



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





# Weatherproof TTL Serial JPEG Camera with NTSC Video and IR LEDs

PRODUCT ID: 613



## Description

This weatherproof camera module is a classy upgrade to the basic camera module we already stock in the shop. The main differences is that this one comes in a nice metal case with a mounting hinge, a 1 meter long cable with the TTL & NTSC signals brought out, and it has an automatic IR LED system for night time photos. When the onboard photo-cell detects that it is too dark for the camera to take a photo, it turns on a ring of 12 IR LEDs that illuminate the nearby area for night-vision shots.

This camera was designed to be used in security systems and does two main things - it outputs NTSC video and can take snapshots of that video and transmit them over the TTL serial link. You can snap pictures at 640x480, 320x240 or 160x120 and they're pre-compressed JPEG images which makes them nice and small and easy to store on an SD card. Perfect for a data-logging, security, or photography project.

One nice thing about this particular camera is all the 'extras' that come with it. For example it has

**manually adjustable focus, auto-white-balance, auto-brightness** and **auto-contrast** taken care of for you as well as **motion detection** built in! That means you can have it alert your project when something moved in the frame.

Using the module is pretty easy and only requires two digital pins (or a TTL serial port) - by default it transmits at 38400 baud. Of course we wouldn't just leave you with a datasheet and a 'good luck', we even spent a lot of time researching the module and DSP to make a really nice Arduino library with example code that shows how to change the image size and compression quality, detect motion, control the video output stream, etc. We also have a very detailed tutorial that will help get the most use out of your camera.

Example photo 1 (outside street) & example photo 2 (inside person)

**Note: We have these working great with classic Arduino UNOs (and other Atmega328-based 'duinos) but they are not yet MEGA compatible.**

## Technical Details

- Metal Housing size: 2" x 2" x 2.5"
- Weight: 150 grams
- Image sensor: CMOS 1/4 inch
- CMOS Pixels: 30M
- Pixel size: 5.6um\*5.6um
- Output format: Standard JPEG/M-JPEG
- White balance: Automatic
- Exposure: Automatic
- Gain: Automatic
- Shutter: Electronic rolling shutter
- SNR: 45DB
- Dynamic Range: 60DB
- Max analog gain: 16DB
- Frame speed: 640\*480 30fps
- Scan mode: Progressive scan
- Viewing angle: 60 degrees
- Monitoring distance: 10 meters, maximum 15meters (adjustable)
- Image size: VGA (640\*480), QVGA (320\*240), QQVGA (160\*120)
- Baud rate: Default 38400, Maximum 115200
- Current draw: 75mA without IR LEDs on. 250mA extra for IR LEDs
- Operating voltage: DC +5V
- Communication: 3.3V TTL (Three wire TX, RX, GND)