

USB Interface

ECM101U2C

The ECM101U2C embedded camera module features a USB 2.0 Type-C interface and supports the UVC (USB Video Class) protocol, enabling easy and flexible integration with industrial PCs, embedded systems, and Edge AI platforms. Equipped with a 2MP CMOS image sensor, it delivers Full HD 1920 × 1080 resolution and smooth video output at up to 60 fps, meeting the demands of real-time image capture and recognition.

Its integrated housing design provides enhanced protection for the lens and internal components while simplifying installation and deployment. With reliable image quality and a streamlined design, the ECM101U2C is well suited for machine vision, industrial automation, smart retail, self-service equipment, and Edge AI vision applications.

Hardware Features

- A 2.8 µm pixel size enables enhanced light sensitivity and superior image quality in various lighting conditions.
- Support high frame rate, delivering smooth and detailed video capture for fast-moving subjects.
- An integrated HDR (High Dynamic Range) function ensures clear and well-balanced images even in scenes with extreme contrast.

Firmware Features

- A built-in ISP (Image Signal Processor) automatically optimizes image settings to deliver optimal image quality across various operating environments.
- Customize image parameters in the driver to ensure image quality meets customer requirements.
- Auto Exposure Control (AEC) and Auto White Balance (AWB) provide quick and accurate adjustments for optimal image brightness and color fidelity.

Ordering Information

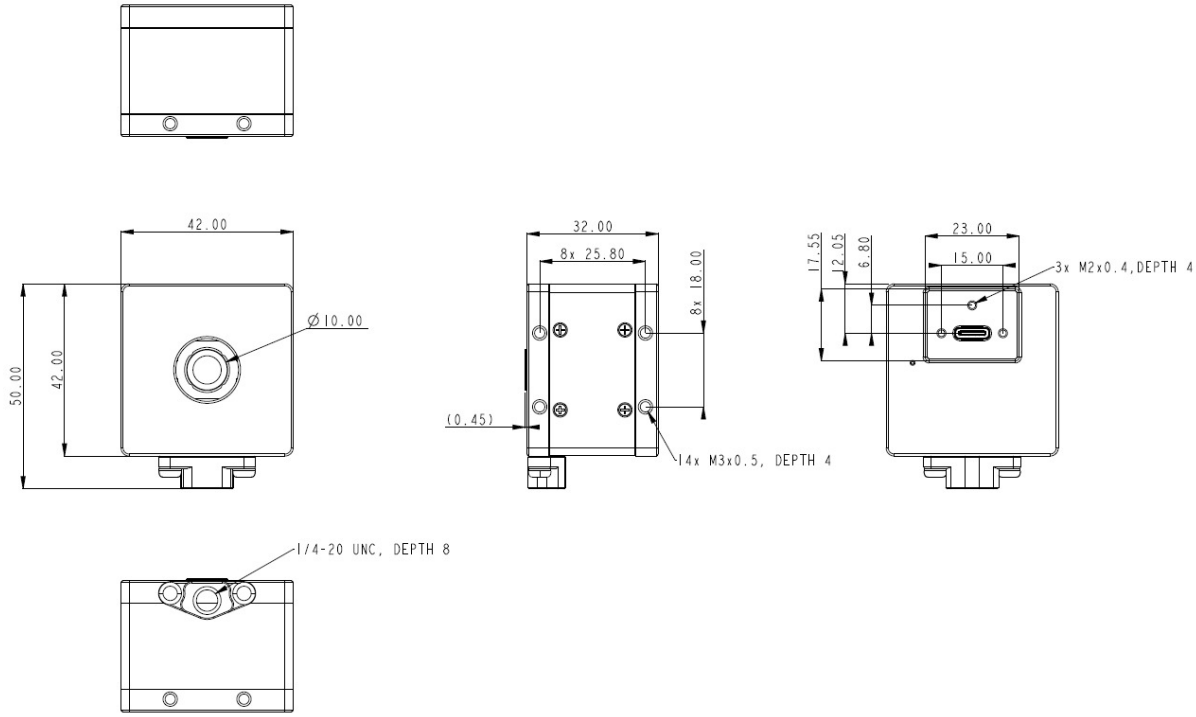
0GB	TS-ECM101U2C

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Specifications

Appearance	Dimensions	50 mm x 42 mm x 32.45 mm (1.97" x 1.65" x 1.25")
Interface	Bus Interface	USB 2.0
Camera	CMOS Sensor	Galaxycore GC2093
	Active Pixel	1920 (H) x 1080 (V) = 2 MP
	Pixel Size	2.8μm x 2.8μm
	Lens Field of View	136°/105°/54°
	Illumination Type	Front Side Illumination(FSI)
	ADC Resolution	10-bit ADC
	Optical Format	1/2.9"
	Shutter Type	Rolling Shutter
	Chromaticity	Color
	Maximum Frame Rate	Full size @ 60 fps
Power	Operating Voltage	5V
	Power Consumption (Operation)	1.25 watt(s)
Operating Environment	Operating Temperature	-30°C (-22°F) ~ 70°C (158°F)
	Storage Temperature	-40°C (-40°F) ~ 85°C (185°F)
	Humidity	5% ~ 95%
Warranty	Warranty	Three-year Limited Warranty

Mechanical Dimensions



Product specifications are subject to change without notice. Pictures shown may differ from actual products. Total accessible capacity varies depending on operating environment. Due to the complexity and variety of industrial applications, Transcend cannot guarantee 100% compatibility with all platforms and under all scenarios. For special applications and environments, it is strongly suggested that you contact Transcend beforehand for clarification.

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