FANGTEC

enables your IPC innovation

CAMERA MODULE

產 品 規 格 書

PRODUCTION SPECIFICATION

Model No. : AJ9010B47-S1-4M0

Customer 客戶名稱	
Date Sumitted 送樣日期	

Approve 確認回簽

Fangtec Corporation

Revision History

Date	Rev.	Contents
2022/09/16	V1.0	First release

Table of Contents

1. Preface

This documentation describes product specifications to ensure design to meet customer's requirements.

AJ9010B47-S1-4M0 is an USB Video Class (UVC) compliant camera module with video feature, designed for portable notebook PC image applications. It is made up of the following components, CMOS sensor, lens, holder, backend, PCB, image processing circuit and connector, to come out a digital video device. It shall be a reliable device which is embedded in notebook PC to transfer video data through USB interface to notebook PC.

AJ9010B47-S1-4M0 not only offers up to HD resolution (1280X720) for image applications to take still image, but also offers video stream for end user to preview/record motion image through USB 2.0 interface. And It can support VGA (300K, 640x480) resolution up to 30 fps at YUY2 mode, 720P resolution (1280x720) up to 30fps at MJPG mode.

AJ9010B47-S1-4M0 builds in AE, AWB and AGC for automatic image control supported by CMOS sensor. For image quality control, it also offers UVC standardized User Interface (UI) to let end user well tune image by property page.

2. Features

- Compliant to USB2.0 and USB Video Class
- Support still image capture and Video Streaming
- Still Image Resolution : 1280x720 pixel
- Video Resolution: 720P
- Black Clamping-Gamma Correction
- Gain and offset adjustment in RGB space
- Window image statistics collection for AE and AWB
- Gain and offset adjustment in YUY2 space
- Input Voltage: standard 5V

3. Applications

- Notebook PC
- LCD PC
- LCD Monitor
- Industrial PC

4. Key Specification

Module Specification	
Size(LWH/mm)	60.0 x 9.0 x 6.2±0.2 mm (include PCB Thickeness)
PCB Thickeness	1.0 mm
Output Interface	USB 2.0
Image/Video Format	YUY2 & MJPG

Output size		
		160x120
	CIF	176x144
	QVGA	320x240
	QCIF	352x288
	VGA	640x480
	SVGA	800x600
	HD	1280x720

Video Class Compliant	YES
LED Indicate	Blue
Operating Temperature	0℃ to +55℃

Power Consumption			
	Min	Type	Max
Input Supply Voltage	4.5V	5V	5.5V
Un-configured Current	30mA	40mA	60mA
Operating Current	120mA	130mA	150mA
Suspend Current	-	-	500µA

Max Frame Rates (fps)							
	160×120	176×144	320×240	352×288	640×480	800×600	1280×720
YUY2	30	30	30	30	30	7	6
MJPG	30	30	30	30	30	30	30

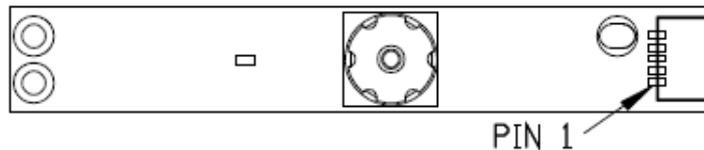| Backend IC Specification	
Type	Backend IC with USB2.0 interface
Compatibility	USB Video class Compliant, Microsoft WHQL Certified
Support Sensor Size	Support to UXGA(3M,2048x1536) sensor
OS Supported	Win7, Win8, Win8.1, Win10, Win11

Sensor Specification	
Optical format	1/4-inch HD CMOS Sensor
Active resolution	1296H×732V
Unit pixel size	3μm x 3μm

Lens Specification		
F/No.	2.2 ± 5%	
Field of View	Vertical	**50.8°**
	Horizonal	**86.6°**
	Diagonal	**100°**
Focus Distance	60cm	

5. Pin Description

Pin Number	Name	Pin Type	Function Description
1	Vcc	Power	5V DC
2	D-	Data Transmission	USB Data Write
3	D+	Data Transmission	USB Data Read
4	GND	GND	System Ground
5	NC		

PIN 1

6. Outline Specification

SEE DETAIL B

SEE DETAIL A

PIN 1

30.5   27.5   12.5   19.3   2.5   9   8   60

111.5°(ME)   4   6.26   0.7

1.9   2.1   3.5   3.1

DETAIL A
SCALE 2.000

2   Ø2.1x2   4   2.5   Ø4x2

DETAIL B
SCALE 2.000
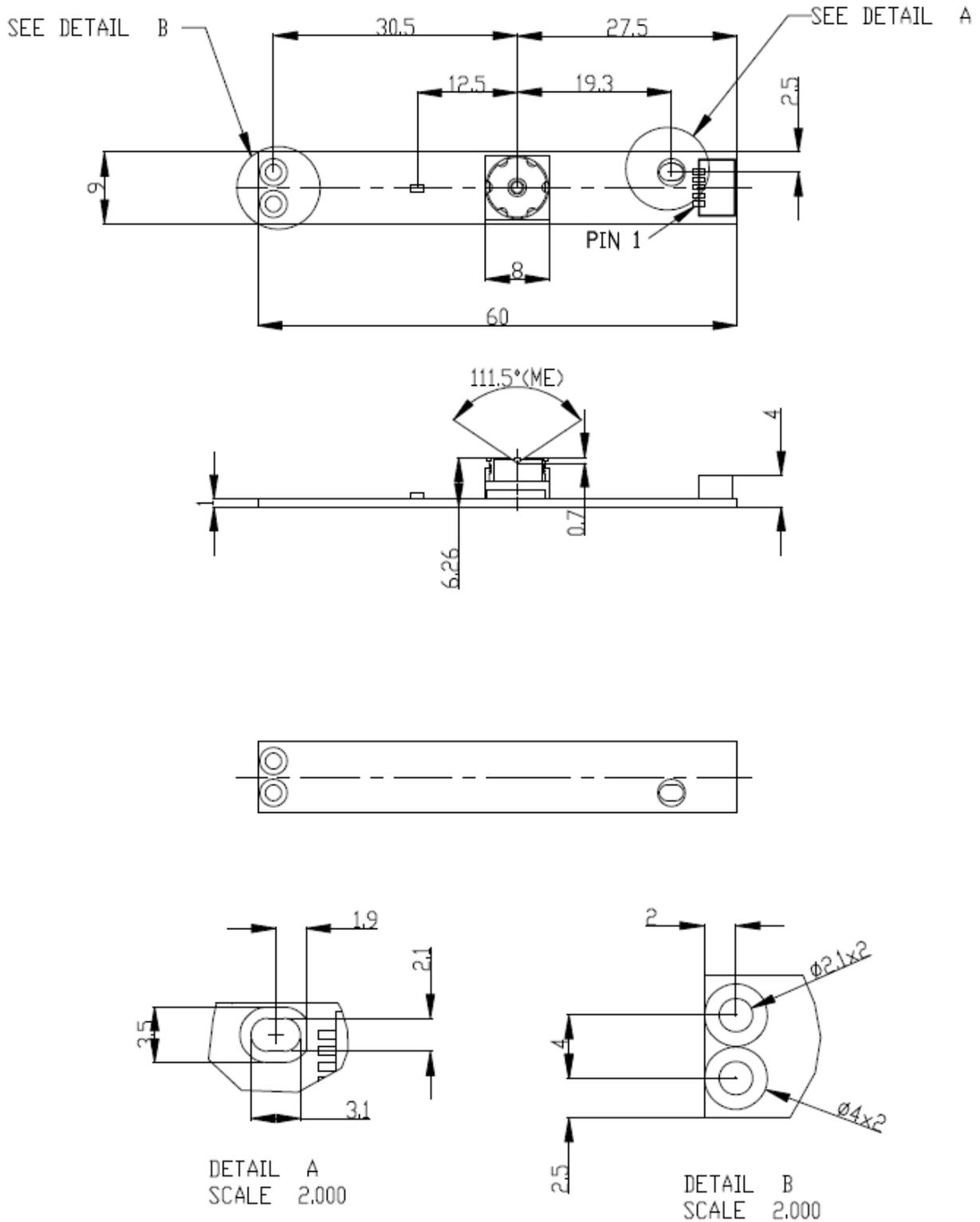
7. Connector Specification

Circuit NO. 1

MATED CONDITION
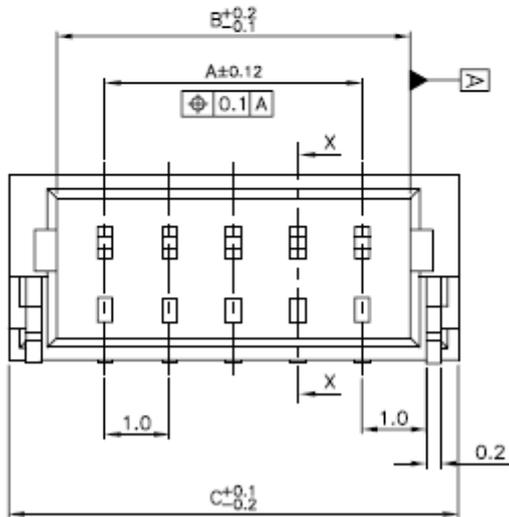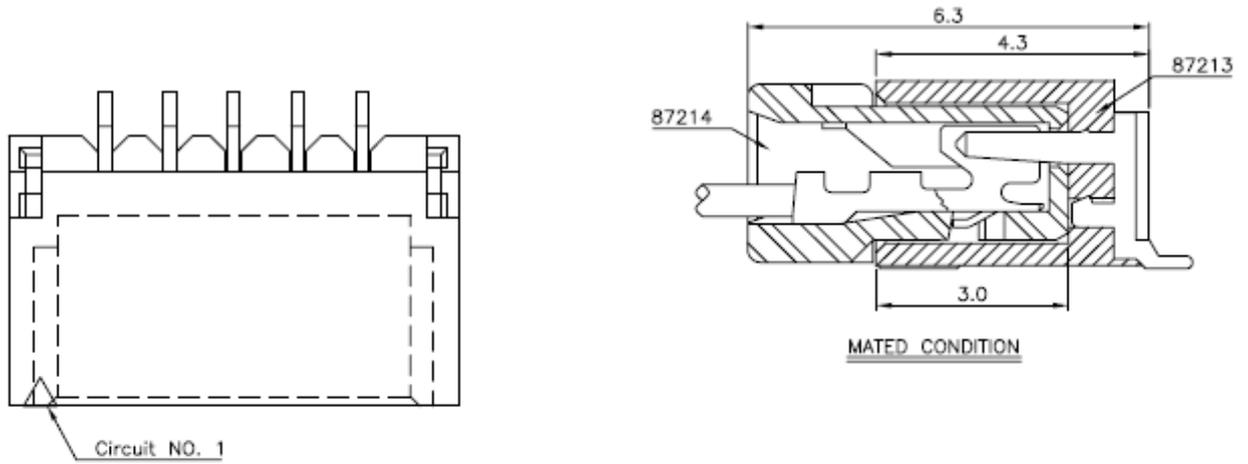
CKT	Dim A	Dim B	Dim C
5	4.0	5.4	7.0

SECTION X—X