

# 2M P 30X Starlight Zoom Camera Module

SOAR-CBH2130



The SOAR-CB Series visible light camera modules are engineered for seamless integration into advanced imaging systems where performance, reliability, and flexibility are critical. Built around high-sensitivity sensors and precision optical zoom assemblies, these modules deliver clear, stable imagery across a wide range of operating environments—from low-light conditions to high-contrast scenes.

Designed with system integration in mind, support is provided for multiple video interfaces along with extensive customization options, including lens configuration, control protocols, and image processing parameters. Applications span UAV payloads, PTZ platforms, and fixed surveillance systems, ensuring consistent imaging performance and long-term operational stability.

Scalable OEM/ODM support enables streamlined development cycles and efficient system integration, supporting faster deployment of high-performance vision solutions.

## Features

- 1/2.8" 2M P CMOS, 1920\*1080 @ 25/30fps
- Ultra starlight, Color: 0.0005 Lux @ (F1.67, AGC ON); B/W : 0.0001 Lux @ (F1.67, AGC ON)
- 5.1~153m 30X optical zoom , 16X digital zoom
- Optical Defog
- WDR
- Auto Day/Night switch
- Electronic anti-shake
- High precision optical axis optional
- MIPI/LVDS Optional
- VISCA , PELCO-D/P
- ONVIF

# Specifications

## Camera

Image Sensor	1/2.8" Progressive Scan CMOS
Minimum Illumination	Color:0.0005 Lux @ (F1.67,AGC ON); B/W :0.0001 Lux @ (F1.67,AGC ON)
Shutter	1/25s to 1/100,000s;Support delayed shutter
Day/Night Switch	ICR cut filter

## Lens

Focal Length	5.1~153mm ,30x Optical Zoom
Aperture Range	F1.67 to F3.67
Field of view	H :55.27~2.66° (wide-tele) V :32.26~1.51° (wide-tele) D :63.99~3.06° (wide-tele)
Minimum Working Distance	100mm -1500mm (wide-tele)
Zoom Speed	Approx.4s (optical,wide-tele)

## Compression Standard

Video Compression	H.265 /H.264
H.265 Type	Main Profile
H.264 Type	Baseline Profile /Main Profile /High Profile
Video Bitrate	32Kbps~16Mbps
Audio Compression	G.711a/G.711u/G.722.1/G.726/MPEG2L2/AAC/PCM
Audio Bitrate	64Kbps(G.711)/16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MPEG2L2)/16-64Kbps(AAC)

## Image

Main Stream	50Hz:25fps (1920x1080,1280x960,1280x720); 60Hz:30fps (1920x1080,1280x960,1280x720)
Sub Stream	50Hz:25fps (1280x720,704x576,640x480,352x288); 60Hz:30fps (1280x720,704x480,640x480,352x288)
Third Stream	50Hz:25fps (704x576,640x480,352x288); 60Hz:30fps (704x480,640x480,352x240)
Image Settings	Saturation, Brightness, Contrast and Sharpness can be adjusted via the client-side or browser
BLC	Support

Exposure Mode	AE /Aperture Priority /Shutter Priority /Manual Exposure
Focus Mode	Auto Focus /One Focus /Manual Focus /Semi-Auto Focus
Area Exposure /Focus	Support
Defog	Support
Stability	EIS
Day/Night Switch	Automatic, manual, timing, alarm trigger
3D Noise Reduction	Support
Picture Overlay Switch	Support BMP 24-bit image overlay, customizable area
Region of Interest	Support three streams and four fixed areas

### Network

Network protocol	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, RTP, RTSP, RTCP, NTP, SMTP, SNMP, IPv6
Storage Function	Support micro SD /SDHC /SDXC card (256g) offline local storage, NAS (NFS, SMB /CIFS support)
Interface Protocol	ONVIF (PROFILE S PROFILE G), SDK, Web API

### Interface

Network Interface	10M /100M network port
USB	2.0
Audio	1 Input, 1 Output
Alarm	1 Input high-level 2.3-3.6V low level 0-1V, 1 Output high-level 3.3V
Control	1 RS485 PELCO D/P, 1 TTL 3.3V VISCA
Storage	Support TF card slots, support USB expandable Micro SD /SDHC /SDXC cards (256G). NAS (NFS, SMB /CIFS all supported).
Digital Interface (optional)	LVDS /MPI

### Smart Function

Basic Intelligence	Motion detection, video blocking, disk detection, illegal access
Smart Intelligence	Area intrusion, cross-border detection, leaving the area, wandering detection, crowd gathering, fast movement, audio anomaly

### General

Operating temperature and humidity	-30°C to 60°C, humidity less than 95%
Power supply	DC12V±10%

Power consumption

2.5W MAX (ICR), 4.3W MAX

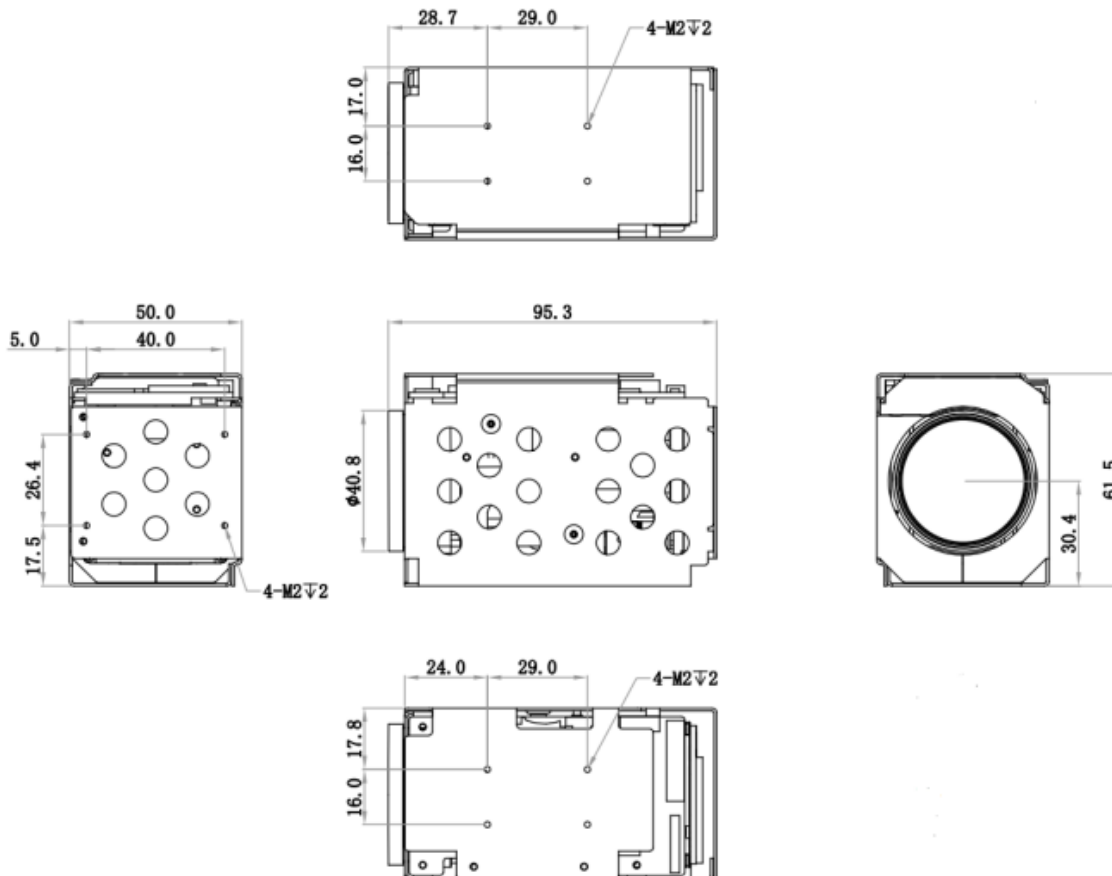
Dimension

95.3mm × 50mm × 61.5mm

Weight

257g

## Dimension (MM)



# Interface Instruction

The figure shows the serial number and actual position of the interface socket. One pin starts with the socket's 1 pin or triangle symbol.

① .J1 is a TF card slot; ② .J3 is a serial port debugging and printing interface; ③ .J4 is a M IPI/LVDS connector; ④ . JP9 is an external USB connector.

JP2 36P FFC/FPC	
No.	Pin Name
1	DC_12V
2	DC_12V
3	DC_12V
4	GND
5	GND
6	CVBS_OUT
7	GND
8	LINEOUT
9	GND
10	LINEIN
11	Empty
12	TX+
13	TX-
14	RX+
15	RX-
16	GND
17	LNK#
18	ACT#
19	ALM_OUT
20	ALM_IN
21	GND
22	SD_EN
23	Empty
24	SD_CD
25	SD_CLK
26	SD_CMD
27	SD_DATA3
28	SD_DATA2
29	SD_DATA1
30	SD_DATA0
31	GND
32	RS-485-
33	RS-485+
34	UART2_TXD
35	UART2_RXD
36	SYS_RST_N

J4 LVDS USL00-30L	
No.	Pin Name
1	NC
2	NC
3	NC
4	NC
5	SYS_RST_N
6	Empty
7	GND
8	GND
9	GND
10	GND
11	GND
12	GND
13	DC_12V
14	DC_12V
15	DC_12V
16	DC_12V
17	DC_12V
18	UART2_RXD
19	UART2_TXD
20	GND
21	LVDS_TA-
22	LVDS_TA+
23	LVDS_TB-
24	LVDS_TB+
25	LVDS_TC-
26	LVDS_TC+
27	LVDS_TCLK-
28	LVDS_TCLK+
29	LVDS_TD-
30	LVDS_TD+

J4 M IPIUSL00-30L	
No.	Pin Name
1	GND
2	NC
3	NC
4	GND
5	NC
6	NC
7	GND
8	NC
9	NC
10	GND
11	NC
12	NC
13	GND
14	CSD3N
15	CSD3P
16	CSD2N
17	CSD2P
18	CSDEN
19	CSDCP
20	CSD1N
21	CSD1P
22	CSD0N
23	CSD0P
24	UART2_RXD
25	UART2_TXD
26	SYS_RST_N
27	DC_12V
28	DC_12V
29	DC_12V
30	DC_12V

JP9 9pin-1.25mm		
Type	No.	Pin Name
USB2.0 4pin (1.25mm socket)	1	DC_5V
	2	USB_DP
	3	USB_DM
	4	GND

J3 3pin-1.25mm	
No.	Pin Name
1	RX
2	TX
3	GND

