

1/3 " Color Camera Module with Digital Output

The CAM-C3188A is a 1/3" color camera module with digital output. It uses OmniVision's CMOS image sensor Ov7620. Combining CMOS technology together with an easy to use digital interface makes CAM-C3188A 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



Specification

Imager	OV7620, CMOS image sensor
Pixels	326688 pixels, VGA/CIF
Array Size	664 × 492 pixels
Pixel size	7.6 × 7.6 μm
Scanning	Progressive / interlace
8/16 bit video data	CCIR601, CCIR656, ZV port
Data format	-YCrCb 4:2:2, GRB 4:2:2, RGB
A/D converter	Built in 10bit 2 ch A/D converter
Synchronization	Internal / external
Effective image area	4.86mm × 3.64mm
Exposure	Frame exposure / line exposure option Electronic exposure / Gain / White balance control
Electronic Exposure	500:1
Gamma Correction	128 curve settings
S/N Ratio	>48dB
Min Illumination	2.5Lux, F1.4
Operation Voltage	5 VDC
Operation Current	120mW Active / 10μW Standby
Lens (Optional)	f6mm, F1.6
Size	40 mm x 28 mm
Interface	I2C interface
Image enhancement	brightness, contrast, gamma, saturation, sharpness, window, etc.

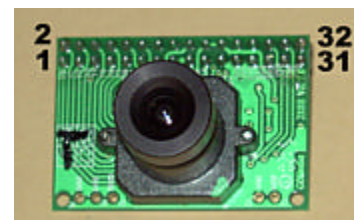
Monochrome composite video signal output 50Hz

Applications

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

Pin Description

1 – 8	Y0 – Y7	Digital output Y Bus
9	PWDN	Power down mode
10	RST	Reset
11	SDA	I2C Serial data
12	FODD	Odd Field flag
13	SCL	I2C 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 (75 Ohm monochrome)



PCB Layout (Top view)

For programming see OV7620 datasheet