



Quick Start Guide
HXG cameras with CMOS sensors (Release 2)

Latest software version and technical documentation are available at:

www.baumer.com/vision/login

Product Specification

HXG cameras – Maximum Performance with CMOS sensors

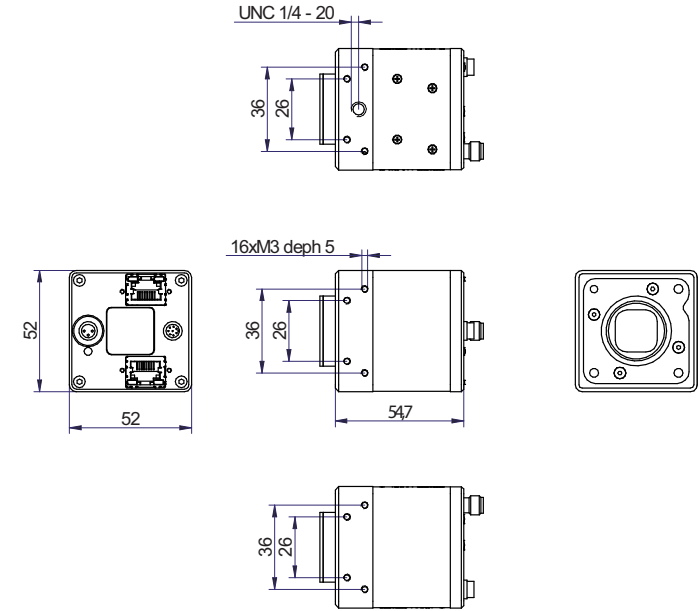
- Dual Gigabit Ethernet progressive scan CMOS camera
- Binning, subsampling, true partial scan function (ROI) for increased frame rates
- High Dynamic Range (HDR) image acquisition
- External synchronization via industrial compliant process interface (trigger / flash)
- Global shutter architecture for minimized motion blur
- Power over Ethernet support
- Standard RJ45 connectors
- GigE Vision™ standard compliant
- Excellent image quality
- Camera parameter programmable in real-time
- Frame rates up to 105 fps (HXG20 / Monochrome)

Camera Type	Sensor Size	Resolution	Full Frames [max. fps]	Burst Mode (buffered)
Monochrome				
HXG20	2/3"	2048 x 1088	105	337
HXG20NIR	2/3"	2048 x 1088	105	337
HXG40	1"	2048 x 2048	56	180
HXG40NIR	1"	2048 x 2048	56	180
Color				
HXG20	2/3"	2048 x 1088	105	337
HXG40	1"	2048 x 2048	56	180



Dimensions

- HXG (C-Mount version)



Safety

Conformity:
CE, FCC Part 15 Class A, RoHS



FCC – Class A device

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off an on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Further Information

For further information on our products visit www.baumer.com

For technical issues, please contact our technical support:
support.cameras@baumer.com · Phone +49 (0)3528 4386-0 · Fax +49 (0)3528 4386-86

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Technical data has been fully checked, but accuracy of printed matter not guaranteed.

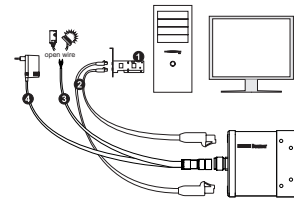
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Installation

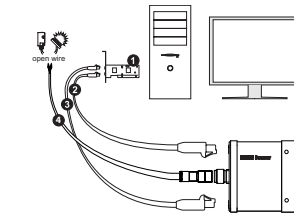
Installation sample without PoE

- 1 - network interface card
- 2 - network cable
- 3 - Process interface cable
- 4 - Power cable



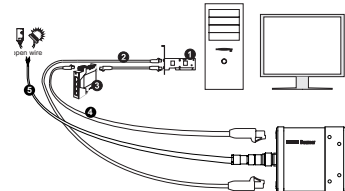
Installation sample with PoE via NIC

- 1 - PoE network interface card (NIC)
- 2 - network cable (PoE)
- 3 - network cable (without PoE)
- 4 - Process interface cable



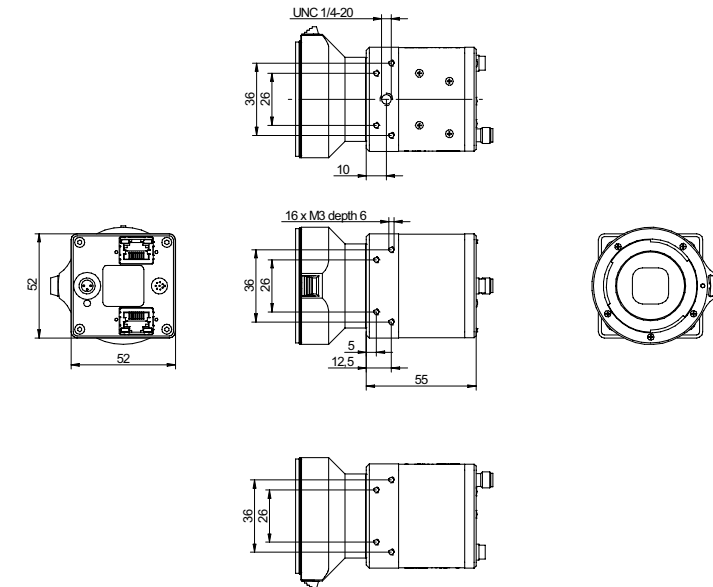
Installation sample with PoE via Injector

- 1 - network interface card (NIC)
- 2 - network cable (without PoE)
- 3 - Injector
- 4 - network cable (with PoE)
- 5 - Process interface cable



Dimensions

- HXG-F (F-Mount version)



General Description



No.	Description	No.	Description
1	(respective) lens mount	4	Digital-I/O
2	Power Supply	5	Data Port 2
3	Data Port 1	6	Signaling-LED

Data Interfaces

Data / Control 1000 Base-T (Port 1)

wire colors of the connecting cable



1	green/white	MX1+	1	green/white	MX1+
2	green	MX1-	2	green	MX1-
3	orange/white	MX2+	3	orange/white	MX2+
4	blue	MX3+	4	blue	MX3+
5	blue/white	MX3-	5	blue/white	MX3-
6	orange	MX2-	6	orange	MX2-
7	brown/white	MX4+	7	brown/white	MX4+
8	brown	MX4-	8	brown	MX4-

Data / Control 1000 Base-T (Port 2)



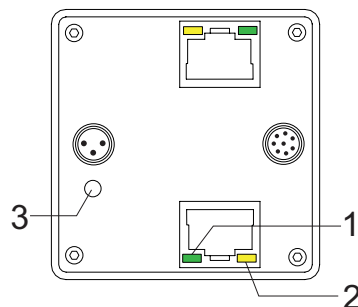
1	green/white	MX1+	1	green/white	MX1+
2	green	MX1-	2	green	MX1-
3	orange/white	MX2+	3	orange/white	MX2+
4	blue	MX3+	4	blue	MX3+
5	blue/white	MX3-	5	blue/white	MX3-
6	orange	MX2-	6	orange	MX2-
7	brown/white	MX4+	7	brown/white	MX4+
8	brown	MX4-	8	brown	MX4-

Notice

Data port 1 supports Power over Ethernet (38 VDC .. 57 VDC).

For the data transfer, the ports are equal. For Single GigE connect one port and for Dual GigE connect the second port additionally. The order does not matter.

LED Signaling



LED	Signal	Meaning
1	green green flash	Link active Receiving
2	yellow	Transmitting
3	green yellow	Power On Readout active

Power Supply and Process Interface

Power Supply

wire colors of the connecting cable



1	brown	Power V _{cc}
3	blue	GND
4	black	not used

Digital I/O M8 / 8 pins



1	white	Line 5
2	brown	Line 1
3	green	Line 0
4	yellow	GND
5	grey	U _{ex}
6	pink	Line 3
7	blue	Line 4
8	red	Line 2

Power Supply

Power V _{cc}	20 VDC ... 30 VDC
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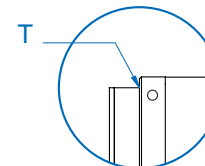
Heat Transmission

Caution

Provide adequate dissipation of heat, to ensure that the temperature does not exceed +50°C (+122°F).



The surface of the camera may be hot during operation and immediately after use. Be careful when handling the camera and avoid contact over a longer period.



T: Housing temperature measurement point

It is very important to provide adequate dissipation of heat, to ensure that the housing temperature does not reach or exceed +50°C (+122°F). As there are numerous possibilities for installation, a specific method for proper heat dissipation is not defined, but the following principles are suggested:

- Operate the cameras only in mounted condition with a good heat conductor (e.g. aluminum)
- Mounting in combination with forced convection may provide proper heat dissipation