

GMSL2 Interface

ECM301G2F

The ECM301G2F embedded camera module features a GMSL2 high-speed video interface with a FAKRA connector and PoC (Power over Coax) technology, enabling video transmission and power delivery over a single coaxial cable for long-distance deployment and simplified system cabling. Equipped with a 5MP Sony STARVIS 2 CMOS image sensor, it supports 2K high-resolution imaging, HDR (High Dynamic Range), and NIR (Near-Infrared) imaging, delivering clear and detailed images in low-light, high-contrast, and complex lighting conditions.

Its integrated housing design provides enhanced protection for the lens and internal components while simplifying installation and deployment. With excellent image quality, low-light performance, and high-speed transmission, the ECM301G2F is well suited for smart transportation, robotics, AMR/AGV, industrial automation, machine vision, and Edge AI surveillance applications.

Hardware Features

- 2K high resolution captures images with outstanding clarity and fine detail.
- 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.
- GMSL2 high-speed video transmission interface for long-distance image output

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.

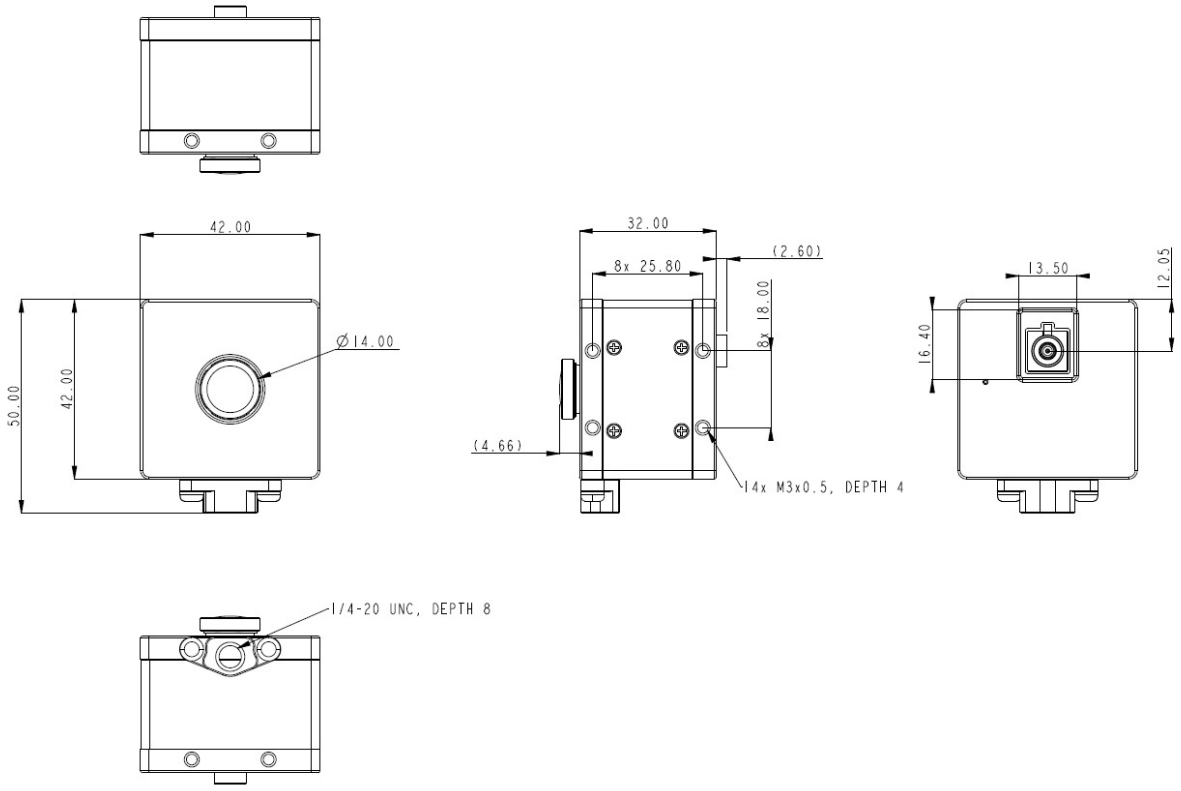
Ordering Information

0GB	TS-ECM301G2F

Specifications

Appearance	Dimensions	42 mm x 50 mm x 32 mm (1.65" x 1.97" x 1.26 ")
Interface	Bus Interface	GMSL2
Camera	CMOS Sensor	Sony IMX675
	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	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.