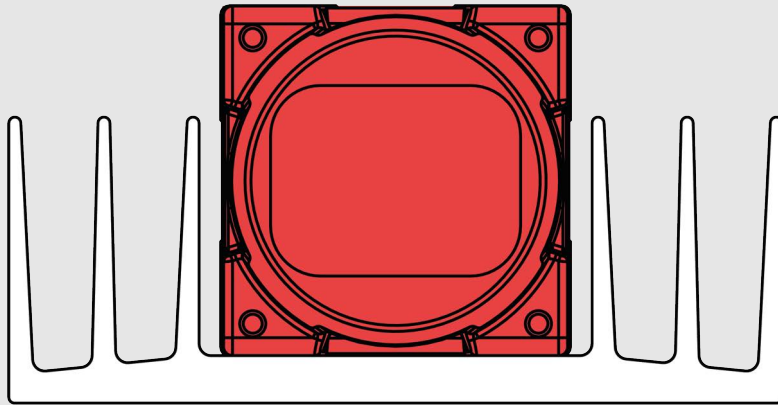




GIGE CAMERAS

Heatsink for Alvium G1

User Guide

V1.0.1

Note: Cameras are not part of this product.

**Quick links**

- [This document at a glance](#) on page 10
- [Contact us](#) on page 11
- [Contents](#) on page 12

Read before use

EN - English

Safety

Before using the product, read these safety instructions. Observe the warnings at all times. Use the product only as stated in the [Intended use](#) on page 16.

**CAUTION****Risk of burns**

The product in operation can reach temperature levels which could cause burns.

**CAUTION****Injury by a falling product**

The falling product can cause injury.

Intended use

Intended use of Allied Vision product is the integration into vision systems by professionals. All Allied Vision product is sold in a B2B setting.

DA - Dansk

Sikkerhed

Læs sikkerhedsanvisningerne, før produkt bruges. Overhold alle advarsler. Brug kun produkt som anført i [Intended use](#) på side 16.



FORSIGTIG

Forbrændingsfare

Når produkt bruges, kan det blive meget varmt og forårsage forbrændinger.



FORSIGTIG

Kvæstelser, hvis produkt falder ned

Falder produkt ned, kan dette forårsage kvæstelser.

Tilsigtet brug

Allied Vision produktets tilsigtede brug er en indbygning i et visionssystem, udført af fagfolk. Alle Allied Vision produkter sælges i B2B.

DE - Deutsch

Sicherheit

Bevor Sie das Produkt benutzen, lesen Sie diese Sicherheitshinweise. Beachten Sie diese Hinweise immer. Verwenden Sie das Produkt nur wie beschrieben in [Intended use](#) auf Seite 16.



VORSICHT

Gefahr von Verbrennungen

Im Betrieb kann das Produkt Temperaturen erreichen, die zu Verbrennungen führen.



VORSICHT

Verletzung durch das fallende Produkt

Das fallende Produkt kann Verletzungen verursachen.

Bestimmungsgemäßer Gebrauch

Allied Vision Produkte sind bestimmt für die Integration in Bildverarbeitungssysteme durch Fachpersonal. Alle Allied Vision Produkte werden in einer B2B-Umgebung verkauft.

ES - Español

Seguridad

Antes de utilizar el producto lea estas instrucciones de seguridad. Observe las advertencias en todo momento. Utilice el producto solo tal y como se estipula en el [Intended use](#) en la página 16.



ATENCIÓN

Riesgo de quemaduras

El producto en funcionamiento puede alcanzar temperaturas que podrían provocar quemaduras.



ATENCIÓN

Lesiones en caso de que el producto se cae

Si el producto se cae puede provocar lesiones.

Uso previsto

El uso previsto del producto Allied Vision es la integración en el sistema de visión por parte de profesionales. Todos los productos Allied Vision se venden dentro de una relación B2B.

FI - Suomi

Turvallisuus

Lue nämä turvallisuusohjeet ennen tuotteen käyttöä. Noudata tuotetta joka hetki. Käytä tuotteen ainoastaan kohdassa [Intended use](#) sivulla 16 kuvatulla tavalla.



HUOMIO

Palovammojen vaara

Käytössä olevan tuotteen saavuttamat lämpötilatasot voivat aiheuttaa palovammoja.



HUOMIO

Putoavan tuotteen aiheuttamat vammat

Putoava tuote voi aiheuttaa vammoja.

Käyttötarkoitus

Allied Vision-tuotteen käyttötarkoitus on integrointi kuvajärjestelmiin ammattilaisten toimesta. Kaikki Allied Vision-tuotteet myydään B2B-ympäristössä.

FR - Français

Sécurité

Veuillez lire ces consignes de sécurité avant d'utiliser le produit. Respectez continuellement les avertissements. Utilisez le produit uniquement comme indiqué sous [Intended use](#), page 16.



ATTENTION

Risque de brûlures

Le produit en service peut atteindre des niveaux de température susceptibles d'entraîner des brûlures.



ATTENTION

Blessures en cas de chute du produit

La chute de la produit peut entraîner des blessures.

Utilisation prévue

L'utilisation prévue du produit Allied Vision est son intégration dans des systèmes de vision par le soin de professionnels. Tout produit Allied Vision est vendu dans un cadre B2B.

עברית - HE

בטיחות

לפני השימוש במוצר, עליך לקרוא את הוראות הביטחון האלו. עליך לממש הוראות ביטחון אלו תמיד. השימוש במצלמה הוא רק לפי מה שכתוב ב"כוונת השימוש" ([Intended use](#) בעמוד 16).

זהירות

סכנת כווייה

בזמן הפעלת המוצר עלולות לעלות טמפרטורות גבוהות, שיכולות לגרום לכוויות.



זהירות

פגיעה מנפילת המוצר

נפילת המוצר עלולה לגרום לפגיעה.



שימוש מיועד

מוצרי AlliedVision מיועדים לשילוב במערכות ממוחשבת לעיבוד צילומים ע"י אנשי מקצוע. כל מוצרי AlliedVision נמכרים לשימוש בסביבת B2B.

IT - Italiano

Sicurezza

Leggere queste istruzioni per la sicurezza prima di utilizzare il prodotto. Osservare sempre tutte le avvertenze. Utilizzare il prodotto come descritto alla sezione [Intended use](#) a pagina 16.



ATTENZIONE

Pericolo di ustioni

Durante il funzionamento, il prodotto può raggiungere temperature elevate che possono essere causa di ustioni.



ATTENZIONE

Lesioni dovute alla caduta del prodotto

Il prodotto può causare delle lesioni.

Uso previsto

Il prodotto Allied Vision è concepito per essere integrato in sistemi di monitoraggio in campo professionale. Tutti i prodotti Allied Vision sono venduti in uno scenario B2B.

JA – 日本語

安全性

本製品を使用する前に、この安全ガイドをお読みください。警告を必ず守ってください。必ず21ページの[Intended use](#) 16 ページに従って使用してください。



注意

やけどの危険性

作動中のカメラは、やけどを引き起こす温度まで熱くなる恐れがあります。



注意

製品の落下によるケガ

本製品が落下すると、けがをするおそれがあります。

用途

Allied Vision製品は、専門家が視覚装置に統合することを意図したものです。すべてのAllied Vision製品は、企業間取り引き用に販売されています。

NL - Nederlands

Veiligheid

Lees deze veiligheidsinstructies voordat u het product gebruikt. Neem deze waarschuwingen altijd in acht. Gebruik het product uitsluitend, zoals aangegeven in het [Intended use](#) op pagina 16.



VOORZICHTIG

Risico van verbranding

Het gebruikte product, kan temperatuurwaarden bereiken die brandwonden kunnen veroorzaken.



VOORZICHTIG

Letsel door het vallende product

Het vallende product kan verwondingen veroorzaken.

Beoogd gebruik

Het beoogde gebruik van het Allied Vision-product is de integratie in optische systemen door professionals. Alle Allied Vision-producten worden verkocht in de B2B-markt.

NO - Norsk

Sikkerhet

Les disse sikkerhetsinstruksene før du bruker produkt. Følg advarslene til en hver tid. Bruk kun produkt i samsvar med [Intended use](#) på side 16.



FORSIKTIG

Risiko for brannskader

Produktet i bruk kan nå temperaturnivåer som kan forårsake brannskader.



FORSIKTIG

Skade ved det fallende produktet

Det fallende produktet kan forårsake skade.

Tiltenkt bruk

Den tiltenkte bruken av Allied Vision-produktet er integrering i visjonssystemer av profesjonelle. Alle Allied Vision-produkter selges i en forretning til forretning-situasjon.

SV - Svenska

Säkerhet

Läs igenom säkerhetsinstruktionerna innan du använder produkten. Var hela tiden särskilt uppmärksam på varningarna. Använd enbart produkten på det sätt som anges i [Intended use](#) på sida 16.



VARNING

Risk för brännskada

Produkten i drift kan komma upp i temperaturer som kan orsaka brännskador.



VARNING

Risk för skador från fallande produkter

Fallande produkter kan förorsaka skador.

Avsedd användning

Den avsedda användningen av Allied Vision-produkter är integrering i visionssystem av fackmän. Samtliga Allied Vision-produkter säljs i en B2B-miljö.

ZH - 简体中文版

安全需知

在使用产品之前，请阅读这些安全说明。请务必遵守相关警告和 [Intended use](#) 于第 16 页。



注意事项

烫伤风险

在产品运行过程中，温度可能会上升，导致烧伤的危险。



注意事项

由坠落的产品造成的伤害

产品可能会坠落并造成伤害。

预期用途

Allied Vision 产品的预期用途是由专业人士整合到视觉系统中。所有 Allied Vision 的产品均通过 B2B 渠道销售。

This document at a glance



Read this document carefully

Learn to use the Heatsink for Alvium G1 in the most safe and efficient way and avoid damage to your Alvium G1 camera.

Requirement for heat dissipation

Depending on the individual setup, Alvium G1 cameras can exceed the specified maximum operating temperature.

Higher operating temperatures reduce image quality by higher noise, especially with VSWIR cameras.

In many cases, mounting the camera on a metal surface or using a lens will be sufficient to cool the camera effectively. However, especially when operated in higher ambient temperatures, additional measures for heat dissipation, such as using a heatsink, should be considered.

The Heatsink for Alvium G1 has been designed to optimize heat dissipation, using minimum space.

You can further adjust the camera installation for your individual application, using [Additional measures](#) on page 24.

If you have doubts or questions, please feel free to contact your Allied Vision Sales representative for support!

Shipping contents

The delivery consists of:

- 1 × heatsink
- 2 × cylinder head screw M3×6 ISO 14581-A2



Alvium G1 camera documentation

For detailed information, see the Alvium G1 User Guide at www.alliedvision.com/en/support/technical-documentation/alvium-g1-documentation.

Contact us

Website, email

General

www.alliedvision.com/en/contact

info@alliedvision.com

Distribution partners

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

Support

www.alliedvision.com/en/support

www.alliedvision.com/en/about-us/contact-us/technical-support-repair/-/rma

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Document history and conventions



This chapter includes:

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Conventions used in this user guide.....	14

Document history

Version	Date	Remarks
V1.0.1	2025-Jul-10	Removed contents for ISO 13485 and updated definitions for Intended use on page 16.
V1.0.0	2025-Feb-17	Initial release

Table 1: Document history

Conventions used in this user guide

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

Typographical styles

Style	Function
Emphasis	Highlighting important things
Web links and references	Links to webpages and internal cross references

Table 2: Typographical styles

Symbols and notes



CAUTION

Risk of burns

Precautions are described.



CAUTION

Injury by falling heatsinks

Precautions are described.



NOTICE

Material damage

Precautions are described.



Additional information

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

Compliance, safety, and intended use



This chapter includes:

Intended use	16
Copyright and trademarks	16
Your safety	17
Product safety	17

Intended use

Allied Vision's objective is the development, design, production, maintenance, servicing and distribution of digital cameras and components for image processing. We are offering standard products as well as customized solutions.

Intended use of Allied Vision product is the integration into Vision systems by professionals. All Allied Vision product is sold in a B2B setting.

Unless expressly agreed otherwise, we design, manufacture, and supply in accordance with the standards of the machine vision industry.

In the event of requirements going beyond this, the customer must:

- Notify us of the special use for each model before the first order is placed so that the models in question can be separated out from the standard processes using their own part numbers, and
- Conclude a quality assurance agreement with us prior to purchasing, to define its requirements in a legally secure manner.

This may require a surcharge, as our prices are very tightly tailored to standard requirements.

Copyright and trademarks

All text, pictures, and graphics are protected by copyright and other laws protecting intellectual property. All content is subject to change without notice.

All trademarks, logos, and brands cited in this document are property and/or copyright material of their respective owners. Use of these trademarks, logos, and brands does not imply endorsement.

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Your safety

This section informs about issues related to your personal safety. Descriptions explain how to avoid hazards and operate Alvium G1 cameras safely.

Handling hot cameras

Depending on the individual setup, Alvium G1 cameras can exceed the specified maximum operating temperature. In many cases, large metal mounting bases or lenses with metal housings can be used to cool the camera effectively. In other cases, consider additional measures for heat dissipation.

If the mainboard temperature exceeds the specified maximum for more than two seconds, the camera is powered off automatically. The current value for mainboard temperature is output by **DeviceTemperature**. You can use this value to control cooling by software, for example, to control a fan.

However, if you hold the camera in your hands during operation, your skin may get hurt. If you touch the camera when it is heated up, we recommend wearing protective gloves.

Providing optimum heat dissipation

Keep the operating temperature in the specified range to enable best image quality and to protect the camera from damage.

For your safety and to improve camera performance, ensure heat dissipation by measures, such as:

- Heatsink mounted
- [Additional measures](#) on page 24.

Heatsink mounting

Heatsinks must be mounted using the mounting threads. If vibration is higher than specified, heatsinks can disconnect from cameras. Falling heatsinks can hurt you. To avoid personal injury:

Mount heatsinks according to the instructions in [Mounting the heatsink to the camera](#) on page 22.

Product safety

Observe the instructions and safety notes in this document to avoid damage to cameras and heatsinks.

Specifications and technical drawings



This chapter includes:

Specifications	19
Technical drawings	19

Specifications

Feature	Specification
Product code	21814
Product name	Heatsink for Alvium G1
Dimensions: Heatsink (Length × width × height [mm])	33 × 65 × 24
Dimensions: Alvium G1 cameras with heatsink mounted (Length × width × height [mm])	• C-Mount: 41.3 × 65 × 33.4 • CS-Mount: 36.3 × 65 × 33.4 • S-Mount: 36.3 × 65 × 33.4
Mass: Heatsink with screws	48 g
Thermal resistance	3.2 K/W
Surface	Blank
Supported cameras	Housed Alvium G1 cameras

Table 3: Heatsink for Alvium G1 specifications

Technical drawings

Figure 1 shows Alvium G1 C-Mount camera with heatsink mounted:

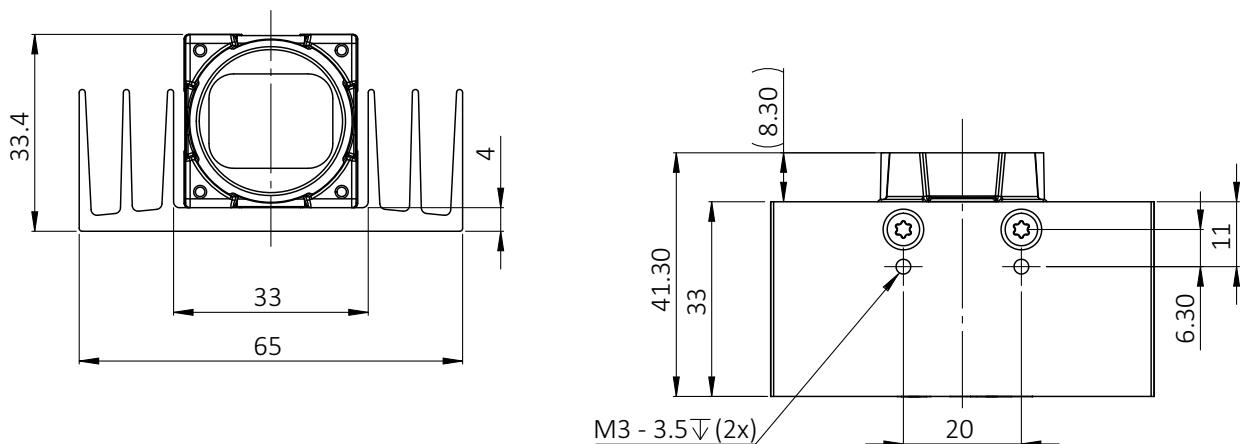


Figure 1: Alvium G1 C-Mount camera with heatsink mounted

Mounting heatsinks



This chapter includes:

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Mounting the heatsink to the camera	22
Mounting the assembly to the mounting base	23

Preconditions



CAUTION

Risk of burns

- Operate Alvium G1 cameras only with sufficient heat dissipation.
- For measures above using the Heatsink for Alvium G1, see [Additional measures](#) on page 24.



CAUTION

Injury by falling heatsinks and cameras

Follow the instructions below.

You need the following items to mount the heatsink to the camera:

- Alvium G1 camera
- Heatsink and 2 screws from the delivery contents
- Clean desktop or work bench
- Compatible Torx T10 torque wrench
- Cotton gloves

For mounting the assembly to a mounting base, you also need:
2 suitable M3 screws

Mounting the heatsink to the camera

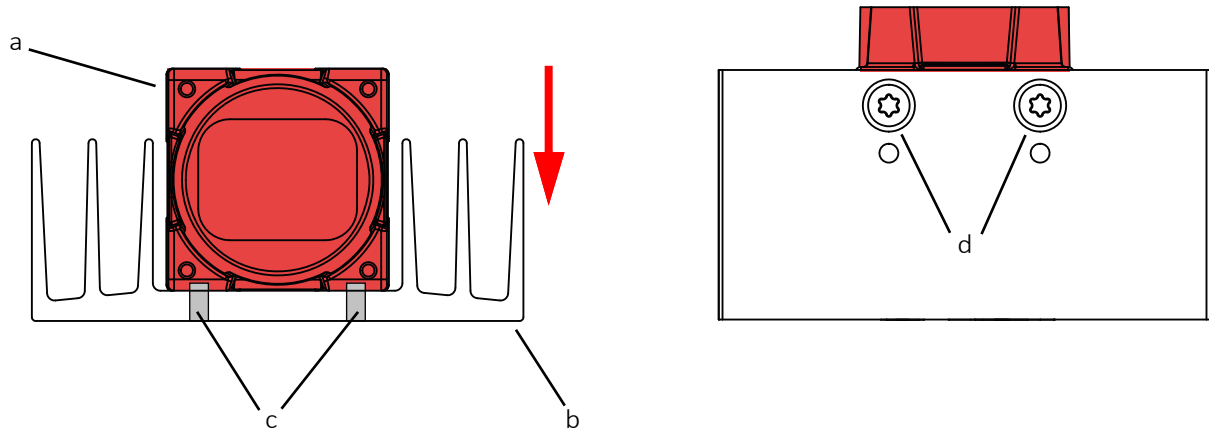


Figure 2: Mounting the heatsink to an Alvium G1 C-Mount camera

1. Put on cotton gloves to keep grease and dirt away from the surface of the camera housing and the heatsink.
2. Fit the camera (a) into the gap of the heatsink (b) with the mounting holes (c) matching for both components.



CAUTION

Injury by falling heatsinks

- Tighten screws at 0.4 Nm maximum torque.
- Lock screws by such as screw locking varnish.

3. Insert the screws (d) and tighten at 0.4 Nm maximum torque, using the Torx T10 torque wrench.
4. To ensure that the screws do not become loose over time, we recommend you to use means for securing screws, such as screw locking varnish.
5. Continue with [Mounting the assembly to the mounting base](#) on page 23.

Mounting the assembly to the mounting base

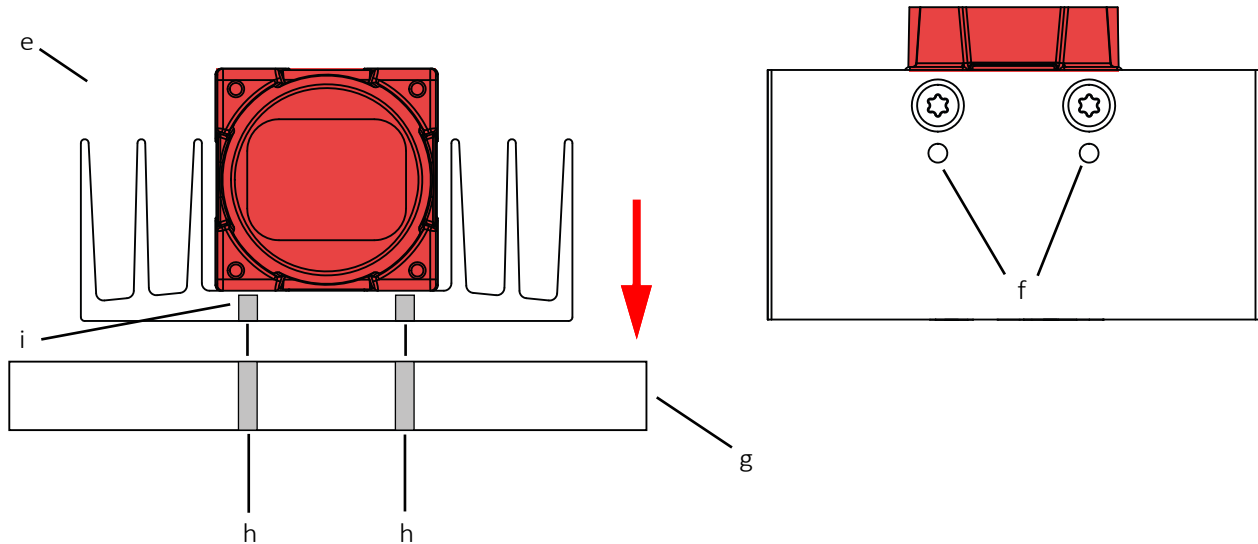


Figure 3: Mounting the heatsink and Alvium G1 camera to the mounting base

1. Put on cotton gloves to keep grease and dirt away from the surface of the camera housing and the heatsink.
2. Fit the assembly (e) of the camera and heatsink with the mounting holes (h) matching the mounting holes (h) for the mounting base (g).



CAUTION

Injury by falling heatsinks and cameras

- Use M3 screws with a maximum intrusion depth (i) of 3.5 mm.
- For an intrusion depth (i) of 3.5 mm, tighten screws at 0.4 Nm maximum torque.
For less intrusion depth, reduce torque proportionally.
- Lock screws by such as screw locking varnish.

3. Insert M3 screws
 - For an intrusion depth (i) of 3.5 mm: Tighten at 0.4 Nm maximum torque.
 - For less intrusion depth, reduce torque proportionally.
4. To ensure that the screws do not become loose over time, we recommend you to use means for securing screws, such as screw locking varnish.

Additional measures



This chapter provides a brief overview of additional measures for heat dissipation.

Scope

This section gives an overview of potential measures to increase the heat dissipation for Alvium G1 cameras after the heatsink has been installed.

Camera power

Camera power by PoE increases the camera's power consumption, resulting in more heat. Therefore, use external power by the I/O connector to reduce heating of the camera.

Lens

Mount a lens or other optical component, preferably with a metal housing. This way, you add another "heatsink".

Mounting base

Mount cameras to a base with a high thermal conductivity. The mounting base should consist of solid metal. Consider that different types of metal with different conductivity have a strong influence, as well as size and shape of the mounting base.

Thermal pads

Use thermal pads (or other conductive media) between cameras and mounting bases. The thermal pads must cover the complete area between the joined components. **Using thermal pads between cameras and heatsinks might improve heat dissipation.**

Airflow

Provide airflow on the surface of the camera, heatsink, and mounting base. You can increase the airflow by using fans. Of course, this may have dust and noise as disadvantages.



Additional information

If you need help for your design, please contact our Technical Support team at www.alliedvision.com/en/about-us/contact-us/technical-support-repair/-rma.