SM1V20NJ

1MP MIPI Camera

www.sensing-world.com

Basic Description

This camera module uses an OmniVision 1MP Global Shutter image sensor, designed with a MIPI CSI interface and compatible with multiple SOC platforms.

Key Parameters

Sensor	OMINIVISION 1MP sensor
Shutter	Global shutter
Output Pixels	1280(H) x 800(V)
Frame rate	60FPS
HDR Support	No
Output data	10bit RAW
Color / Mono	Mono sensor 850nm IR
Power Supply	3.3V 1.8V 1.2V
Power consumption	<0.5W
Camera interface	FPC
Connector	DIANWEI 8.03A5.021250
Operating temp.	-20 to +60℃
Storage temp.	-20 to +75℃
Dimensions	24*16*13.3mm
Weight	<15g

Hardware Configuration

EEPROM	
I2C Address	OXA0

Sensor	
I2C Address	OXC0

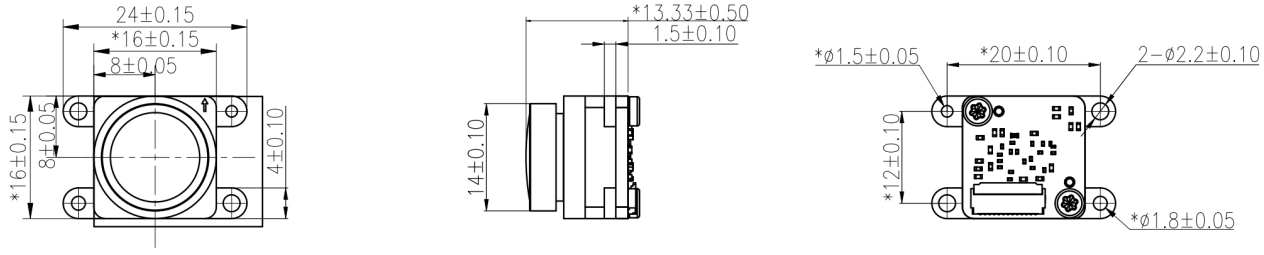
Pin Definition

NO	Pin Name	Type
1	VCC-1.2V	POWER
2	VCC-1.2V	POWER
3	GND	POWER
4	SEN-CLK	CLK
5	GND	POWER
6	CLK_P	MIPI
7	CLK_N	MIPI
8	GND	POWER
9	D1_P	MIPI
10	D1_N	MIPI
11	GND	POWER
12	D0_P	MIPI
13	D0_N	MIPI
14	GND	POWER
15	VCC-1.8V	POWER
16	SCL	Level 1.8V
17	SDA	Level 1.8V
18	EEP-SCL	Level 1.8V
19	EEP-SDA	Level 1.8V
20	FSYNC	Level 1.8V
21	EEP-SID	Level 1.8V
22	EEP-WP	Level 1.8V
23	XSHUTDN	Level 1.8V
24	GND	POWER
25	VCC-3.3V	POWER

Optical Specifications

Product Model	HFOV	VFOV	Aperture	Focal Length	Depth of Field	Lens Spec
SM1V20NJ	138°	95°	F2.2	1.14mm	0.1m-INF	Threaded

Dimensions



Remarks:

△ The icon indicates the forward image orientation, and mirroring can be processed via software.

Dimensions

Revision History

Version	Description	Date
Rev1	First release	2026.05
Rev2	Updated structure drawing and PIN	2026.06
Rev3	Updated lens specs and structure drawing	2026.08