



- ADPT-2P-X2G3-FF-X4G3-SFF  
Firefly to SFF adapter

# 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](http://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

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# 1 General description

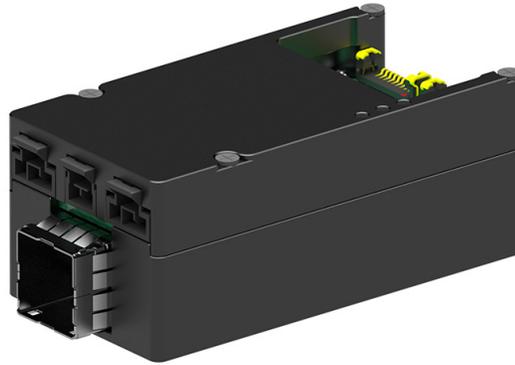


Figure 1: Isometric view of ADPT-2P-X2G3-FF-X4G3-SFF

- Adapter to connect XIMEA FireFly cameras to SFF cable
- Connects 2x PCIe Gen3 x2 cameras
- Copper FireFly cable from camera turns to fiber optic SFF-8644 cable
- Offers Power and IO connectors for synchronization and triggering
- Suitable for cameras from: *xiX family*

Adapter can be used as the primary way for PCIe/FireFly connection for MX cameras to PC. The camera/s should be connected to these adapters over a FireFly ECUE copper cable (e.g. 0.1 to 3 m).

It contains also connectors for power and GPI/GPO from the camera. The power cable (CBL-XEC2-PWR-0M15) is going to be bundled with the adapter delivery and Sync cable is optional.

## LED Description

| LED | Color | ON meaning                                | Description  |
|-----|-------|---|--------------|
| 1   | Red   | The power is provided                     | Power        |
| 2   | Green | Not active - device did not reset on PCIe | PERST signal |

Table 1: LED Description

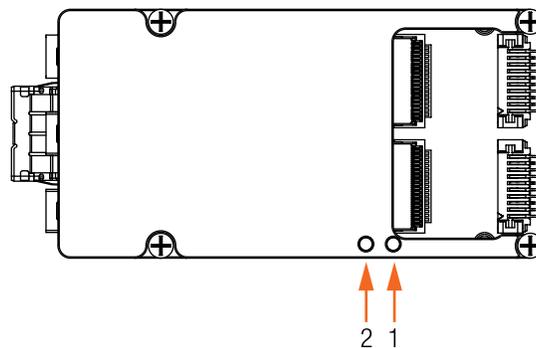


Figure 2: LEDs position

## 2 Dimensional drawings

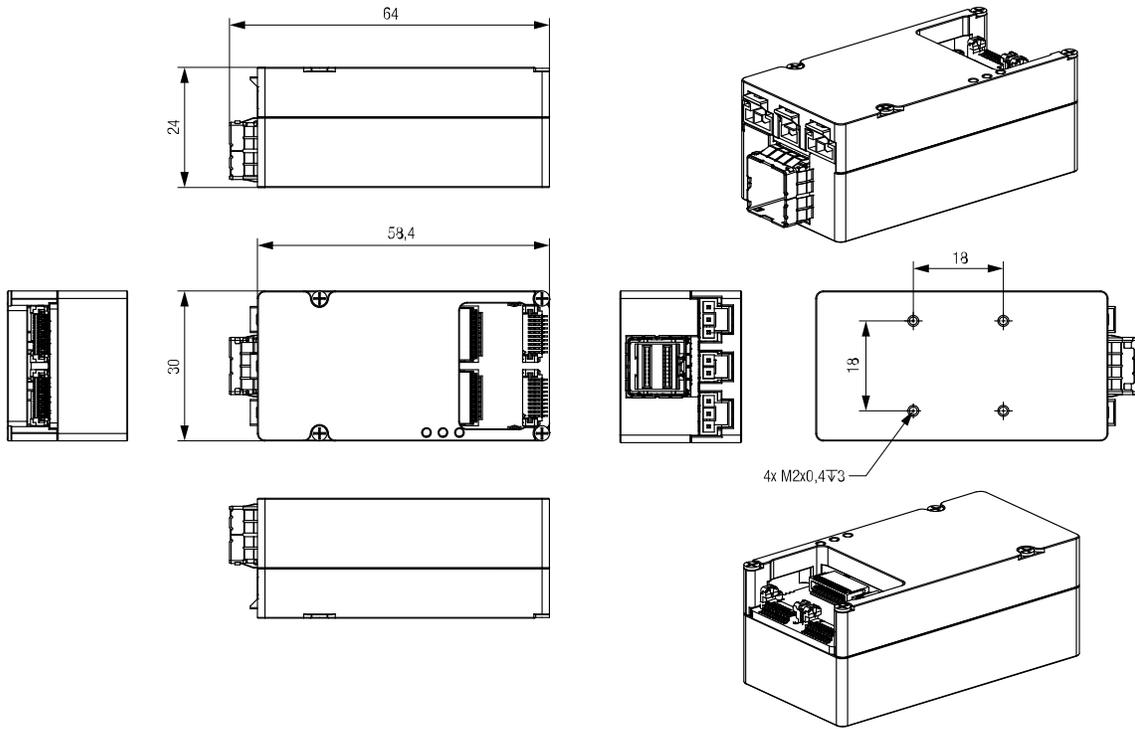


Figure 3: Dimensional drawing

| Width [ W ] | Height [ H ] | Depth [ D ] | Mass [ M ] |
|-------------|--------------|-------------|------------|
| 30 mm       | 24 mm        | 64 mm       | TBD        |

Table 2: Parameters

### 3 Connectors

#### 3.1 Location of connectors

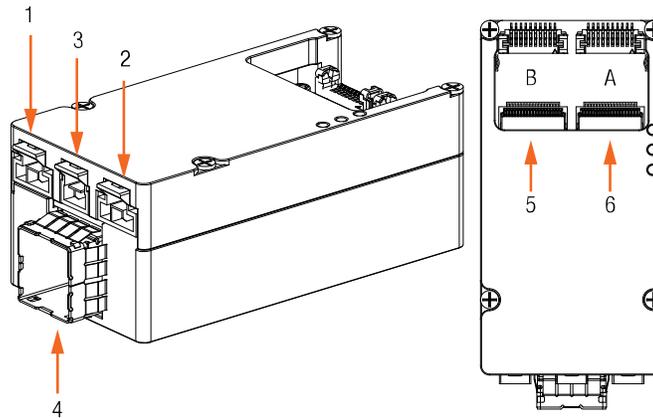


Figure 4: Location of connectors

| num. | connector           |
|------|---------------------|
| 1    | IO connector B      |
| 2    | IO connector A      |
| 3    | PWR connector       |
| 4    | SFF connector       |
| 5    | FireFly connector B |
| 6    | FireFly connector A |

Table 3: Connectors location

| Usage           | Identification |
|-----------------|----------------|
| IO connector    | 1053131203     |
| Power connector | 1053131202     |

Table 4: Global identification of the connectors

## 3.2 Data interfaces

### 3.2.1 GPIOs

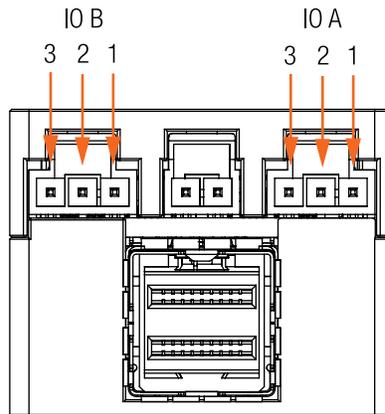


Figure 5: IO connector pinning

| Pin         | Name   | Signal                               |
|-------------|--------|--------------------------------------|
| <b>IO A</b> |        |                                      |
| 1           | GPI    | Opto-isolated input                  |
| 2           | IO_GND | Isolated ground for the IO subsystem |
| 3           | GPO    | Opto-isolated output                 |
| <b>IO B</b> |        |                                      |
| 1           | GPI    | Opto-isolated input                  |
| 2           | IO_GND | Isolated ground for the IO subsystem |
| 3           | GPO    | Opto-isolated output                 |

Table 5: IO connectors pin assignment

### 3.2.2 Power connector

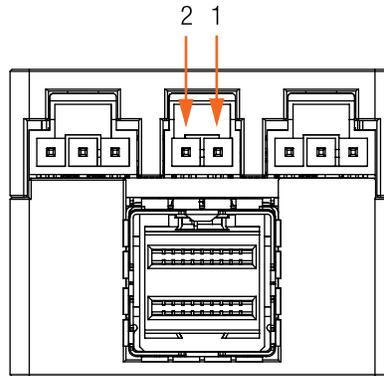


Figure 6: Power connector location

| Pin | Name | Signal     |
|-----|------|------------|
| 1   | GND  | Ground     |
| 2   | PWR  | 12 to 24 V |

Table 6: Power connector (2POS) pin assignment

## 4 Quickstart guide

### 4.1 Hardware setup

#### 4.1.1 Essential components

- a camera with firefly interface
- host PC with supported SFF host adapter card inside
- ADPT-2P-X2G3-FF-X4G3-SFF
- SFF-8644 fiber optical cable (e.g. Ximea CBL-SFF-X4G3-10M0)
- Firefly ECUE copper cable (CBL-ECUE-X4G3-xM0)
- power cable (CBL-XEC2-PWR-0sM15)

#### 4.1.2 Connecting the components

- Step 1.** Connect SFF-8644 fiber optic cable to adapter (ADPT-2P-X2G3-FF-X4G3-SFF)
- Step 2.** Connect SFF-8644 fiber optic cable to PC
- Step 3.** Connect Firefly ECUE cable (CBL-ECUE-12-010-T1-FF-01-1) to adapter
- Step 4.** Connect Firefly ECUE cable to the cameras
- Step 5.** Connect power cable (CBL-XEC2-PWR-0M15) to adapter
- Step 6.** Turn on the power for the adapter
- Step 7.** Turn on the computer

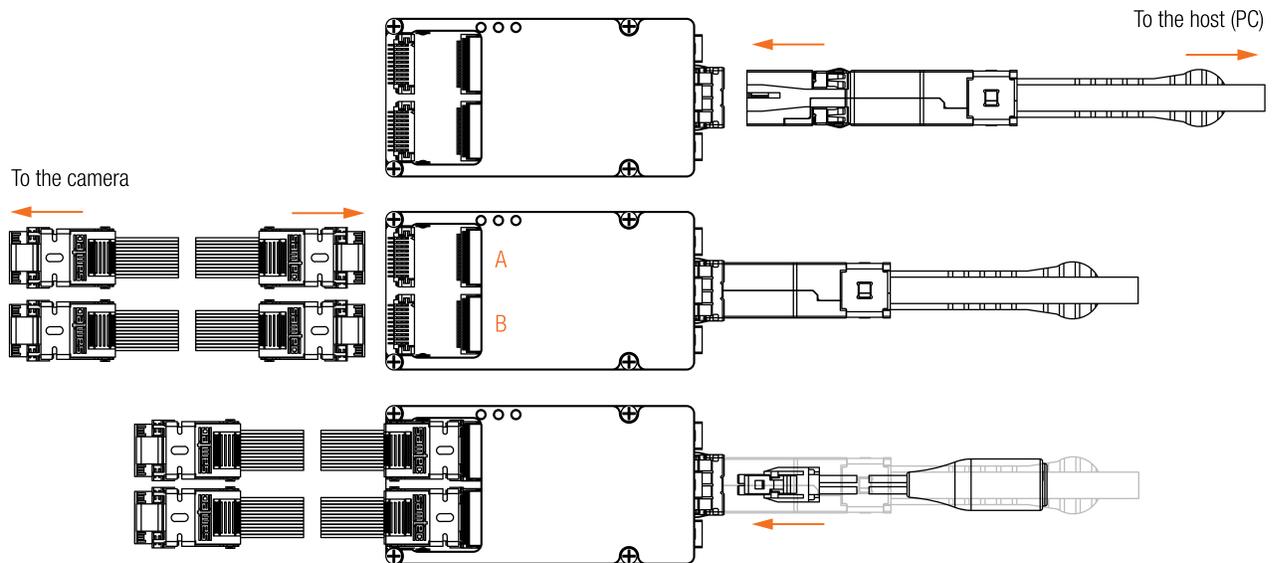


Figure 7: Connecting steps

For more information about ADPT-2P-X2G3-FF-X4G3-SFF please contact: [sales@ximea.com](mailto:sales@ximea.com).

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