

# C3

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

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# Overview

Kurokesu industrial USB cameras with 4K Sony IMX415 sensor and internal MPEG/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.

# 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 (6.4mm)
- Sensor: Sony IMX415 Color
- MJPEG/YUY2 compression
- 3840 x 2160 @ 30fps
- UVC compatible
- Sensor pixel size: 1.45 $\mu$ m x 1.45 $\mu$ m
- Sensor dynamic range: 66db
- SNR max: 40.5db
- Operation temperature range: -50°C...+85°C
- USB-C (High-speed, 480Mbit/s mode)
- 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 (TBD)
- HDR/WDR (High / Wide Dynamic Range) function (optional with dedicated firmware)
- Internal EEPROM memory to store last preset
- RoHS, REACH, CE certified

# Specifications

## Common specifications

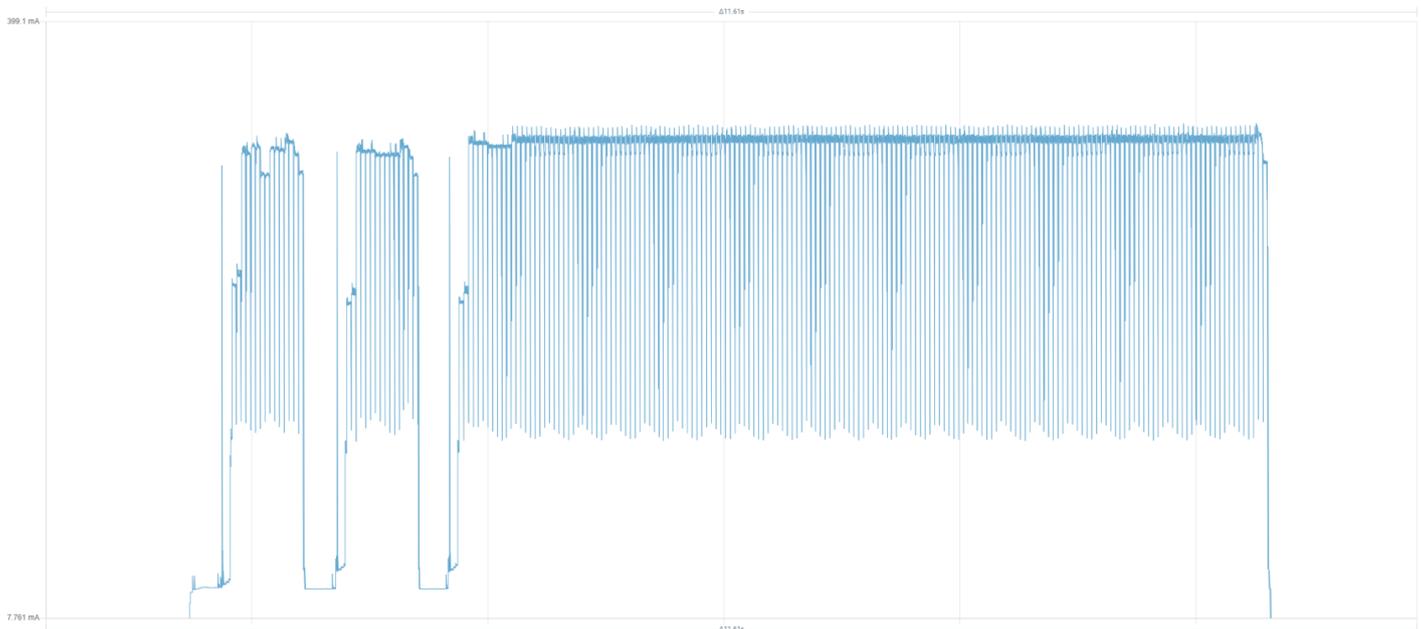
Pixels	3840H x 2160V
Sensor size	5.568 x 3.132 mm
Shutter	Electronic Rolling Shutter
Sensor pixel size	1.45µm x 1.45µm
Frame rates	<ul style="list-style-type: none"><li>• MJPG - 30fps in all modes</li><li>• YUV 4:2:2 (YUYV)</li></ul>
Output frame sizes	3840×2160, 2592×1944, 2048×1563, 1920×1080, 1600×1200, 1280×720, 1280×960, 800×600, 640×480, 320×240
Scan	Progressive
Manual control	<ul style="list-style-type: none"><li>• Exposure</li><li>• White balance (2000°K - 10000°K)</li><li>• Gain</li><li>• Gamma</li><li>• Backlight compensation</li><li>• Zoom, Pan, Tilt, Rotation</li><li>• Low light compensation</li></ul> <hr/> <ul style="list-style-type: none"><li>• Sharpnes</li><li>• Contrast</li><li>• Saturation</li><li>• Hue</li><li>• Brightness</li><li>• Anti-flicker frequency</li></ul>
Rated power	<ul style="list-style-type: none"><li>• 2W max</li><li>• 290mA @ 5V - MJPEG / YUYV</li></ul>
Supported OS	<ul style="list-style-type: none"><li>• Windows</li><li>• OSX</li><li>• Linux</li><li>• Android</li></ul>
Sensor	Sony IMX415

# Boxed camera

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

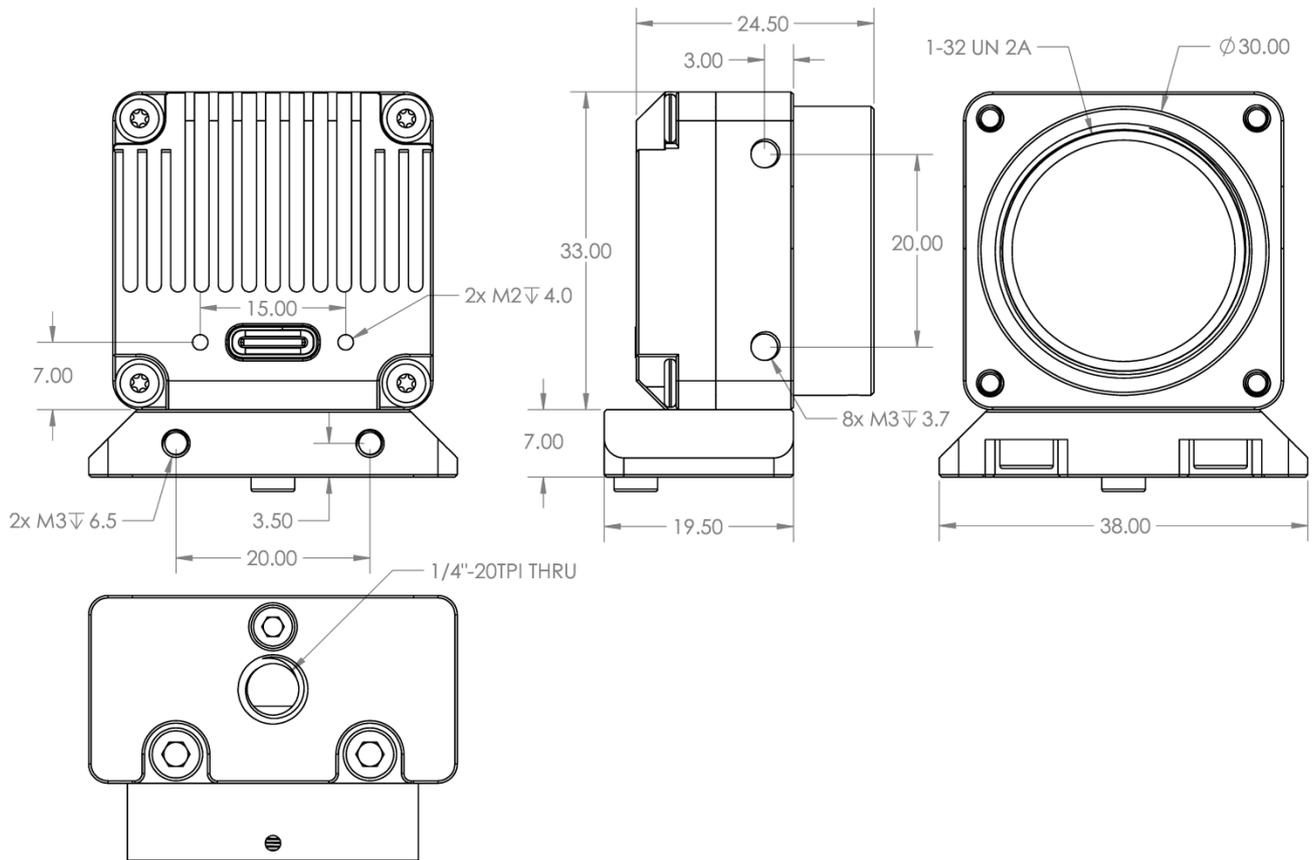
## Power profile

Typical power consumption looks like in diagram below (MJPEG mode)



# Dimensions

## Boxed camera



Tripod / Arca Swiss mount plate is optional

## 3D model

Most of the Kurokesu product 3D models uploaded to [Github](#) (See C2 camera 3D model)