

XC-X8G3-MTP-X8G3-IPASS

MTP converter adapter

XIMEA Accessories
Technical Manual
Version v260828

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

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1 General description

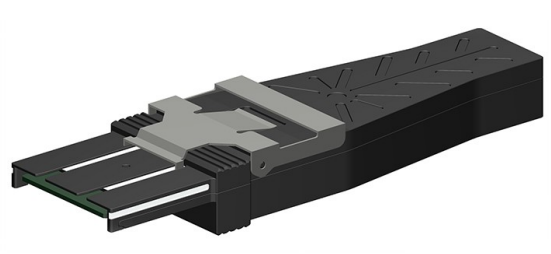


Figure 1: Isometric view of XC-X8G3-MTP-X8G3-IPASS

- PCIe Gen.3 x8 iPass to MTP converter
- Link Speed 64 Gb/s

Adapter converter for connection of iPass X8G3 camera to MTP fiber optics cable. The cage (XCable housing) has been designed with standard MTP 10 cm cable. The adapter features an integrated Samtec PCUO module. This allows for a high-speed connection to your PC using an optical MTP cable.

XC-X8G3-MTP-X8G3-IPASS can be used with xiB-64 camera series and xSWITCH.

2 Dimensional drawings

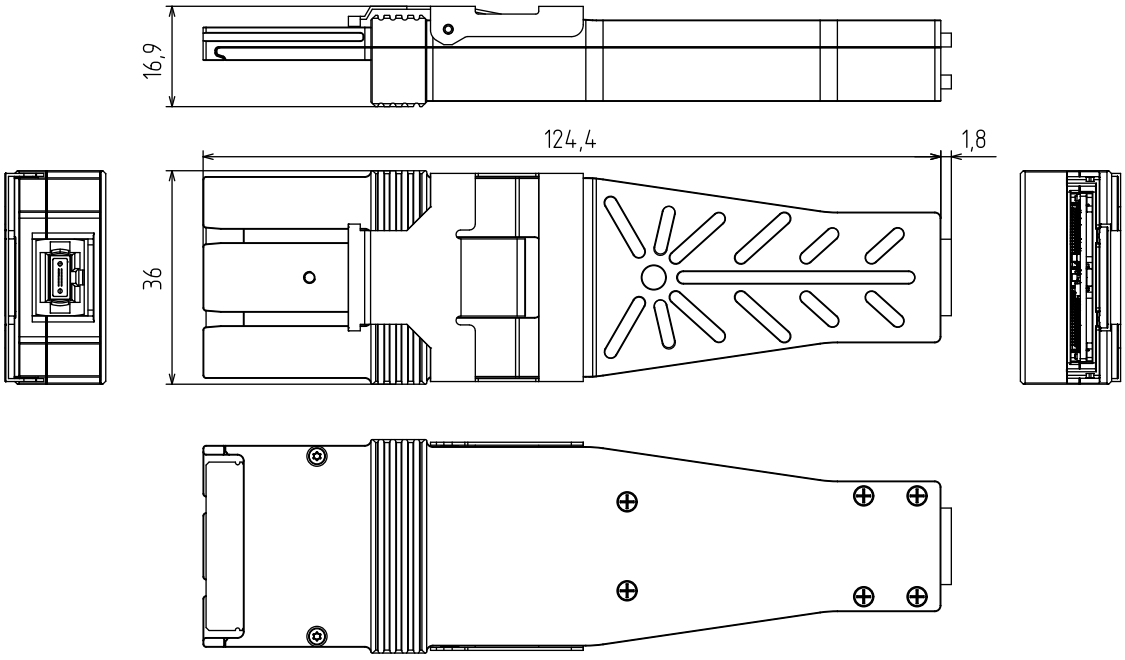


Figure 2: Dimensional drawing of XC-X8G3-MTP-X8G3-IPASS

Width [W]	Height [H]	Depth [D]	Mass [M]
36 mm	126.2 mm	16.9 mm	85.4 g

Table 1: Mechanical parameters of XC-X8G3-MTP-X8G3-IPASS

3 Connectors

3.1 Location of connectors

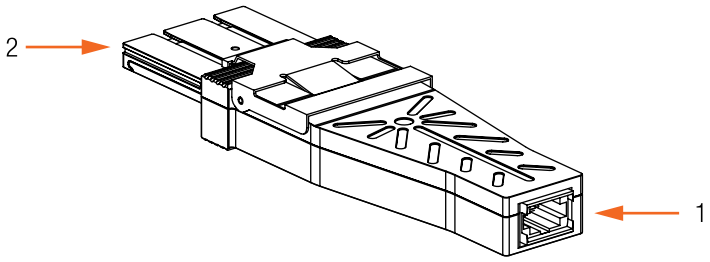


Figure 3: XC-X8G3-MTP-X8G3-IPASS connectors location

Num.	Connector
1	MTP optical connector (X8G3)
2	IPASS PCIe connector plug (X8G3)

Table 2: Connectors description

3.2 Data interfaces

3.2.1 MTP optical fiber connector

The MTP connector on the xSwitch 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, see Section CBL-MTP-X8G3-FF-10M0.

Item	Value
Connector	MTP Male 24-fiber connector (see CBL-PCUO-X8G3-0M15)
Signals	PCIe Gen3 x8, RX lanes, TX lanes
Mating Connectors	US Conec MTP (Pinless) Female connector
Mating Cable	Ximea PN: CBL-MTP-X8G3-FF-5M0, CBL-MTP-X8G3-FF-10M0, CBL-MTP-X8G3-FF-20M0, CBL-MTP-X8G3-FF-30M0, CBL-MTP-X8G3-FF-40M0, CBL-MTP-X8G3-FF-50M0

Table 3: MTP connector general description

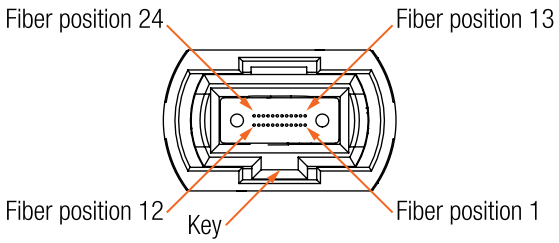


Figure 4: MTP connector pinout

Pin	Name	Description	Pin	Name	Description
1	Rx0	Receive channel 0	13	Tx0	Transmit channel 0
2	Rx1	Receive channel 1	14	Tx1	Transmit channel 1
3	Rx2	Receive channel 2	15	Tx2	Transmit channel 2
4	Rx3	Receive channel 3	16	Tx3	Transmit channel 3
5	NC	Not connected	17	NC	Not connected
6	NC	Not connected	18	NC	Not connected
7	NC	Not connected	19	NC	Not connected
8	NC	Not connected	20	NC	Not connected
9	Rx4	Receive channel 4	21	Tx4	Transmit channel 4
10	Rx5	Receive channel 5	22	Tx5	Transmit channel 5
11	Rx6	Receive channel 6	23	Tx6	Transmit channel 6
12	Rx7	Receive channel 7	24	Tx7	Transmit channel 7

Table 4: MTP connector pin assignment

4 Additional information

4.1 Cables

4.1.1 CBL-MTP-X8G3-FF-10M0

To connect product with MTP connector to MTP host connector you can use a 10-meter MTP fiber-optic trunk cable supporting PCIe Gen3 x8 with a data rate of 64 Gbit/s. Cable has (pinless) female-to-female connectors and contains 24 Corning ClearCurve glass fibers. The cable features a minimum bend radius of 7.5 mm and a plenum (OFNP)-rated outer jacket.

It is also available in 5 m, 10 m, 20 m, 30 m, 40 m, and 50 m lengths.



Figure 5: CBL-MTP-X8G3-FF-10M0 cable

4.1.2 CBL-PCUO-X8G3-0M15

The product includes the CBL-PCUO-X8G3-0M15, a 15 cm MTP to Firefly 24-fiber cable supporting PCIe Gen3 x8.

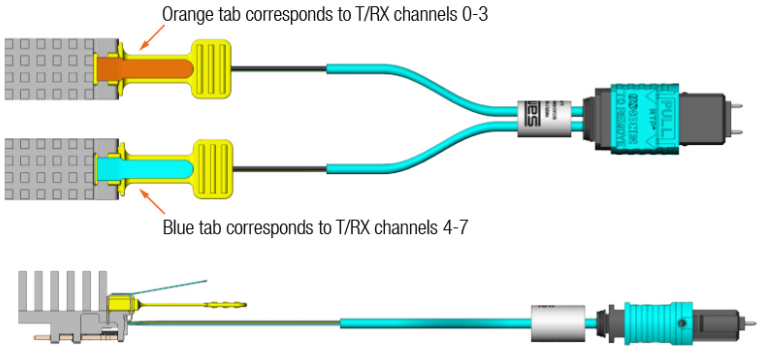


Figure 6: CBL-PCUO-X8G3-0M15 cable

5 Quickstart guide

5.1 Hardware setup

5.1.1 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.

- a camera
- host PC
- adapter (XC-X8G3-MTP-X8G3-IPASS)
- host adapter
- MTP fiber optic cables (e.g. CBL-MTP-X8G3-FF-10M0)

5.1.2 Connecting the components

This accessory can be used as an end-connecting component for the camera as well as an end-connecting component for the computer (see Step 3. and Step 4., Options A / B below).

Step 1. Ensure the PC is turned off and unplugged from the power source and then deploy the host adapter to the PC

Step 2. Connect the MTP cable to the XC-X8G3-MTP-X8G3-IPASS adapter

Step 3. Option A: Connect the MTP cable to the computer
Option B: Connect the MTP cable to the connected device (e.g., the camera)

Step 4. Option A: Connect the PCIe side of the adapter to the connected device (e.g., the camera)
Option B: Connect the PCIe side of the adapter to the computer

Step 5. Power up the PC

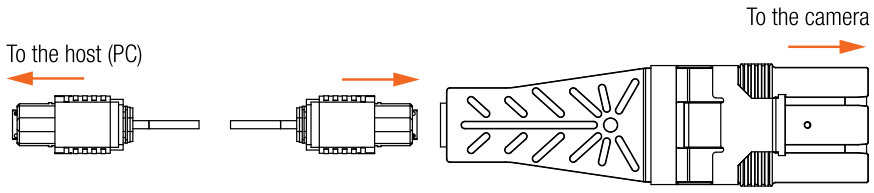


Figure 7: Connecting steps

For more information about XC-X8G3-MTP-X8G3-IPASS please contact: sales@ximea.com.

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