

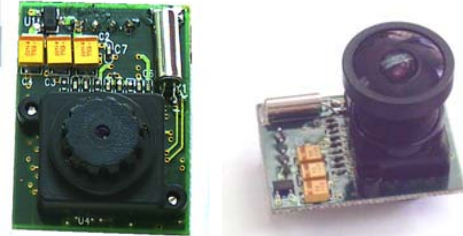
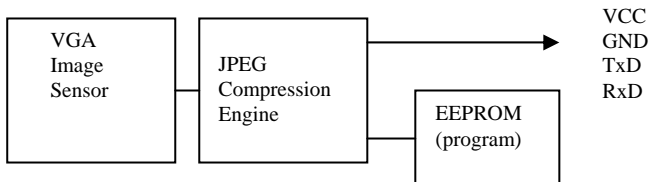
C328-7640

JPEG Camera Module W/ UART Interface

General Description

The C328-7640 is VGA camera module performs as 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 thru serial port.

Block Diagram



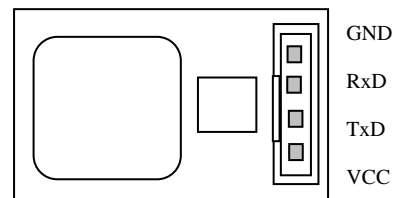
Features

- Small in size, 20x28mm
- VGA resolution, down sample to QVGA or CIF
- 3.3V operation
- Low power consumption 60mA
- User friendly commands to control the module
- UART interface of up to 115.2Kbps
- Auto detect baud rate and make connection to the host
- Power saving mode
- Various lens options

Pin Description

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

Connector specification: 2mm pitch, 4pin single row
 Reference part no: Suyin 190600
 Mating connector: Suyin 140600



Bottom View

Command Summary

Detail Command control, please refer to the user's manual

1.	Initial	To configure the image size, color type
2.	Get Picture	Get Picture type
3.	Snapshot	Set snap shot image type
4.	Set Package Size	Set the package size to transmit data from module to Host
5.	Set Baudrate	Change the baud rate
6.	Reset	Reset the whole system or reset the state machine
7.	Power Off	To enter sleep mode
8.	Data	Set the data type and length for transmitting data to host
9.	SYNC	Sync signal to connect between host and module
10.	ACK	Command to indicate the communication success
11.	NAK	Command to indicate the communication fail with error code

Electrical Specification

$V_{DD} = 3.3V \pm 10\%$, $T_A = 0$ to $25^\circ C$

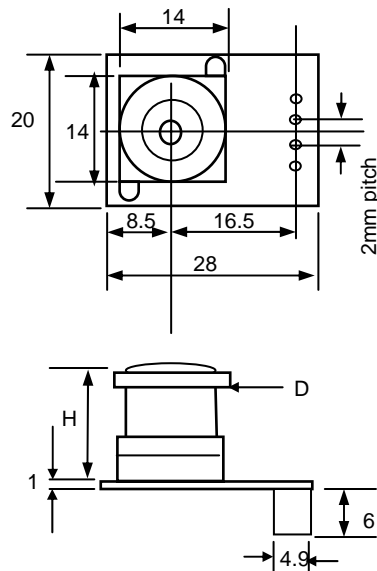
Symbol	Parameter	Condition	Min	Typ	Max	Unit
V_{DD}	DC supply voltage		3.0	3.3	3.6	V
I_o	Normal Operation Current	Operating		60		mA
I_s	Suspend Current	Suspend		100		uA
V_{IH}	High level input voltage	TTL	2.0			V
V_{IL}	Low level input voltage	TTL			0.8	V

Lens Specification

Description	C328-7640	C328-2225BW	C328-2520BW	C328-3620IR	C328-3620BW	C328-6016BW	C328-6016IR
F/#	2.8	2.5	2.0	2.0	2.0	1.6	1.6
Focal length (mm)	4.63	2.2	2.5	3.6	3.6	6.0	6.0
Field of View Diagonal (deg)	57	118	100	66	66	36	36
Filter Option IR-cut filter	Yes	NA	NA	Yes	NA	NA	Yes
Total height from PCB H (mm)	10	18	24	22	22	20	20
Diameter of lens cap D (mm)	9	18	15	14	14	14	14

Board Measurement


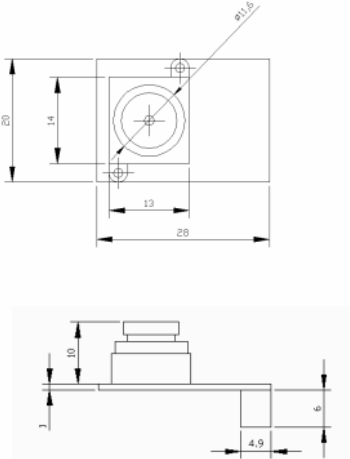

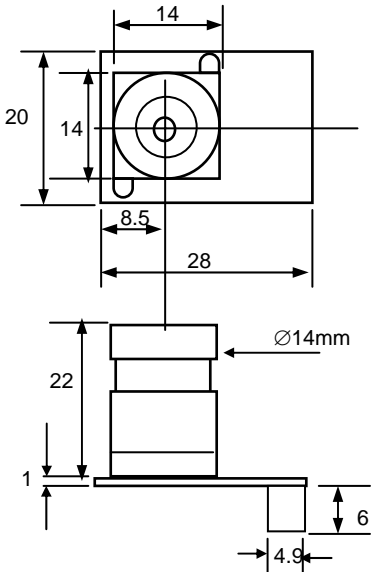
Note: All lens holder are with 14x14, thread of 12mmx0.5, height H will be varied from different lens spec.



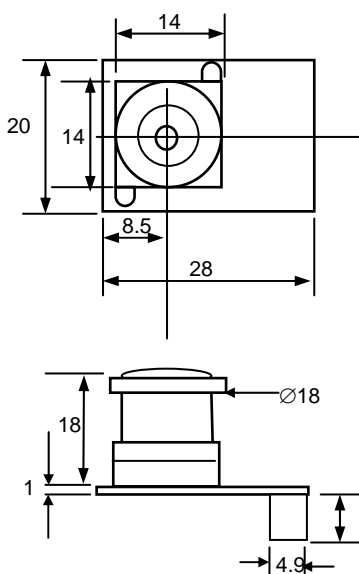
Note: In order to facilitate people for better understanding the communication with the module, we have developed an EV kit, C328-EV232, for user to run under PC Windows environment. However, this module is not designed for PC application. Such PC evaluation is only for better understanding of command control.

Information of Alternative Lens solution for C328

Note: we suggest to use lens of IR cut filter built-in for outdoor application.

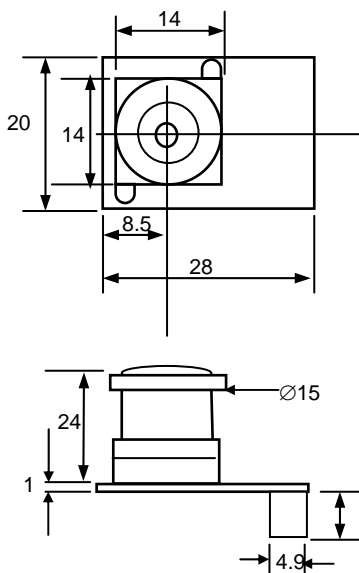
<p>C328-7640 Standard configuration</p> 		<p>Detail spec and dimension, pls refer to the spec sheet of C328</p> <p>F/No 2.8 $f= 4.63\text{mm}$ FOV 57° diagonal IR cut filter built-in</p>
<p>C328-3620BW/IR No IR cut filter on the lens</p> 		<p>F/No 2.0 $f=3.6\text{mm}$ FOV=66° diagonal</p>

C328-2225BW
No IR cut filter on the lens



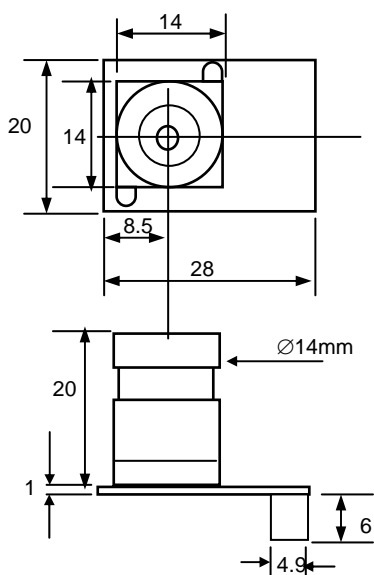
F/No 2.5
f=2.2mm
FOV=118° diagonal

C328-2520BW
No IR cut filter on the lens



F/No 2.0
f=2.5mm
FOV=100° diagonal

C328-6016BW/IR
No IR cut filter on the lens



F/No 1.6
f=6.0mm
FOV=36° diagonal