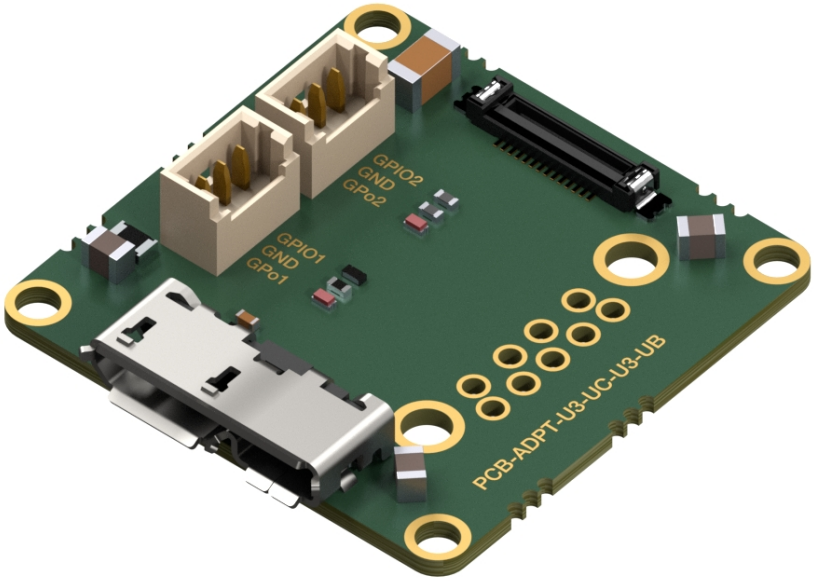


• ADPT-U3-UC-U3-UB
Micro-Coax to USB3 Micro-B adapter board

XIMEA Accessories •
Technical Manual •
Version v260903 •

Introductions

About this manual

Dear customer,

Thank you for purchasing a product from XIMEA.

We hope that this manual can answer your questions, but should you have any further queries or if you wish to claim a service or warranty case, please contact your local dealer or refer to XIMEA Support on our website: www.ximea.com/support

The purpose of this document is to provide a description of XIMEA Accessories and to describe the correct way to install related software, drivers and run it successfully. Please read this manual thoroughly before operating your new XIMEA Accessories for the first time. Please follow all instructions and observe the warnings.

This document is subject to change without notice.

About XIMEA

XIMEA is one of the worldwide leaders for innovative camera solutions with a 30-year history of research, development and production of digital image acquisition systems. Based in Slovakia, Germany and the US, with a global distributor network, XIMEA offers their cameras worldwide. In close collaboration with customers XIMEA has developed a broad spectrum of technologies and cutting-edge, highly competitive products.

XIMEA's camera centric technology portfolio comprises a broad spectrum of digital technologies, from data interfaces such as USB 2.0, USB 3.1 and PCIe to cooled digital cameras with CCD, CMOS and sCMOS sensors, as well as X-ray cameras.

XIMEA has three divisions – generic machine vision and integrated vision systems, scientific imaging and OEM/custom.

Our broad portfolio of cameras includes thermally stabilized astronomy and x-ray cameras, as well as specialty cameras for medical applications, research, surveillance and defense.

Contact XIMEA

XIMEA is a worldwide operating company

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1 General description

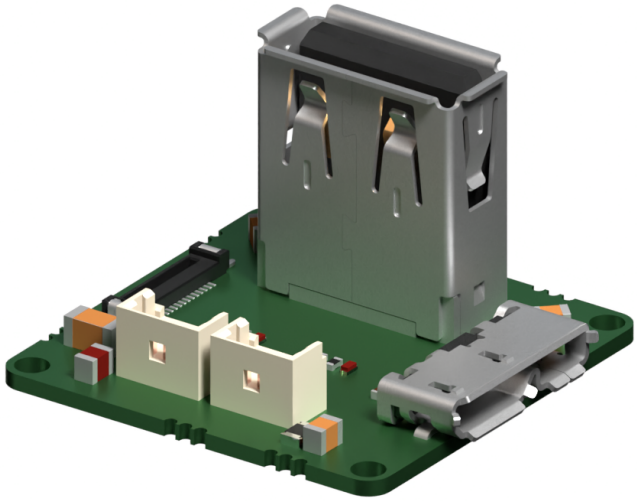


Figure 1: Isometric view of ADPT-U3-UC-U3-UB

The ADPT-U3-UC-U3-UB adapter enables cameras with a Micro-Coax interface to connect to standard USB 3.0 cables with Micro-B connectors. Adapter board also provides a GPIO interface for synchronization and triggering.

- Camera interface: Micro-Coax connector
- Cable interface: USB3 Micro-B connector
- Synchronization: GPIO interface
- Cable compatibility: Standard USB 3.0 Micro-B cables
- USB-A connector: Not included in the standard configuration; available as a custom option.

The ADPT-U3-UC-U3-UB adapter is suitable for xiMU and xiC cameras.

2 Dimensional drawings

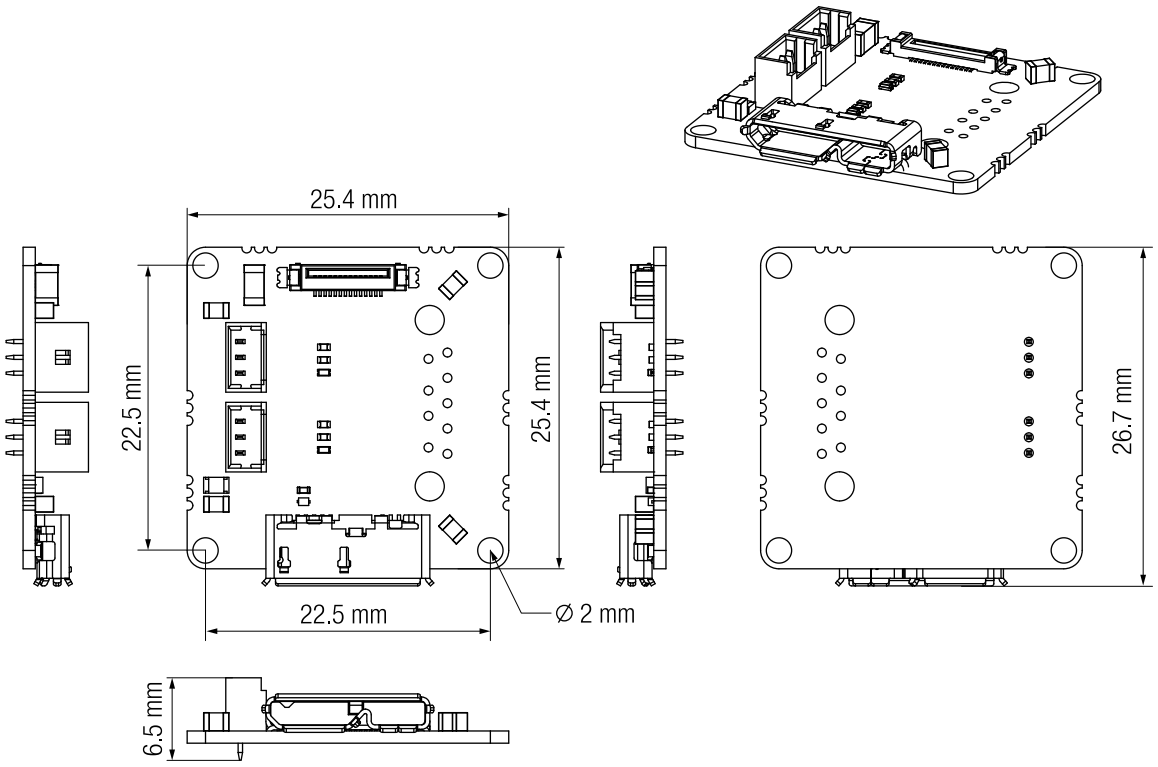


Figure 2: ADPT-U3-UC-U3-UB dimensional drawing

Width [W]	Height [H]	Depth [D]	Mass [M]
25.4 mm	26.7 mm	6.5 mm	6.4 g

Table 1: Dimensions and mass of ADPT-U3-UC-U3-UB

3 Connectors

3.1 Location of connectors

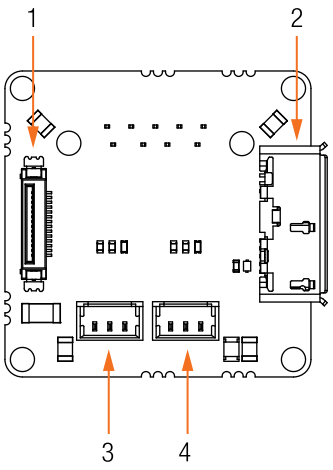


Figure 3: ADPT-U3-UC-U3-UB location of connectors

Num.	Connector
1	I-PEX SS Micro Coax 14pos, device connector
2	USB 3.0 Micro-B connector, host connector
3	IO 2 connector, Molex PicoBlade, 3 pos
4	IO 1 connector, Molex PicoBlade, 3 pos

Table 2: Description of connectors

3.2 Data interfaces

3.2.1 Micro-Coaxial Cabline SS

Item	Value
Connector	CONN I-PEX Cabline SS Micro Coax Cable Receptacle, 14-position (CONN-20374-R14E-31)
Signals	USB 3.1 Gen1 (SuperSpeed), USB 2.0, Power, I/O
Mating Connector	Cable-side I-PEX Cabline SS 14-position plug
Mating Cable	XIMEA PN: CBL-U3-PSD-UC-0M10, CBL-U3-PSD-UC-0M25, CBL-U3-PSD-UC-0M50, CBL-U3-PSD-UC-1M0

Table 3: Micro-Coaxial Cabline SS connector general description

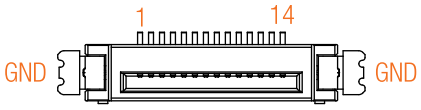


Figure 4: Micro-coax connector pinout

Pin	Signal	GPI/GPO index API	Description
1	VBUS	None	+5 V Power input
2	VBUS	None	+5 V Power input
3	INOUT2	4/4	Non-isolated Input/Output 2 (<0.3 Low; > 1.3 High)
4	OUT2	-/3	Non-isoalted Output 2
5	SSRX+	None	SuperSpeed receiver differential pair
6	SSRX-	None	SuperSpeed receiver differential pair
7	D+	None	2.0 differential pair
8	D-	None	2.0 differential pair
9	SStX+	None	SuperSpeed transmitter differential pair
10	SStX-	None	SuperSpeed transmitter differential pair (<0.3 Low; > 1.3 High)
11	INOUT1	2/2	Non-isolated Input/Output 1
12	OUT1	-/1	Non-isoalted Output 1
13	VBUS	None	+5 V Power input
14	VBUS	None	+5 V Power input

Table 4: ADPT-MU-CX3-UC connector pin assignment

3.2.2 USB3 Micro-B

Item	Value
Connector	USB - micro B USB 3.0 (USB 3.1 Gen 1, Superspeed) Receptacle Connector 10 Position
Signals	USB 3.0/3.1 Gen 1 SuperSpeed, PWR, GND
Mating Connectors	Standard USB 3.1 Gen1 Micro-B Connector

Table 5: Micro-B connector general description

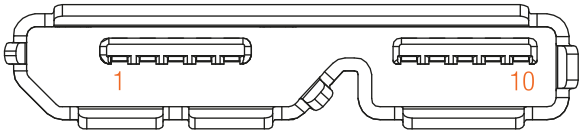


Figure 5: Micro-B pinout

Pin	Signal	Description
1	VBUS	Power
2	D-	USB 2.0 signal pair
3	D+	USB 2.0 signal pair
4	ID	OTG Identification
5	GND	Power Ground
6	SSTX-	USB 3.0 SuperSpeed transmitter signal pair
7	SSTX+	USB 3.0 SuperSpeed transmitter signal pair
8	GND_DRAIN	USB 3.0 signal Ground
9	SSRX-	USB 3.0 SuperSpeed receiver signal pair
10	SSRX+	USB 3.0 SuperSpeed receiver signal pair

Table 6: Micro-B connector pin assignment

3.2.3 GPIO connectors

Item	Value
Connector	Molex PicoBlade Header, 3 pos, PN: 0530470310
Signal	Digital Input and Output
Mating connectors	PN: 0510210300
XIMEA PN	CBL-S-PB3-PT-0M40

Table 7: ADPT-U3-UC-U3-UB GPIO connector description

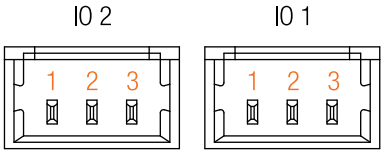


Figure 6: IO connectors pinout

Pin	Name	Description
1	GPIO1	Digital Input/Output
2	GND	Ground
3	GPO1	Digital Output

Table 8: IO 1 connector pin assignment

Pin	Name	Description
1	GPIO2	Digital Input/Output
2	GND	Ground
3	GPO2	Digital Output

Table 9: IO 2 connector pin assignment

4 Quickstart guide

4.1 Hardware setup

4.1.1 Essential components

It is important that the power is turned off when inserting/detaching the cables. General ESD precautions need to be applied. Failing this requirement may lead to product damage.

- ADPT-U3-UC-U3-UB adapter board
- Camera cable: Micro-Coaxial cable (e.g. CBL-U3-PSD-UC-0M25)
- Device (e.g. XIMEA camera) with Micro-Coaxial interface
- Host cables: USB Micro-B cable
- IO cable CBL-S-PB3-PT-0M40
- Host PC

4.1.2 Connecting the components

Step 1. Ensure the camera / device and the computer are turned off before connecting any cables.
The order of cable connections is not strictly specified.

Step 2. Power on the device /computer.

For more information about ADPT-U3-UC-U3-UB please contact: sales@ximea.com.

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