



VISION



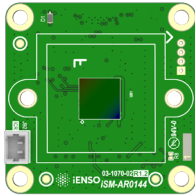
AI



CLOUD



SECURITY



# Sensor Module

## iSM-AR0144

### Key features:

- Ready to embed with iENSO vision platform ecosystem
- 1MP resolution and 720p60 video performance
- Incorporates innovative global shutter pixel design optimized for accurate and fast capture of moving scenes
- Ideal for battery powered applications

- Standard MIPI CSI-2 output interface
- Various lens options available

### Compatible embedded vision camera platforms:

- iENSO iVS-CV28P
- iENSO iVS-CV22
- Any camera platform supporting MIPI CSI-2 interface



Image Sensor	
Sensor Model	On Semi AR0144
Shutter Type	Global Shutter
Chromaticity/Signal Type	Color/RGB
Optical Format	1/4"
Pixel Size	3.0 x 3.0 $\mu\text{m}$
Max. Resolution	1MP / 1280 x 800
Frame Rate (max.)	60 fps / 12 Bit
Bit Depth(s)	12 bit
HDR	Supported

Interface	
Data Interface	MIPI CSI-2 (2 / 4 lane)
Communication Interface	I2C
Input Voltage	3.3V
Interface Connector	Hirose FH58 series • FH58-41S-0.2SHW

Mechanical	
Dimensions (w/o Lens)	26 x 26 mm

Optical	
Lens Mount	M12

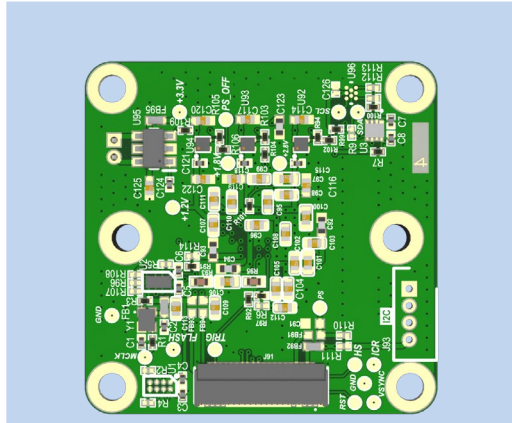
Environmental	
Operating Temperature	-30°C to +85°C (Function) -10°C to +60°C (Performance)
Storage Temperature	-40°C to +85°C
Ambient Humidity	20% to 90% RH, non-condensing

### Give your vision the edge

- Application-based turnkey embedded vision solutions
- Edge AI for powerful on-device decision-making
- Flexible Cloud platform and end-to-end security



## Sensor Module Pinout



J91

Pin 1

PIN	Name	PIN	Name
1	RST N-H	21	GND
2	Hsync-H	22	DCLK P
3	Vsync-H	23	GND
4	3.3V	24	DCLK N
5	3.3V	25	GND
6	ICR_CTL	26	DMO1 P
7	GND	27	GND
8	5.0V	28	DMO1 N
9	SCK-H	29	GND
10	SDA-H	30	DMO3 P
11	GND	31	GND
12	MCLK-H	32	DMO3 N
13	GND	33	GND
14	DMO2 P	34	SCK3
15	GND	35	SDA3
16	DMO2 N	36	1.2V
17	GND	37	CV CLK
18	DMO0 P	38	CV EN0
19	GND	39	CV MOSI
20	DMO0 N	40	CV MISO
		41	1.8V

Connector Type: Hirose FH58-41S-0.2SHW

## Popular Applications

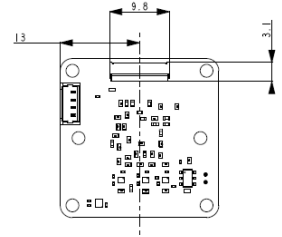
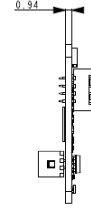
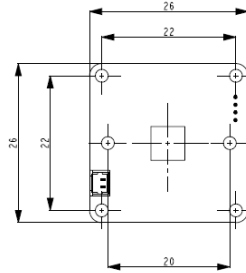


SMART APPLIANCES



INDUSTRIAL / ROBOTICS

## Mechanical Drawing



### iENSO Sensor Module Test Platform

High-speed USB3.0 output

Standard MIPI CSI-2 interface

Optics focus checking

RAW image configuration

Compatible with OS Windows 7 and above

### iENSO Sensor Module EVK

- iSM Test Platform
- Sensor Module: iSM-AR0144
- Included Optics:
  - Lens#1: 5.0mm, F2.4, HFOV 50 degrees
  - Lens#2: 3.5mm, F2.4, HFOV 80 degrees

For more information, visit [iENSO.com](http://iENSO.com)

- Custom module and optics available upon request
- Minimum order quantities may apply
- Contact sales to discuss your specific needs



[www.ienso.com](http://www.ienso.com)



#### Americas

Global HQ Toronto  
20 Mural St., Unit 7  
Richmond Hill, ON Canada L4B 1K3  
(905) 763-6938 • [vision@ienso.com](mailto:vision@ienso.com)

#### Europe

Kyiv, Ukraine • [EU@ienso.com](mailto:EU@ienso.com)

#### Middle East

Tel Aviv, Israel • [ME@ienso.com](mailto:ME@ienso.com)

#### Asia

Shenzhen, PRC • [Asia@ienso.com](mailto:Asia@ienso.com)