**General Description**

The C3188 is a 1/3” color camera module with digital output. It uses OmniVision’s CMOS image sensor OV7610. Combining CMOS technology together with an easy to use digital interface makes C3188 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 I2C interface.

In combine with OV511, USB controller chip, it will be easily form a USB camera for PC application.

**Features:**

- 307,200 pixels, VGA / CIF format
- Small size : 40 x 28 mm
- Lens: f=6mm (Optional)
- 8/16 bit video data : CCIR601, CCIR656, ZV port
- Read out - progressive / interface
- Data format - YCrCb 4:2:2, GRB 4:2:2, RGB
- I2C interface
- 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 (<300mW)
- Monochrome composite video signal output

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**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 On chip video oscillator clock output
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 C3188