ximea

ADPT-4P-X2G3-FF-X8G3-MTP
Firefly to MTP 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

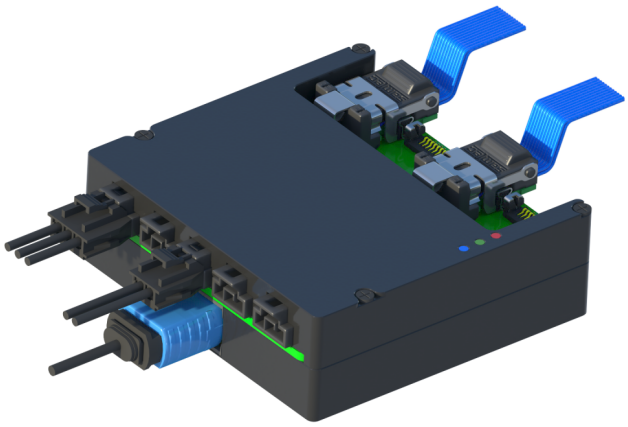

Figure 1: Isometric view of ADPT-4P-X2G3-FF-X8G3-MTP

- Adapter to connect XIMEA FireFly cameras to MTP cable
- Connects 4x PCIe Gen3 x2 cameras
- Copper FireFly cable from camera turns to fiber optic MTP cable
- Offers Power and IO connectors for synchronization and triggering
- Suitable for cameras from: xiX family

This adapter offers a streamlined way to connect your PCIe/FireFly camera directly to your PC, eliminating the need for an xSwitch. A FireFly ECUE copper cable is needed for connecting a camera(s) to the adapter. The adapter features an integrated Samtec PCUO module. This allows for a high-speed connection to your PC using an optical MTP cable. The adapter comes bundled with a power cable (CBL-XEC2-PWR-0M15) to ensure smooth operation and provides connectors for GPI/GPO signals from the camera, enabling control and synchronization with other devices (cables required for GPI/GPO functionality).

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
3	Blue	Connected to PC	PRSNT signal

Table 1: LED Description

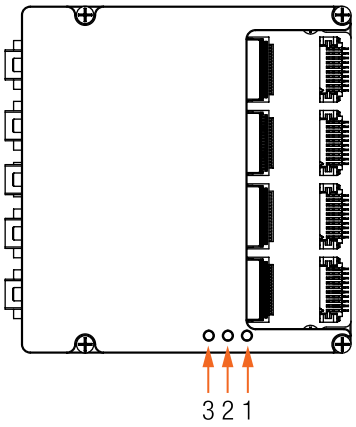

Figure 2: LEDs position

2 Dimensional drawings

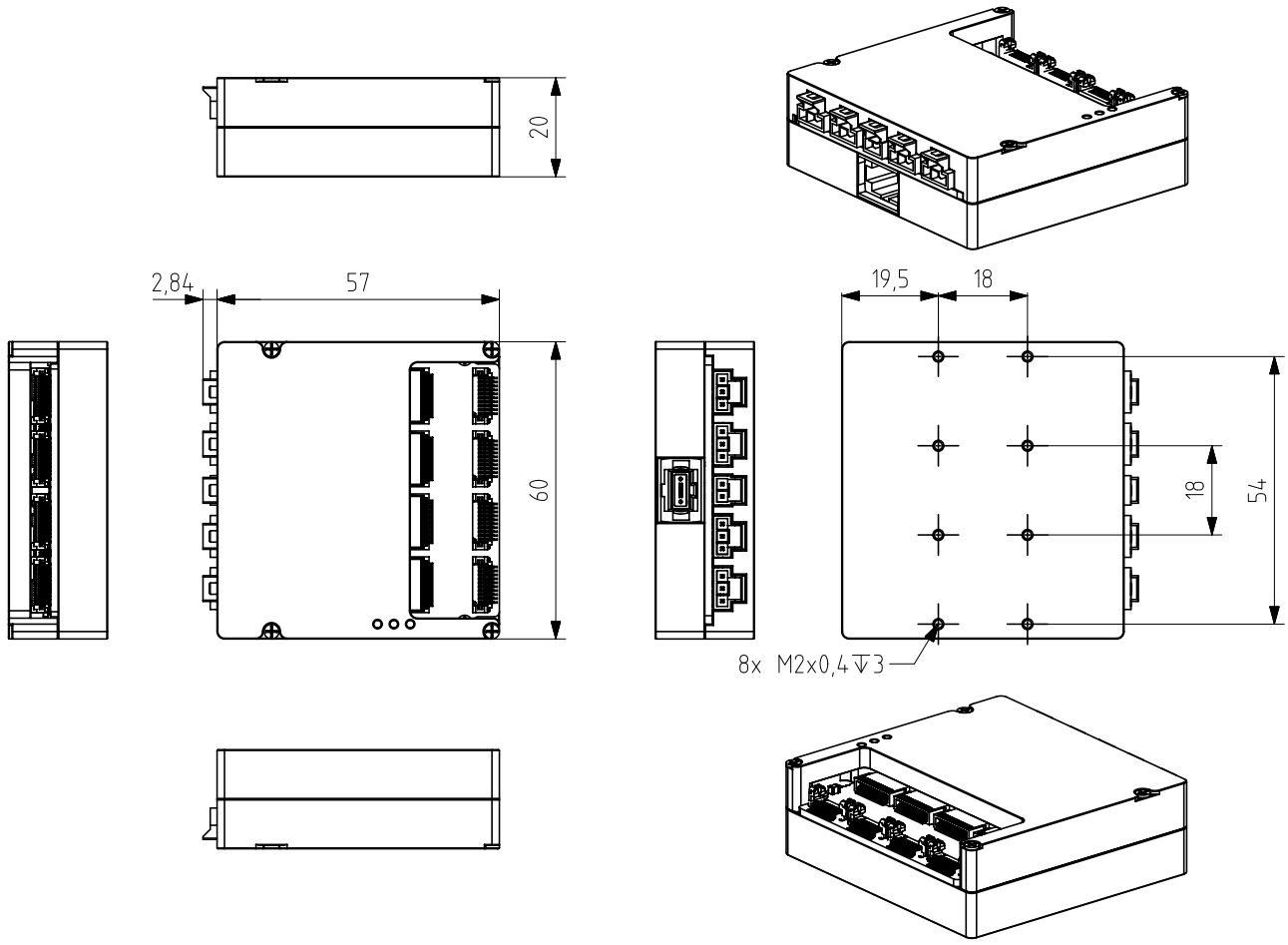

Figure 3: ADPT-4P-X2G3-FF-X8G3-MTP dimensional drawing

Width [W]	Height [H]	Depth [D]	Mass [M]
60 mm	20 mm	59.84 mm	TBD g

Table 2: Mechanical parameters

3 Connectors

3.1 Location of connectors

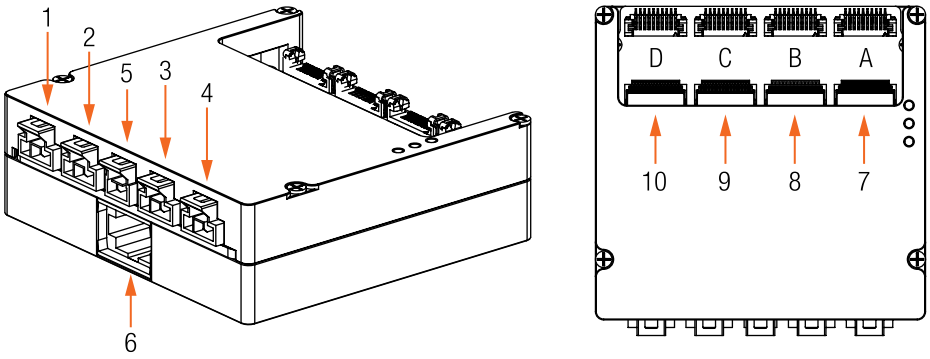

Figure 4: ADPT-4P-X2G3-FF-X8G3-MTP location of connectors

num.	connector
1	IO connector D
2	IO connector C
3	IO connector B
4	IO connector A
5	PWR connector
6	X8G3 MTP optical connector (24 fiber)
7	FireFly connector A
8	FireFly connector B
9	FireFly connector C
10	FireFly connector D

Table 3: Description of connectors

Usage	Identification
IO connector	1053131203
Power connector	1053131202

Table 4: Global identification of the connectors

3.2 Data interfaces

3.2.1 GPIO

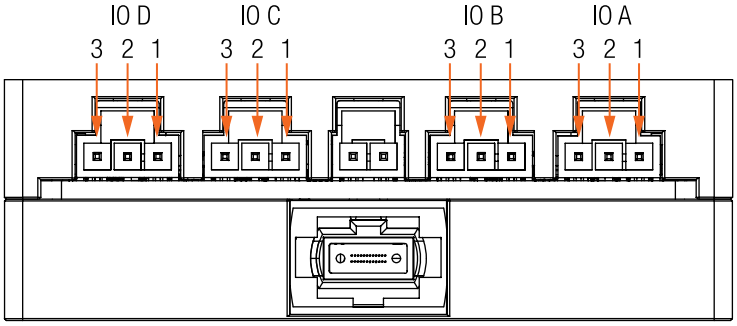

Figure 5: ADPT-4P-X2G3-FF-X8G3-MTP IO pinning

Pin	Name	Signal
IO A		
1	ISO_GPI	Opto-isolated input
2	ISO_GND	Isolated ground for the IO subsystem
3	ISO_GPO	Opto-isolated output
IO B		
1	ISO_GPI	Opto-isolated input
2	ISO_GND	Isolated ground for the IO subsystem
3	ISO_GPO	Opto-isolated output
IO C		
1	ISO_GPI	Opto-isolated input
2	ISO_GND	Isolated ground for the IO subsystem
3	ISO_GPO	Opto-isolated output
IO D		
1	ISO_GPI	Opto-isolated input
2	ISO_GND	Isolated ground for the IO subsystem
3	ISO_GPO	Opto-isolated output

Table 5: IO connectors (3POS) pin assigment

3.2.2 Power connector

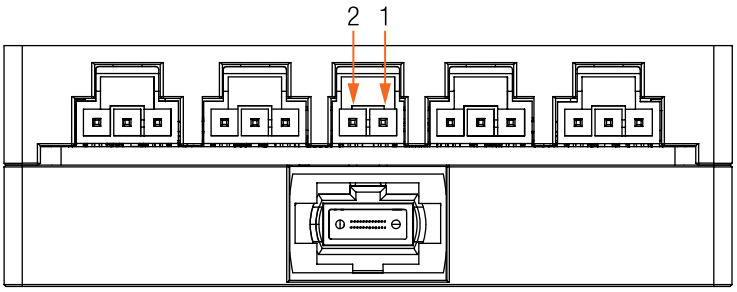

Figure 6: Power connector pinning

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

Table 6: Power connector (2POS) pin assigment

3.2.3 MTP connector

The MTP connector on the adapter is a 24-fiber male MTP connector. For proper operation, use MTP cables with a 24-fiber female connector, such as CBL-MTP-X8G3-FF-xxxM0.

4 Quickstart guide

4.1 Hardware setup

4.1.1 Essential components

- a camera with firefly interface
- host PC
- ADPT-4P-X2G3-FF-X8G3-MTP
- optical MTP cable (CBL-MTP-X8G3-FF-xxxM0)
- Firefly ECUE copper cable (CBL-ECUE-X4G3-xM0)
- power cable (CBL-XEC2-PWR-0M15)

4.1.2 Connecting the components

Step 1. Connect optical MTP cable (CBL-MTP-X8G3-FF-xxxM0) to adapter (ADPT-4P-X2G3-FF-X8G3-MTP)

Step 2. Connect optical MTP cable (CBL-MTP-X8G3-FF-xxxM0) to PC

Step 3. Firefly ECUE cable (CBL-ECUE-X4G3-xM0) to adapter

Step 4. Firefly ECUE cable (CBL-ECUE-X4G3-xM0) 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

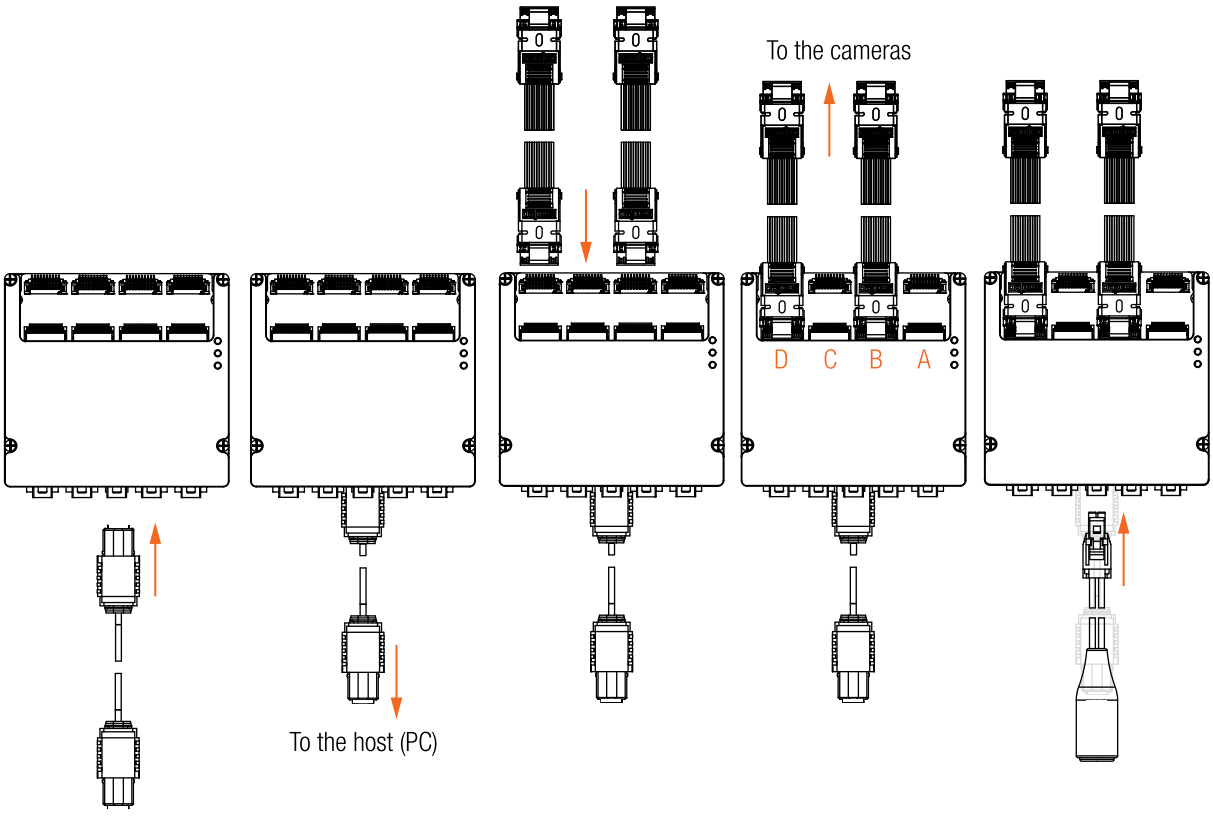

Figure 7: Connecting steps

For more information about ADPT-4P-X2G3-FF-X8G3-MTP please contact: sales@ximea.com.

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