

## MIPI-CAM-290



# 1 MIPI-CAM-290 2M STARVIS Camera Module Features

## 1.1 General Description:

MIPI-CAM-290 is a high quality Sony STARVIS IMX290 image sensor custom designed add-on board for Raspberry Pi. It attaches to Pi by way of one of the small sockets on the board upper surface and uses the dedicated CSI interface, designed especially for interfacing to cameras. The board itself is tiny and weighs just over 3g, making it perfect for mobile or other applications where size and weight are important.

## 1.2 Features:

1. 1/2.8 inch 2 Mega STARVIS Mega STARVIS sensor IMX290 by SONY;
2. MIPI output: CSI-2 2Lans;
3. Uncompressed UYVY format, YUV422-8bit;
4. Standard lens mount;
5. IR-CUT circuit;
6. BLC, DOL-WDR, 2D/3D noise reduction, Anti-fog;
7. Brightness, Contrast, Sharpness, Saturation adjustable;
8. Support Raspberry Pi 3B+,3A+,ZERA;Drivers for other ARM Solutions,please contact:sales@inno-maker.com;
9. All software is supported within the latest version of Raspberry Operating System.

## 1.3 Applications:

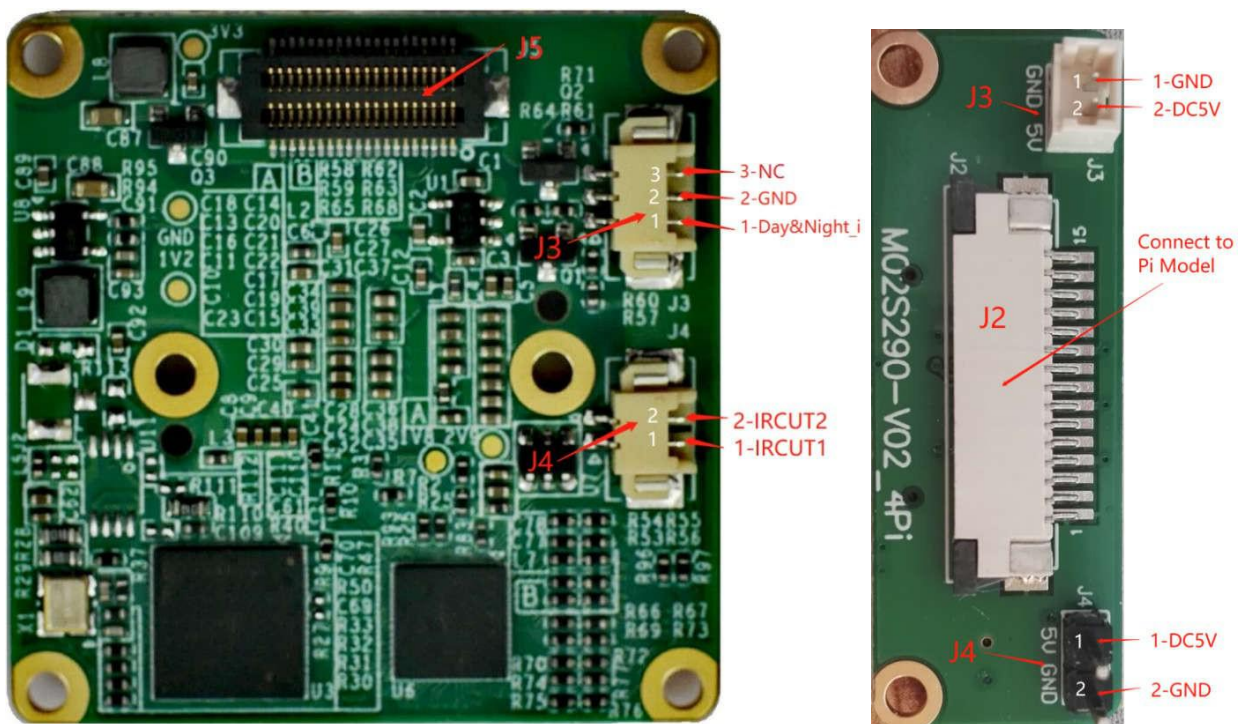
1. Video surveillance, IP Camera;
2. Industrial Vision System;
3. Machine Vision, AI;
4. Smart Home;
5. ADAS;
6. Face Identification

## 1.4 Technical Details

<b>SENSOR</b>	
Sensor	SONY IMX290LQR-C STARVIS
Pixels	<b>2.13M pixels</b>
Image Size	<b>Diagonal 6.46 mm (Type 1/2.8)</b>
Unit Cell Size	<b>2.9um (H)*2.9um(V)</b>
ISP	
Frame Rate	<b>1080p@25 / 1080p@30fps</b>
Exposure	<b>Auto or Manual</b>
White Balance	<b>Auto or Manual</b>
Shutter	<b>1/25(1/30)s to 1/50,000s</b>
Slow Shutter	<b>Support</b>
Denoising	<b>2D/3D noise reduction</b>
Image Setting	<b>Brightness, Contrast, Sharpness,Saturation, Flip, Mirror</b>
Image Enhancement	<b>BLC, DOL-WDR, Defog</b>
Day/Night Switch	<b>Manual or IR-CUT filter with external trigger</b>
<b>Lens &amp; IR-CUT</b>	
Lens	<b>Support M12*0.5 or M16*0.5 depend on lens depend on lens mount</b>
Lens Mount with IR-CUT	<b>MTV12 or MTV16</b>
Mounting Hole	<b>2 screw holes with diameter of 2.1mm Centre distance of 20mm</b>
<b>Interface</b>	
PCB Connector	<b>BTB050040-F1D</b>
Communication Interface	<b>IIC</b>
Video Data Interface	<b>MIPI:2Lane/4Lane, CSI2 YUV422-8bit Data Type, Bandwidth 1.188Gbps</b>
IR-CUT Control	<b>IR-CUT motor control, 3.3VDC level</b>
External Trigger	<b>Ambient light synchronization, 3.3VDC level</b>
<b>General</b>	
Operating Conditions	<b>-10°C-50°C, Humidity 95% or less, non-condensing</b>

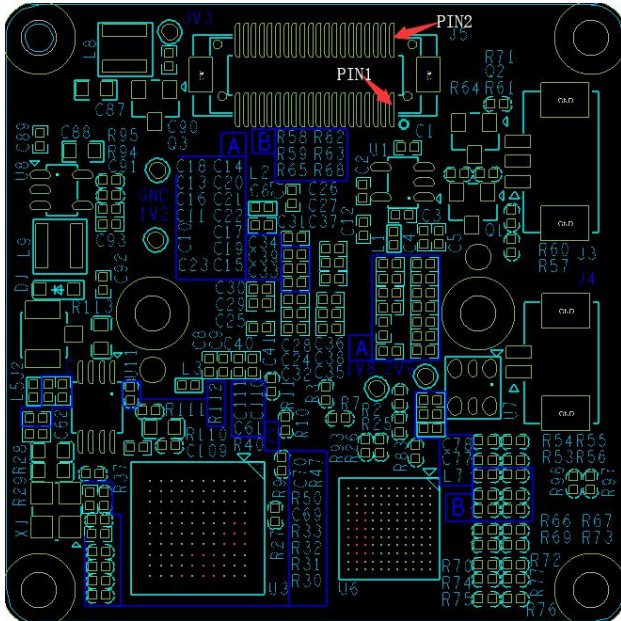
Power Supply	3.3VDC
Power Consumption	3.3VDC, 1.2W
Dimension	38mm*38mm*8mm(not include lens and IR-CUT)

### 1.5 Hardware Description



CORE BOARD(a)

INTERFACE BOARD(b)



1.CORE BOARD J5 PIN MAP

1	RESERVE, Not Connected	2	RESERVE, Not Connected
3	GND	4	RESERVE, Not Connected
5	MIPI_L3_P	6	RESERVE, Not Connected
7	MIPI_L3_N	8	RESERVE, Not Connected
9	GND	10	GND
11	MIPI_L2_P	12	RESERVE, Not Connected
13	MIPI_L2_N	14	RESERVE, Not Connected
15	GND	16	GND
17	MIPI_CK_P	18	SCL_3.3V
19	MIPI_CK_N	20	SDA_3.3V
21	GND	22	RESERVE, Not Connected
23	MIPI_L1_P	24	RESERVE, Not Connected
25	MIPI_L1_N	26	RESERVE, Not Connected
27	GND	28	RESERVE, Not Connected
29	MIPI_L0_P	30	RESERVE, Not Connected
31	MIPI_L0_N	32	RESERVE, Not Connected
33	GND	34	GND
35	GND	36	GND
37	VCC3V3	38	VCC3V3
39	VCC3V3	40	VCC3V3



2.CORE BOARD J3 PIN MAP

1	Day&Night Signal In	2	GND
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3.CORE BOARD J4 PIN MAP

1	IRCUT1	2	IRCUT2
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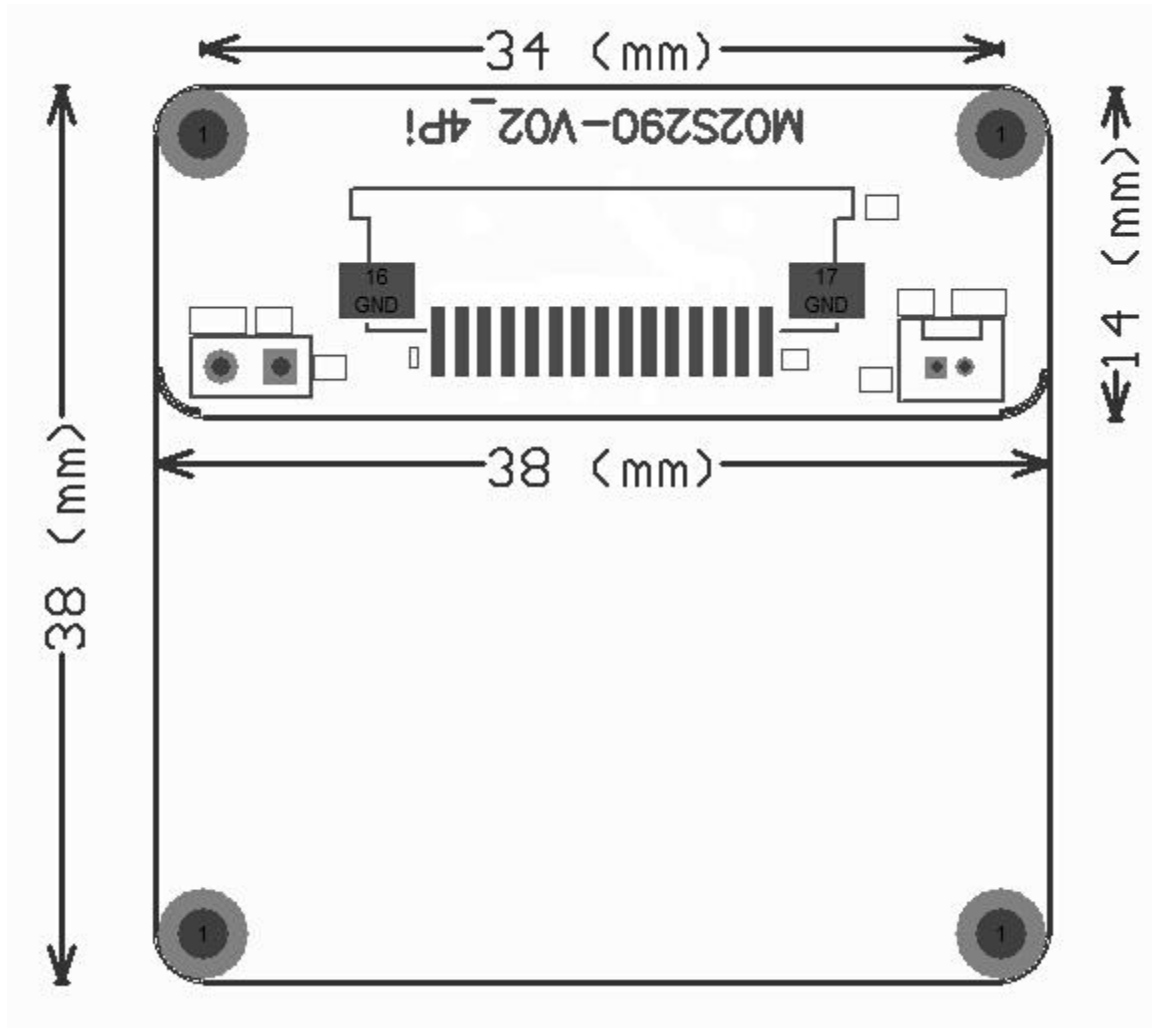
4.INTERFACE BOARD J3 PIN MAP

1	GND	2	DC5V
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5.INTERFACE BOARD J4 PIN MAP

1	DC5V	2	GND
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## 1.6 Mechanical Size







[www.inno-maker.com/wiki](http://www.inno-maker.com/wiki), We provide the coolest modules and design service for

open source boards.