



- **ADPT-1P-X4G3-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

XIMEA is a worldwide operating company

Headquarters, Sales worldwide

XIMEA GmbH  
Am Mittelhafen 16  
48155 Münster  
Germany

Tel: +49 (251) 202 408-0  
Fax: +49 (251) 202 408-99

Web [www.ximea.com](http://www.ximea.com)  
General inquiries [info@ximea.com](mailto:info@ximea.com)  
Sales [sales@ximea.com](mailto:sales@ximea.com)  
Support [XIMEA Support](#)

Sales America

XIMEA Corp.  
12600 W Colfax Ave., Suite A-130  
Lakewood, CO 80215  
USA

Tel: +1 (303) 389-9838  
Fax: +1 (303) 202-6350

R&D, Production

XIMEA s.r.o.  
Lesná 52  
900 33 Marianka  
Slovakia

Tel: +421 (2) 205 104 26  
Fax: +421 (2) 205 104 27

# Contents

About this manual .....	2
About XIMEA .....	2
Contact XIMEA .....	2
<b>1 General description .....</b>	<b>4</b>
<b>2 Dimensional drawings .....</b>	<b>5</b>
<b>3 Connectors .....</b>	<b>6</b>
3.1 Location of connectors .....	6
3.2 Data interfaces .....	7
3.2.1 Power connector .....	7
3.2.2 GPIOs .....	7
<b>4 Quickstart guide .....</b>	<b>8</b>
4.1 Hardware setup .....	8
4.1.1 Essential components .....	8
4.1.2 Connecting the components .....	8
List of figures .....	9
List of tables .....	10

# 1 General description



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

- Adapter to connect XIMEA FireFly cameras to SFF cable
- Connects 1x PCIe Gen3 x4 camera
- Copper FireFly cable from camera turns to optic SFF-8644 cable
- Offers Power and IO connectors for synchronization and triggering
- Suitable for cameras from: *xiX family*, *xiX-XL family* and *xiX-Xtreme family*

Adapter can be used as the primary way for PCIe/FireFly connection for MX camera to PC. The camera should be connected to these adapter 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 (e.g. PN:1451300301 (15 cm), PN:1451300310 (100 cm)) is optional.

## LED Description

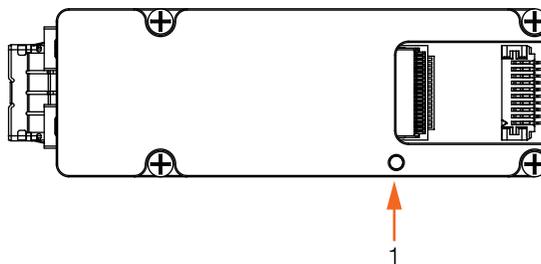


Figure 2: LED position

LED	Color	ON meaning	Description
1	Red	The power is provided	Power

Table 1: LED Description

## 2 Dimensional drawings

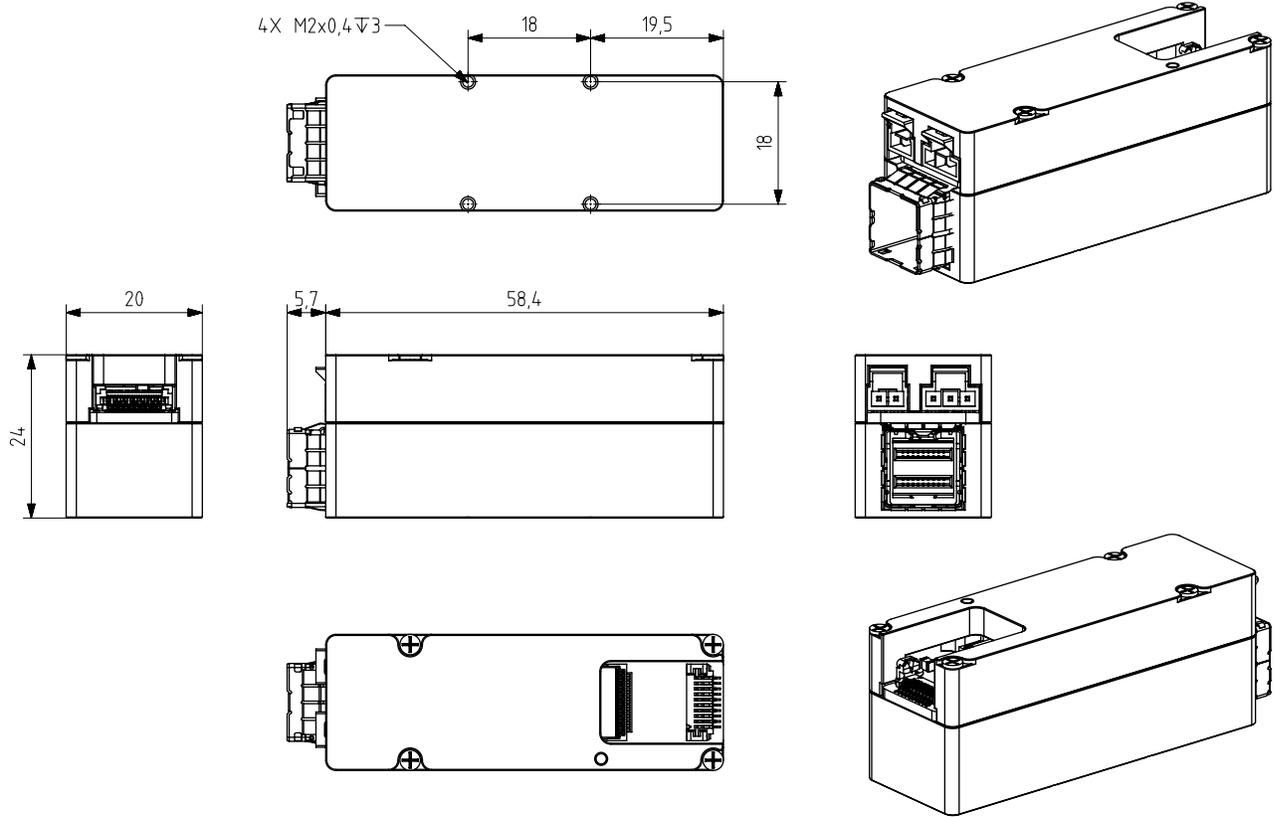


Figure 3: Dimensional drawing

Width [ W ]	Height [ H ]	Depth [ D ]	Mass [ M ]
20 mm	24 mm	64.1 mm	TBD

Table 2: Parameters

### 3 Connectors

#### 3.1 Location of connectors

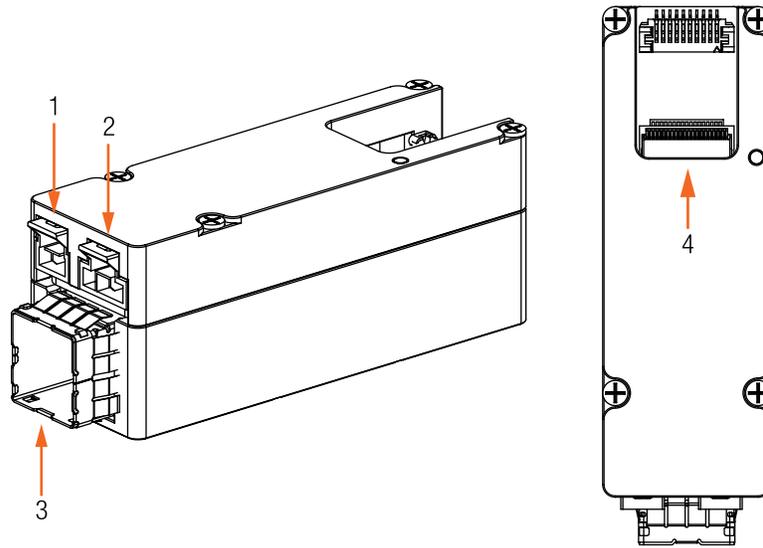


Figure 4: Location of connectors

num.	connector
1	PWR connector
2	IO connector
3	SFF connector
4	FireFly connector

Table 3: Connectors description

Usage	Identification
IO connector	1053131203
Power connector	1053131202

Table 4: Global identification of the connectors

## 3.2 Data interfaces

### 3.2.1 Power connector

### 3.2.2 GPIOs

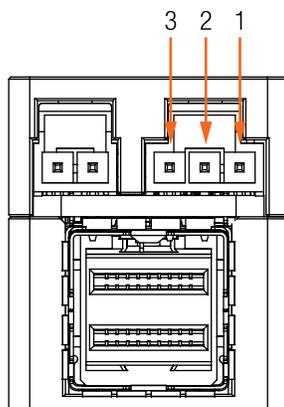


Figure 5: IO connector pinning

Pin	Name	Signal
1	GPI	Opto-isolated input
2	IO_GND	Isolated ground for the IO subsystem
3	GPO	Opto-isolated output

Table 5: IO connector (3POS) pin assignment

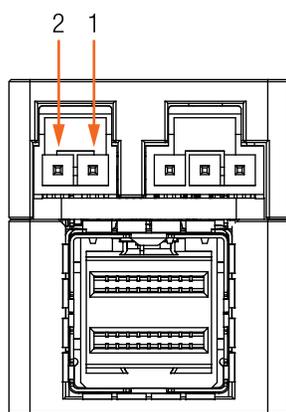


Figure 6: power connector pinning

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

- ADPT-1P-X4G3-FF-X4G3-SFF
- a camera with firefly interface
- host PC with supported SFF host adapter card (e.g. Ximea HA-2P-X4G3-SFF-X4G3) inside
- 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-0M15)

#### 4.1.2 Connecting the components

- Step 1.** Connect SFF-8644 fiber optic cable to adapter (ADPT-1P-X4G3-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 camera
- Step 5.** Connect power cable (CBL-XEC2-PWR-0M15)
- Step 6.** Turn on the power for the adapter
- Step 7.** Turn on the computer

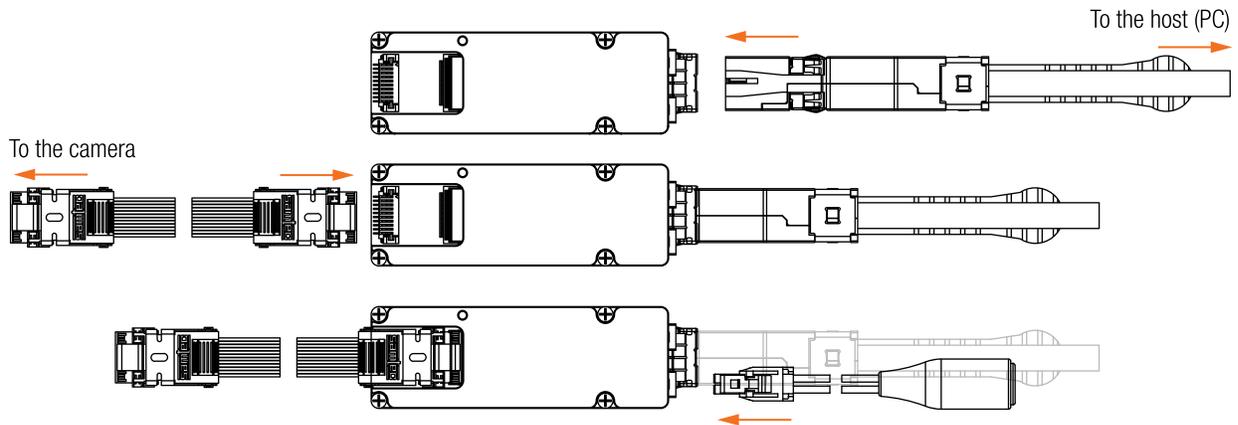


Figure 7: Connecting steps

For more information about ADPT-1P-X4G3-FF-X4G3-SFF please contact: [sales@ximea.com](mailto:sales@ximea.com).

# List of Figures

1	Isometric view of ADPT-1P-X4G3-FF-X4G3-SFF.....	4
2	LED position .....	4
3	Dimensional drawing.....	5
4	Location of connectors .....	6
5	IO connector pinning .....	7
6	power connector pinning .....	7
7	Connecting steps .....	8

# List of Tables

1	LED Description .....	4
2	Parameters .....	5
3	Connectors description .....	6
4	Global identification of the connectors .....	6
5	IO connector (3POS) pin assignment .....	7
6	Power connector (2POS) pin assignment .....	7



