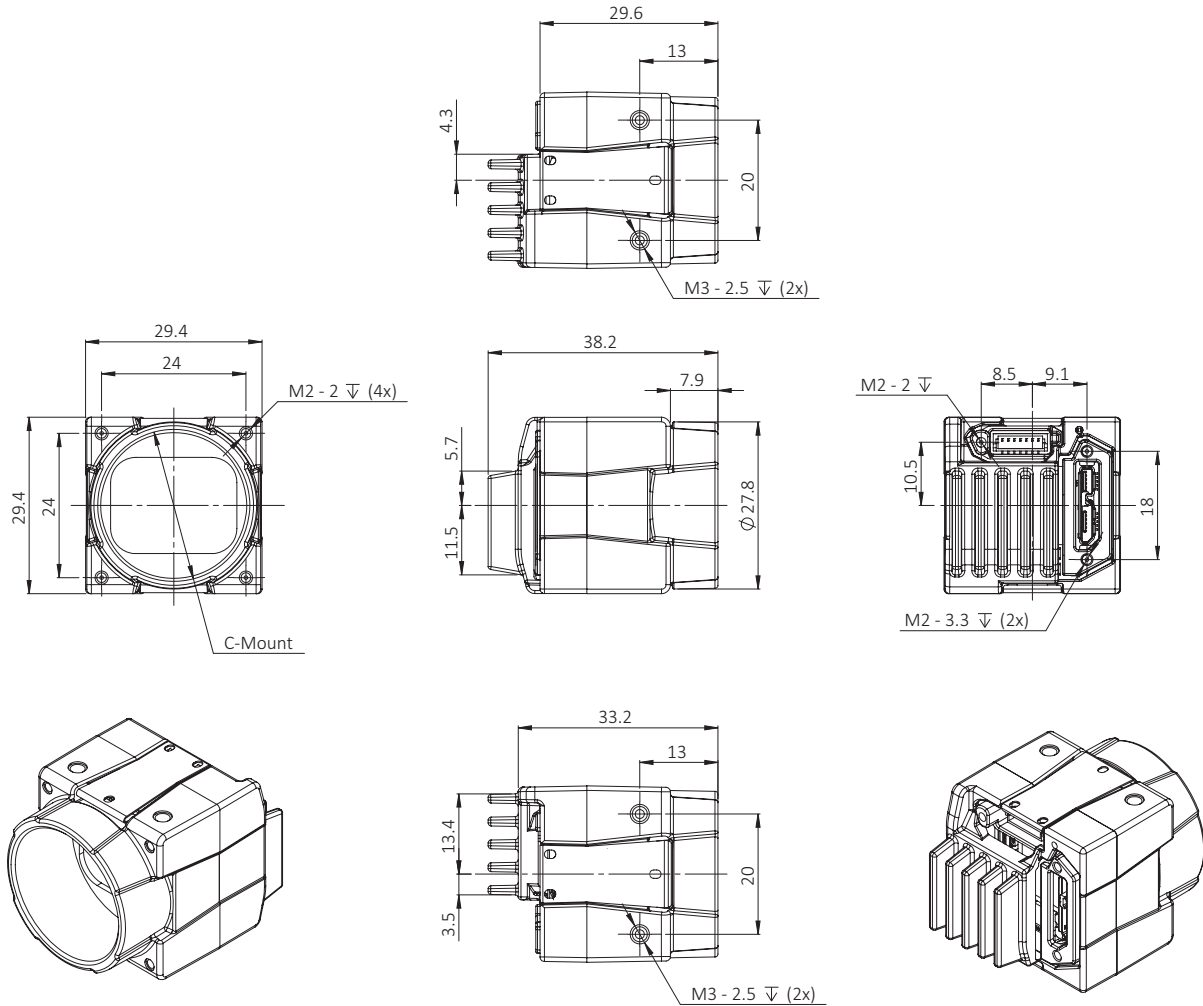


Figure 15: USB Closed Housing C-Mount dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	38 × 29 × 29
Mass ¹	60 g
Mass ²	65 g
¹ Alvium 1800 U-040,-050,-120,-158,-319,-500,-501,-507	
² Alvium 1800 U-240,-508,-511,-811,-1236,-1240,-1242,-1620,-2040,-2050,-2460	

Table 23: USB Closed Housing C-Mount dimensions and mass

USB Closed Housing S-Mount 90°

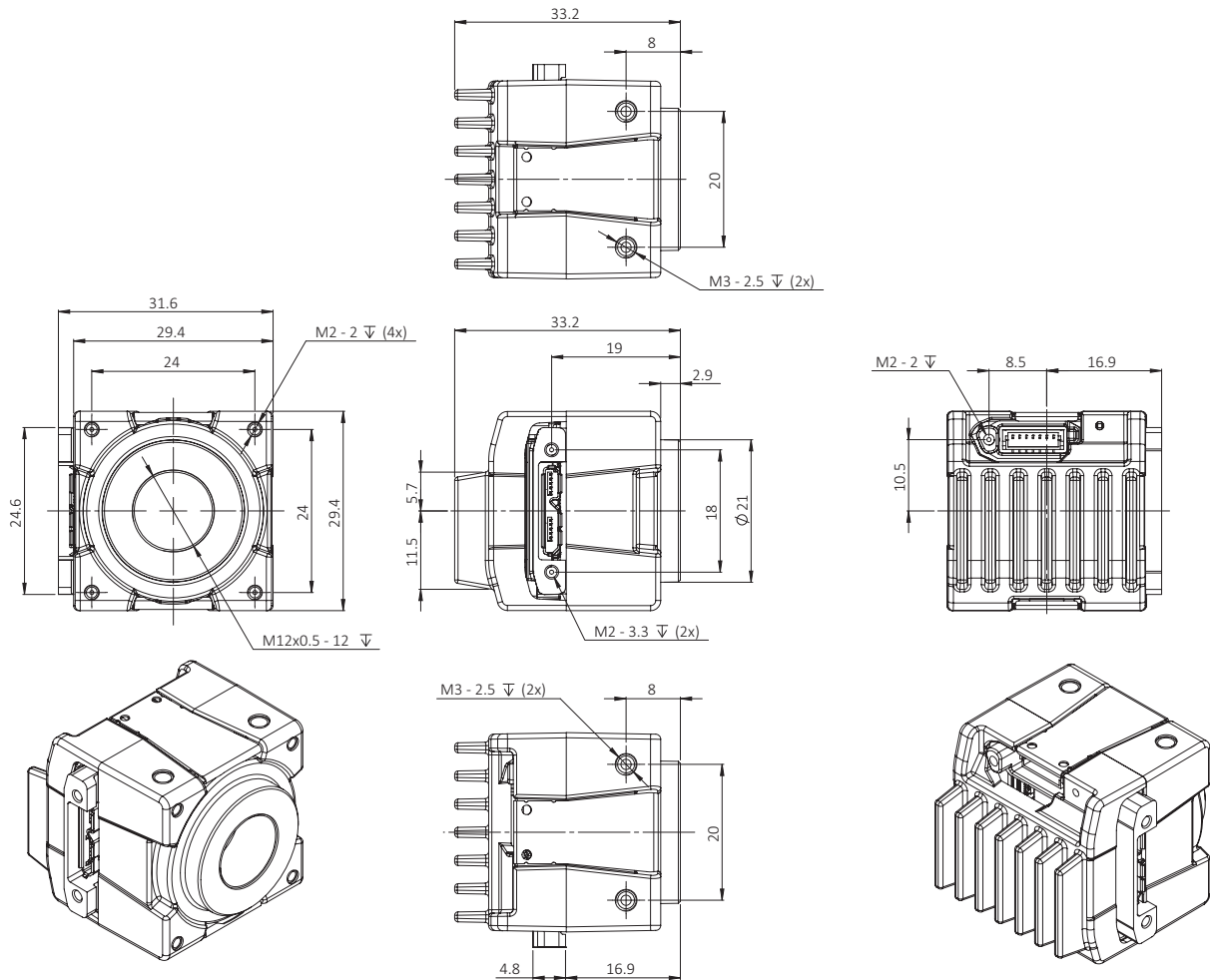


Figure 16: USB Closed Housing S-Mount 90° dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	33 × 32 × 29
Mass ¹	65 g
Mass ²	70 g
¹ Alvium 1800 U-040,-050,-120,-158,-319,-500,-501,-507	
² Alvium 1800 U-240,-508,-511,-811,-1236,-1240,-1242,-1620,-2040,-2050,-2460	

Table 24: USB Closed Housing S-Mount 90° dimensions and mass

USB Closed Housing CS-Mount 90°

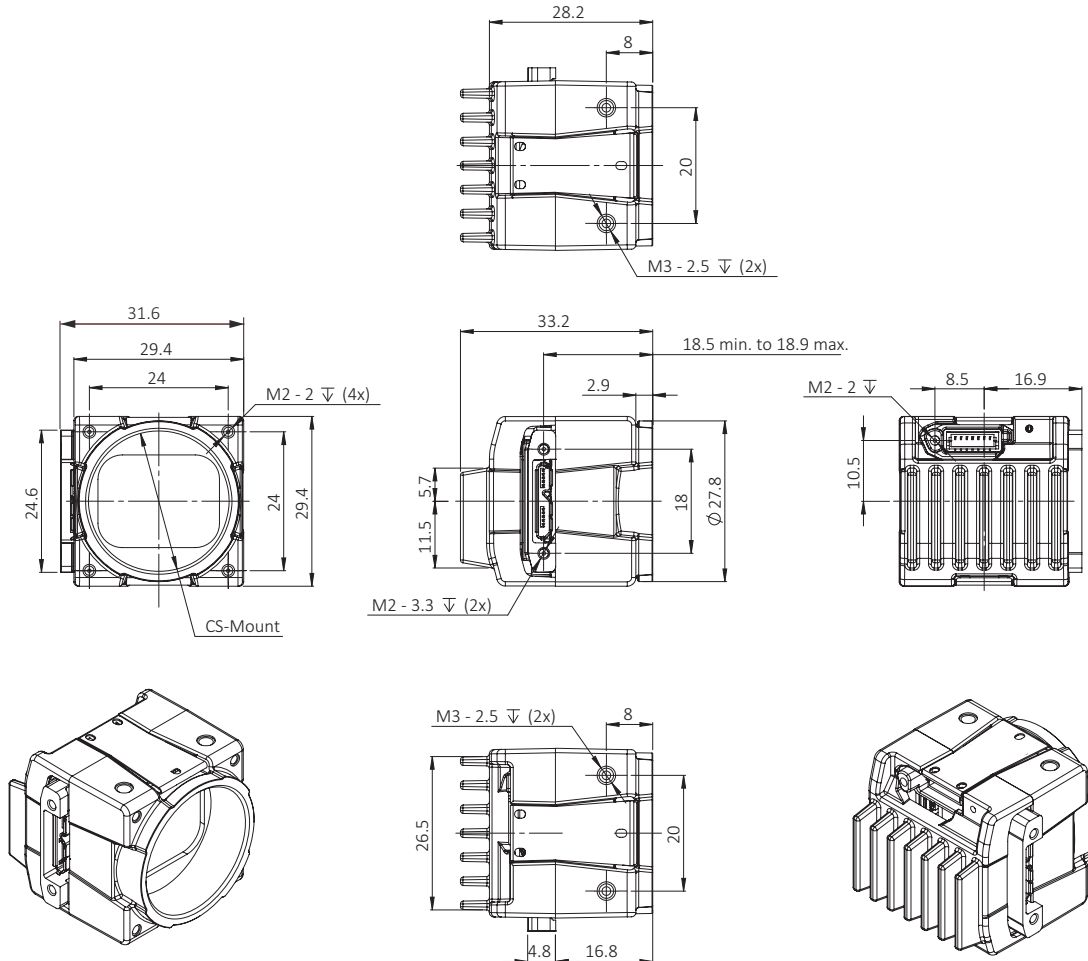


Figure 17: USB Closed Housing CS-Mount 90° dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	33 × 32 × 29
Mass ¹	65 g
Mass ²	70 g

¹Alvium 1800 U-040,-050,-120,-158,-319,-500,-501,-507
²Alvium 1800 U-240,-508,-511,-811,-1236,-1240,-1242,-1620,-2040,-2050,-2460

Table 25: USB Closed Housing CS-Mount 90° dimensions and mass

USB Closed Housing C-Mount 90°

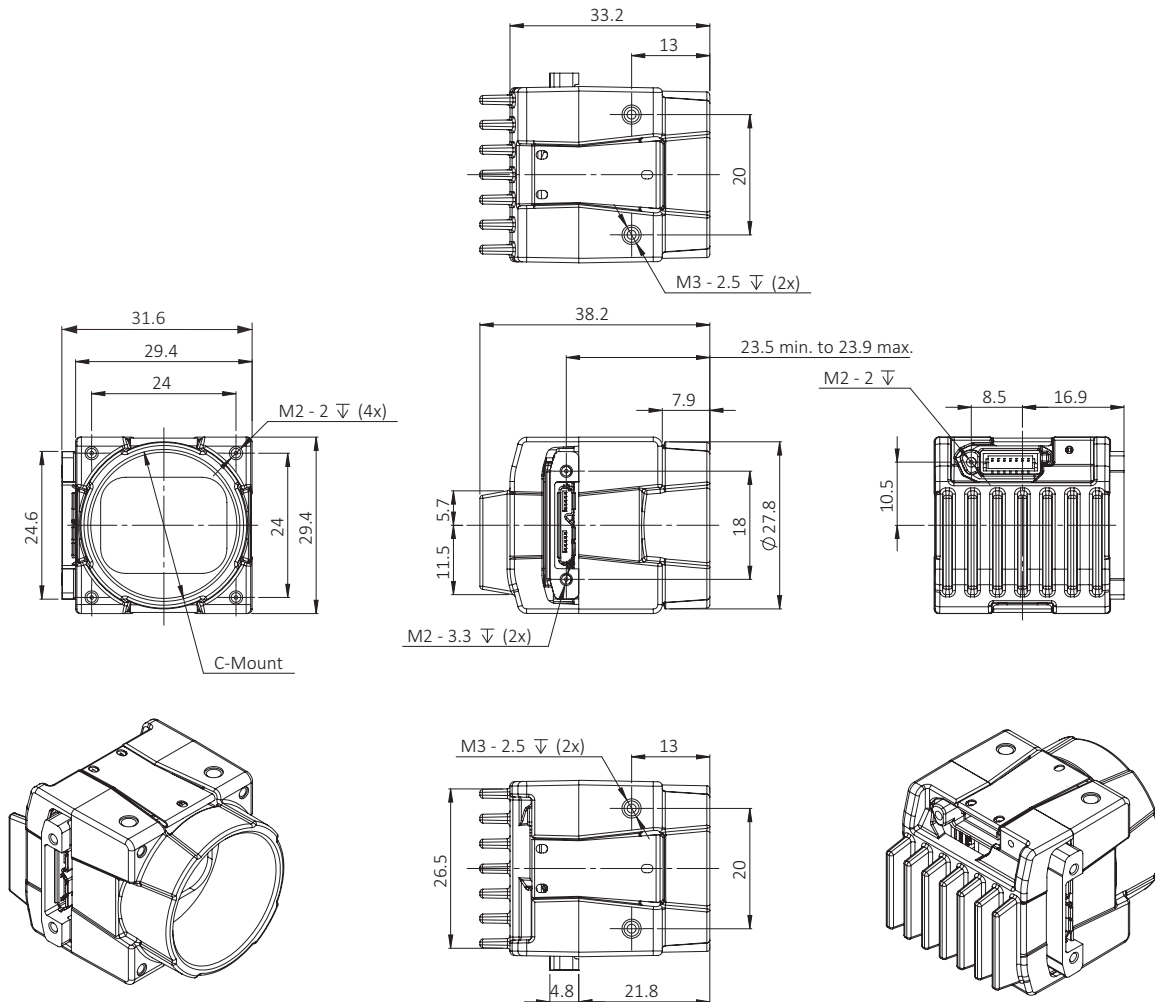


Figure 18: USB Closed Housing C-Mount 90° dimensions

Dimensions and mass

Feature	Specification
Dimensions (L × W × H [mm])	38 × 32 × 29
Mass ¹	65 g
Mass ²	70 g

¹Alvium 1800 U-040,-050,-120,-158,-319,-500,-501,-507
²Alvium 1800 U-240,-508,-511,-811,-1236,-1240,-1242,-1620,-2040,-2050,-2460

Table 26: USB Closed Housing C-Mount 90° dimensions and mass