

# M4088

## 1/4" B/W Camera Module With Digital Output

### General Description

The M4088 is a 1/4" monochrome camera module with digital output. It uses OmniVision's CMOS image sensor OV5017. Combining CMOS technology together with an easy to use digital interface makes M4088 a low cost solution for higher quality video image application.

The digital video port supplies a continuous 8 bit-wide image data stream. On chip programmable features include variable frame rate, selectable exposure setting, and adjustable image size. All camera features are registered based. Accessing the video data and configuration the chip is as easy as interfacing to an SRAM.



### Features:

- Small size :35 x 29 mm
- Lens: 7.4mm (Optional)
- Digital Output (8 bit pixel resolution)
- Analog (75Ω) Output
- Non-interlace (progressive) scan
- Single 5V operation
- Low power consumption (<100mW)
- Programmable exposure setting
- Programmable frame rate (0.5 ~ 50fps)
- Programmable image size
- Gamma correction - 0.45/1.0
- Auto gain control - 0 ~ 18dB
- External frame sync capability

### Specification

Imager	OV5017, 1/4" CMOS imager sensor
Scanning	Progressive
Shutter	1/50 to 1/5000 sec
Video Output	1. Digital : 8bit 2. Analog :1V p-p composite video (75Ω)
Array Size	384 x 288 pixels
Effective image area	4.2mm x 3.2mm
S/N Ratio	> 42dB (AGC on )
Min Illumination	1 Lux at f1.4
Operation Voltage	5 VDC
Standby Current	< 10mA
Lens (Optional)	1. f7.4mm F2.1, FOV 31.7° x 24.4° 2. f3.8mm F2.0, FOV 57.9° x 45.7°

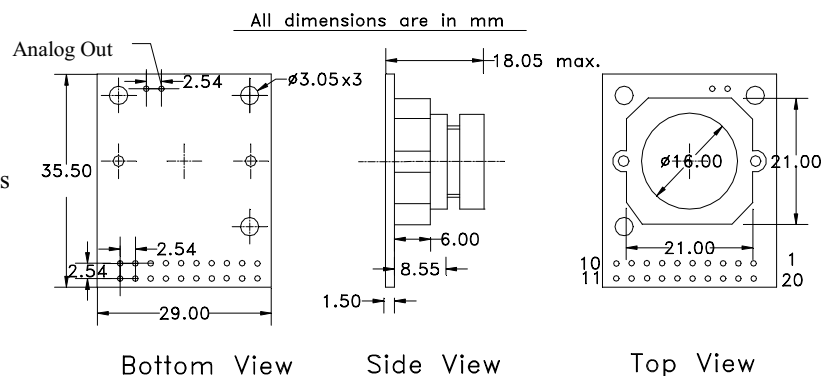
### Application Example

- Computer based security & surveillance
- Machine vision
- Process control
- Bar code reader
- Finger Print scanner

### Mechanical Dimension

#### Pin Description

1~8	D0~D7	Bidirection Data Bus
9	VCC	Power Supply, DC5V+/-0.5V
10	GND	Power supply ground
11~14	A3~A0	Address inputs for int registers
15	OEB	Output enable for 8 bit data
16	WEB	Write enable for int register
17	CSB	Chip enable for device
18	HREF	Horizontal timing ref output
19	PCLK	Pixel clock output
20	Vsync	Vertical timing ref output



Note : Evaluation Board is available for M4088