VADZO

INNOVA-662CRS

2MP Color Low-Light OnVIF GigE Camera based on Sony IMX662 Starvis 2 Sensor

Vadzo Innova-662CRS is an ultra-low light GigE Camera based on Sony IMX662 Starvis 2 Sensor coupled with high-performance ISP. The camera delivers max resolution of 2.4MP and Video streaming of 1080p and 720p. Applicable in use cases such as traffic monitoring camera, patient monitoring camera, security camera, video surveillance camera, smart parking camera, ICU camera, etc.

Key Features

- Sensor Model: IMX662 Sony Starvis 2 Sensor
- Max Resolution: 2.4 MP
- Pixel Size: 2.9 µm x 2.9 µm
- Shutter: Rolling Shutter
- Lens FOV: 105 DFOV
- Compliance: OnVIF, RoHS 3, REACH

Applications

- **Smart Parking Camera:** Parking Space Detection, Traffic Flow Management, Vehicle Monitoring, etc.
- **Patient Monitoring Camera:** Patient Bedside Monitoring, Fall Detection & Prevention, Baby Monitoring, ICU Monitoring.
- **Smart Surveillance Camera:** Facial Recognition, Day/Night Video Recording, Smart Parking, Pedestrian Safety.

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1. Introduction

Innova-662CRS is a OnVIF Compliant GigE Fixed-Focus color camera based on IMX662 Sony Starvis 2 sensor.

The camera incorporates the IMX662 Bayer sensor from Sony integrated with an on-board Image Signal Processor (ISP) to perform functions such as debayering, demosaicing, color correction, contrast correction, gamma correction, denoising, lens corrections and so on. In addition to this, the ISP also supports Auto functions such as Auto-Exposure and Auto-White Balance that help achieve excellent HDR performance even in ultra-low light environments.

2. Camera Specifications

General Information	
Product Family	Innova series
Camera Model	Vadzo Innova-662CRS
Sensor	
Sensor	IMX662 CMOS sensor from Sony Starvis 2
Sensor Format	1/2.8”
Pixel Size	2.9 µm x 2.9 µm
Max Resolution	2MP – 1920(H) x 1080(V)
Shutter	Rolling Shutter
Chroma	Color
Camera Data	
Interface	100Base-T and 1000base-T modes
Pixel Depth	10bit
Output Format	H.264, H.265, and 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)

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Connector	Standard RJ45 Ethernet Interface
Power Supply	Power over Ethernet (Compliance with PoE 802.3af standard 36 to 57V)
Power Requirement	Max: 1.75 W at PoE (Without LED Board) Min: 1.05 W at PoE (Without LED Board)
Operating Temperature	-40^{0}C to 85^{0}C
Dimension	38mm (L) x 38mm (B) Three Board
Weight	25 Grams (Without Lens)
Camera Software	
Video Resolutions	VGA, HD, and Full HD
Video formats	H.264 and H.265
Still Image Resolutions	VGA, HD, and Full HD
Image Capture formats	MJPEG
Image Capture Modes	Software trigger
Camera Controls	Brightness, Exposure, Contrast, Sharpness, Saturation, Gamma, Gain, White Balance
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, RoHS 3, REACH

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3. Supported Resolutions

Single Stream Mode:

Resolution	Frame Rates (FPS) in 100Base-T and 1000base-T modes Mode	
	H.264	H.265
320 x 240 (QVGA)	30	30
640 x 480 (VGA)	30	30
1280 x 720 (HD)	30	30
1920 x 1080 (FHD)	30	30

Dual Stream Mode:

Resolution	Frame Rates (FPS) in 100Base-T and 1000base-T modes Mode	
	Stream 1	Stream 2
	H.264	H.265
320 x 240 (QVGA)	30	30
640 x 480 (VGA)	30	30
1280 x 720 (HD)	30	30
1920 x 1080 (FHD)	30	30

4. Supported Camera Functions

The List of functions supported by the Innova-662CRS camera are:

- Resolution Control
- Image Format Setting
- Video Format Setting – H.264 and H.265
- Dual Stream capability can be enabled
- Image Capture Software Trigger
- Gain – Auto & Manual
- Exposure – Auto & Manual
- White Balance – Auto & Manual
- Anti Flicker – 50Hz/60Hz
- Contrast Control
- Gamma Control
- Hue & Saturation Control
- Sharpness Control

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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 LED's 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.

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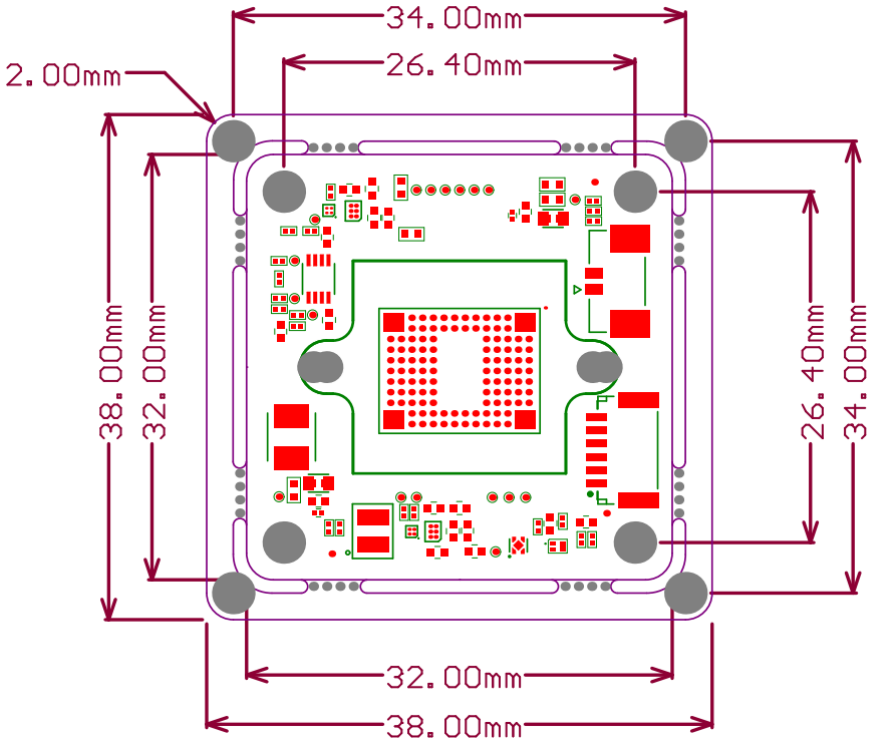
8. Temperature and Humidity Specifications

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



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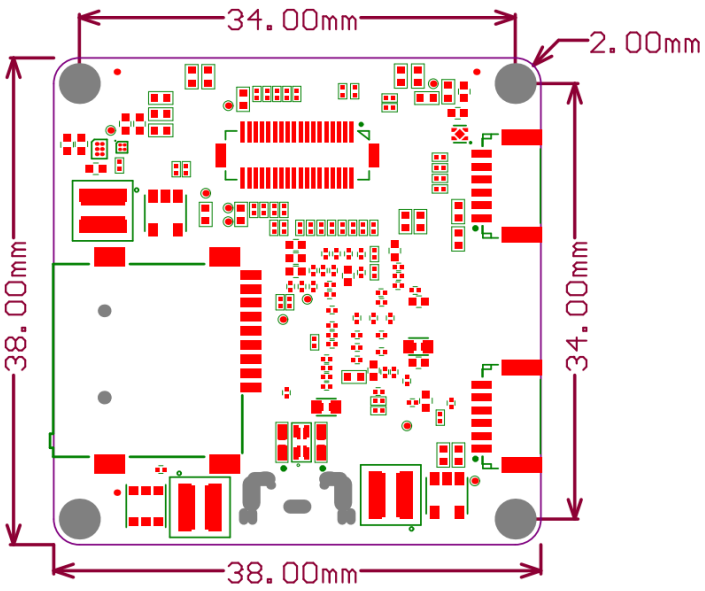
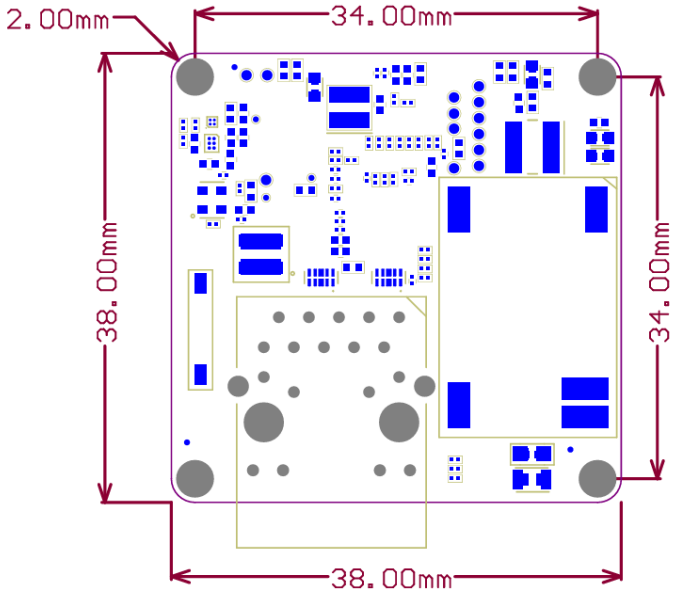
Board 2: Base Board - 2D



Board 3: ATR PoE Board - 2D



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