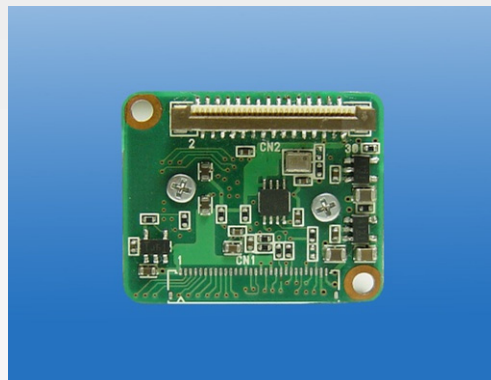


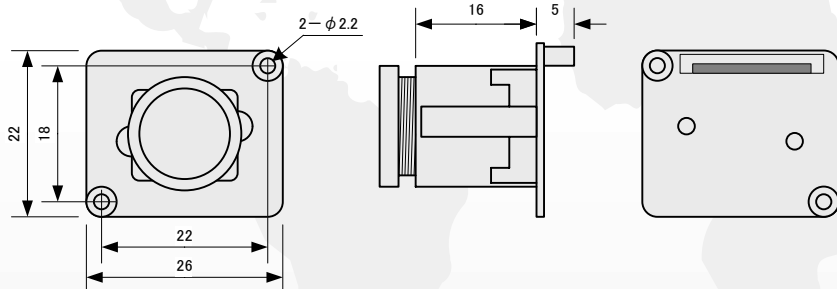
MS-1PD 1/4 Type VGA Progressive Scan CMOS Board Camera



■ Futures

- 1/4 type 330k Pixels CCD
- Frame Rate 30fps
- CLK/HD/VD,Digital(8bit),output
- Auto White Balance
- Auto Gain Control
- Board Camera Lens
- Power source : DC5V

Mechanical Drawings



LENS lineup

Standard LENS					
Model name	Focal length	F No.	Horizontal	Vertical	Diagonal
MD15	12mm	2.2	15°	11°	17°
MD23	8mm	2.0	23°	18°	26°
MD33	6mm	1.8	33°	24°	39°
MD45	4.3mm	2.0	45°	34°	58°
MD55	3.6mm	2.0	55°	42°	67°
MD65	3mm	2.0	65°	48°	83°
MD74	2.5mm	2.0	74°	56°	91°
MD91	2.1mm	2.0	91°	67°	111°
MY104	1.9mm	2.0	104°	77°	129°

仕様

Function Items	Specification
Model Name	MS-1PD
Signal System	VGA
Image Sensor	1/4 Type VGA Progressive CMOS sensor
Effective picture elements	640(H) × 480(V)
Elements size	5.6 μm × 5.6 μm
Frame rate	30fps
Minimum illumination	1 lx (F2)
Digital outputs	YUV 8bit
Sync system	Internal
Lens mount	M12
Power requirements	DC5V±10%
Current consumption	約45mA
Dimensions	22(W)×26(H)mm
Mass	Approx. 10g
Operating temperature	-10 to +50°C
Operating humidity	20 to 80% (no condensation)

コネクター入出力

Pin No.	Signal names	Pin No.	Signal names
1	GND	16	VD OUT
2	DOU7	17	GND
3	DOU6	18	CLK OUT
4	DOU5	19	GND
5	DOU4	20	FLASH OUT
6	DOU3	21	SCLK OUT
7	DOU2	22	GND
8	DOU1	23	SDAT IN
9	DOU0	24	RESET IN
10	DOU LSB1	25	STANDBY IN
11	DOU LSB0	26	GND
12	NC	27	OE IN
13	NC	28	NC
14	GND	29	+5V IN
15	HD OUT	30	GND IN

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Distributors

Specifications

Function names	Specification	
Model name	MS-94KR	MS-94LR
Image sensor	Progressive scan 1/3 type color CCD	Progressive scan 1/3 type B/W CCD
Effective picture elements	659(H) x 494(V)	
Scanning area	4.8(H) x 3.6(V)	
Scan method	Progressive scan	
Sync system	Internal / External	
External sync signal	HD , VD TTL Level	
Analog video out	V:1.0V(p-p)/75Ω , HD/VD : TTL level	
Digital video out	RAW12bit (TTL Parallel)	
Shutter mode	Electronic shutter , External trigger shutter	
Electronic shutter	1/100 , 1/250 , 1/500 , 1/1,000 , 1/2,000 , 1/4,000 , 1/25,000sec (Under 30 Frame / sec mode)	
Gamma	1 , 0.6 , 0.45	
Gain	0 to 32 dB	
AGC	ON/OFF	
S/N Ratio	50dB	
Minimum illumination	1 lx (MS-94LR,F1.4 , Electronic Shutter 1/60sec)	
Lens mount	CS mount	
Frame rate	30 Frame / sec , 60 Frame / sec	
Power requirements	DC5V +/-10%	
Power consumption	Approx. 2W	
Mass	Approx. 30g	
Operating temperature	-10 to 50°C	
Operating humidity	20 to 80% (no condensation)	

Connector Outputs

30 pin connector (FH12-30S-0.5V)					
Pin No.	I/O	Signal	Pin No.	I/O	Signal
1	—	GND	16	O	VDO
2	O	RAW11	17	—	GND
3	O	RAW10	18	O	CKO
4	O	RAW9	19	—	GND
5	O	RAW8	20	O	EXOUT1
6	O	RAW7	21	O	EXOUT0
7	O	RAW6	22	—	GND
8	O	RAW5	23	I	HDI
9	O	RAW4	24	I	VDI
10	O	RAW3	25	I	TRIG IN
11	O	RAW2	26	—	GND
12	O	RAW1	27	I	EXIN1
13	O	RAW0	28	I	EXIN0
14	—	GND	29	—	NC
15	O	HDO	30	—	GND

10 pin connector (BM10B-SRSS-TB)		
Pin No.	I/O	Signal
1	I	+5V
2	I	GND
3	O	HDO
4	O	VDO
5	I	HDI
6	I	VDI
7	O	TRIG IN
8	O	NC
9	O	VIDEO GND
10	O	VIDEO OUT

Mode settings

Dip SW		
SW	Function name	Function
1	DUB/NOR	ON : 60 Frame/sec , OFF : 30 Frame/sec
2	GAMMA	Gamma ON / OFF
3	GAMMA SEL	ON: Gamma=0.45 , OFF : Gamma=0.6
4	AGC	Auto gain control ON/OFF
5	AGC CONTROL	ON : AGC 5 to 32 dB , OFF : 18 to 32 dB
6	SHUTTER MODE2	OFF2 OFF1:shutter value、OFF2 OFF1:Nothing
7	SHUTTER MODE1	ON2 OFF1:Nothing、ON2 ON1 : Trigger mode 1
8	SHUTTER3	Shutter speed setting 3
9	SHUTTER2	Shutter speed setting 2
10	SHUTTER1	Shutter speed setting 1

Shutter speed setting (Under 30 Frame/sec mode)			
SHUTTER3	SHUTTER2	SHUTTER1	Shutter speed (sec)
OFF	OFF	OFF	1/30
OFF	OFF	ON	1/100
OFF	ON	OFF	1/250
OFF	ON	ON	1/500
ON	OFF	OFF	1/1000
ON	OFF	ON	1/2000
ON	ON	OFF	1/4000
ON	ON	ON	1/25000

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