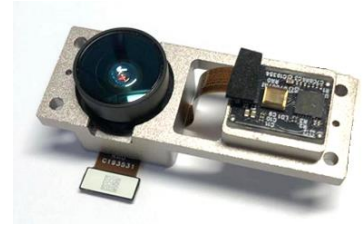


General Description

OPNM8806A is a tiny 3D camera module, based on OPNOUS Time-of-Flight (ToF) technology using VCSEL illumination. The high integration, low power consumption and high precision make this module ideal for depth sensing applications.



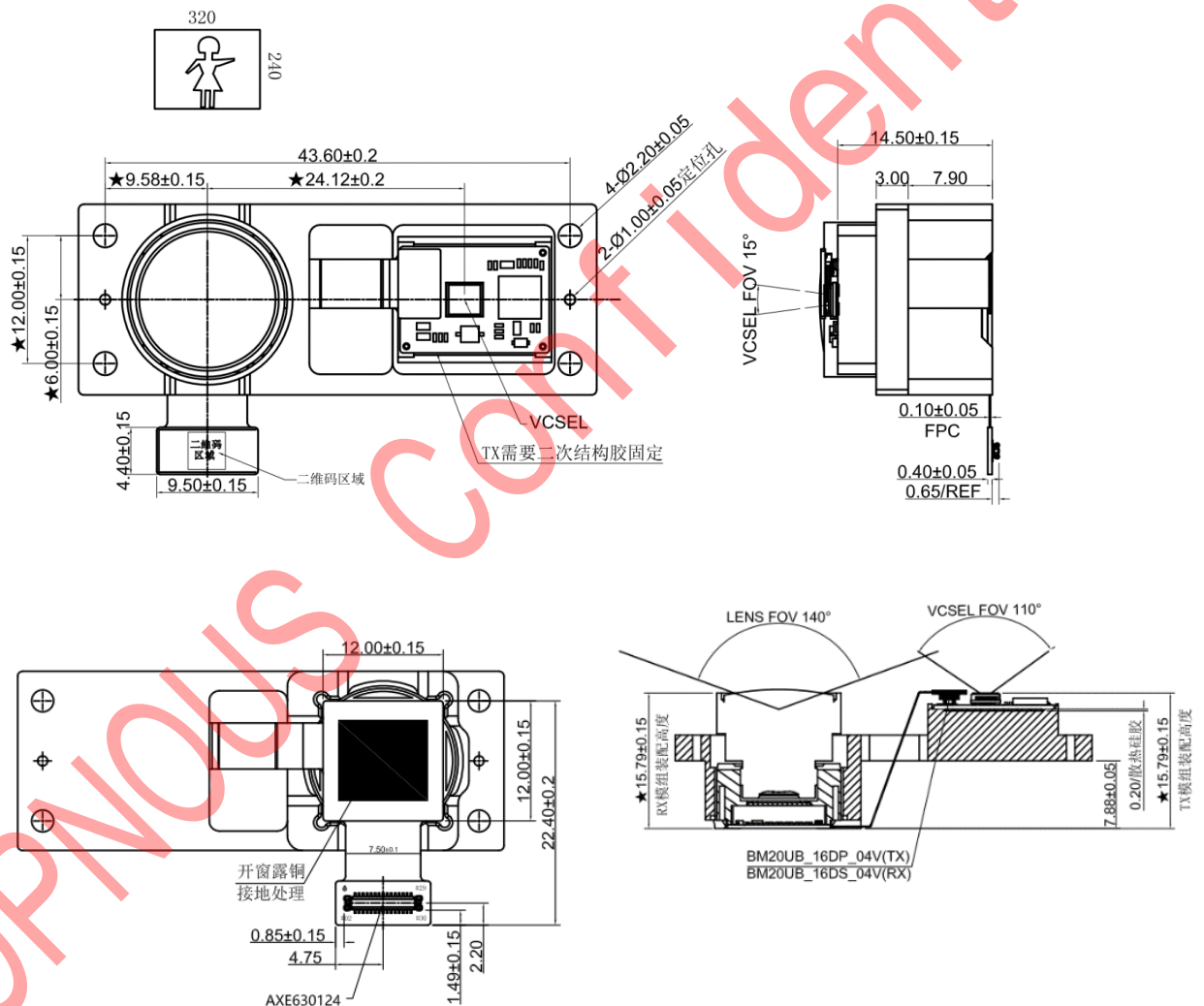
Key Specifications

Parameter	Description
Sensor	OPN8008D, global shutter
Resolution	320 * 40
Pixel size	15um
Sensor size	1/3"
Dimensions	48.60mm * 17.90mm * 15.79mm
Frame rate	10 – 60 fps
Measurement range	0.15 - 5m
FoV	110°(H) * 12°(V)
Distortion	<2.5%
Illumination	850nm, 2W
Input clock	27Mhz
Power supply	Sensor: 3.3V single power supply, >=300mA VCSEL: 4.6V, >= 2A
Power consumption	340mW. Typ
Depth accuracy	<=1%
Interface	MIPI CSI-2, 2 lanes

Typical Applications

- ✓ SLAM
- ✓ 3D reconstruction
- ✓ Visual support for robot grippers
- ✓ Localization, tracking and identification of individuals (humans, animals)
- ✓ People counting and motion analysis

Module Dimensions



Module connector shown in above Figure:

- ✓ Part Number of module connector is AXE630124.
- ✓ Mating connector is AXE530127.

Pin Definitions

Pin No.	Name	Function/Description
1	AV3.3V	3.3V Power Supply
2	LDD_4V5	VCSEL Supply
3	AV3.3V	3.3V Power Supply
4	LDD_4V5	VCSEL Supply
5	VDD_3V3	3.3V Power Supply
6	LDD_4V5	VCSEL Supply
7	SLV_LSB	Address Select
8	DGND	Ground
9	DGND	Ground
10	SI	SPI Data In
11	MCLK	Reference Clock, 27MHz
12	SO	SPI Data Out
13	DGND	Ground
14	SCLK	SPI Clock
15	MDP0	CSI-2 non-inverting data output of data lane 0
16	CS	SPI Cs
17	MDN0	CSI-2 inverting data output of data lane 0
18	DGND	Ground
19	DGND	Ground
20	NC	NC
21	MCP	CSI-2 non-inverting clock output
22	ERR	Error Indicator
23	MCN	CSI-2 inverting clock output
24	SCL	CCI, Camera control interface
25	DGND	Ground
26	SDA	CCI, Camera control interface
27	MDP1	CSI-2 non-inverting data output of data lane 1
28	DGND	Ground
29	MDN1	CSI-2 inverting data output of data lane 1
30	RESET	Reset (active low)

Revision History

Revision	Date	Description
v1.0	2019/11/20	Initial revision.
v1.1	2020/2/8	Modify VCSEL power voltage and doc format

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