General Description

The M3188 is a 1/3" B/W camera module with digital output. It uses OmniVision's CMOS image sensor OV7110. Combining CMOS technology together with an easy to use digital interface makes M3188 a low cost solution for higher quality video image application.

The digital video port supplies a continuous 8 bit-wide image data stream. All camera functions, such as exposure, gamma, gain, windowing, are programmable through I^2C interface.
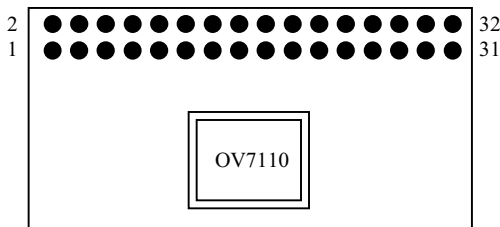
Features:

- 307,200 pixels, VGA / CIF format
- Small size : 40 x 28 mm
- Lens: f=6mm (Optional)
- Read out - progressive / interlace
- Data format - 8 bit video data
- I^2C interface
- Electronic exposure / Gain / Control
- Image enhancement - brightness, contrast, gamma, sharpness, window, etc
- Internal / external synchronization scheme
- Frame exposure / line exposure option
- Single 5V operation
- Low power consumption (<300mW)

Specification

Imager	OV7110, CMOS image sensor
Array Size	644 x 484 pixels
Pixel size	8.4 x 8.4 μm
Scanning	Progressive / interlace
Effective image area	5.4mm x 4mm
Electronic Exposure	500:1
Gamma Correction	0.45/1.0
S/N Ratio	42dB
Min Illumination	1lux @F1.4
Operation Voltage	5 VDC
Operation Current	200mW Active
	100 μW Standby
Lens (Optional)	F3.7mm, F2.0

PCB Layout

Application Example

- Still Image
- Machine Vision
- Process control
- Finger print recognition
- Bar code scanner

Note: Evaluation board is available for M3188

Pin Description

1~8	Y0~Y7	Digital output Y Bus.
9	PWDN	Power down mode
10	RST	Reset
11	SDA	I^2C Serial data
12	FODD	Odd Field flag
13	SCL	I^2C Serial clock input
14	HREF	Horizontal window reference output
15	AGND	Analog Ground
16	VSYN	Vertical Sync output
17	AGND	Analog Ground
18	PCLK	Pixel clock output
19	EXCLK	On chip video oscillator clock output
20	VCC	Power Supply 5VDC
21	AGND	Analog Ground
22	VCC	Power Supply 5VDC
23~30	NC	
31	GND	Common Ground
32	VTO	Video Analog Output(75Ω)