C2

Industrial USB cameras with CS lens mount and h.264 on-board encoder

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Overview

Kurokesu industrial USB cameras with Sony Exmo R Starvis IMX290 sensors and internal h.264/MJPEG/YUYV codec is suitable for a wide range of target applications and use cases. Stable and reliable web cameras operate on most modern operating systems (Windows, OSX, Linux, Android) designed to solve vision problems.

Target applications and use cases

- Remote operated and autonomous vehicles (low latency, low bandwidth streaming, wide range temperature operation -55°C~+85°C)
- Machine vision applications (full manual or auto controls, interchangeable CS or M12 lenses)
- Teleconferencing and virtual meetings (multicamera setup, interchangeable lenses for different view angles)
- Remote teaching/learning (multicamera setup, interchangeable lenses for wide, tele, or close-up scenes)
- Complex scientific equipment (internal process inspection and tracking)

Customers

- Universities and schools (students and teachers can use as teaching equipment or remote learning tool)
- Machine vision developers and researchers (suitable for RND and final product installation)
- Robot system developers and researchers (suitable for RND and final product installation)
- Vloggers, Gamers (recording video from multiple angles in low light)

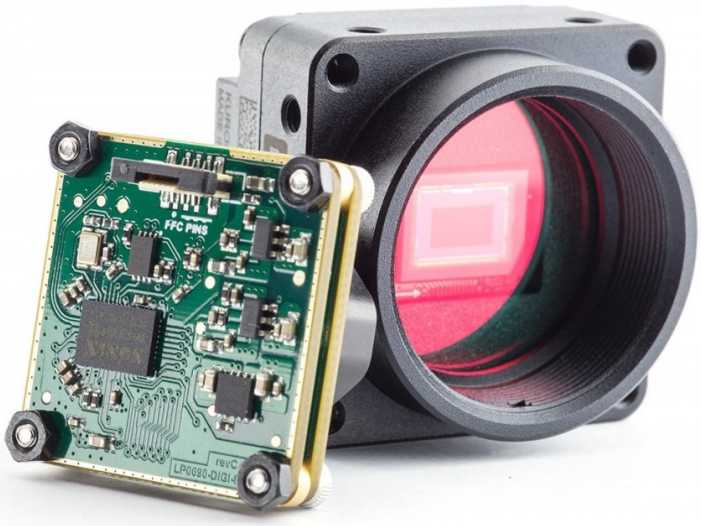
Long term availability

We produce our cameras until there is demand and we can buy the components. Even if a product is marked on our web as obsolete, it can be produced on demand when the minimum quantity is met.

Modifications

Camera model	Lens mount	Microphones	Connector	Colors	Note
C2_USBC	CS	No	USB-C	RGB	Boxed camera
C2_USBC_MIC	CS	Yes	USB-C	RGB	Boxed camera with stereo microphones

C2_BOARD_FFC_M12	M12	No	FFC 6p 0.5mm	RGB	Board camera
C2_BOARD_HS_FFC_M12	M12	No	FFC 6p 0.5mm	RGB	Board camera with heatsink
C2M_USBC	CS	No	USB-C	Mono	Boxed monochrome camera



Features

- 1″-32TPI CS / M12 lens mount
- Multiple mounting options (all side walls and top has M3 tapped holes) for machine vision or robotics
- Board mount option
- Optional 1/4-20 UNC thread for tripod mounting
- Format: 1/2.8-inch (6.46mm)
- Sensor: Sony IMX290 Color / Mono
- MJPEG/h.264/YUY2 compression
- 1920x1080 @ 30fps
- UVC compatible
- Sensor pixel size: 2.9µm x 2.9µm
- Sensor dynamic range: 66db
- SNR max: 40.5db
- Operation temperature range: -50°C...+85°C
- USB 2.0
- Interchangeable filters (650nm installed by default)
- High quality industrial black anodized aluminum case / lens mount
- Non cropped sensor operation in all resolutions
- Each camera has unique serial number
- RoHS, REACH, CE certified

Specifications

Common specifications

Pixels	1920H x 1080V
Sensor size	5.63 x 3.17 mm
Shutter	Electronic Rolling Shutter
Sensor pixel size	2.9µm x 2.9µm

Frame rates	• h.264 – 30fps in all modes
	• MJPG – 30fps in all modes
	• YUV 4:2:2 (YUYV)
	  ◦ 1920x1080 – 5fps
	  ◦ 1280×720 – 10fps
	  ◦ 640×480 – 30fps

Output frame sizes	1920×1080, 1280×720, 640×480, 640×360, 320×240, 320×180
Scan	Progressive
Manual control	• Exposure • White balance (2800°K – 9300°K) • Gain • Gamma • Backlight compensation • Sharpnes • Contrast • Saturation • Hue • Brightness • Anti-flicker frequency
Rated power	• 2W max • 350mA @ 5V – h.264 • 290mA @ 5V – MJPEG / YUYV
Supported OS	• Windows • OSX • Linux • Android
Sensor	Sony IMX290

Boxed camera

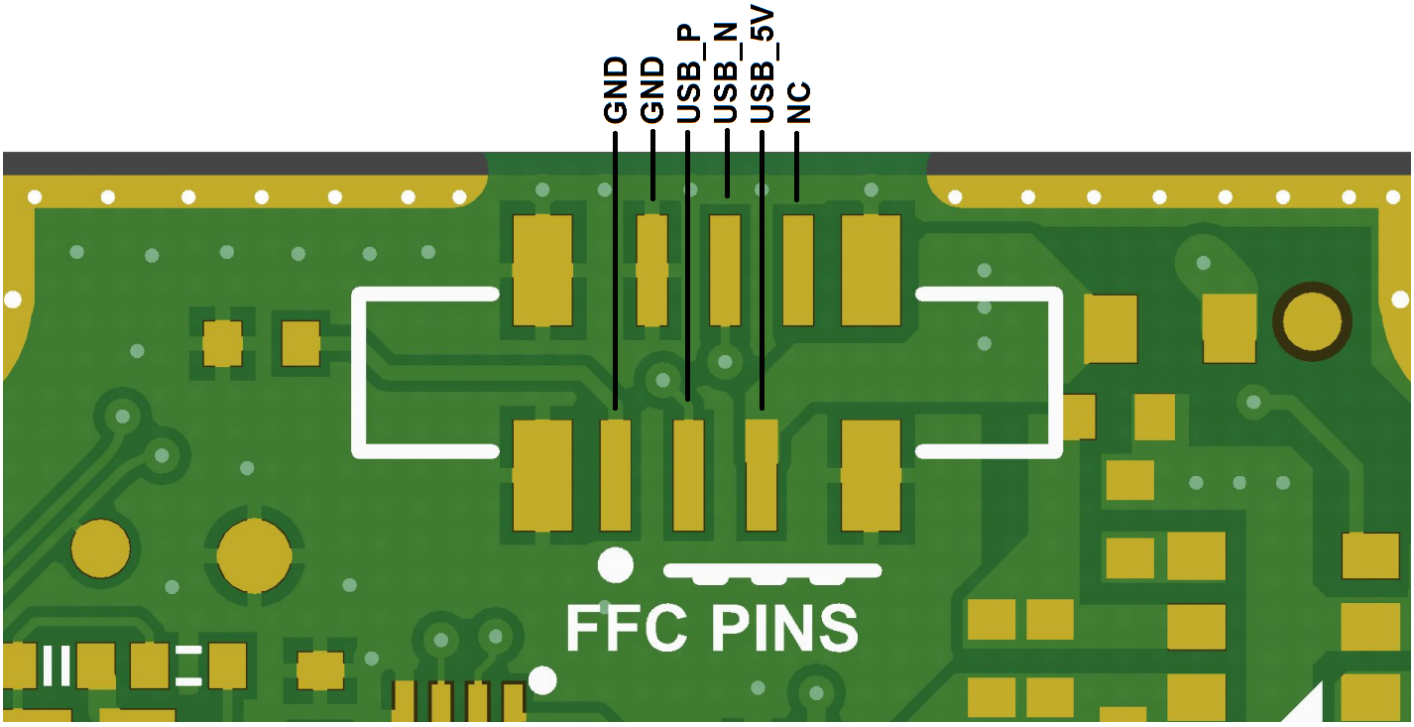
Weight	36g
Dimensions	33×33×24.5mm
Ingress protection	IP40
Lens mount	CS-mount
Operational temperature	-50 ... 85°C (non condensing)

Board camera

Weight	TBD
Dimensions	TBD
Ingress protection	TBD
Lens mount	M12
Operational temperature	-50 ... 65°C (non condensing)

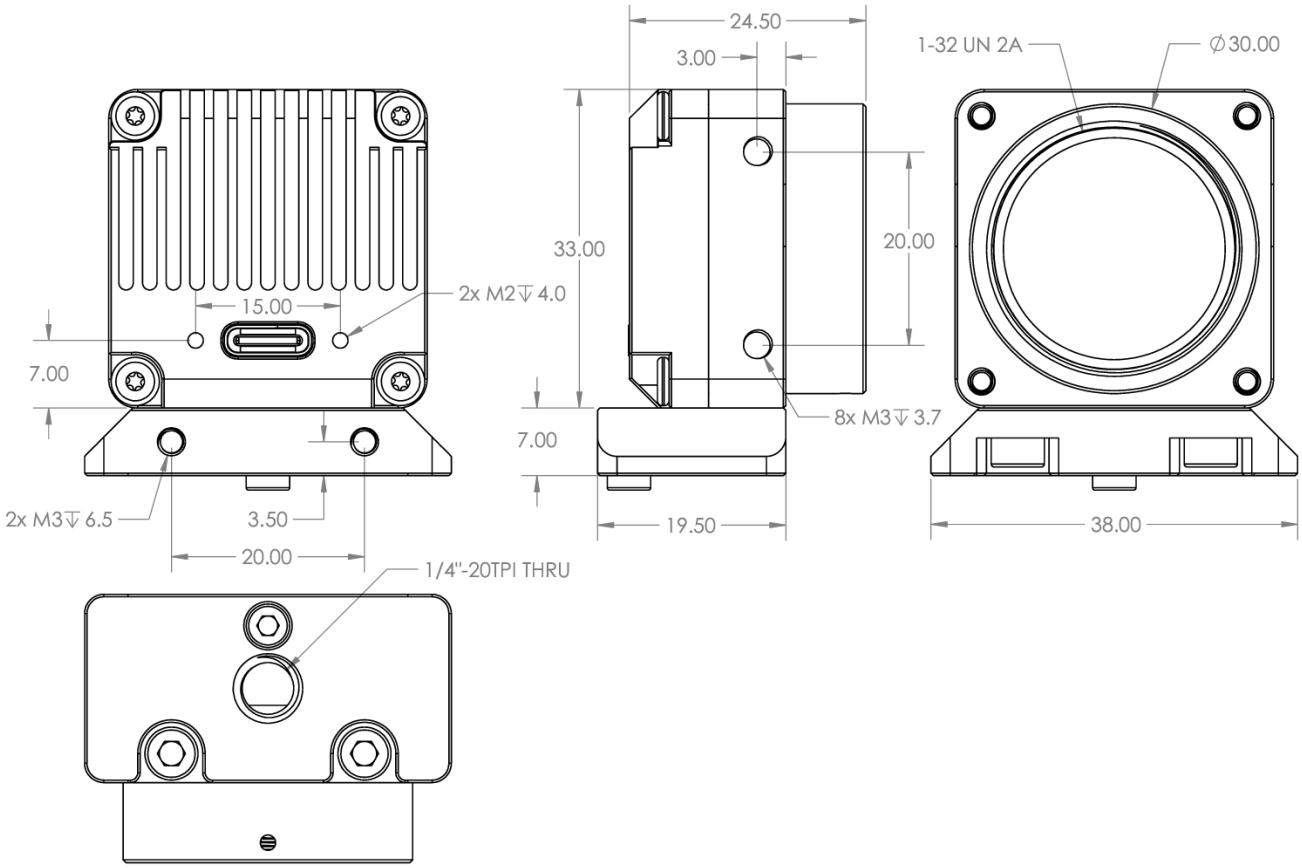
FFC connector pin-out

C2 FFC board camera should be used with 6 pin 0.5mm pitch FFC cable like 687606050002 from Würth Elektronik



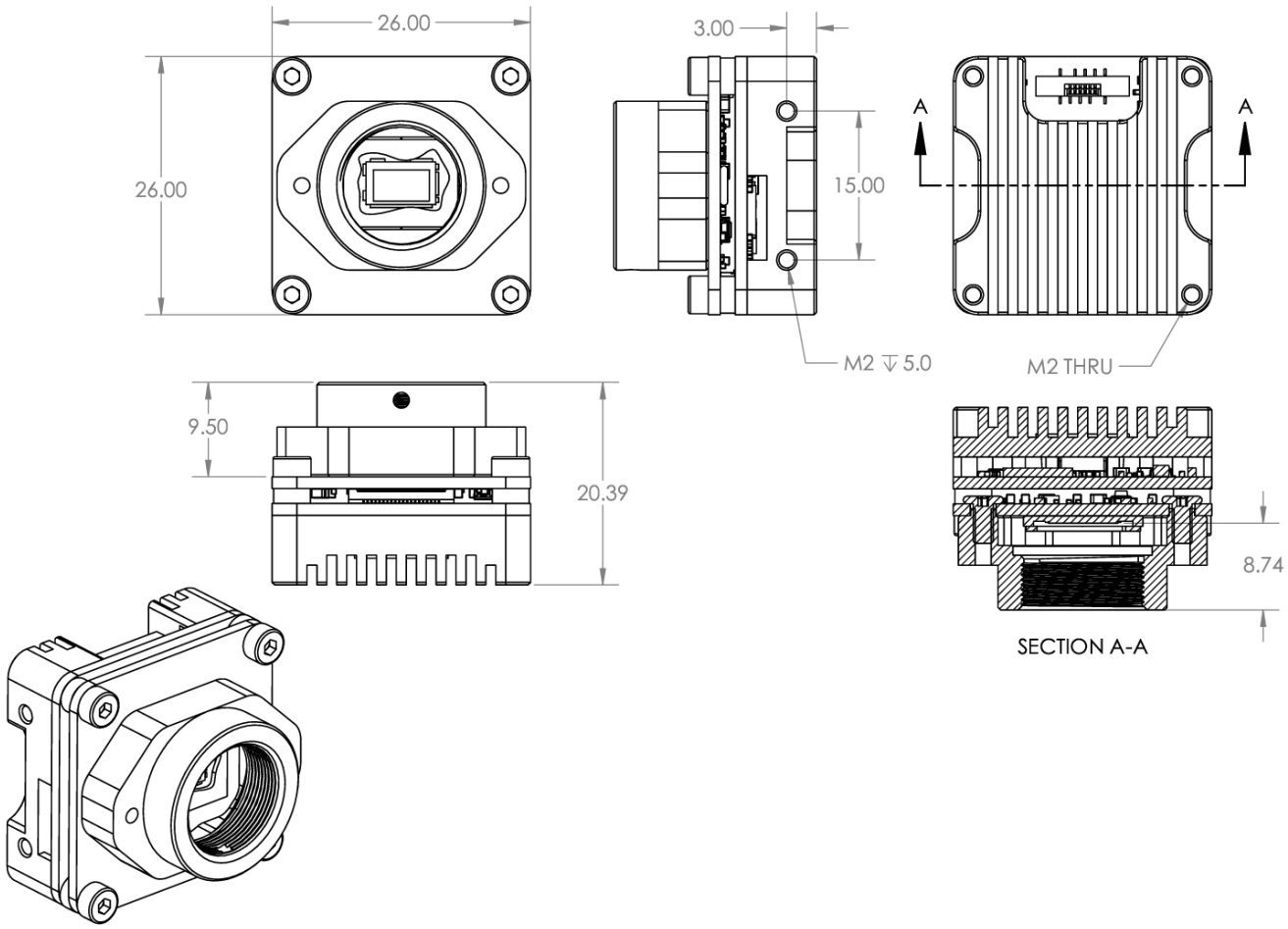
Dimensions

Boxed camera



Tripod / Arca Swiss mount plate is optional

Board camera



Back plate heat-sink is optional