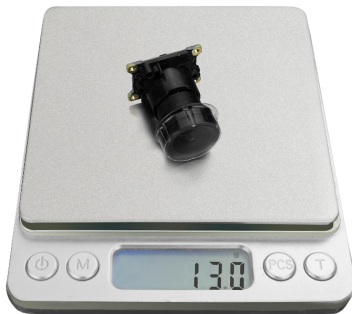


SKU:A157





Description

CamModule SC850SL is a high-performance camera module customized for LLM630 Compute Kit, integrating the SmartSens SC850SL 8 MP sensor. It supports 4K video capture, wide dynamic range (HDR), and low-light high sensitivity, enabling stable imaging in complex lighting environments. It also offers advantages of low read noise, high signal-to-noise ratio, and low power consumption. Equipped with a 200 mm FPC for flexible cabling, it transmits images to LLM630 via MIPI CSI-2 for real-time AI inference and intelligent analysis (such as object detection, image classification, and visual navigation). Suitable for AI vision scenarios like intelligent monitoring, robotic vision, drone inspection, and smart cities.

Features

- Compatible with LLM630 Compute Kit
- SmartSens SC850SL CMOS sensor
- YT10151-8MP-4mm lens
- Stack BSI + Rolling Shutter architecture
- MIPI communication interface
- 4K video capture
- High signal-to-noise ratio and dynamic range
- High-speed DPC function
- Excellent night vision performance

- High sensitivity & fast bad pixel correction

| Includes

- 1 x CamModule SC850SL
- 1 x 200 mm FPC cable
- 1 x Thermal pad

| Applications

- Intelligent monitoring
- Robotic vision
- Drone inspection
- Smart cities

| Specifications

Specification	Parameter
Image Sensor	SmartSens SC850SL CMOS
Resolution	8 MP
Pixel Array	3856H × 2176V
Pixel Size	2.0 μm × 2.0 μm
Optical Specs	1/1.8"
Max Frame Rate	3840 × 2160 @ 60 fps
Output Interface	MIPI CS1-2 (4 Lanes)
Image Format	RAW RGB
Diagonal Field of View (DFoV)	110.8°
Photosensitivity	5034 mV/(Lux · s)
Dynamic Range	Up to 100dB in HDR mode; 75 dB in linear mode
Signal-to-Noise Ratio (SNR)	39 dB
Operating Temperature	−30 °C ~ +85 °C
Optimal Image Quality Temperature	−20 °C ~ +60 °C
Lens Specs	M16
Interface Method	200mm FPC Cable
Product Size	28.0 x 23.5 x 33.9mm
Product Weight	Single camera: 13.0g
Package Size	80.0 x 52.0 x 22.0mm
Gross Weight	27.3g

Learn

Installation direction

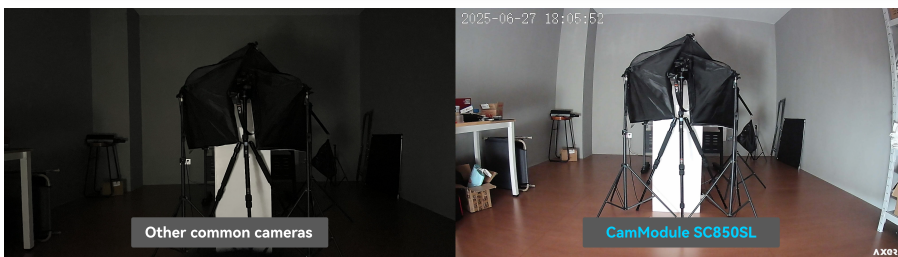
Note: There is a human figure icon printed on the camera to indicate the installation direction of the camera.
Please install the camera correctly according to the indicated position.



Imaging Optimization

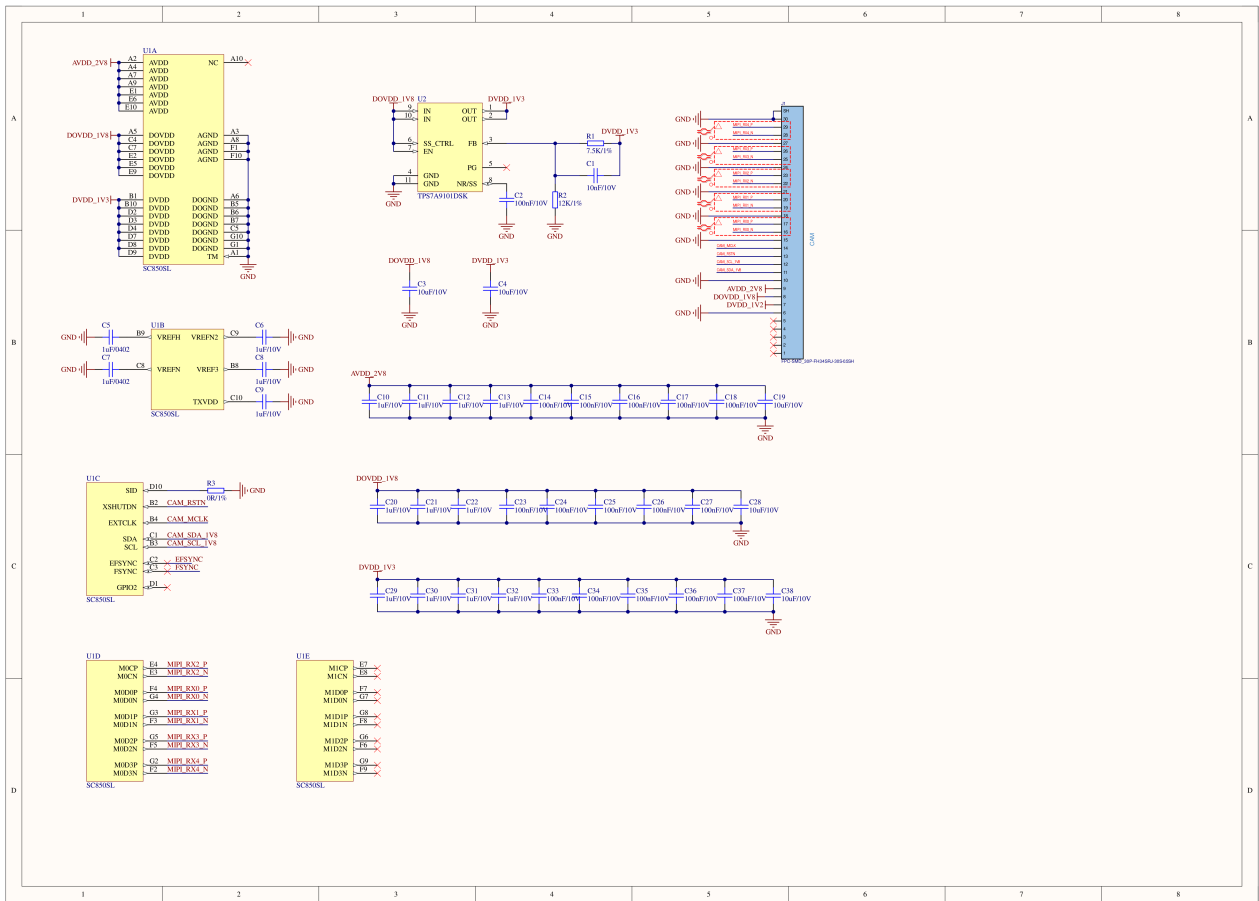
AI-ISP

The AI-ISP image processing technology of CamModule SC850SL combined with the LLM630 Compute Kit can significantly enhance imaging performance in low-light conditions. AI-ISP is enabled by default and will utilize half of the NPU's computing power.



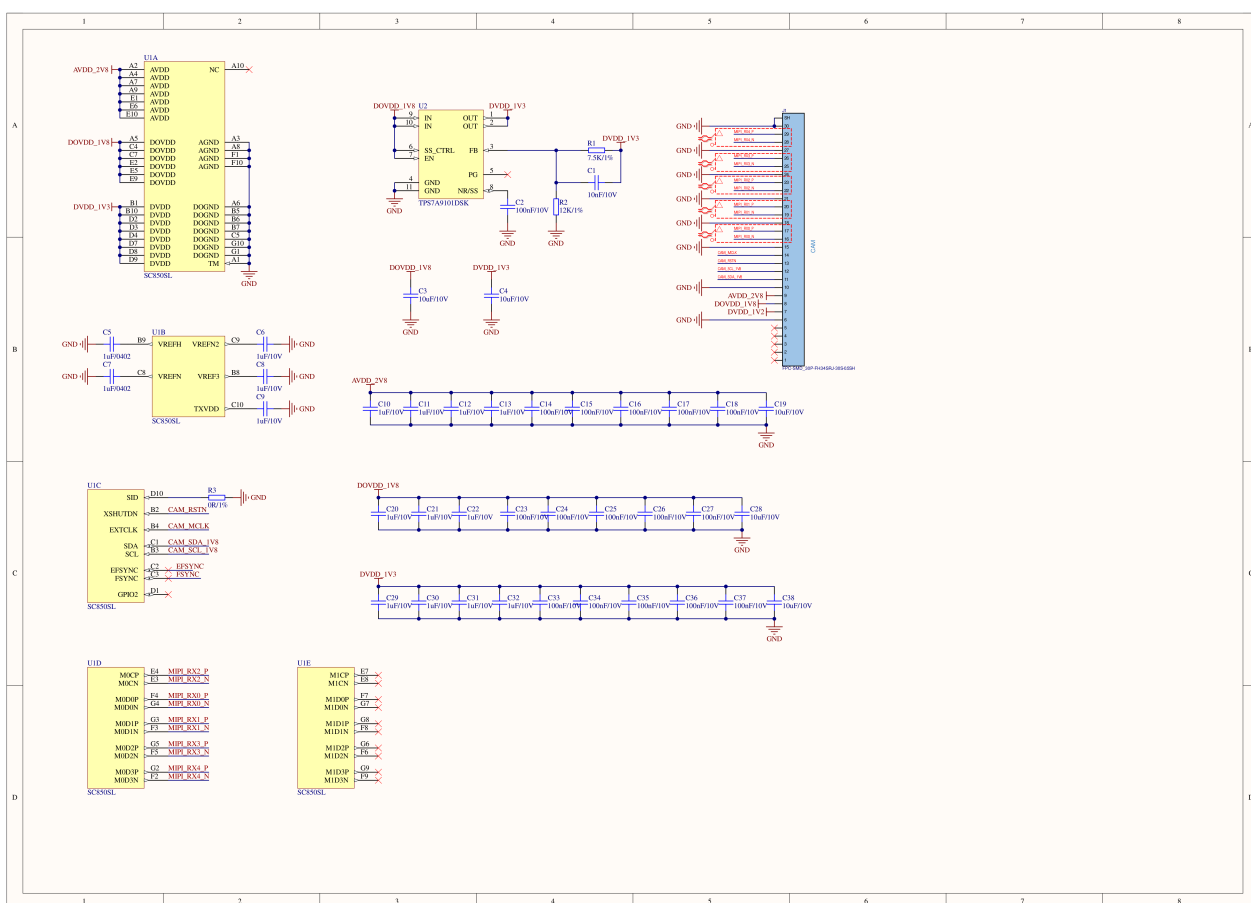
Schematics

[CamModule SC850SL Schematics PDF](#)



Schematics

CamModule SC850SL Schematics PDF



PinMap

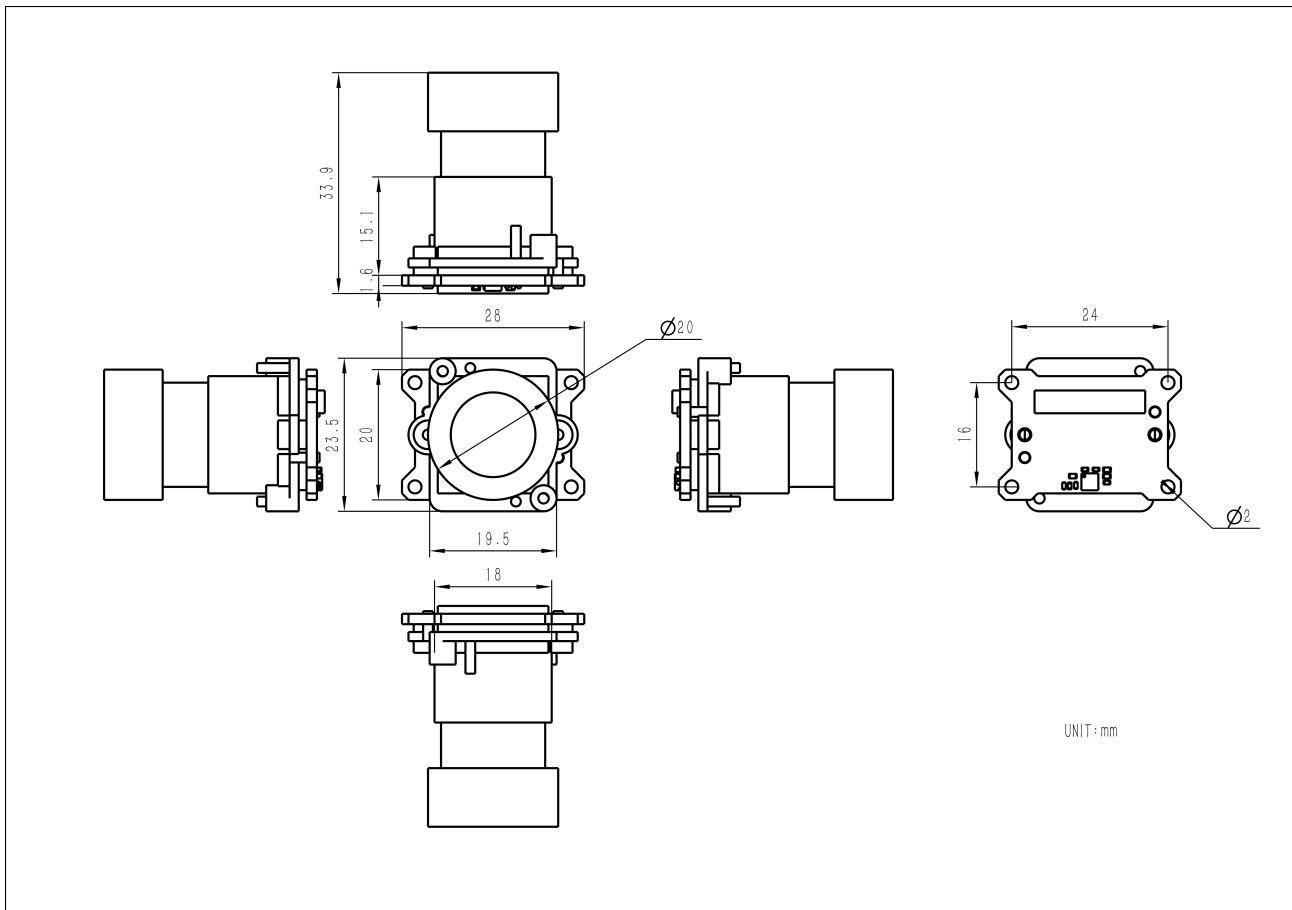
CamModule SC850SL

Pin Number	CamModule SC850SL
1-5	NC
6	GND
7	DVDD_1V2
8	DOVDD_1V8
9	AVDD_2V8
10	GND
11	CAM_SDA_1V8
12	CAM_SCL_1V8
13	CAM_RSTN
14	CAM_MCLK
15	GND
16	MIPI_RX0_N
17	MIPI_RX0_P
18	GND
19	MIPI_RX1_N
20	MIPI_RX1_P
21	GND
22	MIPI_RX2_N
23	MIPI_RX2_P
24	GND
25	MIPI_RX3_N
26	MIPI_RX3_P
27	GND
28	MIPI_RX4_N
29	MIPI_RX4_P

Pin Number	CamModule SC850SL
30	GND

Model Size

[CamModule SC850SL Model Dimensions PDF](#)



Softwares

Quick Start

- [LLM630 Compute Kit - IPC Network Camera](#)
- [LLM630 Compute Kit - StackFlow API Camera Demo](#)
- [LLM630 Compute Kit - StackFlow API DepthAnything](#)
- [LLM630 Compute Kit - StackFlow API Yolo11n Demo](#)
- [LLM630 Compute Kit - StackFlow API Yolo11n Visual Demo](#)

Video

CamModule SC850SL product introduction and case demonstration

[A157-CamModule-SC850SL_video.mp4](#)

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