



## USB3 VISION ACCESSORIES

# USB 3.2 Host Adapter U3-PCIE1XG322-13 User Guide

V1.0.2

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# 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 17.

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

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

### 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 17.

**FORSIGTIG****Forbrændingsfare**

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

### 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 17.



#### Gefahr von Verbrennungen

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

### 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 17.



#### ATENCIÓN

#### Riesgo de quemaduras

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

### 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 17 kuvatulla tavalla.



#### HUOMIO

##### Palovammojen vaara

Käytössä olevan tuotteen saavuttamat lämpötilatasot voivat aiheuttaa palovammoja.

### Käyttötarkoitus

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

## FR - Français

### Sécurité

Veillez lire ces consignes de sécurité avant d'utiliser le produit. Respectez continuellement les avertissements. Utilisez le produit uniquement comme indiqué sous [Intended use](#), page 17.



#### ATTENTION

##### Risque de brûlures

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

### 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 17).

#### זהירות

##### סכנת כווייה

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



### 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 17.



#### ATTENZIONE

##### Pericolo di ustioni

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

### 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 17 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。

### 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 17.



#### VOORZICHTIG

#### Risico van verbranding

Het gebruikte product, kan temperatuurwaarden bereiken die brandwonden kunnen 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 17.



#### FORSIKTIG

##### Risiko for brannskader

Produktet i bruk kan nå temperaturnivåer som kan forårsake brannskader.

### 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 17.



#### VARNING

##### Risk för brännskada

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

### 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 17 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。

### 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



Get an overview of documentation for the USB 3.2 Host Adapter U3-PCIE1XG322-13:

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## Notes



### Read this document carefully

Learn to avoid damage to your USB 3.2 Host Adapter U3-PCIE1XG322-13 and use it in the most safe and efficient way.

This document is based on the manufacturer data sheet by IOI.

## Product highlights

- Host bus: PCIe Gen 3 x1
  - Compliant with PCI Express Base Specification Revision 3.0
- 2-port USB 3.2 host controller (Asmedia ASM3042)
  - Compliant with Universal Serial Bus 3.2 Specification Revision 1.0
  - Compliant with Intel's eXtensible Host Controller Interface (xHCI) Specification Revision 1.1
- The Vbus of each USB Port with protected power switch
  - 2.0A (70  $\Omega$  on-resistance) single channel current-limited power switch
  - UL File Number E322375
- USB3 Vision Standard cable port lock mechanism

## What else do you need?

This is a selection of helpful downloads:

Download	Link
Cameras and related documentation	<a href="http://www.alliedvision.com/en/support/technical-documentation">www.alliedvision.com/en/support/technical-documentation</a>
<b>Accessories</b> , such as interface cables and cards, power and I/O cables, power supplies, lenses, and tripod adapters	<a href="http://www.alliedvision.com/en/products/accessories">www.alliedvision.com/en/products/accessories</a>

Table 1: Downloads for USB 3.2 Host Adapter U3-PCIE1XG322-13



### Technical information on Components Express host adapter cards

For information on USB 3.2 Host Adapter U3-PCIE1XG322-13, See [www.ioi.com.tw](http://www.ioi.com.tw).

# Contact us

## Website, email

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### Distribution partners

[www.alliedvision.com/en/avt-locations/avt-distributors](http://www.alliedvision.com/en/avt-locations/avt-distributors)

### Support

[www.alliedvision.com/en/support](http://www.alliedvision.com/en/support)  
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# Document history and conventions



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## Document history

Version	Date	Remarks
V1.0.2	2023-May-31	<ul style="list-style-type: none"> <li>Added China RoHS symbol in <a href="#">Compliance notifications</a> on page 16.</li> <li>Applied editorial changes.</li> </ul>
V1.0.1	2023-May-16	<ul style="list-style-type: none"> <li>Changed the order of elements in the product name for easier reading.</li> <li>Added product code in <a href="#">General specifications</a> on page 20.</li> </ul>
V1.0.0	2023-Apr-24	Release version

Table 2: 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
<b>Emphasis</b>	Highlighting important things
<a href="#">Web links and references</a>	Links to webpages and internal cross references

Table 3: Typographical styles

### Symbols and notes



#### CAUTION

##### Risk of burns

Precautions are described



##### Additional information

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

# Compliance, safety, and intended use



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## Compliance notifications



National regulations on disposal must be followed.

### For customers in the USA

#### 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

This device complies 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.

**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**

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**

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)

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## 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.

Allied Vision isn't a legal manufacturer of medical product. Instead, Allied Vision cameras and accessories may be used as components for medical product after design-in by the medical device manufacturer and based on a quality assurance agreement (QAA) between Allied Vision (supplier) and medical device manufacturer (customer). Allied Vision's duties in that respect are defined by ISO 13485, clause 7.2 (customer-related processes, equivalent to ISO 9001, clause 8.2).

## Copyright and trademarks

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## Your safety

This section informs about issues related to your personal safety. Descriptions explain how to avoid hazards and use host adapter cards safely.

### Handling hot host adapter cards

Electrical components of host adapter cards get hot during operation.

Before operation, include host adapter cards in housings that disable any contact to hot components.

## Product safety

### Electrostatic discharge (ESD)

Electrostatic discharge (ESD) is dangerous for electronic devices, especially when tools or hands get in contact with connectors. We recommend measures to avoid damage by ESD:

- **Unpacking:** Remove the host adapter card from its anti-static packaging only when your body is grounded.
- **Workplace:** Use a static-safe workplace with static-dissipative mat and air ionization.
- **Wrist strap:** Wear a static-dissipative wrist strap to ground your body.
- **Clothing:** Wear ESD-protective clothing. Keep components away from your body and clothing. Even if you are wearing a wrist strap, your body is grounded but your clothes are not.
- **Housing:** use an ESD protective housing, including the host adapter card, and the host.

# Specifications



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## Description

USB 3.2 Host Adapter U3-PCIE1XG322-13 is a 2-port USB 3.2 Gen 1 (5Gbps) to PCI Express Gen 3 x1 (8 GT/s) host adapter card.

USB 3.2 Host Adapter U3-PCIE1XG322-13 is designed with the new generation Universal Serial Bus XHCI host controller, bridging PCI Express to USB 3.2 Gen 1, compliant with USB 3.2 Specification Revision 1.0 and Intel eXtensible Hot Controller Interface Specification Revision 1.1.

USB 3.2 Host Adapter U3-PCIE1XG322-13 supports two USB 3.2 Gen 1 (5Gbps) ports and performs trusting high speed bandwidth with PCIe x1 Gen 3 support. It is backward compatible with legacy USB function and devices, compliant with UASP (USB Attach SCSI Protocol) Revision 1.0, and it supports the XHCI debug capability.

## General specifications

Feature	Specification
Product code (by Allied Vision)	20288
Supported operating systems	Inbox driver for Windows 8 later Various Linux kernels
USB power input	12 VDC step-down to 5 VDC from either <ul style="list-style-type: none"> <li>• PCIe 12 VDC or</li> <li>• Power connector 12 VDC (IDE 4-pin or SATA 15-pin)</li> </ul>
Operating temperature	5 °C to 60 °C (41 °F to 140 °F)
Storage temperature	5 °C to 70 °C (41 °F to 150 °F)
Humidity	10% to 80% (non-condensing)
PCBA: Dimensions (H × L); mass	64 mm × 73 mm; 48.7 g
Unit package: Dimensions (H × L × W); mass	140 mm × 110 mm × 42 mm; 95 g

*Table 4: General specifications*

## PCIe host bus

- Support PCI Express Gen 3 x1 (8 GT/s)
- Support high bandwidth performance with low latency
- Support PCI Express Link power management
- Compliant with PCI Express Base 3.0 Specification
- Compliant with PCI Express Card Electromechanical 2.0 specification
- Compliant with PCI Express Mini Card
- Electromechanical 1.2 specification
- Compliant with PCI Bus Power Management Interface Specification

- Revision 1.2
- Compliant with PCI Local Bus Specification Revision 3.0
- Integrate Spread Spectrum Controller for PCI Express interface
- Overclock capability on PCI Express bus

## USB features

- Support 2 ports of USB 3.2
- Up to USB 3.2 Gen1 (5Gbps)
- Compliant with Universal Serial Bus 3.2 Specification Revision 1.0
- Compliant with Universal Serial Bus Specification Revision 2.0
- Compliant with USB Attached SCSI Protocol Revision 1.0
- Support USB 3.2 and USB 2.0 Link Power Management
- Support Control, Bulk, Stream, Interrupt, Isochronous transfer type
- Support independent port power control
- Support overcurrent detection
- Support Remote/Wakeup event
- Integrate Spread Spectrum Controller for USB 3.2 interface
- Backward compatible with Legacy USB function and device
- Support the Debugport

## USB3 cable lock mechanism

The USB sockets include **threaded holes** to match USB 3 Type-A connectors:



Figure 1: Threading hole dimensions for USB connectors