

## 产品规格书

## Specification

产品名称 (Product) 1/2.7" CMOS 彩色摄像模组 (1/2.7" CMOS Color camera module)摄像头 (Camera Module): JD3AH20JF-A版本号 (Version): 1.00

镜头 (Lens): \_\_\_\_\_

客户名称 (Customer): \_\_\_\_\_

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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## 1. 概况 Profile:

JD3AH20JF-A R1.00 是 200 万模拟高清的 CMOS 彩色摄像模组，采用 1/2.7inch CMOS 影像传感器。适用于需要摄取视频信号的各种电子设备中，有 PAL 制式、NTSC 制式，具有自动白平衡，暗角补偿，坏点自动检测和消除，自适应 2D 降噪；支持 IR-CUT 功能，可实现日夜切换；客户自定义 OSD，数字宽动态，智能曝光（前光补偿、背光补偿、全局曝光、中心权重可调）；CVBS/AHD/TVI/CVI 四合一混合同轴高清输出。

JD3AH20JF-A R1.00 is A CMOS color video camera module with 2 million analog high definition, Using 1/2.7" CMOS Image sensor. It applies to difference electric equipment that need capture video signal. such as PAL system, NTSC system, It has automatic white balance, dark Angle compensation, automatic detection and elimination of bad points, adaptive 2D noise reduction.Support ir-cut function, which can realize day and night switch;Customer customized OSD, digital wide dynamic, intelligent exposure (front compensation, backlight compensation, global detonation, center weight adjustable); **CVBS/AHD/TVI/CVI/CVI in combination with high definition output.**

## 2. 产品特性 Features

1. CVBS+AHD+TVI+CVI 视频输出 (CVBS:  $1.0\pm 0.2V_{p-p}/75$  欧姆)  
CVBS+AHD+TVI+CVI Video output ( $1.00 +0.2 V_{p-p}/75$  ohms)
2. PAL 制式、NTSC 制式  
PAL system, NTSC system
3. 智能曝光、自动白平衡  
Intelligent exposure, automatic white balance
4. 客户自定义 OSD  
Customer Customization OSD

## 3. 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)

## 4.电气规格 Specifications

NO	项目/Item	参数说明/Specification	备注/Remark
1	图像传感器/Image sensor	1/2.7inch CMOS	
2	图像制式/Video Format	PAL, NTSC	默认 PAL/Default PAL
3	有效像素/ Effective pixel	1932H×1088V	
4	同步方式/ Synchronously	内置同步/ Built-in Synchronization	
5	水平解析度/ Resolution	CVBS: 600TVL; AHD: 1000TVL	
6	信噪比/ S/N ratio	38dB	
7	灵敏度/Sensitivity	3900 mV/lux-sec	
8	曝光系统/ Exposure system	前光补偿、背光补偿、全局曝光、中心权重可调 Front compensation, backlight compensation, global detonation, center weight adjustable	
9	电子快门/ Electronic shutter	自动电子快门/Automatic Electronic Shutter	
10	动态范围/Dynamic Range	73dB	
11	视频输出/ Video output	CVBS+AHD+TVI+CVI (四合一 Four in one) CVBS: 1Vp-p/ 75 ohm	
12	白平衡/White Balance	自动跟踪白平衡、手动白平衡可调 Automatic tracking white balance, manual white balance adjustable	
13	增益控制 AGC	自动 /Auto	
14	帧率/Frame	CVBS:25FPS (PAL) /30FPS (NTSC) AHD:30FPS	
15	启动时间/Starting Time	<500ms	
16	输入电压/ Input voltage	DC12V ±25%	
17	功耗/ Power Consumption	DC+12V 电压时: 电流为 60mA±10mA DC+12V Voltage: current:60mA±10mA	
18	工作环境温度/ Working Temp.	-40℃ ~ 70℃	
19	储存环境温度/ Storage Temp.	-40℃ ~125℃	
20	湿度/ Humidity	5~95% RH	
21	图像显示方向/ Direction	拍摄正立图像时基板放置方位 Front Stand	
22	产品尺寸/Dimension	32mm (L) ×32 (W)	
23	镜头参数/Lens Parameter	焦距 Focus	2.96mm
		对角线视角 Diagonal view angle	160° ±3°
		水平视角 Horizontal view angle	127° ±3°
		垂直视角 Vertical view angle	68° ±3°
		对焦距离 Focus Distance	40cm (近焦 Near) 1.5M (远焦 Far)
		相对畸变 Distortion	<-6%
		光谱特性 Spectrum	650nm 不感红外型 650nm without IR

## 5. 可靠性测试 Reliability Testing

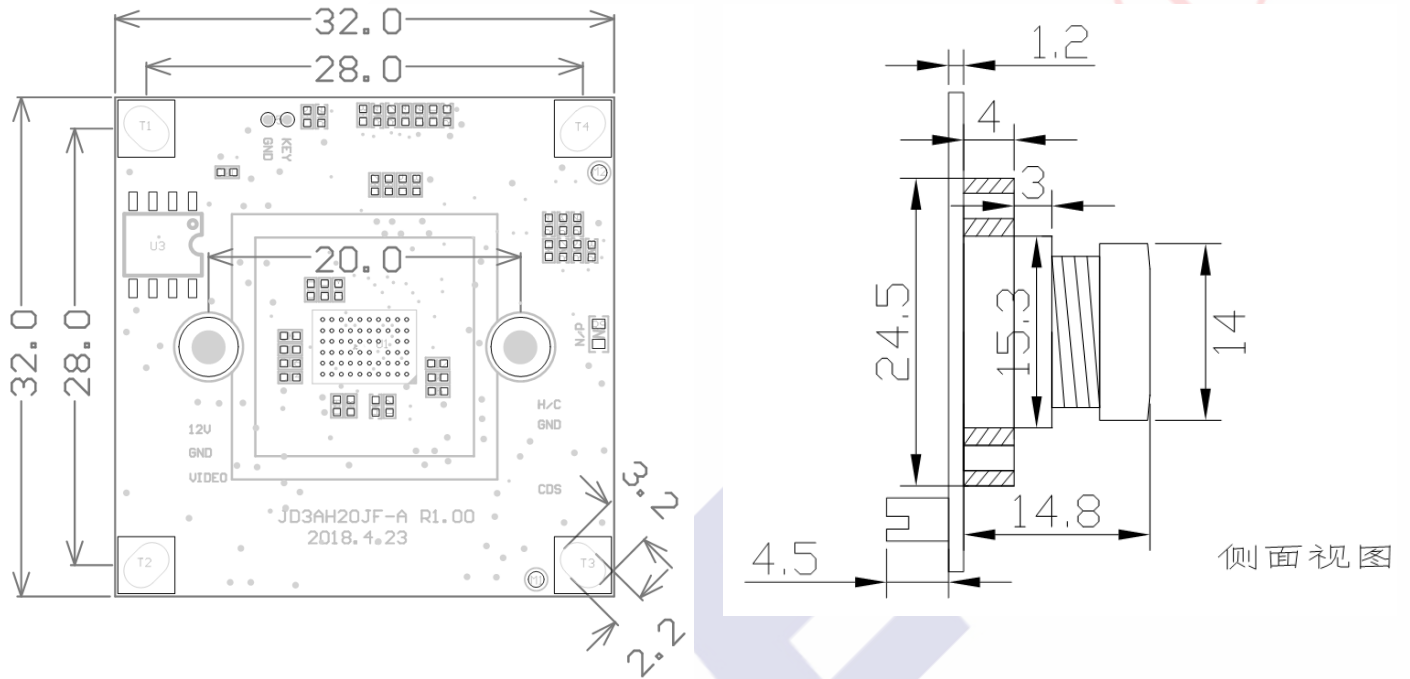
NO	试验项目 Testing Item	试验条件 Testing Conditions	判定标准 Judgment Standard
1	高温功能试验 High Temp. Test	+12V 通电, 高温 70°C; 8H 通电 +12V, high temp.70°C; 8H aging test	在 8H 测试中工作正常 Proper Functioning in 8H
2	低温功能试验 Low Temp. Test	+12V 通电, 低温-40°C; 8H 通电 +12V, low temp.-40°C; 8H aging test	在 8H 测试中工作正常 Proper Functioning 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 105°C; 8H Temp.:105°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	12V 通电; 连续开关机; 48H 12V 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 9V\12V\15V,5 秒循环开 关机。每个电压通电 4H Input 9V\12V\15V,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:1surface 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="518 943 979 1167"> <thead> <tr> <th>重量 Weight</th> <th>高度 Height</th> </tr> </thead> <tbody> <tr> <td>0kg&lt;W≤4.5kg</td> <td>91cm</td> </tr> <tr> <td>4.5kg&lt;W≤11.8kg</td> <td>76cm</td> </tr> <tr> <td>11.8kg&lt;W≤23.1kg</td> <td>61cm</td> </tr> <tr> <td>23.1kg&lt;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	  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.
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												

## 6. 结构图 Structure Diagram

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)

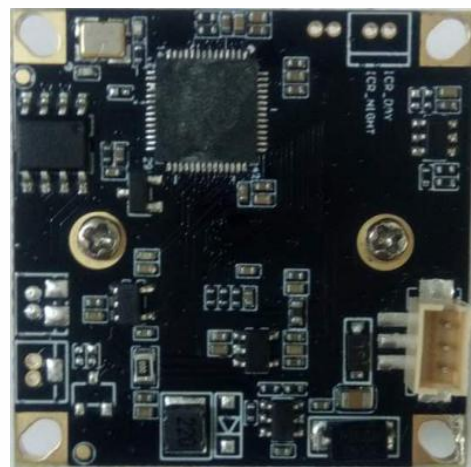


## 实物图/Picture of real products

正面 (Front):

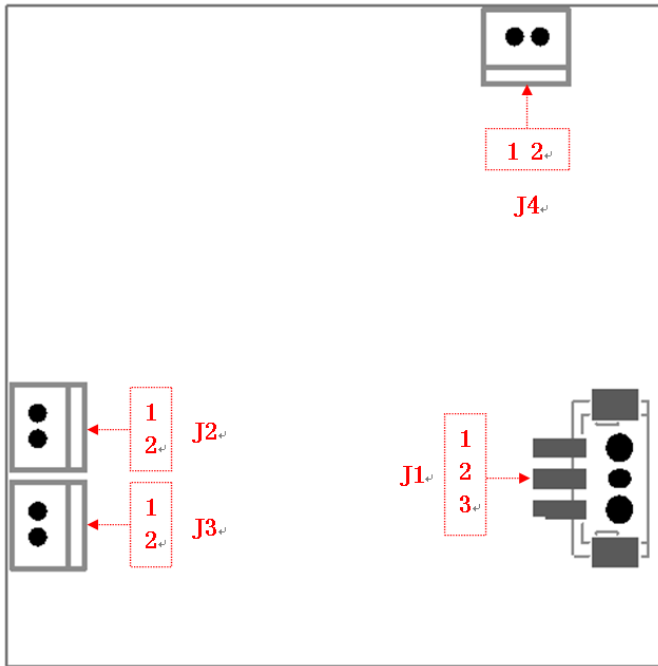


背面 (Back):





## 接口说明（背面视图） / Interface Description (back view)

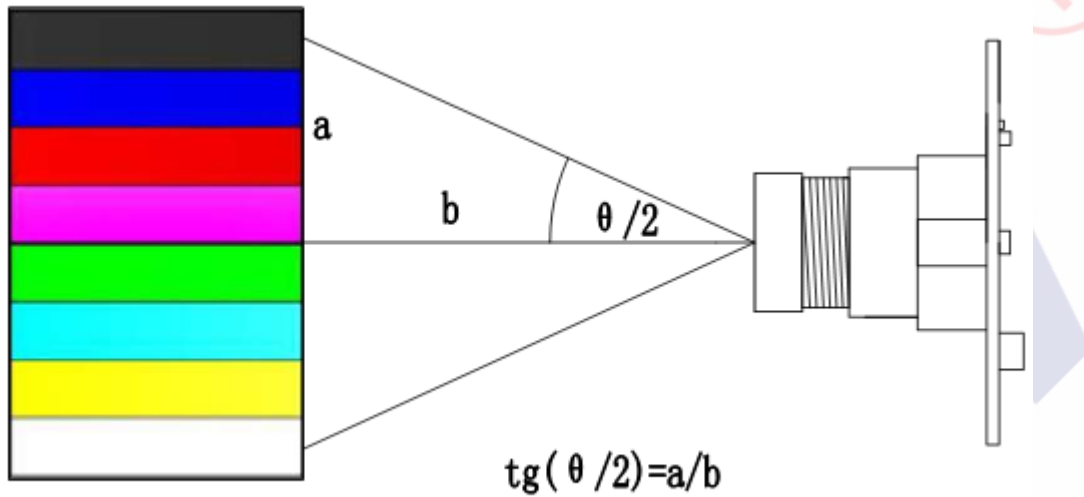


位号 Bit Number	接口/Port	引脚编号 NO.	引脚定义 Definition	功能说明 Function Declaration
J1	电源接口 Power Interface	1	12V	+12V 电源输入/Mains Input
		2	GND	接地/GND
		3	VIDEO	视频信号输出/ Video signal output
J2	视频输出快捷切换接口 Video output quick switch interface	1	H/C	此脚对地短路可以使 AHD 与 CVBS 信号循环切换（5S 左右） The short circuit of this foot to the ground can make the loop switch between AHD and CVBS signal (about 5S)
		2	GND	接地/GND
J3	红外灯控制信号输入接口 Infrared lamp control signal input interface	1	CDS	红外灯控制 IR-CUT 信号输入 Infrared light controls the IR-CUT signal input
		2	CDS	
J4	IR-CUT 控制接口 IR-CUT Control Interface	1	ICR_NIGHT	控制 IR-CUT 切换（负）
		2	ICR_DAY	控制 IR-CUT 切换（正）

## 7. 视场角 View Angle

标注尺寸单位为：mm，公差为±0.2mm

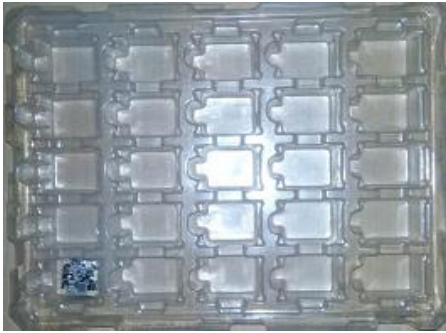
Size units are: mm, tolerance ±0.2mm



注：测量满景时镜头到彩条板距离 b，可以约算出视角

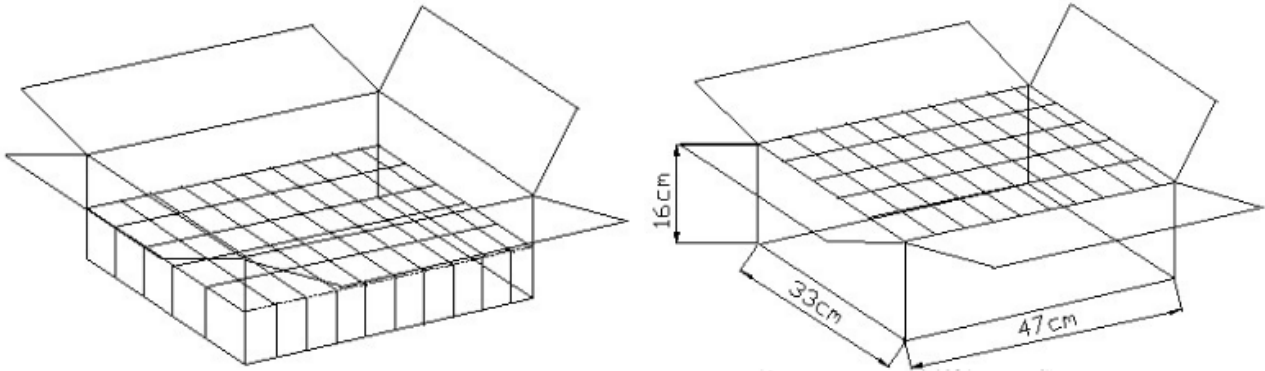
Note: The view angle could be calculated though measure b distance between lens to testing board.

## 8. 包装 Packing



**步骤 1 :** 将摄像模块放入吸塑盒中，放满为止；

Step1: Put the camera module into the blister box until it is full.

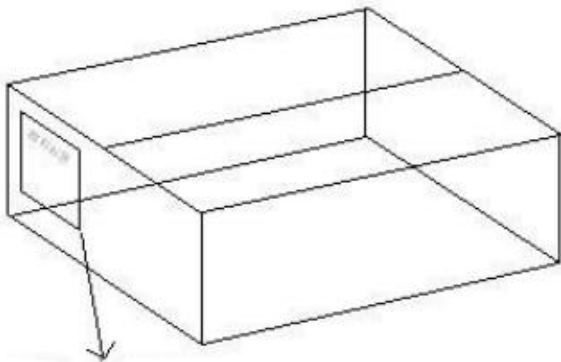


**步骤 2 :** 将吸塑盒放入纸箱；

Step2: Put the blister box into the carton.

**步骤 3 :** 逐层放入装有摄像模块的吸塑盒，直到放满为止；

Step3: Place the blister box with the camera module layer by layer until it is full.



**步骤 4 :** 检验员检验合格后放入合格证，贴好物品标签并用胶纸封好纸箱。

Step4: After inspection, the inspector puts in the certificate of qualification, affixed the label of the goods and sealed the cartons with adhesive paper.

## 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.

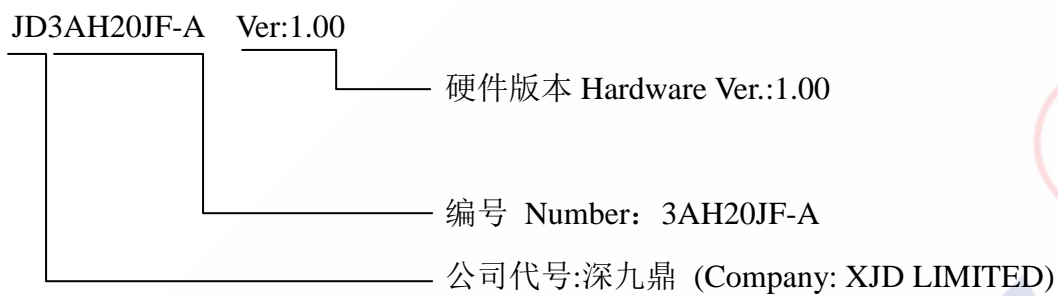
- 4、镜头是玻璃制品小心拿放，以免破裂。

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



## 12. 配线 Accessory Cable

无配线

No Accessory