



Quick Start Guide  
VCXU cameras (USB 3.0)

Latest software version and technical  
documentation available at:  
[www.baumer.com/vision/login](http://www.baumer.com/vision/login)

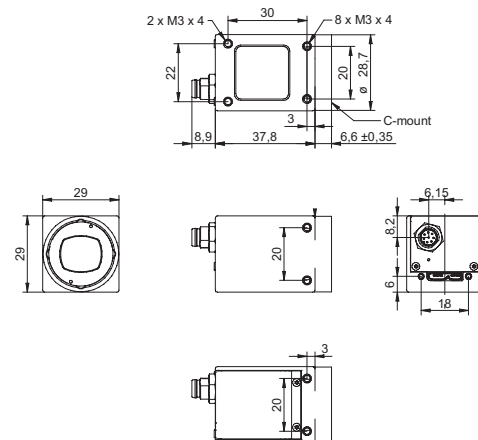
## Product specification

Camera type	Sensor size	Resolution	Full frames [max. fps]
<b>Monochrome / Color</b>			
VCXU-02M / VCXU-02C	1/4"	640 × 480	891
VCXU-13M / VCXU-13C	1/2"	1280 × 1024	222
VCXU-23M / VCXU-23C	1/1.2"	1920 × 1200	165
VCXU-24M / VCXU-24C	1/1.2"	1920 × 1200	38
VCXU-25M / VCXU-25C	2/3"	1920 × 1200	167
VCXU-31M / VCXU-31C	1/1.8"	2048 × 1536	120
VCXU-32M / VCXU-32C	1/1.8"	2048 × 1536	55
VCXU-50M / VCXU-50C	2/3"	2448 × 2048	76.9
VCXU-51M / VCXU-51C	2/3"	2448 × 2048	35
VCXU-53M / VCXU-53C	1"	2592 × 2048	73.5
VCXU-123M / VCXU-123C	1.1"	4096 × 3000	31

### Notice

Further technical details are available in the respective data sheets.

## Dimensions



## Safety

Conformity:  
CE, RoHS



### CE

We declare, under our sole responsibility, that the previously described Baumer VCXU camera conforms with the directives of the CE.

### RoHS

All VCXU cameras comply with the recommendation of the European Union concerning RoHS Rules.

### Further Information

For further information about our products, please visit [www.baumer.com](http://www.baumer.com)  
For technical issues, please contact our technical support:  
[support.cameras@baumer.com](mailto:support.cameras@baumer.com) · Phone +49 (0)3528 4386-845 · Fax +49 (0)3528 4386-86  
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Technical data has been fully checked, but accuracy of printed matter is not guaranteed.  
The information in this document is subject to change without notice.

## System requirements

	Single-camera system Recommended	Multi-camera system Recommended
CPU	Intel® Core™ i5-2520M CPU @ 2.50 GHz, Cores: 4	Intel® Core™ i7-3770 CPU @ 3.40 GHz, Cores: 8
RAM	4 GB	8 GB
Operating system	Microsoft® Windows® 7 32 / 64 bit systems (required for USB 3.0)	Microsoft® Windows® 8 32 / 64 bit systems (required for USB 3.0)
(OS)	Microsoft® Windows® 10 32 / 64 bit systems (required for USB 3.0)	

## Installation

### Lens mount

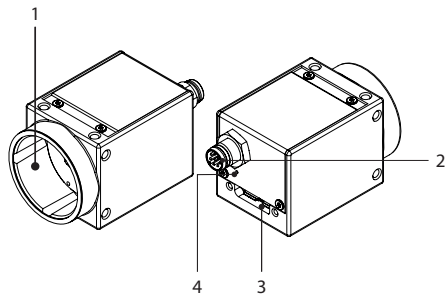
#### Notice

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!

General description




No.	Description	No.	Description
1	Lens mount (C-mount)	4	LED
2	Digital IO		
3	USB 3.0 port		

Data interface / Digital IOs

USB 3.0 (Micro B)			
1	VBUS	6	MicB_SSTX-
2	D-	7	MicB_SSTX+
3	D+	8	GND_DRAIN
4	ID	9	MicB_SSRX-
5	GND	10	MicB_SSRX+


Digital IOs (on camera side) wire colors of the connecting cable (ordered separately)					
1	GPIO (Line2)	white	5	Power VCC OUT1	grey
2	not connected	brown	6	OUT1 (Line3)	pink
3	IN1 (Line0)	green	7	GND GPIO	blue
4	GND IN1	yellow	8	GPIO (Line1)	red

Images with USB 2.0 / LED signals

 **Caution**

If the camera is connected to an USB2.0 port image transmission is disabled by default. The camera consumes more than 2.5W which is the maximum allowed by the USB2.0 specification. But there is a possibility to activate the image transmission at your own risk!

This activation could damage your computer's hardware!

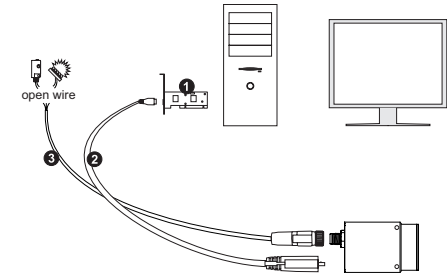
 **Procedure**

1. Open the camera in the *Camera Explorer*.
2. Select the Profile *GenICam Guru*.
3. Activate the Feature *USB2 Support Enable* in the category *Device Control*.
4. Disconnect the data connection of the camera to the USB 2.0 port.
5. Connect the data connection of the camera to the USB 2.0 port.
6. Images will be transmitted via the USB 2.0 port.

	Signal	Meaning
LED	green flash	Power on
	green	USB 3.0 connection
	red	USB 2.0 connection
	yellow	Readout active
	red flash	Update


Installation

- Installing the camera:**
- Connect the camera to the USB connection on your PC using an appropriate cable.
  - If required, connect a trigger and / or flash to the digital IOs.




Installation example  
1 - PCI USB board  
2 - USB cable  
3 - Cable for trigger and flash

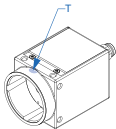
Heat transmission

 **Caution**

Heat can damage the camera. Heat must be dissipated adequately to ensure that the temperature does not exceed the values in the table below.

 As there are numerous possibilities for installation, Baumer recommends no specific method for proper heat dissipation, but suggest the following principles:

- operate the cameras only in mounted condition
- mounting in combination with forced convection may provide proper heat dissipation



Measurement point	Maximum temperature
Measurement point (T)	65°C (149°F)

Troubleshooting

1. Check camera operation using the LED signals.  
→ If LED is red:
  - Camera is connected to USB 2.0 (settings possible).
2. Check connection using Windows Device Manager:  
→ If device is not listed:
  - Check the host controller power supply.
  - Check USB 3.0 cable and connection.  
→ If device is regularly not listed
  - Check USB 3.0 driver installation.