



Quick Start Guide
VLXT.FO cameras (10 Gigabit Ethernet)

Download latest camera software:
www.baumer.com/vision/software

Download latest technical documentation:
www.baumer.com/cameras/docs

Product Specification

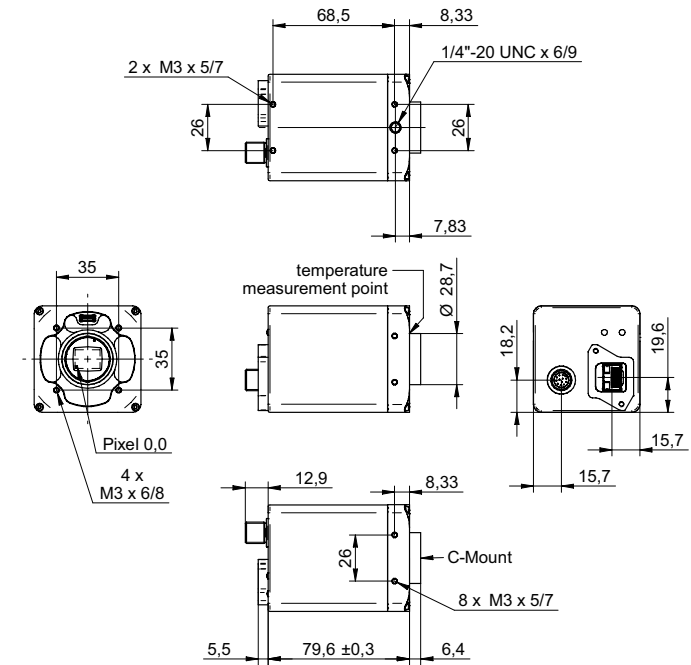
VLXT.FO cameras – Extremely functionality and high frame rates

- GigE Vision™ standard compliant
- SFP+ (Enhanced small form-factor pluggable)
- Optional: Protection class IP67 (with installed tube and Harting adapter)
- Optional: Modular tube system
- M12 industry connector
- PWM on outputs for direct controlled illuminations
- 4 outputs with maximum 1.5 A (2.5 A with 40% periode time)

Notice

Further technical details are available in the respective data sheets.

Dimensions



Conformity / Safety

Conformity



We declare, under our sole responsibility, that the previously described Baumer VLXT.FO cameras conform with the directives of the CE.



The camera has been tested by UL (Underwriters Laboratories) and complies with the requirements of the standards.

Please see the User's Guide for further information.

Safety Precautions

Notice

See the User's Guide for the complete safety instructions!

Caution

Observe precautions for handling electrostatically sensitive devices!

Environmental Requirements

Storage temp.	-10 °C ... +70 °C
Humidity	10 % ... 90 % Non-condensing

System Requirements

	Recommended for GigE	Recommended for 10 GigE
CPU	Intel® Core™ i5-2520M CPU @ 2.50GHz, Cores: 4	Intel® Core™ i7-3770 CPU @ 3.40GHz, Cores: 8
RAM	4 GB	8 GB
Operating system (OS)	Microsoft® Windows® 7 (32 / 64 bit systems) Microsoft® Windows® 8 (32 / 64 bit systems) Microsoft® Windows® 10 (32 / 64 bit systems)	

Installation

Lens mount

Notice

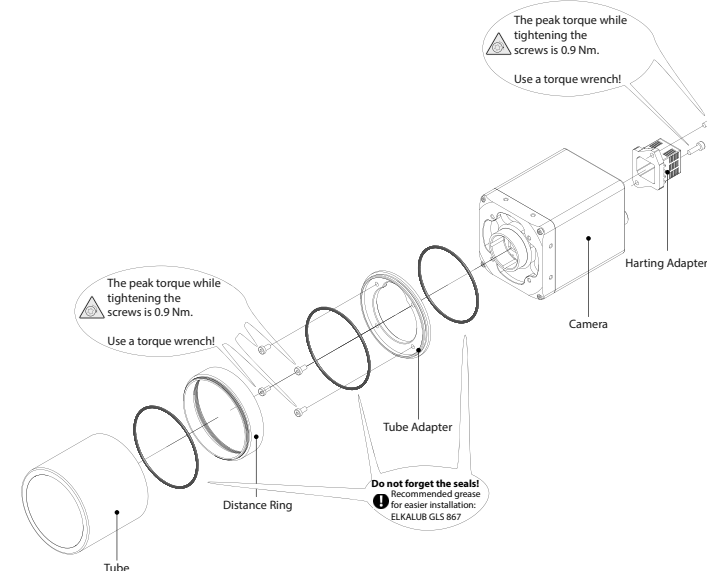
Ensure the sensor and lens are not contaminated with dust and airborne particles when mounting the support or the lens to the device!

The following points are very important:

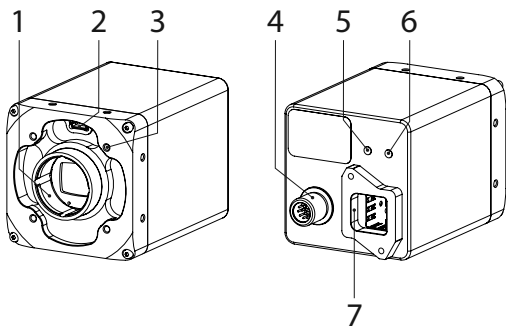
- Install the camera in an environment that is as dust free as possible!
- Keep the dust cover (bag) on the camera for as long as possible!
- Hold the camera with the sensor downwards if the sensor is uncovered.
- Avoid contact with any of the camera's optical surfaces!

Installation

Modular tube system and Harting Adapter (ordered separately)



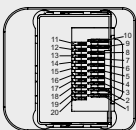
General Description



No.	Description	No.	Description
1	Lens mount (C-mount)	5	GigE LED
2	UART0 Interface (≥ Release 3, C- / EF-Mount only)	6	Camera LED
3	4 x Tube Adapter /front mounting threads	7	SFP+ Socket
4	Power- and process interface (including UART1 / RS232)		

Data Interface

SFP+ Socket



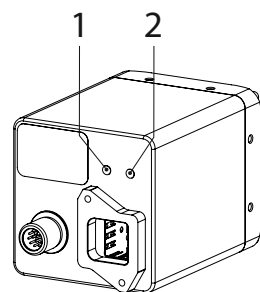
1	VEET	11	VEER
2	TX_FAULT	12	RD-
3	TX_DISABLE	13	RD+
4	SDA	14	VEER
5	SCL	15	VCCR
6	MOD_ABS	16	VCCT
7	RS0	17	VEET
8	RX_LOS	18	TD+
9	RS1	19	TD-
10	VEER	20	VEET

Power Supply

Power Supply

Power V _{CC}	12 V ... 24 V (-15 % ... +20 %) / Power consumption: max. 9.6 W For UL conform installation: Class 2 per NEC / Protection Class III The device is intended to be supplied from an isolated Limited Energy Source per UL61010-1, 3rd ed cl. 9.4 or Limited Power Source per UL60950-1 or Class 2 per NEC.
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LED Signaling



LED	Signal	Meaning	
1	GigE LED	green static	link active
		green flash	receiving
2	Camera LED	yellow static	error
		yellow flash	transmitting
		orange static	overheated

Digital IOs

Power supply / Digital IOs (on camera side) (SACC-CI-M12MS-12CON-L180)

M12 / 12 pins / wire colors of the connecting cable (ordered separately)



1	Power V _{CC}	brown	7	OUT3 (Line6)	black
2	GND (Power)	blue	8	RS232 Txd (Line2)	grey
3	IN1 (Line0)	white	9	OUT4 (Line7)	red
4	OUT1 (Line4)	green	10	RS232 RxD (Line3)	violet
5	IN2 (Line1)	pink	11	GND (IO)	grey-pink
6	OUT2 (Line5)	yellow	12	Power (IO)	red-blue

Caution

In order to achieve the mentioned IP protection level, the M12 connector need to be tightened with a torque value of 0.4 Nm.



For that Baumer suggests the use of a torque driver (such as Wiha TorqueVario®-S ESD) in combination with a wrench for assembling sensor/ actuator cables with M12 connector (such as Phoenix Contact SAC BIT M12-D15).

On the SFP+ socket, a Harting Adapter must be used.

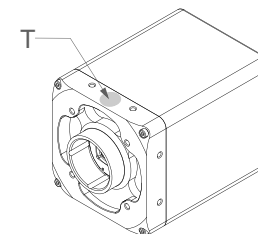
Heat Transmission

Caution

Heat can damage the camera. Ambient temperature above 25 °C (77 °F) requires heat dissipation measures. Provide adequate dissipation of heat, to ensure that the temperatures does not exceed the specified values. Baumer recommends the following methods for proper heat dissipation:



- Every form of convection around the device and mounting helps reduce temperature. Prevent heat from becoming trapped!
- Mounting in combination with forced convection may provide proper heat dissipation.
- Avoid mounting onto stainless steel. Stainless steel has a roughly 10-fold lower thermal conductivity compared to aluminium.
- Do not install the device at the end of a profile; this will allow heat to dissipate on both sides (higher temperature drops over a larger area)!
- Do not operate other devices in close proximity to the camera. Their waste heat could additionally heat the camera.
- From an ambient temperature of 30 °C (86 °C) up to +40 °C (104 °F) the camera requires forced air cooling (min. 0.9 m/s).

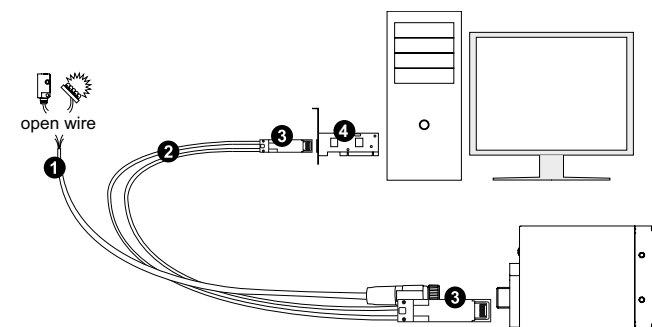


See User's Guide for further information.

Installation

Installation of the camera:

- Connect the camera using appropriate fibre optic cables to the transceivers.
- If required, connect a trigger and / or flash to process interface.
- Connect the camera to power supply.



- Installation sample
- 1 - Cable for trigger and flash
 - 2 - Optical Fibre cables
 - 3 - SFP+ Transceiver
 - 4 - PCI board