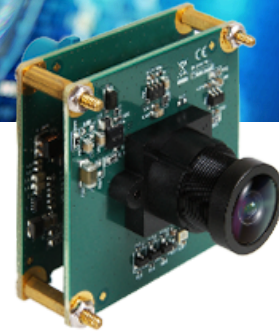


Embedded Solutions

GMSL2 Interface

ECM300G2F



Transcend's industrial embedded camera module ECM300G2F 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 ECM300G2F adopts a GMSL2 high-speed transmission interface and a Fakra industrial-grade connector, supporting up to 6Gbps bandwidth and coaxial cable transmission distances of up to 15 meters. With integrated Power over Coax (PoC), the module enables video, control, and power delivery through a single coaxial cable, significantly simplifying system cabling and enhancing overall system reliability.

Supporting real-time video output up to 60 fps and remote control via I²C, the ECM300G2F operates reliably within an industrial temperature range of -30°C to 70°C, suited for applications such as autonomous driving systems, robotic vision, smart factories, and industrial automation equipment (AMR/AMV).

Hardware Features

- 2K high resolution captures images with outstanding clarity and fine detail.
- 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.
- High sensitivity provides excellent image brightness and sharpness even in varied lighting scenarios.

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

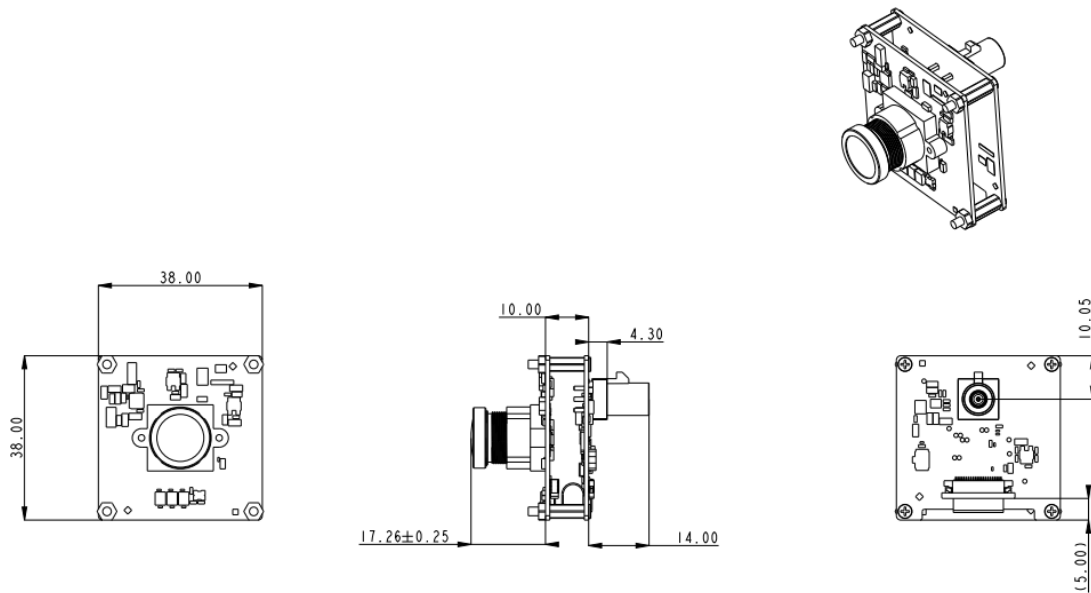
Ordering Information

0X	TS-ECM300G2F
----	--------------

Specifications

Appearance	Dimensions	38 mm x 38 mm x 41.26 mm (1.5" x 1.5" x 1.62")
Interface	Bus Interface	GMSL2
Camera	CMOS Sensor	Sony IMX675
	Active Pixel	2592 (H) x 1944 (V) = 5 MP
	Pixel Size	2 μ m x 2 μ m
	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	12V
	Power Consumption (Operation)	1.05 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.