Specification

Product Model:JDEPC-OV05

Driver Board's Version: VER:1.00

Driver Board's Dimension:60*8*6.6(6.6/13.4 optional)

USER			MANUFACTURER		
QA	Project	Approved by	Prepared by	Checked by	Approved by

Add: 6/F Bldg B,No.11,Fuyong Rd,Shenjiuding Technology Park,Xiangzhou District,Zhuhai, Guangdong,China
TEL: 86-756.8995.398 FAX: 86-756.8995.396 P.C: 519000

Catalogue

Content 2

Version 3

1. Profile 4

2. Project 4

3. Capability Parameter 4

4. Optical Lens Specification 4-6

5. Structure drawing、Wiring diagram、Connector Definition 7

6. Structural Diagram 7-8

7. Function Test 8

8. Packing 9-10

9. Precautions 10

Version

Date	Version	Content
2014-08-26	VER:1.00	The First Version
2014-09-26	VER:1.01	Modification& Two more optional lens

Add: 6/F Bldg B,No.11,Fuyong Rd,Shenjiuding Technology Park,Xiangzhou District,Zhuhai, Guangdong,China
TEL: 86-756.8995.398 FAX: 86-756.8995.396 P.C: 519000

1. Profile:

JDEPC-OV05 VER: 1.00 camera module, adopt 1/4" CMOS Sensor with high quality image; supporting USB 1.1/2.0 interface, no need for driver, with night-vision fill-in function. This camera module has small volume, high accuracy for color revert, clear image, low consumption, high dependability, etc.

2. Project:

OV2643+AU3822U

3. Capability Parameter:

No	Item	Parameter	Note
1	Image sensor	1/4inch CMOS	
2	Effective pixel	3590um* 2710um	
3	synchronous mode	Internal synchronous	
4	pixel size	2.2um*2.2um	
5	S/N ratio	＞39dB	
6	Exposure	Intelligent exposure，intelligent B/C	
7	Electronic shutter	1/50(1/60)-1/10000S	
8	Gamma	Programmable	
9	Video output	YUV422/YCbCr422/GBR422/RGB565、555/8-bit、10-bit raw RGB	
10	Input Voltage	DC5V	
11	Working temp.	0℃～ 50℃	
12	Storage temp.	-40℃～ 80℃	
13	Size	60（L）×8（W）mm	

3.2、DSP Specification:

The AU3822U is a media product that is a single chip with cost-effective target for Stand-alone and build-in WEB camera solution. The AU3822U includes Image Signal Processing (ISP) engine, JPEG compression engine and USB 2.0 high-speed controller. The AU3822U is built-in the LDO for Sensor and internal and on-chip clock synthesizer.

The AU3822U is a UVC compliance chip with OS support UVC standard (XP SP2/SP3, VISTA SP3, Windows 7 and Windows 8). It can support VGA (300K 640x480) resolution up to 60 fps at JPEG mode or up to 30 fps at YUY2 mode, SXGA (1.3 M, 1280x1024) & Full-HD (2M, 1920x1080) up to 30 fps at JPEG mode.(Full-HD is for parallel I/F only)

The AU3822U Built-in 4 regulators for BOM cost and PCB area saving. One regulator is designed to convert 3.3V source-in to 1.1V-to-2.9V adjustable power out for sensor. And, the other one regulator is designed to convert 3.3V source-in to 1.1V-to-1.9V adjustable power out for sensor. Another one regulator is designed to convert 3.3V source-in to 1.2V and 1.8V for AU3822U core power and interface power.
With on-chip clock synthesizer, AU3822U is allowed to be programmed as various set of clock speed for performance and power saving. Additional clock output with various clock speed ranged up to 144MHz is provided for video capture module.

4、Optical Lens Specification

Lens type	focal distance	diagonal angle of view （800*600）	Horizontal angle of view （800*600）	TV aberration （opposite angle）	Working temp.	Lens's seat dimension& Total Height	spectral characteristic
HK-4003-A2	3.27mm	64°	48°	<1%	-20℃～70℃	8.0*8.0*6.6mm	Without optical filter
HK-4001A-A1-017	3.75mm	64°	50°	<1%	-20℃～70℃	8.0*8.0*6.6mm	650nm(insensitive to infrared)
HK-8082B-N1	2.00mm	114°	102°	<-88%	-20℃～70℃	8.0*8.0*13.4mm	650nm(insensitive to infrared)

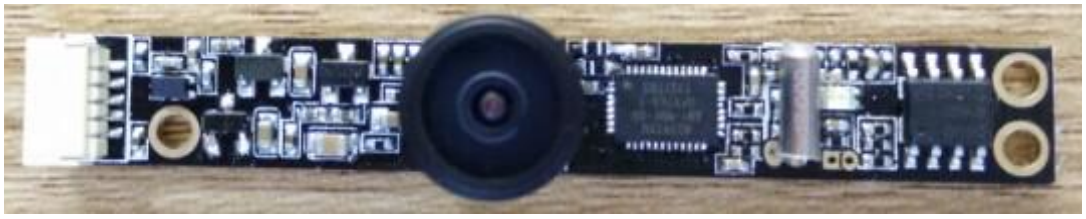
5. Wiring diagram:

5.1 product pictures:

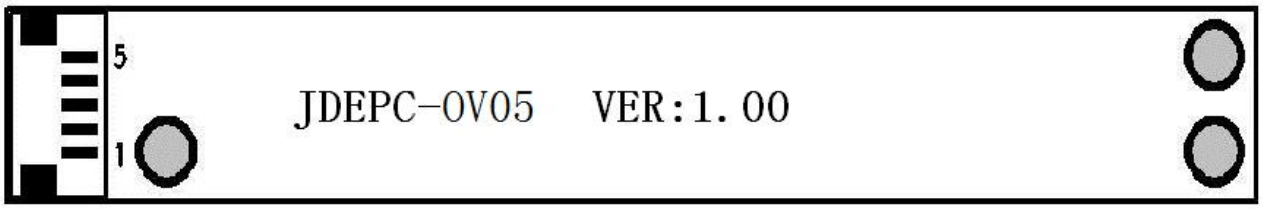
1、HK-4003-A2 Lens：

2、HK-4001A-A1-017 Lens：

3、HK-8082B-N1 Lens：



Wiring Diagram:

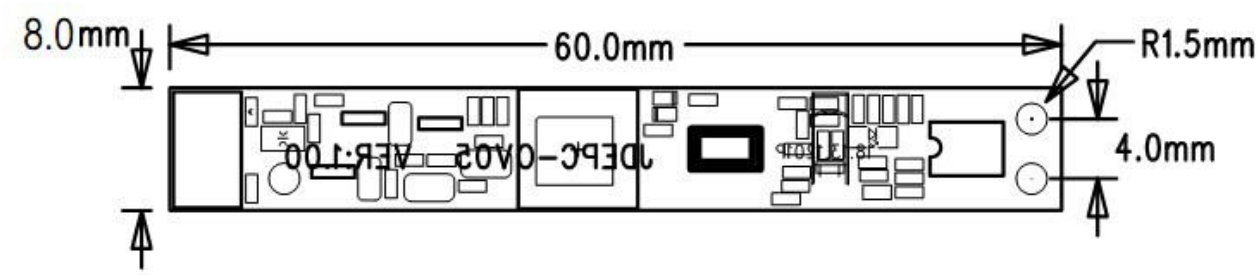


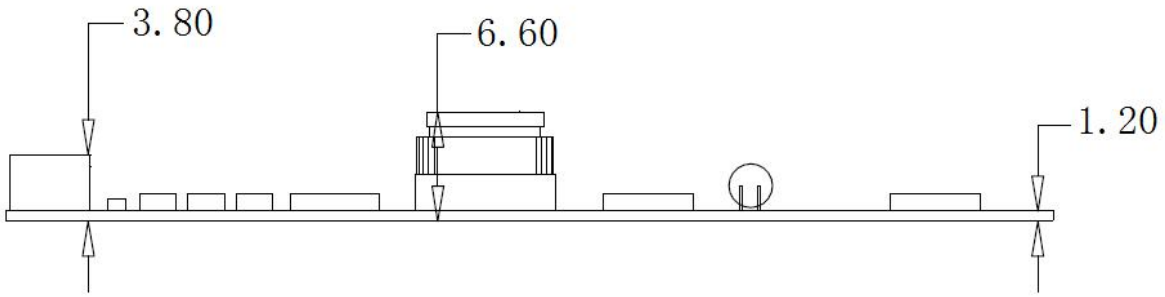
(5pin 1.0mm pitch) Connector Definition:

Pin No.	Symbol	Input/Output	Description	Not
1	USBGND	I	Ground	
2	USBGND	I	Ground	

3	USBD+	O	USB data cable+	
4	USBD-	O	USB data cable-	
5	USB+5V	I	+5V power supply	

6. Structural Diagram:





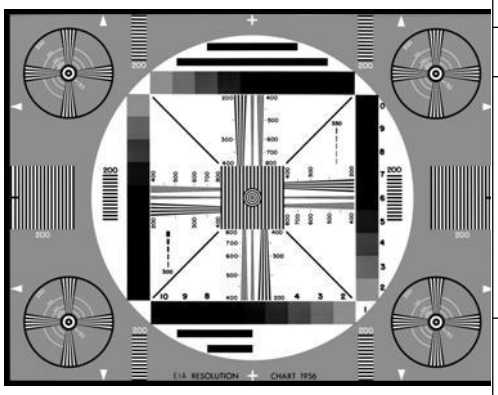
7.Function Test:

➢ MODULE Function Test.

✓ Optical Test Condition:

- ◆ All the tests are under 100K level dust-free environment.
- ◆ The brightness of Test Board: Brightness 400~500Lux, the brightness difference between center and four corners is no more than 15%.

✓ Resolution Test (Chart&Condition).



Items	Contents
Test Picture	MTF Test drawings
Condition(Effective distance：35cm~∞)	Lamp Source: Cold lamp-house Color Temperature：6500K Brightness: 450±50Lux, Test height:400mm
MTF Spec.	Center：300TV/LINES Four Corners：200TV/LINES

✓ Dark Corner Test:

Item	Contents
Test Drawings	Test Drawing(Right Drawings)
Condition	Lamp Source: Cold lamp-house Color Temperature：6500K Brightness: 450±50Lux, Test height:400mm
Standard	No obviously dark corner by eyes.

✓ Spot Test.

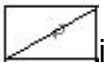
Condition	Specification
Make the camera facewhite light board and check if have	The difference of brightness between spot and nearby this spot will be no more than

spots	5%

✓ Wounded &Dead pixel Test

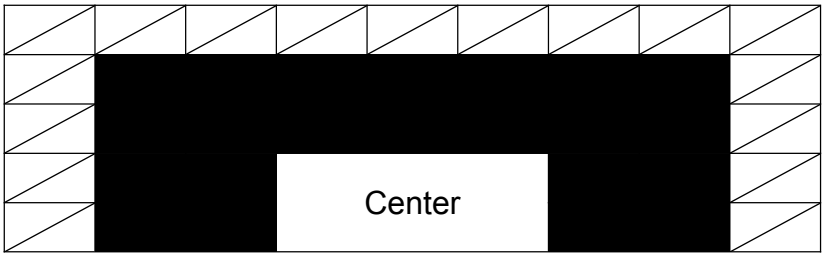
Model：all of CCM

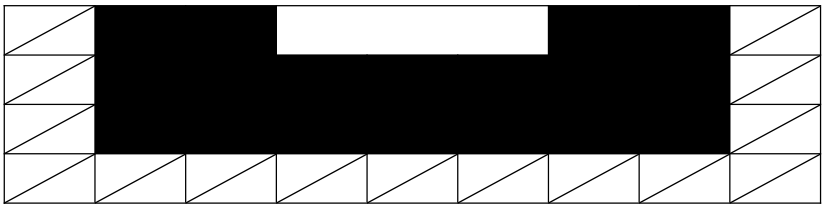
Product name：All of the Semi finished products and finished-products

Contents：Divide the picture to nine frames.（P1-1），not allowing any CSP spots at the center，The area of labeled as  in the picture，allowed 2 WOUNDED PIXEL or only 1 DEAD PIXEL. The area of labeled as  in the picture, allowed 1 WOUNDED PIXEL or 1DEAD pixel.

DEAD Pixel	No any reaction to light, it looks like either white pixel or black pixels. Nothing changed in the brightness of pixels.
WOUNDED Pixel	Will be appeared irregularly as the light ray becomes bright or dark, and pixels will have different brightness because of bright or dark light ray.

Pixel	All blocks	Total pixels	Pixels in each block
0.3	81	307200	3793
1.3	81	1336400	16499





Add: 6/F Bldg B,No.11,Fuyong Rd,Shenjiuding Technology Park,Xiangzhou District,Zhuhai, Guangdong,China
TEL: 86-756.8995.398 FAX: 86-756.8995.396 P.C: 519000

8. Packing:

TBD

9. Precautions:

1. Don´t input the voltage higher than prescriptive value.
2. Don´t make the connector in converse, if converted, the board will be broken very easy.
3. This product is electronic product, please protect from static.
4. Lens are glasswork, please take it carefully.
5. Lens are glasswork, please store it in dust-free and damage-free.

Add: 6/F Bldg B,No.11,Fuyong Rd,Shenjiuding Technology Park,Xiangzhou District,Zhuhai, Guangdong,China
TEL: 86-756.8995.398 FAX: 86-756.8995.396 P.C: 519000