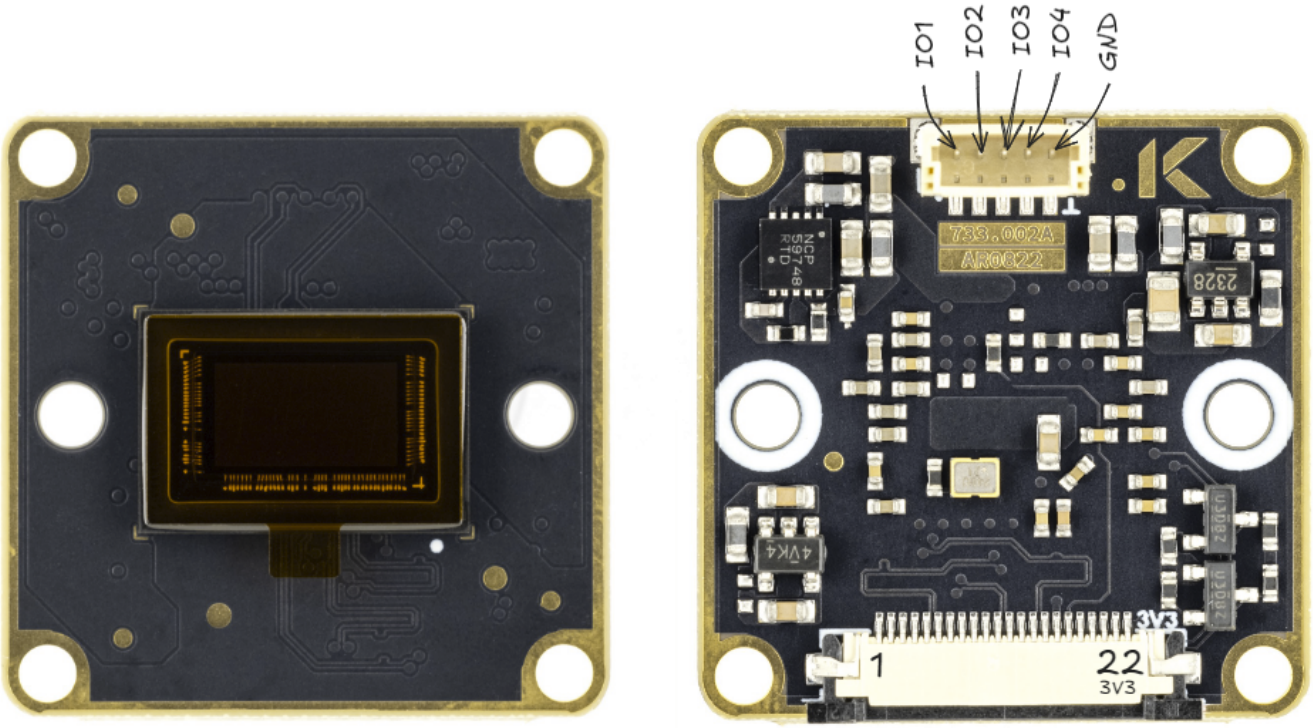
822x-CSI

The AR0822 is an 8-megapixel stacked back-side-illuminated CMOS image sensor that uses a 2.0µm pixel pitched array of 3840 x 2160 pixels, corresponding to a 1/1.8″ (8.81 mm diagonal) optical format. It offers electronic rolling-shutter and global-reset-release readout, feeding up to 4-lane MIPI CSI-2 interface at 350 Mb/s to 2 Gb/s per lane via an 12-bit ADC. In linear mode the device streams native 4 K video at 60 frames per second; high-dynamic-range operation includes two-exposure line-interleaved HDR and three-exposure embedded HDR at up to 30 fps, producing a composite dynamic range of 120 dB, while a single-exposure extended-dynamic-range mode reaches 45 fps. In FullHD mode sensor can stream up to 120fps. Best suitable for: security camera systems, IoT imaging nodes and connected device cameras, vehicle car DVR (dash cam) recorders.

Camera variants

SKU	Lens mount	Chroma	Note
822C-CSI-M12	9.5mm for wide angle lenses	RGB Color	**Most common use for wide angle and fish-eye lenses.**
822C-CSI-M12L	14.7mm for regular and telephoto lenses	RGB Color	**Modification for lenses above 6mm (typical)**
822M-CSI-M12	9.5mm for wide angle lenses	Mono	Same as 822C-M12 but Mono sensor for better light sensitivity
822M-CSI-M12L	14.7mm for regular and telephoto lenses	Mono	Same as 822C-M12L but Mono sensor for better light sensitivity

Pinout



Interface connector 22pin 0.5mm pitch 687122183622 from Würth Elektronik. Top facing pins.

Pin	Signal	Description
1	GND	
2	D0_N	
3	D0_P	
4	GND	
5	D1_N	
6	D1_P	
7	GND	
8	CLK_N	
9	CLK_P	
10	GND	
11	D2_N	

12	D2_P	
13	GND	
14	D3_N	
15	D3_P	
16	GND	
17	ENABLE	Wired to sensor RESET_N
18	N.C.	
19	GND	
20	SCL	
21	SDA	
22	+3.3V	

AUX wiring

Interface connector 5 pin 1mm pitch 665305124022 from Würth Elektronik. IOx pins are defined with AR0822 registers.

Pin	Signal	Description
1	IO1	
2	IO2	
3	IO3	
4	IO3	
5	GND	

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