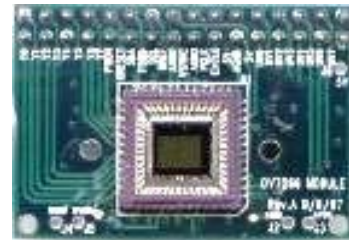




**General Description**

The C3088 is a 1/4" color camera module with digital output. It uses OmniVision's CMOS image sensor OV6620. Combining CMOS technology together with an easy to use digital interface makes C3088 a low cost solution for higher quality video image application.

The digital video port supplies a continuous 8/16 bit-wide image data stream. All camera functions, such as exposure, gamma, gain, white balance, color matrix, windowing, are programmable through I<sup>2</sup>C interface.

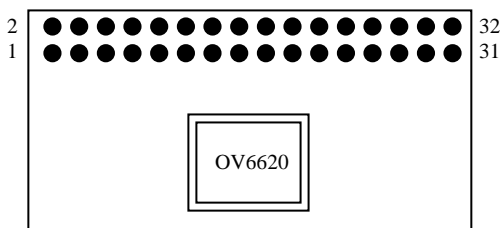


**Features:**

- 101,376 pixel, CIF/QCIF format
- Small size : 40 x 28 mm
- Lens: f=4.9mm (Optional)
- 8/16 bit video data : CCIR601, CCIR656, ZV port
- Read out - progressive
- Data format -YCrCb 4:2:2, GRB 4:2:2, RGB
- I<sup>2</sup>C interface
- Wide dynamic range, anti blooming, zero smearing
- Electronic exposure / Gain / White balance control
- Image enhancement - brightness, contrast, gamma, saturation, sharpness, window, etc
- Internal / external synchronization scheme
- Frame exposure / line exposure option
- Single 5V operation
- Low power consumption (<100mW)
- Monochrome composite video signal output(50 Hz)

**Specification**

Imager	OV6620, CMOS image sensor
Array Size	356x 292 pixels
Pixel size	9.0 x 8.2 μm
Scanning	Progressive
Effective image area	3.1mm x 2.5mm
Electronic Exposure	500:1
Gamma Correction	0.45/0.55/1.0
S/N Ratio	48dB
Min Illumination	3lux @F1.2
FPN	<0.03% Vp-p
Dark current	<0.2 nA/cm <sup>2</sup>
Dynamic Range	72dB
Operation Voltage	5 VDC
Operation Current	80mW Active 30 μW Standby
Lens (Optional)	f4.9mm, F2.8 FOV=34.4x20.7° f3.7mm, F2.0 FOV=43.7x25.8°



PCB Layout (Top side)

**Pin Description**

1~8	Y0~Y7	Digital output Y Bus.
9	PWDN	Power down mode
10	RST	Reset
11	SDA	I <sup>2</sup> C Serial data
12	FODD	Odd Field flag
13	SCL	I <sup>2</sup> C 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	External Clock input (remove crystal)
20	VCC	Power Supply 5VDC
21	AGND	Analog Ground
22	VCC	Power Supply 5VDC
23~30	UV0-UV7	Digital output UV bus.
31	GND	Common ground
32	VTO	Video Analog Output (75Ω monochrome)

**Application Example**

- Video Conferencing
- PC Multimedia
- Video Phone
- Video Mail
- Still Image
- Machine Vision
- Process control

Note: Evaluation Board is available for C3088