

Embedded Solutions



MIPI Interface

ECM 300

Designed for embedded systems and intelligent applications, Transcend's industrial-grade ECM300 Embedded Camera Module is equipped with the high-sensitivity Sony CMOS sensor and STARVIS 2 image processing technology. It delivers 5MP resolution and an ultra-wide 140° field of view, producing sharp, low-noise images even in low-light environments. Supporting the MIPI CSI-2 interface, the ECM300 can be seamlessly integrated into various embedded platforms, including AI edge computing, industrial inspection, and robotic systems.

With an operating temperature range of -30°C to 70°C and a robust, vibration-resistant design, the ECM300 ensures reliable performance in harsh environments. Flexible customization options accommodate diverse project requirements, providing your system with high reliability and long-term supply assurance.

Hardware Features

- Incorporates Sony's advanced STARVIS 2 technology, delivering exceptional low-light performance, reduced noise, and vivid color reproduction even in challenging lighting conditions.
- An integrated HDR (High Dynamic Range) function ensures clear and well-balanced images even in scenes with extreme contrast.
- NIR (Near-Infrared) enhancement improves sensitivity to near-infrared light, allowing the camera to deliver clear and detailed images in low-light or IR-assisted night-time conditions.
- MIPI 4-lane interface for fast, stable, and efficient transmission of high-resolution image data to the processing unit.

Ordering Information

0GB TS-ECM300M22

Firmware Features

- Customize image parameters in the driver to ensure image quality meets customer requirements.
- Provide ISP (Image Signal Processor) tools, allowing customers to fine-tune image parameters themselves and achieve optimal results in various shooting environments.



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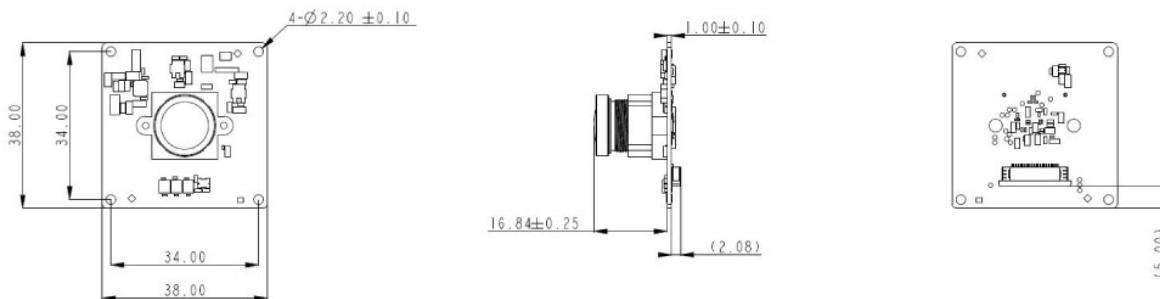


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Specifications

Appearance	Dimensions	38 mm x 38 mm x 19.92 mm (1.5" x 1.5" x 0.78")
Interface	Bus Interface	MIPI CSI-2
	CMOS Sensor	Sony IMX675
	Active Pixel	2592 (H) x 1977 (V) = 5 MP
	Pixel Size	2µm x 2µm
	Lens Field of View	140°/117°/90°
	Illuminated Type	Back Side Illuminated (BSI)
	ADC Resolution	12-bit ADC
	Optical Format	1/2.8"
	Shutter Type	Rolling Shutter
	Chromaticity	Color
Camera	Maximum Frame Rate	Full size @ 60 fps
	Connector	22 pin
	Operating Temperature	-30°C (-22°F) ~ 70°C (158°F)
	Storage Temperature	-40°C (-40°F) ~ 85°C (185°F)

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.

