

产品规格书

Specification

产品名称 (Product) USB 摄像头模组(USB Camera Module)

摄像头 (Camera Module): JDCU40AV50 R1.00

版本号 (Version): R1.00

镜头 (Lens): 2mm /3.84mm(650nm)

客户名称 (Cust): _____

客户型号 (Cust.P/N): _____

日期 (Date): _____

客户 CUSTOMER			承制方 MANUFACTURER		
品质 Quality	工程 Engineer	审批 Approved	审核 Checked	批准 Approved	销售 Sales

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版本更改 Version

日期/Date	版本/Ver.	修改版本/Modification
2021-09-09	R:1.00	第一版 (The First Version)

1. 概况 Profile:

JDCU40AV50 R1.00 摄像头模块，采用具有高画质的图像 1/4" CMOS 传感器；产品专用于笔记本电脑，支持 USB1.1/2.0 接口，免装驱动，模块具有体积小，色彩还原度准确、图像清晰、低耗电量、可靠性高之特点。

JDCU40AV50 R1.00 camera module, with high picture quality image 1/4 "CMOS sensor; The product is specially designed for notebook computer, supporting USB1.1/2.0 interface, no installation drive, the module has the characteristics of small size, accurate color restoration, clear image, low power consumption, high reliability.

2. 可选镜头 Lens

默认 2mm 镜头，可选 3.84mm 镜头和其他客户指定的镜头。

Default 2mm lens, optional 3.84mm lens and other custom-specified lens.

3. 产品特性 Features

1) 1/4inch CMOS 传感器

1/4" CMOS Sensor

2) 200 万像素/2MP

3) 支持 USB1.1/2.0 接口 2

Supporting USB 1.1/2.0 interface

4) MJPG/YUV 格式

MJPG/YUV format

4. 应用范围 Application

- 办公室电子设备 Office electronic device
- 仪器、仪表和测量用具 Equipment & Instrument and measuring tools
- 机器设备 Machine equipment
- 监视设备（车用监视器、便携视频采集、远程监视）Supervising equipment (Car Monitor & Portable video capture and remote monitoring)
- 家居用品（可视门铃、可视电话）Home supplies (Video door phone & video phone)


5. 电气规格 Specifications

NO	项目/Item	参数说明/Specification	备注/Note
1	图像传感器/ Image sensor	1/4inch CMOS	
2	有效像素/ Effective pixel	3888um* 2208um	
3	同步方式/ Synchronous mode	内置同步/ Internal synchronous	
4	像素大小/ pixel size	3um*3um	
5	信噪比/ S/N ratio	38dB	
6	曝光系统/ Exposure system	智能曝光, 智能背光补偿等 Intelligent exposure, intelligent backlight compensation, etc	
7	电子快门/ Electronic shutter	1/50(1/60)-1/10000S	
8	伽玛校正/ Gamma Correction	可编程设计/ Programmable	
9	视频输出/ Video output	MJPG(30FPS) / YUV2(5FPS)	
10	最大分辨率 Maximum Resolution	1280H×720V	
11	工作电压/ Working Voltage	VCC :+5V±0.5V	
12	工作电流/ Working current	70mA±10mA	
13	工作环境温度/ Working temp	-20℃ ~ 70℃	
14	储存环境温度/ Storage temp	-40℃ ~ 80℃	
15	产品尺寸/ Size	60 (L) × 8.2 (W) mm	
16	镜头参数 1 Lens Parameter 焦距 Focus: 2mm	焦距 Focus	2MM
		分辨率 Resolution	VGA 720P/1080P
		对角线视角 Diagonal view angle	105° 135°

	水平视角 Horizontalview angle	82°	112°		
	垂直视角 Vertical view angle	58°	58°		
	对焦距离 Focus Distance	40CM(近焦 Near) 1.5M (远焦 Far)			
	相对畸变 Distortion	<30%			
	光谱特性 Spectrum	650nm 不感红外型 650nm Non-inductive infrared type			
17	镜头参数 2 Lens Parameter 焦距 Focus: 3.84mm	焦距 Focus	3.84MM		
		分辨率 Resolution	VGA	720P/1080P	
		对角线视角 Diagonal view angle	45°	53°	
		水平视角 Horizontalview angle	36°	47°	
		垂直视角 Vertical view angle	28°	28°	
		对焦距离 Focus Distance	40CM(近焦 Near) 1.5M (远焦 Far)		
		相对畸变 Distortion	<1%		
		光谱特性 Spectrum	650nm 不感红外型 650nm Non-inductive infrared type		

6. 可靠性测试 Reliability Testing

NO	试验项目 Testing Item	试验条件 Testing Conditions	判定标准 Judgment Standard
1	高温功能试验 High Temp. Test	+5V 通电, 高温 70°C; 8H 通电 +5V, high temp.70°C; 8H aging test	在 8H 测试中工作正常 Proper Functioning in 8H
2	低温功能试验 Low Temp. Test	+5V 通电, 低温-20°C; 8H 通电 +5V, low temp. -20°C; 8H aging test	在 8H 测试中工作正常 Proper Functioning in 8H
3	温湿度测试 Temp.& Humidity test	温度 70°C; 湿度 93%; 32H 通电 Temp.:70°C; Humidity 93%;32H aging	在 32H 测试中工作正常 Proper Functioning in 32H
4	高温贮存试验 High Temp. storage test	温度 80°C; 8H Temp.:80°C;8H	恢复常温后产品正常 Proper Functioning after test
5	低温贮存试验 Low Temp. storage test	温度-40°C; 8H Temp.: -40°C;8H	恢复常温后产品正常 Proper Functioning after test
6	寿命试验 Aging Test	5V 通电; 连续开关机; 48H 5V DC; Continuous on/off; 48H	在 48H 测试冲击中工作正常 Proper Functioning after 48H
7	间断电源试验 Discontinuous power supply test	常温下各输入 5V, 5 秒循环开关机。 每个电压通电 4H Input 5V,turn on/off in every 5s,test 4H for each voltage	每个电压冲击工作正常 Every Voltage works good after shock
8	静电放电试验 ESD test	接触放电 Contact discharge: 6.0KV 空气放电 Air discharge: 8.0KV 水平/垂直接触放电: 8.0KV Horizontal/Vertical discharge: 8.0KV	产品功能和外观无问题 Function and appearance are all ok
9	振动试验 Vibration test	1.振动标准: (1).振动方向: Y 方向 (2).振动幅度: 2mm (3).振动频率: 10HZ to 50HZ (4).振动表面: 紧靠一角的三个面 (5).振动时间: 30 分钟/每个面 1. Vibration standard: (1).Direction: Y direction (2).Range:2mm (3).Frequency:10HZ to 50HZ (4).Surface: 1 surface fixed when testing another 3 surface (5). Time: 30mins./every surface	振动后,摄像机结构及功能应正常,所有配套附件及吸塑不出现异常现象 The camera structure &function working good after vibration, all accessories& blister have no change.

NO	试验项目 Testing Item	试验条件 Testing Conditions	判定标准 Judgment Standard										
10	跌落试验 Drop test	1. 跌落标准: (1). 跌落地面: 水泥地板或钢板 (2). 跌落方位: 一角、三边、六面 (3). 跌落方式: 自由下落 (4). 跌落高度: 根据产品的重量依照下表而定 1. Drop standard: (1). Floor: concrete floor steel plate (2). Direction: corner, three sides, six surface (3). Drop way: free falling (4). Height: according to the product's weight as follows: <table border="1" data-bbox="528 943 987 1167"> <thead> <tr> <th>重量 Weight</th> <th>高度 Height</th> </tr> </thead> <tbody> <tr> <td>0kg < W ≤ 4.5kg</td> <td>91cm</td> </tr> <tr> <td>4.5kg < W ≤ 11.8kg</td> <td>76cm</td> </tr> <tr> <td>11.8kg < W ≤ 23.1kg</td> <td>61cm</td> </tr> <tr> <td>23.1kg < W ≤ 45.4kg</td> <td>46cm</td> </tr> </tbody> </table>	重量 Weight	高度 Height	0kg < W ≤ 4.5kg	91cm	4.5kg < W ≤ 11.8kg	76cm	11.8kg < W ≤ 23.1kg	61cm	23.1kg < W ≤ 45.4kg	46cm	 <p> 跌落后, 摄像机结构及功能应正常, 所有配套附件及吸塑不出现异常现象 The camera structure and function is normal after dropped, all of accessories & blister are well. </p>
重量 Weight	高度 Height												
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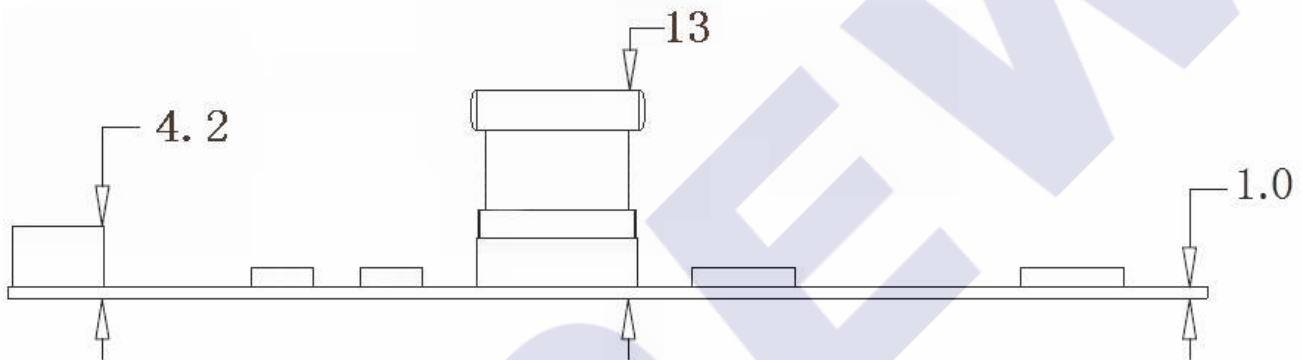
7. 结构图及接口定义 Structure drawing and interface definition

以下标注尺寸单位为: mm, 公差为±0.2mm(已标注公差除外)

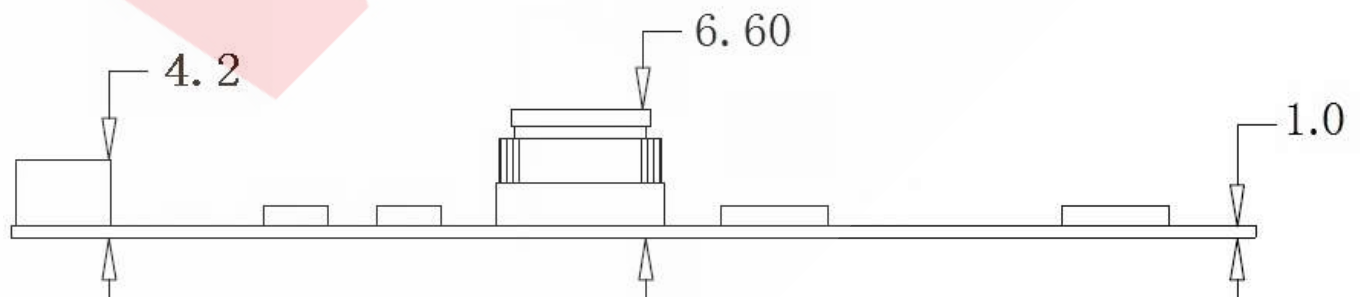
Following size units are: mm, tolerance±0.2mm(exclude marked)

正面实物图与侧视图(Front view and side view):

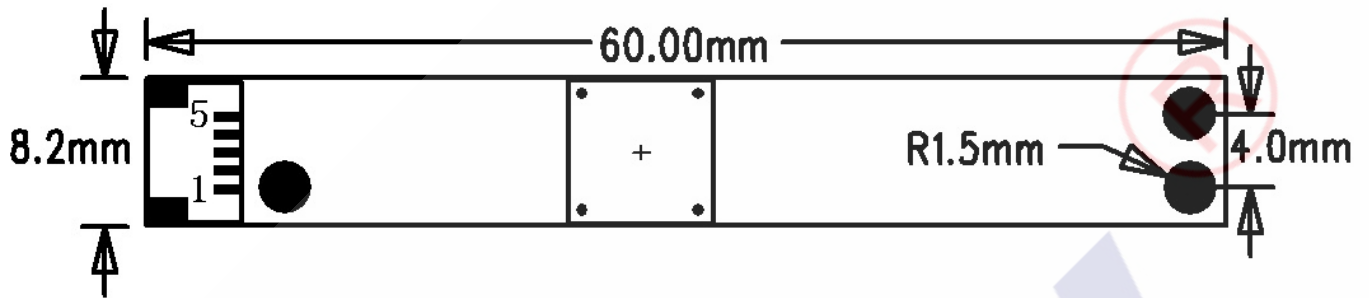
①JDCU40AV50 —2MM Lens:



②JDCU40AV50 —3.84MM Lens:



正面结构图(Front structure drawing):



接口定义 Connector Definition:

序号	接口定义	I/O/P	定义说明	备注
1	USBGND	I	地/Ground	
2	USBGND	I	地/Ground	
3	USBD+	O	USB 数据线+/USB data cable+	
4	USBD-	O	USB 数据线-/USB data cable-	
5	USB+5V	I	+5V 电源/+5V power supply	

8. 包装 Packing



步骤 1：用防静电袋包装。

Step1: put the camera into antistatic bag box



步骤 2：用 19.5CM(长)*12CM(宽)*3.3CM(高)包装盒。

Step 2: Use 19.5CM(L)*12CM(W)*3.3CM(H)Packing



步骤 3：把装有板的防静电袋装入包装盒。

Step 3: Put the antistatic bag with board into the box



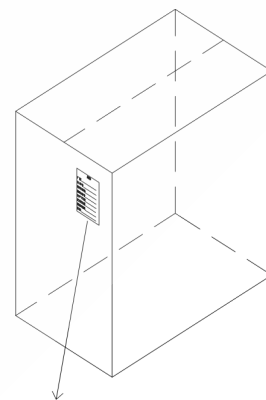
步骤 4：然后盖上包装盒贴上型号。

Step 4: then packed and stick P/N No.



步骤 5:把已检验合格品放入包装箱

Step 5:put all the boxes to carton



步骤 6:贴好物品标签并用胶纸包好纸箱

Step 6: Stick label and packed the carton

9. 外箱标签 Carton Mark

外箱标签的内容如下 The carton box mark include below information:

厂家码 Vendor Number :

订单号 Order Number :

物料规格 Part Specifications :

原料编号 Part Number :

生产日期 Production Date :

交货数量 Delivery Qty :

保障期限 Delivery Date :

备注 Remark :

10. 注意事项 Notes

- 1、输入电压请勿超过规格书上规定值以免损坏模组。

The input voltage don't exceed the value stated on the specification , in order to avoid damage to the module.

- 2、接口连接线不能接反，接反容易烧坏板子，对产品的使用造成影响。

The connector can't be reversed , reverse burn the board and affect the use of the product.

- 3、此驱动板为电子产品,所以加工、组装、操作时需注意防静电措施，以免影响产品性能。

This is a electronic product, so processing, assembly , operation need to take anti -static measures to avoid affecting product performance.

- 4、镜头是玻璃制品小心拿放，以免破裂。

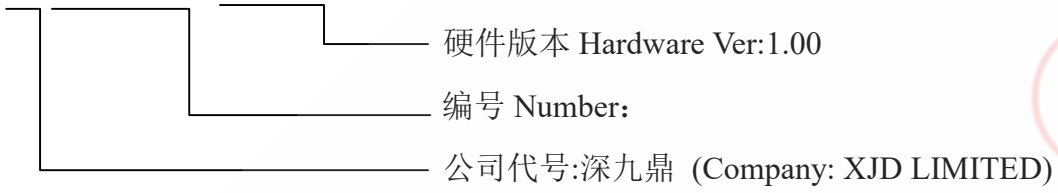
Lens is glass product, place carefully to avoid breakage.

- 5、镜头是玻璃制品注意防尘、防损，以免影响图像较果。

Lens is glass-made product, please take anti-dust, loss prevention measures to prevent the image quality.

11. 命名规则 Naming Rule

JDCU40AV50 R1.00



12. 配线 Accessory Cable

无配线

No Accessory