

Embedded Solutions

MIPI CSI-2 Interface ECM300M22



Transcend's industrial embedded camera module ECM300M22 features a Sony high-sensitivity CMOS sensor with advanced STARVIS™ 2 imaging technology, delivering 5MP high-resolution imaging and a 140° wide field of view. With near-infrared (NIR) enhancement, the module captures detailed, low-noise images even in low-light environments.

The ECM300M22 supports a MIPI CSI-2 interface with a 22-pin connector, enabling seamless integration into embedded platforms. Designed for reliable operation, it offers an operating temperature range of -30°C to 70°C and a low-power design (approximately 550mW), reducing overall system power consumption while maintaining stable long-term performance. The module is ideal for applications such as advanced AI edge computing, industrial inspection, and robotics.

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.
- Includes a MIPI CSI-2 flexible ribbon cable, enabling seamless integration into embedded vision solutions.

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.

Ordering Information

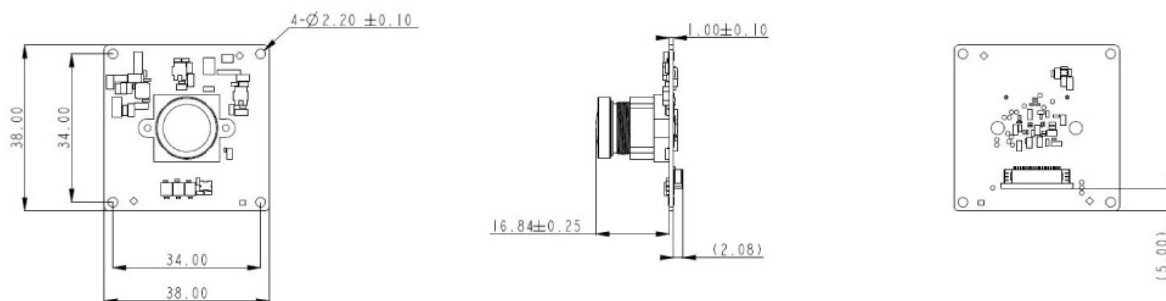
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Specifications

Appearance	Dimensions	38 mm x 38 mm x 19.92 mm (1.5" x 1.5" x 0.78")
	Bus Interface	MIPI CSI-2
Interface	Connector	22 pin
	CMOS Sensor	Sony IMX675
Camera	Active Pixel	2592 (H) x 1944 (V) = 5 MP
	Pixel Size	2µm x 2µm
	Lens Field of View	140°/117°/90°
	Illumination Type	Back Side Illumination(BSI)
	ADC Resolution	12-bit ADC
	Optical Format	1/2.8"
	Shutter Type	Rolling Shutter
	Chromaticity	Color
	Maximum Frame Rate	Full size @ 60 fps
Power	Operating Voltage	3.3V
	Power Consumption (Operation)	0.55 watt(s)
Operating Environment	Operating Temperature	-30°C (-22°F) ~ 70°C (158°F)
	Storage Temperature	-40°C (-40°F) ~ 85°C (185°F)
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.

