



VISION



AI



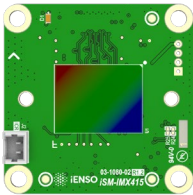
CLOUD



SECURITY

Sensor Module

iSM-IMX415



SONY

Powered by Sony

Key features:

- Ready to embed with iENSO vision platform ecosystem
- 8MP resolution and 4KP60 video performance
- Featured with digital overlap HDR
- BSI structure to achieve high-sensitivity and high-quality image in multiple lighting conditions
- 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 | Sony IMX415 |
| Shutter Type | Rolling Shutter |
| Chromaticity/Signal Type | Color/RGB |
| Optical Format | 1/2.8" |
| Pixel Size | 1.45 x 1.45 μm |
| Max. Resolution | 8.6MP / 3864 x 2228 |
| Frame Rate (max.) | 60 fps / 12 bit 90 fps / 10 bit |
| Bit Depth(s) | 10 / 12 bit |
| HDR | Supported, Digital overlap |

| Interface | |
|-------------------------|---|
| Data Interface | MIPI CSI-2 (2 / 4 lane) |
| Communication Interface | I2C |
| Input Voltage | 3.3V |
| Interface Connector | Hirose FH58 series • FH58-415-0.2SHW |

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

| Optical | |
|------------|--------------------------------|
| Lens Mount | M12 |
| Optical | Consult iENSO for lens options |

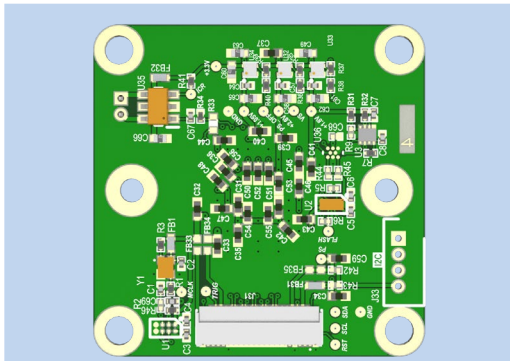
| Environmental | |
|-----------------------|---|
| Operating Temperature | -30°C to +85°C (Function) -10°C to +60°C (Performance) |
| Storage Temperature | -40°C to +85°C |
| Ambient Humidity | 20% to 90% RH, non-condensing |



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



| J1 | | Pin 1 | |
|-----|----------|-------|---------|
| PIN | Name | PIN | Name |
| 1 | RST_N-H | 21 | GND |
| 2 | Hsync-H | 22 | DCLK P |
| 3 | Vsync-H | 23 | GND |
| 4 | +3V3_AUX | 24 | DCLK_N |
| 5 | PS | 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 | +1V1D |
| 17 | GND | 37 | CV CLK |
| 18 | DMO0 P | 38 | CV EN0 |
| 19 | GND | 39 | CV MOSI |
| 20 | DMO0_N | 40 | CV MISO |
| | | 41 | +1V8D |

Connector Type: Hirose FH58-41S-0.2SHW

Popular Applications



SECURITY



DRONES

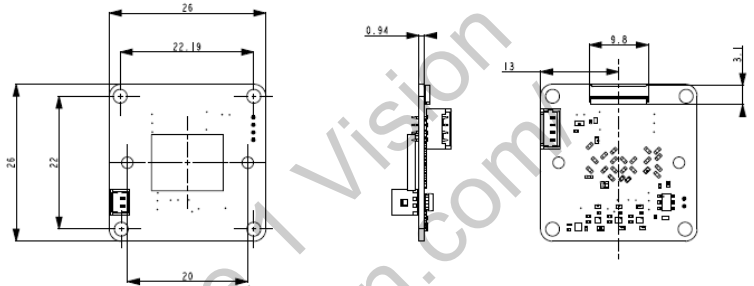


PRECISION FARMING



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-IMX415
- Included Optics:
 - Lens#1: 4.6mm, F2.0, HFOV 75 degrees
 - Lens#2: 3.1mm, F2.4, HFOV 85 degrees

For more information, visit iENSO.com

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



www.ienso.com



Americas

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

Europe

Kyiv, Ukraine • EU@ienso.com

Middle East

Tel Aviv, Israel • ME@ienso.com

Asia

Shenzhen, PRC • Asia@ienso.com