

Camera module solution with Renesas 8Mpixels CMOS Image Sensor

# High resolution 4K Camera module

Proposing 38mm board camera(CB10) & High-speed AF zoom camera(CB13)

## Features

### Adopt High performance Socionext ISP (CB10&CB13)

- Support high frame rate(4K@60fps)

### 4K & Low light performance (CB10 & CB13)

- The module can capture small character and detailed pattern, and even subject textures.
- High sensitivity CMOS Image sensor(optical size:1/1.9 inch) enables better color imaging under low light condition.

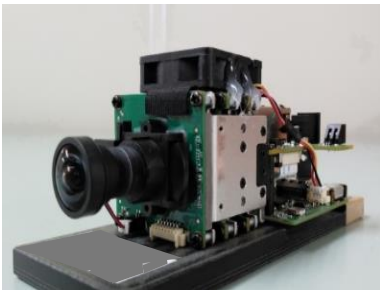
### Achieve faster AF speed with PDAF<sup>(Note 1)</sup> Sensor (CB13)

- Hybrid AF(contrast AF & PDAF) enables faster AF and higher AF accuracy.

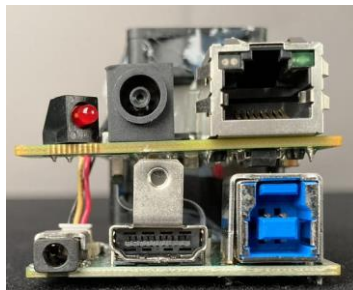
(Note 1) PDAF : Phase Detection Auto Focus

## Camera module Lineup(E-Globaledge products)

### CB10(38mm board camera)



Outlook



Outlook(Backside)

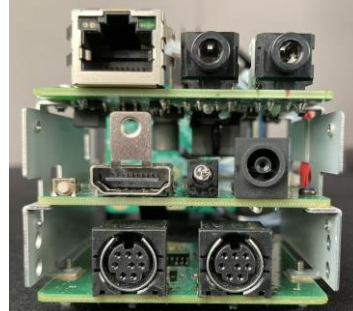
- M12 Lens mount
- Three 38mm boards & IF board<sup>(Note 2)</sup>
- Video output IF: Ethernet, HDMI, USB

(Note 2) Available as optional purchase

### CB13(High-speed AF zoom camera)



Outlook



Outlook(Backside)

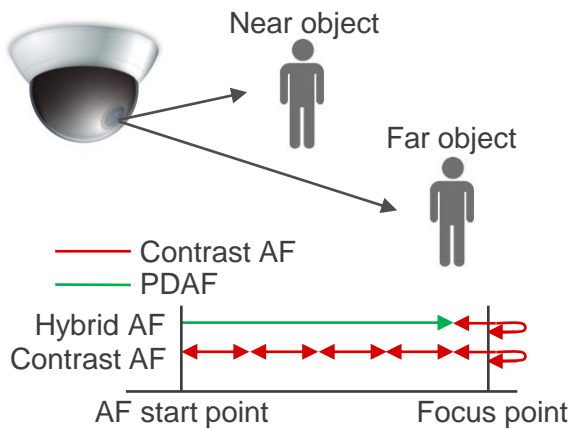
- Zoom Lens(Optical 30x)
- Main camera unit & IF board<sup>(Note 3)</sup>
- Video output IF: Ethernet, HDMI
- High-Speed AF function(Hybrid AF)

(Note 3) Available as optional purchase.  
It supports Ethernet & HDMI output IF.  
If you need USB output IF, you have to prepare your own IF board.

Please contact us when you need the demo of image quality or AF speed.

## High-speed AF function(Hybrid AF)

Hybrid AF can focus quickly even if the distance to the object changes suddenly.



- Hybrid AF  
 Hybrid AF moves the lens to near the in-focus position by PDAF, and then makes fine adjustments by contrast AF.
- Contrast AF  
 Contrast AF takes time to search in focus point because the lens is moved many times.

## CB10/CB13 Specifications

Items	CB10	CB13
Sensor	1/1.9" RENESAS CMOS	←
Lens	M12 lens mount with IR-cut filter control	Build-in Zoom lens(30x) with IR-cut filter control
Video Output Interface	HDMI / IP / USB 3.0 IP and USB can't work at the same time	HDMI / IP CB13 itself has USB video output, but IF board doesn't have
Output Resolution	3840 x 2160 , 1920 x 1080 1280 x 720 , 640 x 360	←
Frame rate	Max : 3840 x 2160 60fps	←
Video Output format	H.265 / H.264 / MJPEG / YUV Able to provide three H265 or H264 simultaneously video streams	←
Control Interface	Ethernet(web page, ONVIF standard, VISCA over IP) / USB	Ethernet(web page, ONVIF standard, VISCA over IP) / RS-232 CB13 itself has the USB interface, but IF board doesn't have
Exposure	Configurable	←
Gain Control	Configurable	←
Auto White Balance	Configurable Auto (2500K~7500K) ATW (2000K~10000K) Manual WB (R/B gain, One-push WB) Indoor (3200K) , Outdoor (5800K)	←
WDR	Yes, 3840x2160 60fps	←
2D/3D Noise Reduction	Yes / Yes	←
Sharpness	Yes	←
Ethernet Standard	100 Base-TX IEEE 802.3u standard 100 Base-TX IEEE 802.1 standard ONVIF standard , VISCA over IP	←
Ethernet Protocol	TCP/IP, UDP , RTP , RTSP , HTTP, HTTPS, DHCP Multicast / Unicast	←
HMI (Webpage)	A web interface protected by username and password. The web interface shall permit to modify camera parameters.	←
Input Voltage	12VDC +/- 20% PoE(IF board function)	←
Operating Temperature	-10°C ~ 60°C	←
Storage Temperature	-40°C ~ 60°C	←
Dimension	50 x 38 x 90mm(w/ IF board) 38 x 38 x 45mm(w/o IF board)	70 x 83 x 210mm(w/ IF board) 70 x 83 x 133.1mm(w/o IF board)