

MIPI CSI-2 8MP Fixed Focus
Camera Module

EV8M-OOM1-RHCF

User Manual

Customer :

Customer Part Number :

Innodisk Part Number :

Innodisk Model Name :

Date :

Innodisk Approver

Customer Approver

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Revision History

Revision	Description	Date
1.0	First Released	19, Mar, 2026

1. Product Introduction

1.1 Overview

The 8MP MIPI CSI-2 Camera Module delivers high-quality imaging at up to 30fps, making it ideal for real-time applications. With built-in ISP and support for HDR, it performs reliably in dynamic lighting environments.

Featuring a wide 120dB dynamic range, the product captures fine details in both bright and dark areas, offering a reliable vision solution for embedded systems, industrial automation, and edge AI computing.

1.2 Block Diagram



Figure 1: Block Diagram

1.3 Product List

P/N	Description
EV8M-OOM-RHCF-11	MIPI CSI-2 8MP Fixed Focus Camera Module (FFC cable included)
EV8M-OOM1-RHCF-21	MIPI CSI-2 8MP Fixed Focus Camera Module, Open Front Housing (FFC cable included)
7W7000000060	FFC Cable 15cm ,22pins, pitch 0.5mm

Table 1: Product List

1.4 Product Picture

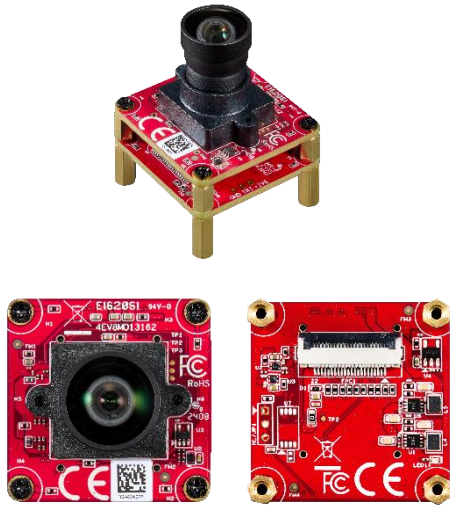


Figure 2: Product Picture



Figure 3: Product Picture (Open Front Housing)

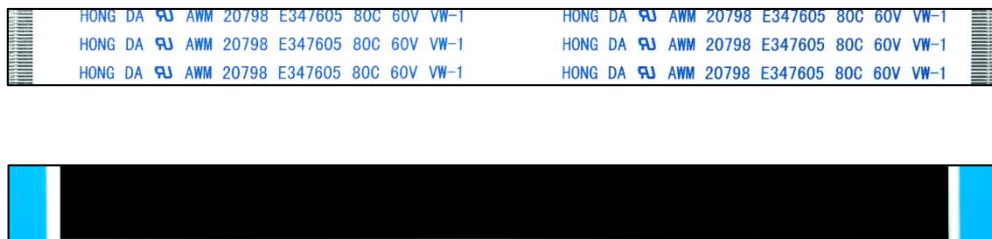


Figure 4: Cable Picture

2. Product Specification

2.1. Product Parameter

Model Name	EV8M-OOM1-RHCF
Module Type	MIPI CSI-2 8MP Fixed Focus Camera Module
Resolution (Max.)	8MP
Frame Rate (Max. Resolution)	30fps
Output I/F	MIPI CSI-2
Sensor	onsemi AR0822
Shutter	Rolling
Video Format	YUV422
Power Consumption	Approximate 1.32W (YUV422 @Max. Resolution)
Operating Temperature	-30°C ~ 70°C
Sensor Size	1/1.8"
Pixel Size	2.0µm
Chroma Type	Color
Lens Type	Fixed Focus (M12)
Dimension (W x L x H/mm)	30 x 30 x 41 39 x 39 x 41 (Open Front Housing)
Lens FOV (D/H/V)	107°/100°/67°
Platform Support	NVIDIA Jetson Orin, Intel, Raspberry Pi
Housing	Board Level, Open Front Housing
Features	HDR, ISP
Dynamic Range	120dB
Warranty	3 Years
Module Weight	34.65 g 60.16 g (Open Front Housing)

Table 2: Product Parameter

2.2 Resolution Information

Resolution	YUV422	MJPEG
3840*2160	30 / 25fps	N/A
2592*1944	30 / 25fps	N/A
2560*1440	30 / 25fps	N/A
1920*1080	60 / 50 / 30 / 25fps	N/A
1280*720	60 / 50 / 30 / 25fps	N/A
640*480	120 / 100 / 90 / 60 / 50 / 30 / 25fps	N/A

Table 3: Resolution Matrix

2.3 Lens Specification

Items	Specification
F No.	2.60 ± 5%
Focal Length	3.25mm ± 5%
Optical Back Focal Length	4.45 ± 0.2mm (in air)
Mechanical Back Focal Length	3.50 ± 0.2mm (in air)
TTL (Total Track Length)	22.50 ± 0.3mm (in air)
Image Circle	Φ8.30mm (MAX)
Lens Structure	4G2P + IR650
Mount	M12*P0.5 (S-Mount)
Diagonal FOV (D)	107°
Horizontal FOV (H)	100°
Vertical FOV (V)	67°

Table 4: Lens Specification

2.4 Electrical Specifications

Item	Value	Unit
Input Voltage	3.3	V
Current @Idle	110	mA
Current @Average	400	mA
Current @Maximum	550	mA
Idle Power Rating	0.36	W
Average Power Rating	1.32	W
Maximum Power Rating	1.82	W

Table 5: Power Consumption

2.5 Operating Temperature Range

Temperature	Range
Operation	-30°C ~ 70°C
Storage	-40°C ~ 85°C

Table 6: Operating Temperature Range

2.6 Mean Time between Failure (MTBF)

Reliability prediction methodology provides the basis for reliability evaluation and analysis. The purpose of the prediction is to predict the life time of the product in units of failure rate and MTBF.

Product	Condition	MTBF (Hours)
EV8M-OOM1-RHCF-11	The analysis is at 25°C ambient temperature by Telcordia SR-332, Issues 4, Method I, Case 3 under Ground Benign, Controlled environment, 50% operation stress	34,599,301

Table 7: Mean Time between Failure (MTBF)

3. Hardware Information

3.1 Connector

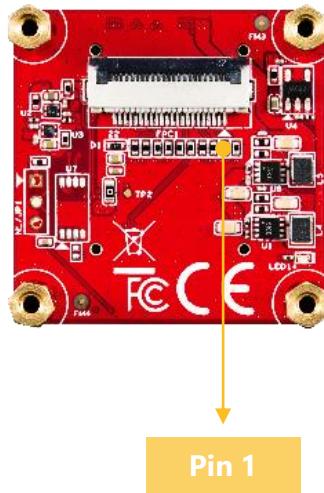


Figure 5: Connector Picture

Location	Connector Type
FPC1	MostWell:2FPDHM-H01122MTA7A01 SMD/1x22P/90D P:0.5mm H:2.0mm

Table 8: Connector Location

3.2 Pin Define

Pin Number	Pin Name	Description
Pin 1	GND	Ground
Pin 2	CAM_D0_N	CSI Data 0
Pin 3	CAM_D0_P	CSI Data 0
Pin 4	GND	Ground
Pin 5	CAM_D1_N	CSI Data 1
Pin 6	CAM_D1_P	CSI Data 1
Pin 7	GND	Ground
Pin 8	CAM_CK_N	CSI Clock
Pin 9	CAM_CK_P	CSI Clock
Pin 10	GND	Ground
Pin 11	CAM_D2_N	CSI Data 2
Pin 12	CAM_D2_P	CSI Data 2
Pin 13	GND	Ground
Pin 14	CAM_D3_N	CSI Data 3
Pin 15	CAM_D3_P	CSI Data 3
Pin 16	GND	Ground
Pin 17	CAM_PWDN/RST	Camera Power-Down / Reset +3.3V
Pin 18	NC	Not Connected
Pin 19	GND	Ground
Pin 20	CAM_SLC	I2C Clock (3.3V)
Pin 21	CAM_SDA	I2C Data (3.3V)
Pin 22	CAM_3V3	+3.3V

Table 9: 22-Pin Define

3.3 Product Drawing

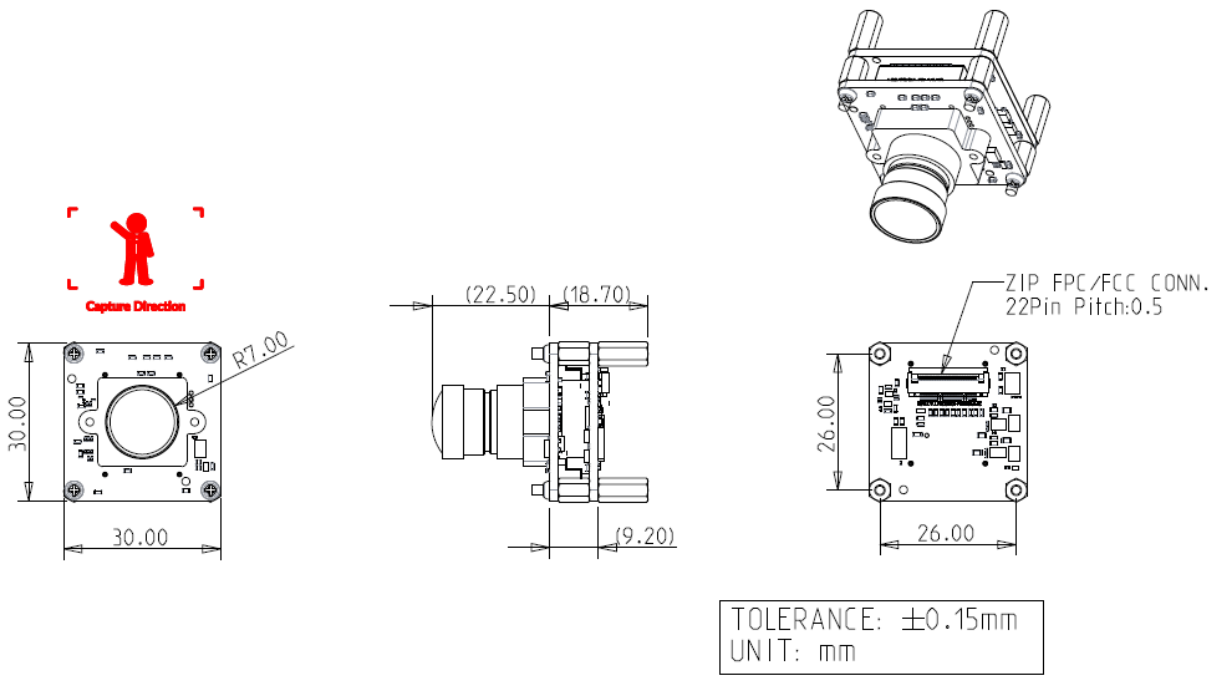


Figure 6: Product Drawing

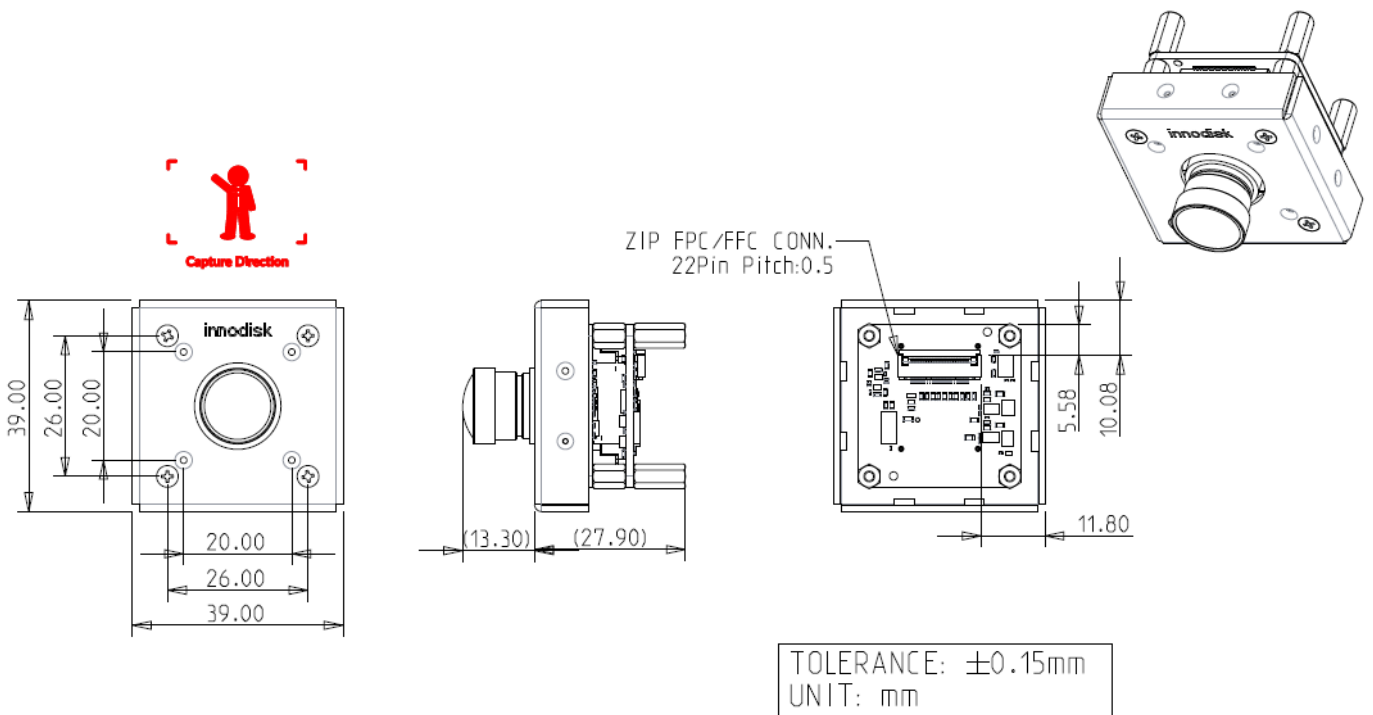


Figure 7: Product Drawing (Open Front Housing)

4. Packing List

P/N	Description	Qty.
EV8M-OOM1-RHCF	MIPI CSI-2 8MP Fixed Focus Camera Module	1
7W7000000060	FFC Cable 15cm ,22pins, pitch 0.5mm	1

Table 10: Packing List

5. Installation Guide

Connect Camera using the FFC cable as shown below:

Lift the MIPI CSI-2 interface latches on both the board and camera module to the unlocked position.

Insert one end of the FFC cable into the board's MIPI CSI-2 interface, then push in the latch to secure it after ensuring the cable is fully seated.


Insert the other end of the cable into the camera module's MIPI CSI-2 interface, then press down the latch to secure it after ensuring full insertion.

Double-check that all latches on both the board and camera ends are securely locked, and that the cable lies flat without any twists.



Figure 10: Installation Guide Picture

6. Declaration And Certification



宜鼎國際股份有限公司
Innodisk Corporation
REACH Declaration

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Innodisk Corporation pursues its social responsibility for global environmental preservation by committing to be compliant with REACH regulation (REGULATION (EC) No 1907/2006). We hereby confirm that the product(s),

Scope: Flash Memory, DRAM Module and Embedded Peripherals Products.

(Standard finished products, excluding all of customized products & EOL products.)

- The standard products of **not listed** in the Appendix2 meet the requirements of REACH SVHC regulations (SVHCs < 0.1% in Article), as described in the candidate list table currently including 247 substances (release date: 21-JAN-2025) and shown on the ECHA website. <https://echa.europa.eu/candidate-list-table>
- The standard products listed in the Appendix2 contain(s) one or more hazardous substances or constituents exceeding 0.1 % by weight in article if not otherwise specified in candidate list table.
Where the threshold value is exceeded, the substances in question are to be declared in accompanying. (SVHCs > 0.1% in Article).
- Comply with REACH Annex XVII.

Guarantor



Company name 公司名稱： Innodisk Corporation 宜鼎國際股份有限公司

Company Representative 公司代表人：  Yichuan Chen 陳怡全

Company Representative Title 公司代表人職稱：Quality Assurance Div. SR. Manager 品保處經理

Date 日期：2025 / 02 / 24

RoHS 自我宣告書 (RoHS Declaration of Conformity)

Manufacturer Products: All Innodisk Flash Memory, DRAM Module and Embedded Peripherals

- 一、 宜鼎國際股份有限公司（以下稱本公司）特此保證售予貴公司之所有產品，皆符合歐盟 2011/65/EU 及 (EU) 2015/863 關於 RoHS 之規範要求。
Innodisk Corporation declares that all products sold to the company, are complied with European Union RoHS Directive (2011/65/EU) and (EU) 2015/863 requirement.
- 二、 本公司同意因本保證書或與本保證書相關事宜有所爭議時，雙方宜友好協商，達成協議。
Innodisk Corporation agrees that both parties shall settle any dispute arising from or in connection with this Declaration of Conformity by friendly negotiations.
- 三、 本公司聲明我們的產品符合 RoHS 指令的附件中 7(a)、7(c)-I、6(c) 允許豁免。
We declare, our products permitted by the following exemptions specified in the Annex of the RoHS directive.
- ※ 7(a) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead).
 - ※ 7(c)-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound.
 - ※ 6(c) Copper alloy containing up to 4% lead by weight. (This exemption applies to products that use antennas)

Name of hazardous substance	Limited of RoHS ppm (mg/kg)
鉛 (Pb)	< 1000 ppm
汞 (Hg)	< 1000 ppm
鎘 (Cd)	< 100 ppm
六價鉻 (Cr 6+)	< 1000 ppm
多溴聯苯 (PBBs)	< 1000 ppm
多溴二苯醚 (PBDEs)	< 1000 ppm
鄰苯二甲酸二(2-乙基己基)酯 (DEHP)	< 1000 ppm
鄰苯二甲酸丁酯苯甲酯 (BBP)	< 1000 ppm
鄰苯二甲酸二丁酯 (DBP)	< 1000 ppm
鄰苯二甲酸二異丁酯 (DIBP)	< 1000 ppm



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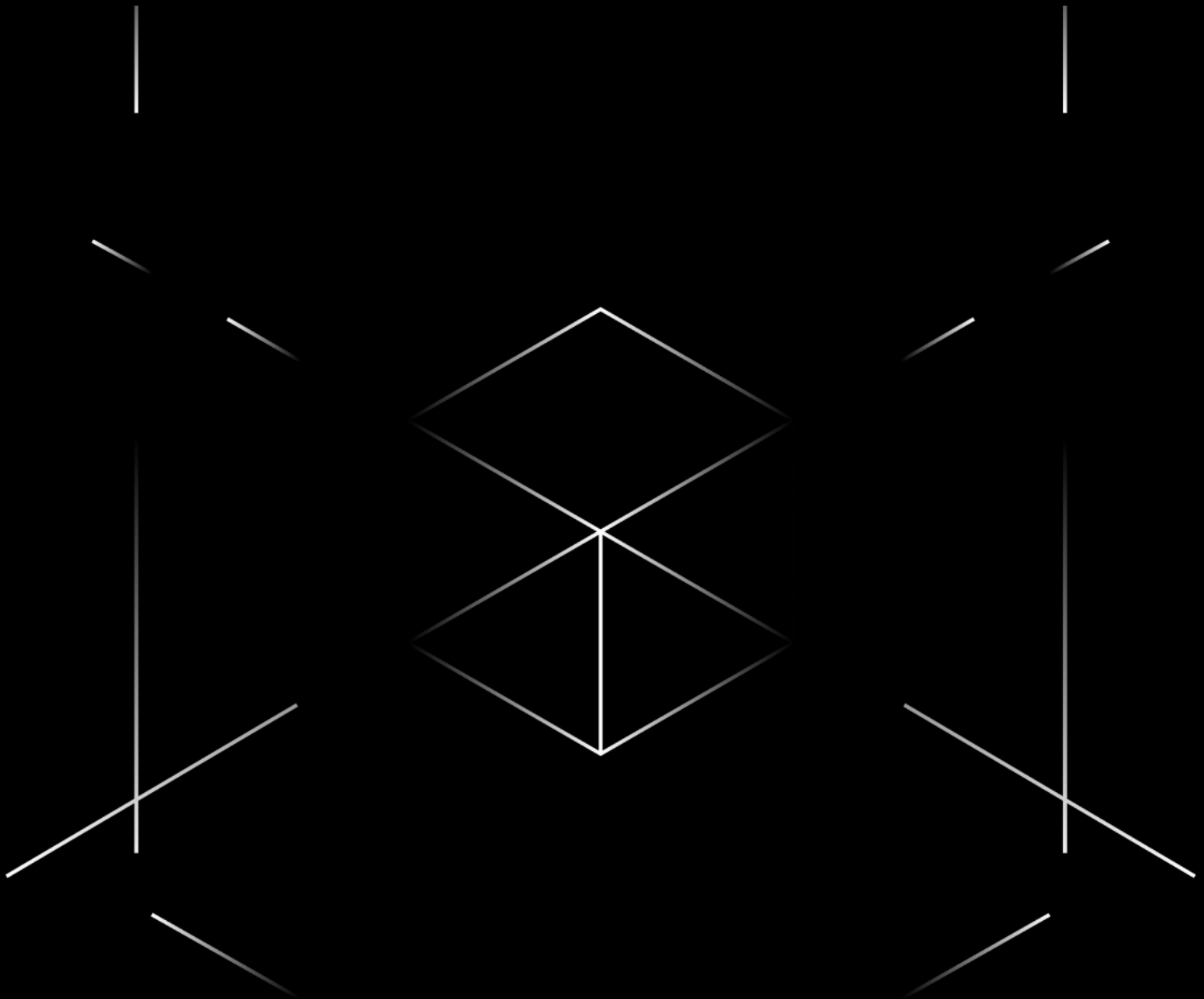
Company Representative 公司代表人： Yichuan Chen 陳怡全

Company Representative Title 公司代表人職稱：Quality Assurance Div. SR. Manager 品保處經理

Date 日期：2025 / 02 / 24



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