

SINOTECHNICS INC.

QD-AC40 Audio and video module specifications

Title:

QD-AC40Audio and video module specifications-V0.1

Revision History:

Version	Date	Author	Details of Changes
V1.0	2024.02.27		First Edition



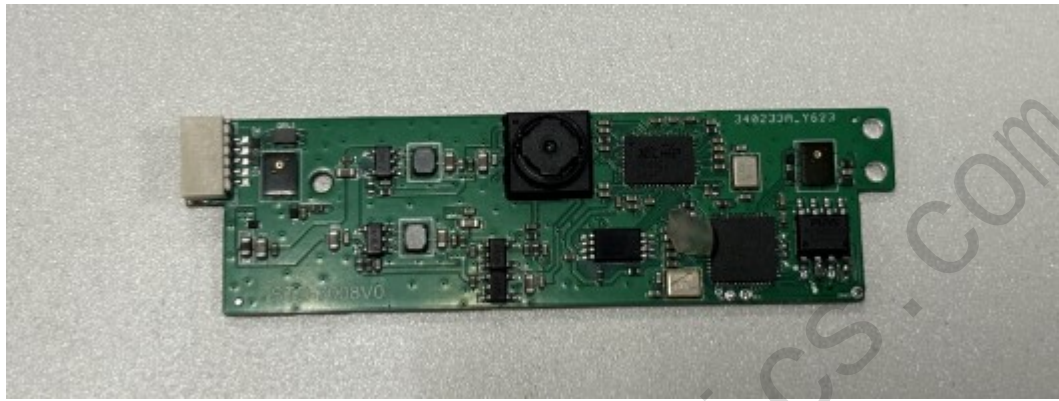
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一、产品图 Product Figure

1.1 实物图（参考） Physical Drawing (Reference)



图示仅为示意，具体以实际为准

The diagram is only schematic, the specific is subject to the actual

模组由主板、摄像头、麦克风三部分组成：摄像头主控采用 XC8022 芯片,语音采用 XR872 芯片；麦克风阵列则由 2 颗麦克风组成，视频和音频输出分别采用 UVC、UAC 协议。

The module consists of three parts: motherboard, camera and microphone: the camera controls XC8022 chip, the voice uses XR 872 chip; the microphone array is composed of two microphones, and the video and audio output adopts UVC and UAC protocol respectively.

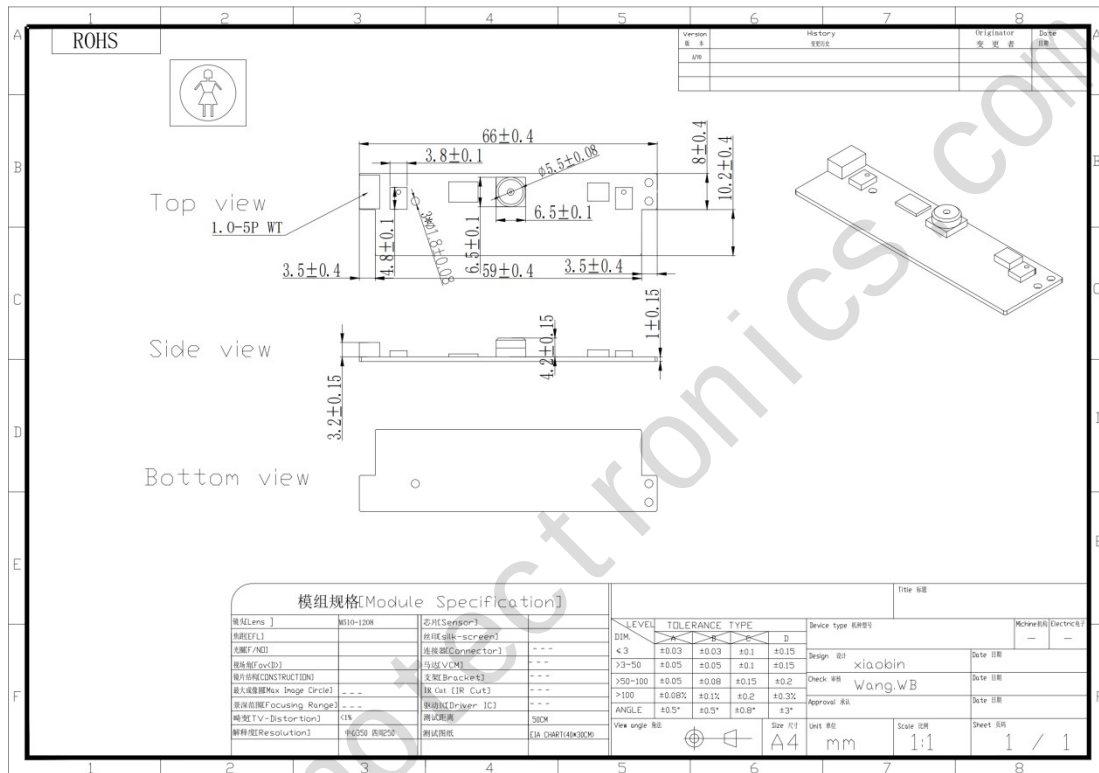
二、技术规格 technical specifications

2.1 电子规格 Electronic specifications

硬件平台 hardware platform	摄像头芯片 Camera chip	XC8022
	语音芯片 Voice chip	XR872
	系统 system	Rtos
电源 power	电源电压，电流 Power supply voltage, and current	5v±5%;200ma~500ma
	接口类型 interface type	4PIN/1.0mm connector 5v, D-,D+,GND
系统 System	系统兼容 System compatible	Windows7/10; Andirod7.0 And

		above、linux
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2.2 摄像头模组尺寸及参数 Camera module size and parameters



三、图像&语音指标 Image & Speech Indicators

3.1 图像性能指标 Image Performance Indicators

最高有效像素 Most effective pixels	3840 (H) *2160 (V)
视频格式 Video format	MJPEG/YUY2
MJPEG 格式分辨率和帧频 MJPEG format maximum resolution and frame rates	3840x2160@25fps、2592x1944@30fps 2560x1440@30fps、1920x1080@30fps 1600x1200@30fps、1280x720@30fps 1024x768@30fps、640x480@30fps
YUY2 格式分辨率和帧频 YUY2 format maximum resolution and frame	1920x1080@5fps、1600x1200@5ps 1280x720 @10fps、1024x768/10fps

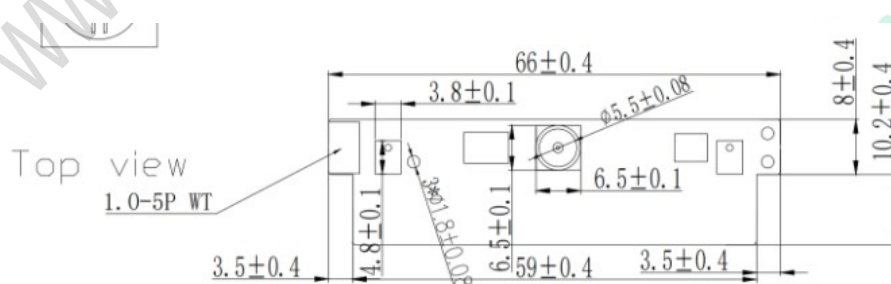
rates	800×600/10fps 、640×480/30fps
最低照度 Minimum illumination	<10LUX
对焦 focusing	Auto Focus
可调参数 Adjustable parameter	亮度，对比度，色饱和度，伽马，增益，白平衡 Brightness, contrast, color saturation, gamma, gain, white balance
镜头规格 Lens specifications	感光片尺寸 sensor: 1/5 Inch CMOS Sensor
	光学总长 Optical length : 4.18MM
	结构 lens construction: 4P+IR
	可视角度 Viewing Angle : D=56°/H=46°/V=35°±3°
	畸变 TV distortion: <1.5%
储存温度 Storage temperature	-20°C to 70°C
工作温度 working temperature	-20°C to 60°C
环境湿度 ambient humidity	0-95%RH

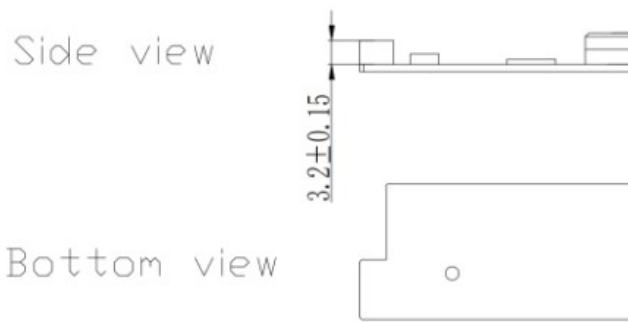
四、 产品 **2D** 尺寸图 the product 2D size drawing

4.1 尺寸 Size

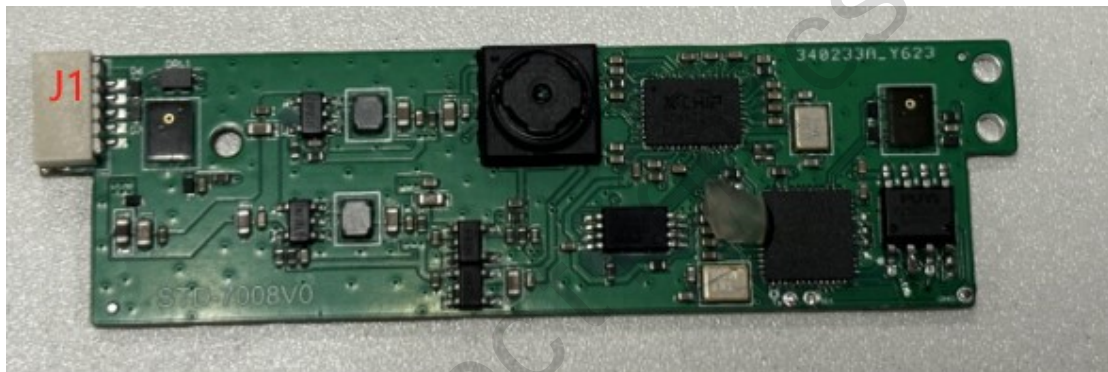
模组尺寸	length 长	width 宽	thickness 厚	remark 备注
Module size	66±0.4mm	11±0.4mm	4.2±0.15mm	TBD

4.2 主板尺寸图 Motherboard Dimensions





五、 模组接口定义说明 Module interface definition



J1:	数据接	data interface	输出音视频数据	Output audio and video data
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J1 USB CONNECTOR (4PIN/1.0) (数据接口)

			
NO.	SYMBOL	DESCRIPTION	
1	5V	5V Power Supply (Input)	
2	DM	Negative half of the USB 2.0 differential pair-Position	
3	DP	Positive half of the USB 2.0 differential pair-Position	
4	GND	Ground	