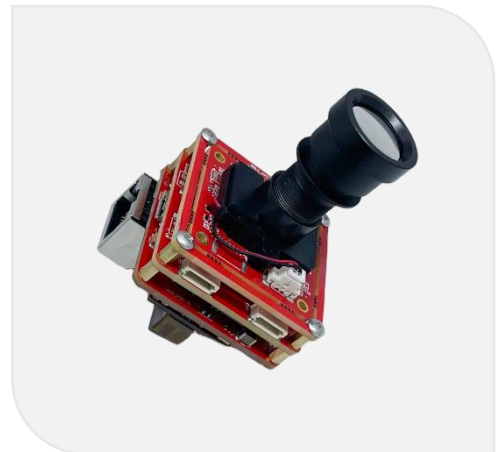


3.2MP monochrome Global Shutter GigE Camera based on Sony IMX900 Sensor

Vadzo's Innova-900MGS is a 3.2MP monochrome global shutter GigE camera powered by the Sony® Pregius S™ IMX900 CMOS sensor, designed for high-speed and high-precision imaging. With Quad HDR (up to 120dB), NIR sensitivity, and fast auto-exposure technology, it delivers exceptional sharp high-quality images, even in challenging lighting conditions. The camera's Quad Shutter Control and global shutter technology ensure distortion-free imaging, even in fast-moving subjects & high-speed environments. You shall be able to stream video in H.264 format.

Key Features

- Sensor Model: Sony® Pregius S™ IMX900
- Max Resolution: 3.2MP
- Pixel Size: 2.25 μm x 2.25 μm
- Shutter: Global Shutter
- Lens FOV: 105 DFOV
- Compliance: ONVIF, RoHS3, REACH



Applications

- **Industrial & Factory Automation:** High-speed barcode/2D code reading, Pick-and-place/robot guidance, In-line inspection & quality control, Machine vision metrology.
- **Logistics & Warehousing:** Automated Guided Vehicle (AGV) navigation, Autonomous Mobile Robot (AMR) vision, Obstacle detection, Object/document scanning, Optical Character Recognition (OCR).
- **Robotics & Drones:** Robotic arm cameras, Drone vision systems, Mobile robot navigation, Motion tracking for robotics applications.
- **Healthcare & Life Sciences:** Patient monitoring cameras, Lab automation imaging, Life-science instrumentation, Particle/colony tracking in research.

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1. Introduction

Innova-900MGS is an ONVIF Compliant 3.2MP Monochrome Global Shutter GigE Camera based on IMX900 CMOS sensor from Sony® Pregius S™ that supports key features like Quad HDR (up to 120dB), Quad Shutter Control, Fast Auto-Exposure, Superior NIR Sensitivity, Global shutter, and so on. It supports image capture and video streaming in H.264 format.

Engineered for integration into Industrial & Factory Automation, Logistics & Warehousing, Robotics & Drones, Healthcare & Life Sciences, Sports & Motion Analytics and Industrial Inspection Platforms, this camera ensures dependable imaging performance for real-time decision-making and advanced analytics.

2. Camera Specifications

General Information	
Product Family	Innova series
Camera Model	Vadzo Innova-900MGS
Sensor	
Sensor	IMX900 CMOS sensor from Sony Pregius S™
Sensor Format	1/3.1"
Pixel Size	2.25 µm x 2.25 µm
Max Resolution	3.2MP – 2064(H) x 1552(V)
Shutter	Global Shutter
Chroma	Mono
Camera Data	
Interface	100Base-T and 1000base-T modes
Pixel Depth	8bit /12bit
Output Format	H.264, H.265 & MJPEG
Exposure Control	Manual Control via software & Auto-Exposure

GPIO	Night Mode IR Illumination with cut filter support LED Board
Camera Hardware	
Lens	S Mount (M12 Standard)
Connector	Standard RJ45 Ethernet Interface
Power Supply	Power over Ethernet (Compliance with PoE 802.3af standard 36 to 57V)
Power Requirement (Without LED Board)	PoE: Max: 1.75 W, Min: 1.05 W USB: Max: 1.9 W, Min: 0.95 W
Operating Temperature	-40°C to 85°C
Dimension	38mm (L) x 38mm (B) Three Board
Weight	25 Grams (Without Lens)
Camera Software	
Video Resolutions	VGA, HD, and Full HD, 3.2MP
Video formats	H.264, H.265 & MJPEG
Still Image Resolutions	VGA, HD, Full HD, and 3.2MP
Image Capture formats	JPEG
Image Capture Modes	Software trigger
Camera Controls	Exposure, Gain
Additional Controls	CBR (Constant Bit Rate), VBR (Variable Bit Rate), Quality Control, Flip, IR Brightness Control along with IR Cut Filter Control* (For Specific Variant)
OS Supported	Windows, Linux, and Android
Conformity	
Conformity	ONVIF Profile T (Default) Compliant, RoHS3 and REACH

3. Supported Resolutions

Resolution	Frame Rates (FPS) in 100Base-T and 1000base-T modes Mode		
	H.264	H.265	MJPEG
640 x 480 (VGA)	60	60	60
1280 x 720 (HD)	60	60	60
1920 x 1080 (FHD)	60	60	35
2064 x 1552 (3.2MP)	30	30	25

4. Supported Camera Functions

The List of functions supported by the Innova-900MGS camera are:

- Resolution Control
- Image Format Setting-jpeg
- Video Format Setting – H.264, H.265 & MJPEG
- Dual Stream capability can be enabled
- Image Capture Software Trigger
- Gain – Auto & Manual
- Exposure – Auto & Manual
- Anti Flicker – 50Hz/60Hz

5. GigE Interface

The camera module features a standard RJ45 Ethernet interface, supporting 100Base-T, and 1000Base-T modes for versatile connectivity options. This interface allows for reliable and high-speed data transfer, transmitting video data, control signals, and power over a single Ethernet cable. The GigE interface adheres to GigE Vision standards, ensuring seamless integration with compatible devices. Vadzo recommends using certified Ethernet cables for optimal performance and reliability.

6. Status LED

Status LEDs indicate the below:

- Green color indicates Device is powered ON and connected on 1000base T-mode.
- Orange color indicates: If the camera connected on 100base T-mode.

7. IR LED Board

The IR LED Board is equipped with advanced IR illumination LEDs and an integrated IR Cut Filter Control for enhanced night vision and image clarity.

IR LED Brightness Control: Adjust the brightness of the IR LEDs easily via the web UI, allowing for optimal illumination based on environmental conditions.

IR Cut Filter Control: The IR Cut Filter operates in two modes

- **Auto Mode:** Automatically switches between day and night modes based on lighting conditions.
- **Manual Mode:** Gives users full control to toggle between day and night modes via the web UI.

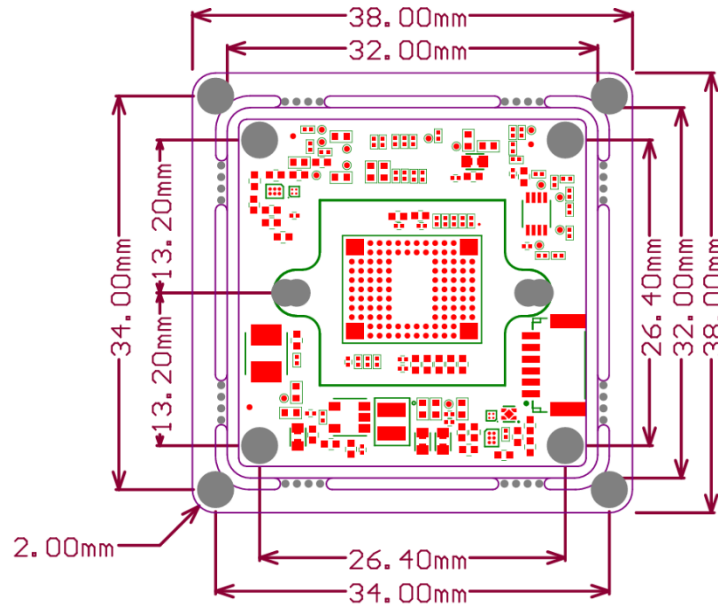
Both brightness and IR Cut Filter configurations can be seamlessly managed through the user-friendly web interface, providing flexible and precise control for various lighting environments.

8. Temperature and Humidity Specifications

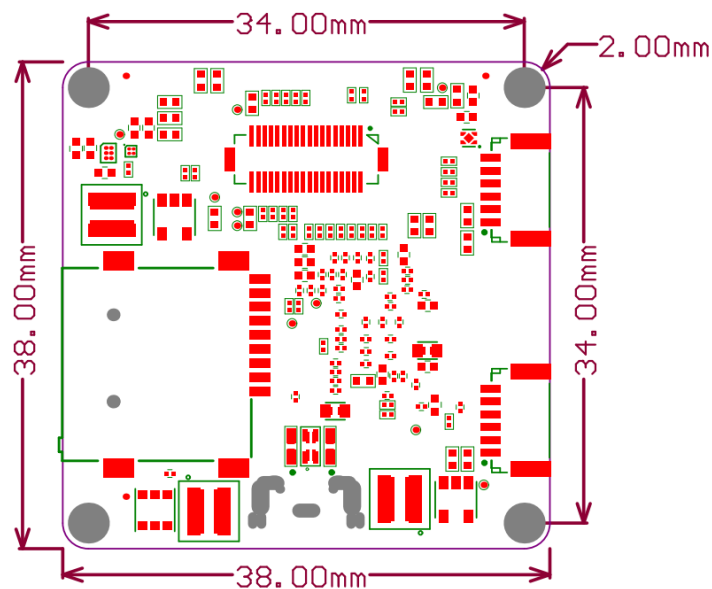
Description	Specification
Operating Temperature	-40°C to 85°C
Storage Temperature	-40°C to 85°C
Humidity	20% to 80%, Relative, non-condensing.

9. Dimensions

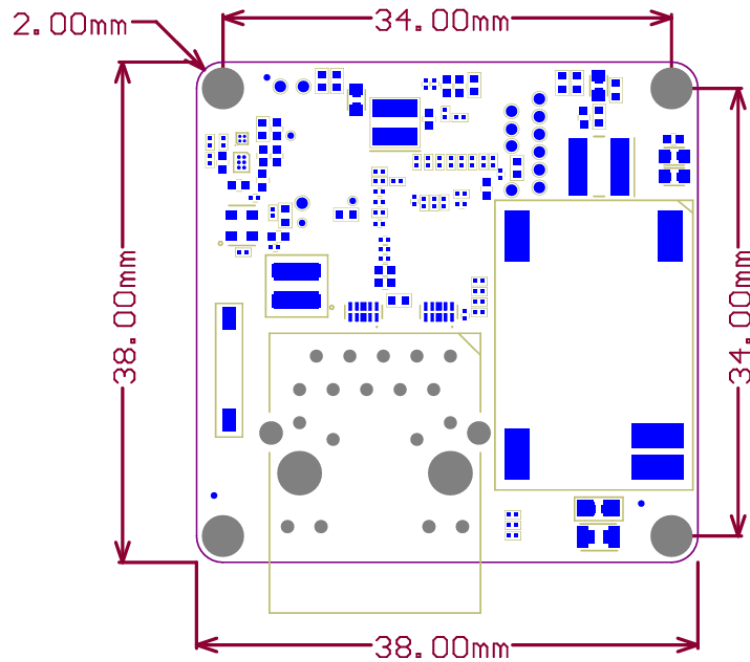
Board 1: Top Board – 2D



Board 2: Base Board - 2D



Board 3: ATR PoE Board - 2D



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