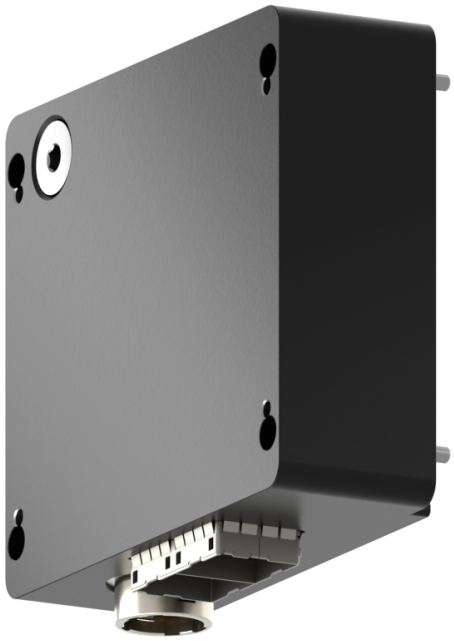
ximea



# ADPT-MX-X8G3-FF-X8G3-SFF

## Firefly to SFF adapter

XIMEA Accessories
Technical Manual
Version v260128

# 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

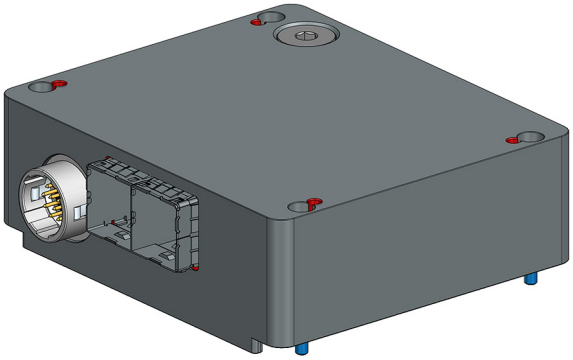

Figure 1: Isometric view of ADPT-MX-X8G3-FF-X8G3-SFF

- Adapter connecting target FireFly X8 interface to SFF host
- PCIe Gen3 x8 bandwidth. Link Speed 64 Gb/s
- For use with xiX family camera series (equipped with FireFly X8 connector)

# 2 Dimensional drawings

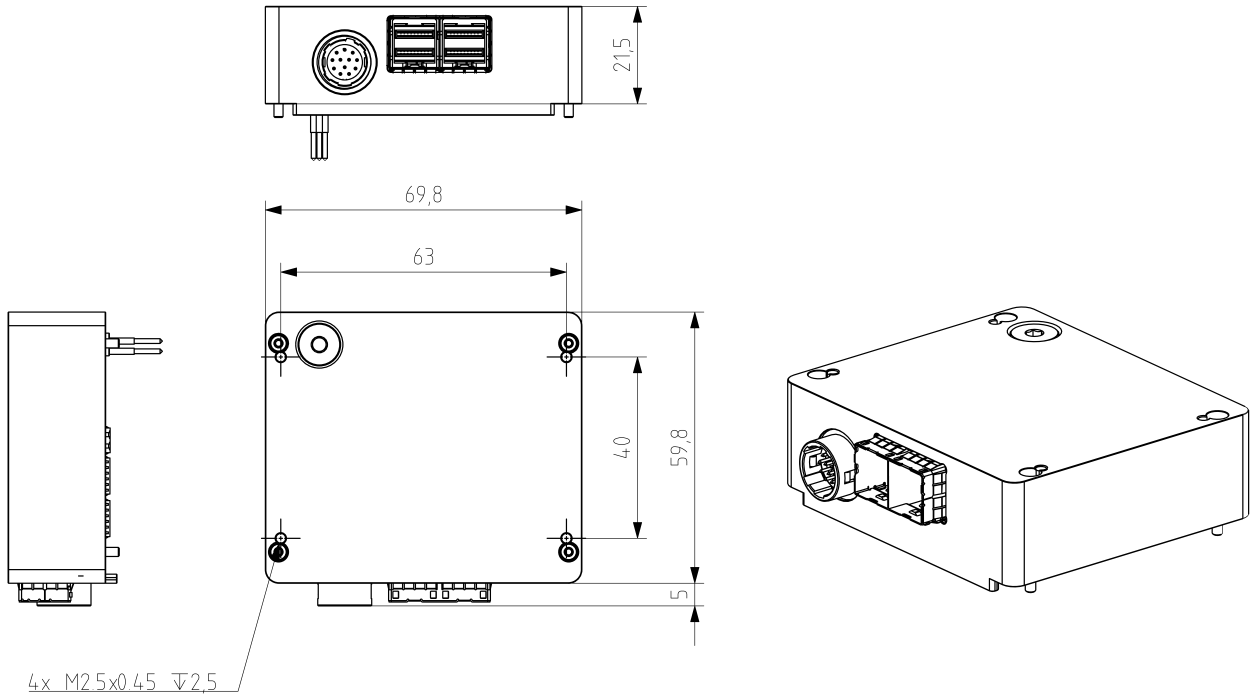


Figure 2: Dimensional drawing

| Width [ W ] | Height [ H ] | Depth [ D ] | Mass [ M ] | Material and technology |
|---|---|---|---|---|
| 69.8 mm | 59.8 mm | 21.5 mm | 137.6 g | Machined Aluminum alloy |

Table 1: Parameters and mass

# 3 Connectors

## 3.1 Location of connectors

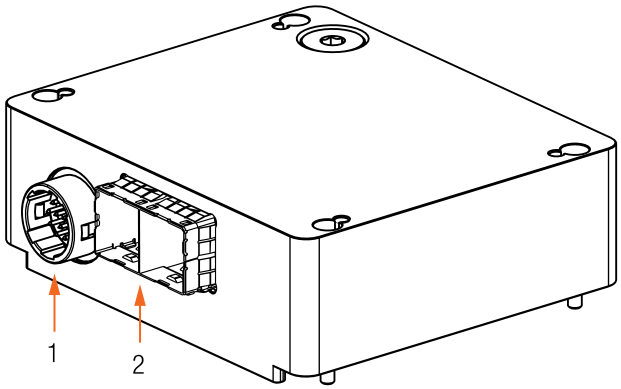


Figure 3: Connectors location

| num. | connector |
|---|---|
| 1 | I/O & Power 12-pin Alysium 60-30-1112 |
| 2 | 2x ports for SFF-8644 (marked A and B) |

Table 2: Connectors description

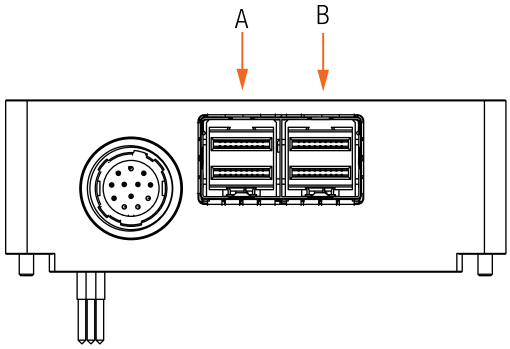


Figure 4: SFF connectors

## 3.2 Data interfaces

### 3.2.1 GPIO

| Item | Value |
|---|---|
| Connector | ALYSIUM 60-30-1112 |
| Signal | Digital Input and Output interface type |
| Mating connector | Alysium 60-41-1012, 60-41-1112,60-01-1012, 60-01-1112, 60-03-1012, 60-03-1112 |

Table 3: IO Connector description

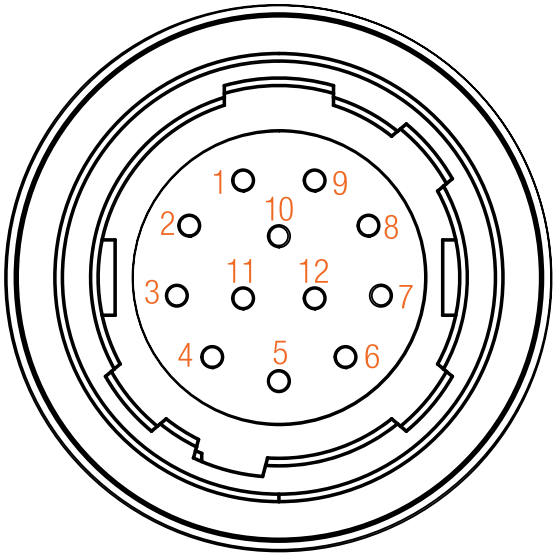


Figure 5: IO connector pinout

| Pin | Name | Signal | Technical description |
|---|---|---|---|
| 1 | IN2 | Opto-isolated Input 2 | (<0.8 Low; 4-24 High) |
| 2 | IN1 | Opto-isolated Input 1 | (<0.8 Low; 4-24 High) |
| 3 | OUT2 | Opto-isolated Output 2 | Open collector |
| 4 | OUT1 | Opto-isolated Output 1 | Open collector |
| 5 | AUX PWR | Power supply input | 12-24 V |
| 6 | GND | External grounds for power and non-isolated I/O | - |
| 7 | INOUT1 | Non-isolated I/O | LVTTL(3.3, 50 µA) |
| 8 | INOUT3 | Non-isolated I/O | LVTTL(3.3, 50 µA) |
| 9 | INOUT2 | Non-isolated I/O | LVTTL(3.3, 50 µA) |
| 10 | IN GND | Ground for Opto-Isolated Inputs (IN1, IN2) | - |
| 11 | OUT GND | Ground for Opto-Isolated Out (OUT1, OUT2) | - |
| 12 | INOUT4 | Non-isolated I/O | LVTTL(3.3, 50 µA) |

Table 4: IO connector pin assigment

# 4 Quickstart guide

## 4.1 Hardware setup

### 4.1.1 Essential components

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

- host PC with supported SFF host adapter card (e.g. Ximea HA-2P-X4G3-SFF-X8G3) inside
- SFF-8644 fiber optic cables (e.g. Ximea CBL-SFF-X4G3-10M0)
- Power cable CBL-MT-PWR-SYNC-3M0
- any xiX camera equipped with ADPT-MX-X8G3-FF-X8G3-SFF adapter

### 4.1.2 Connecting the components

Step 1. Make sure the DIP switches on the host adapter card are in position for x8 ports

Step 2. Connect SFF-8644 fiber optic cables to the camera adapter ADPT-MX-X8G3-FF-X8G3-SFF

Step 3. Connect the cable from port A on the host adapter to port A on the HA-2P-X4G3-SFF-X8G3
Connect the cable from port B on the host adapter to port B on the HA-2P-X4G3-SFF-X8G3

Step 4. Connect CBL-MT-PWR-SYNC-3M0 to the ADPT-MX-X8G3-FF-X8G3-SFF

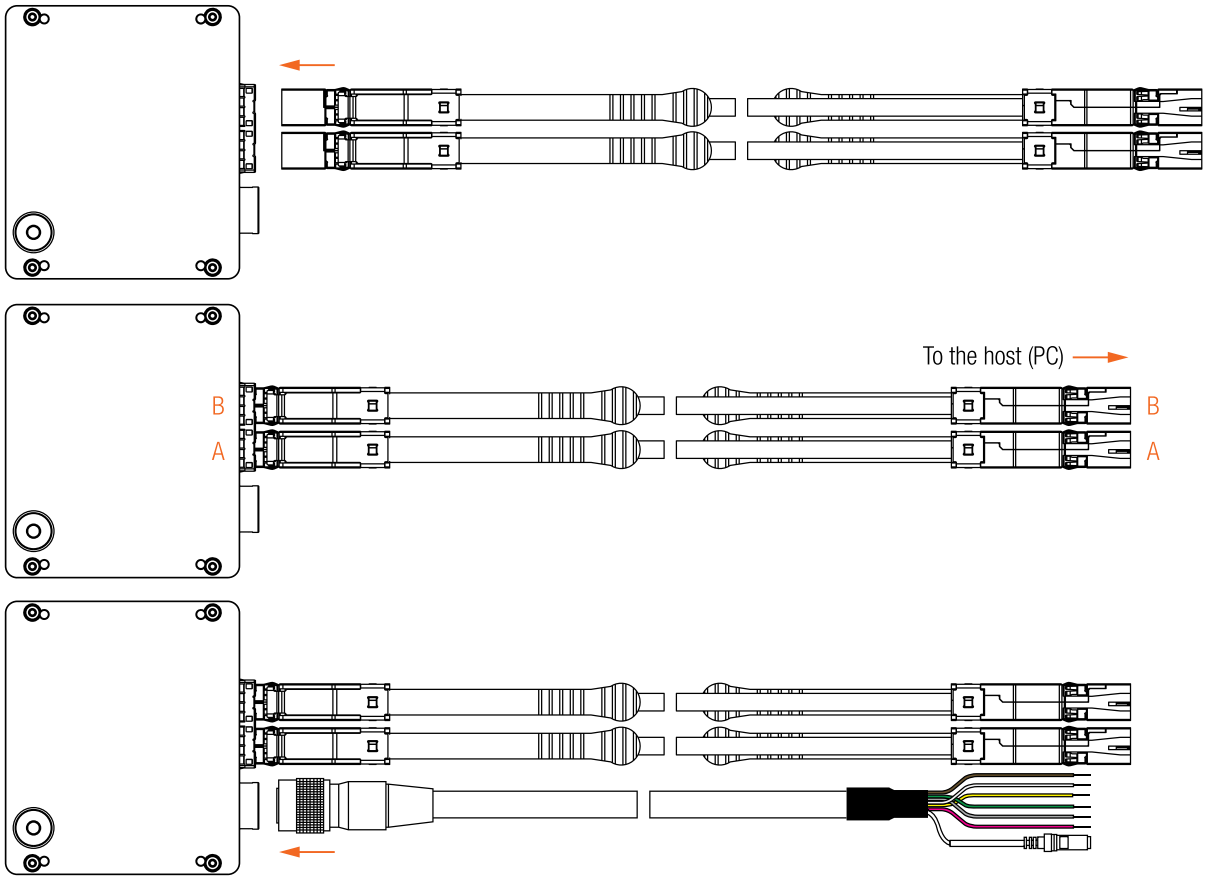


Figure 6: Connecting steps

For more information about ADPT-MX-X8G3-FF-X8G3-SFF please contact: sales@ximea.com.

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