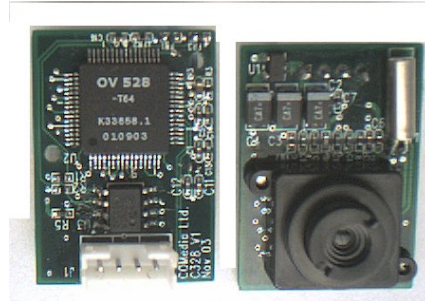
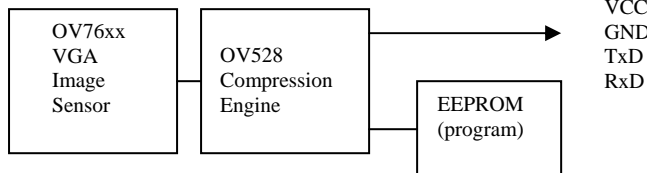


General Description

The C328 JPEG compression module performs as a video camera or a JPEG compressed still camera and can be attached to a wireless or PDA host. Users can send out a snapshot command from the host in order to capture a full resolution single-frame still picture. The picture is then compressed by the JPEG engine and transferred to the host.

Block Diagram



Features

- Low-cost, & low-powered solution for high resolution image capture
- Built-in down-sampling, clamping and windowing circuits for VGA/CIF/SIF/QCIF/160x128/80x64 image resolutions
- RS-232: 115.2K bps for transferring JPEG still pictures or 160x128 preview @8bpp with 0.75~6 fps
- JPEG CODEC for different resolutions
- Built-in color conversion circuits for 4 gray/16 gray/256 gray/12-bit RGB/16-bit RGB preview images
- Auto detect baud rate and make connection to the host

System Configuration

Camera Sensors

The C328 uses OmniVision OV76xx VGA CameraChips with an 8-bit YCbCr interface.

OV528 Serial Bridge

The OV528 Serial Bridge is a controller chip that can transfer image data from CameraChips to external device. The OV528 takes 8-bit YCbCr 422 progressive video data from an OV76xx CameraChip. The camera interface synchronizes with input video data and performs down-sampling, clamping and windowing functions with desired resolution, as well as color conversion that is requested by the user through serial bus host commands.

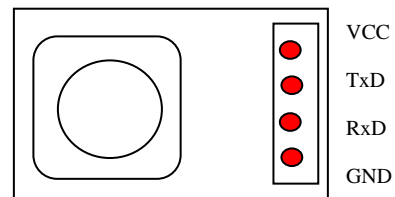
The JPEG CODEC with variable quality settings can achieve higher compression ratio & better image quality for various image resolutions.

Program Memory

A serial type program memory is built-in for C328, which provides user-friendly commands to interface external control units.

Pin Description

Pin	Description
VCC	Power 3.3VDC
TxD	Data Transmit (3.3V)
RxD	Data Receive (3.3V)
GND	Power Ground



Electrical Specification

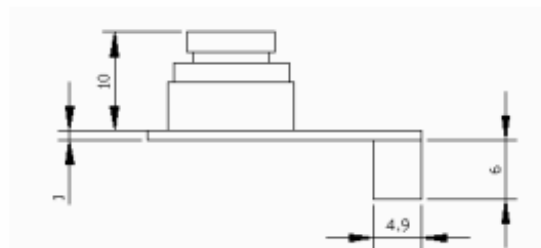
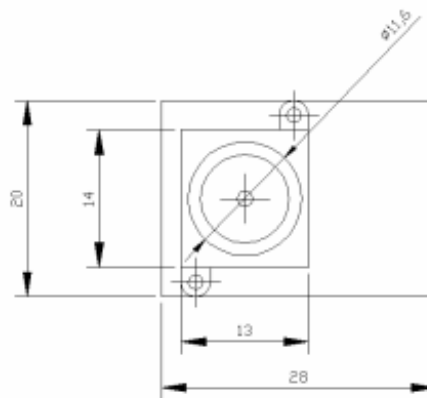
V_{DD} = 3.3V±10%, TA = 0 to 25°C

Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _{DD}	DC supply voltage		3.0	3.3	3.6	V
I _o	Normal Operation Current	Operating		60		mA
I _s	Suspend Current	Suspend		100		uA
V _{IH}	High level input voltage	TTL	2.0			V
V _{IL}	Low level input voltage	TTL			0.8	V

Lens Specification

Description	Parameter
Imager Format	1/4"
F/#	2.8
Focal length (mm)	4.63
Field of View Diagonal (deg)	57
Horizontal (deg)	42
Vertical (deg)	16.5
Distortion	-3.3%
Relative Illumination	67%
Filter Option IR-cut filter	included


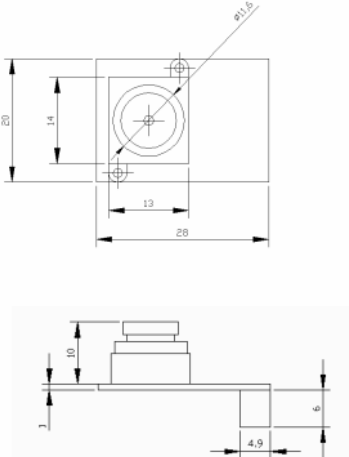

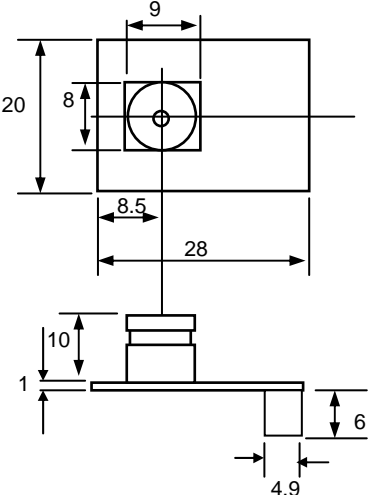

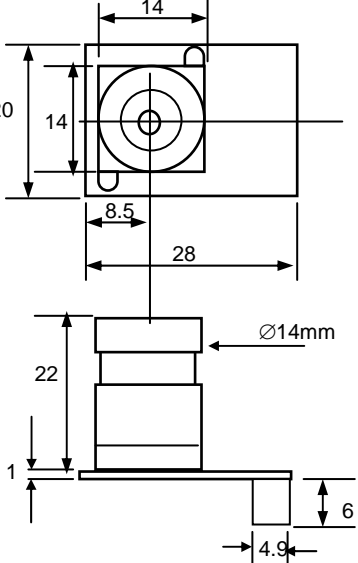
Board Measurement



Rev 3
Updated: Oct 10, 2006

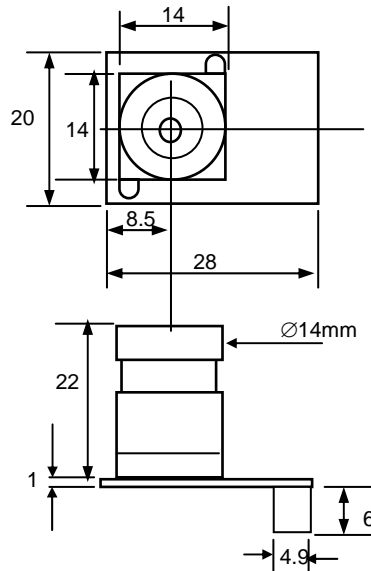
Information of Alternative Lens solution for C328

Updated: Nov 3rd, 2006

<p>C328 Standard configuration</p> 		<p>Detail spec and dimension, pls refer to the spec sheet of C328</p> <p>F/No 2.8 $f= 4.63\text{mm}$ FOV 57° diagonal IR cut filter built-in</p>
<p>C328S Small lens holder</p> 		<p>Optical spec is same as C328 standard, listed in spec sheet</p> <p>F/No 2.8 $f= 4.63\text{mm}$ FOV= 57° diagonal IR cut filter built-in</p>
<p>C328-3720BW No IR cut filter on the lens</p> 		<p>F/No 2.0 $f=3.7\text{mm}$ FOV=66° diagonal</p>

C328-2820BW

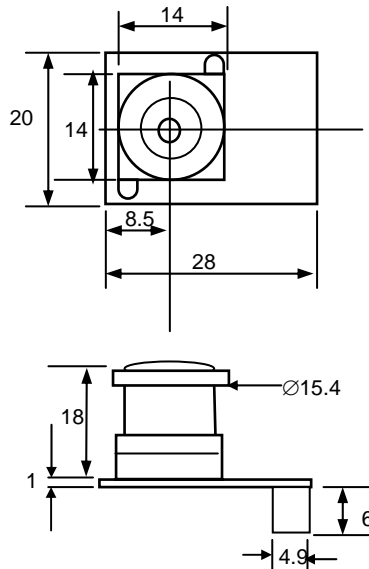
No IR cut filter on the lens



F/No 2.0
f=2.8mm
FOV=86° diagonal

C328-2225BW

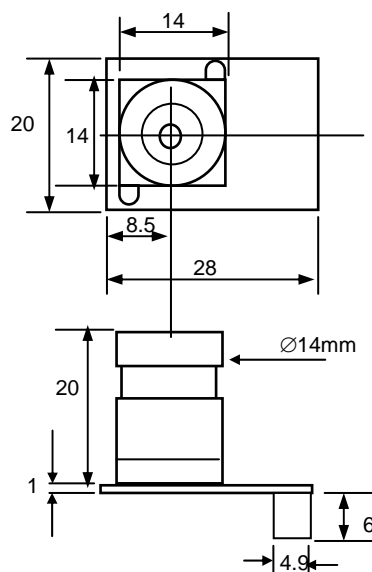
No IR cut filter on the lens



F/No 2.5
f=2.2mm
FOV=118° diagonal

C328-6016BW

No IR cut filter on the lens



F/No 1.6
f=6.0mm
FOV=36° diagonal