



enables your IPC innovation

CAMERA MODULE

產品規格書

PRODUCTION SPECIFICATION

Model No. : AV6020B6F-L1-DQ0

Customer 客戶名稱	
Date Sumitted 送樣日期	

Approve 確認回簽

Fangtec Corporation



Revision History

Date	Rev.	Contents
2023/04/19	V1.0	First release



Table of Contents

Table of Contents

1. Preface	3
2. Features	4
3. Applications	4
4. Key Specification	5
5. Pin Description	6
6. Outline Specification	7
7. Connector Specification	8



1. Preface

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

AV6020B6F-L1-DQ0 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.

AV6020B6F-L1-DQ0 not only offers up to FHD resolution (1920X1080) 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 FHD(1920x1080) resolution up to 60fps at MJPG mode.

AV6020B6F-L1-DQ0 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
- Convert Bayer RGB to YUY2 color space
- Still Image Resolution : Max. 1920x1080 pixel
- 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 6.0 x 3.4±0.2 mm (include PCB Thickness)
PCB Thickness		0.6 mm
Output Interface		USB 2.0
Image/Video Format		YUY2 & MJPG
Output size	360P	640x360
	HD	1280x720
	FHD	1920x1080
Video Class Compliant		YES
LED Indicate		Blue
Operating Temperature		-20℃ to +85℃
Stable image temperature		0℃ to +60℃

Max Frame Rates (fps)			
	640×360	1280×720	1920x1080
YUY2	30	10	-
MJPG	30	30	60

Backend IC Specification	
Type	Backend IC with USB2.0 interface
Compatibility	USB Video class Compliant, Microsoft WHQL Certified
Support Sensor Size	Support Most popular CMOS sensors
OS Supported	Win8, Win8.1, Win10, Win 11

Sensor Specification	
Optical format	1/7.25-inch FHD 1080P CMOS Sensor
Active resolution	1920H×1080V
Unit pixel size	1.116μm x 1.116μm

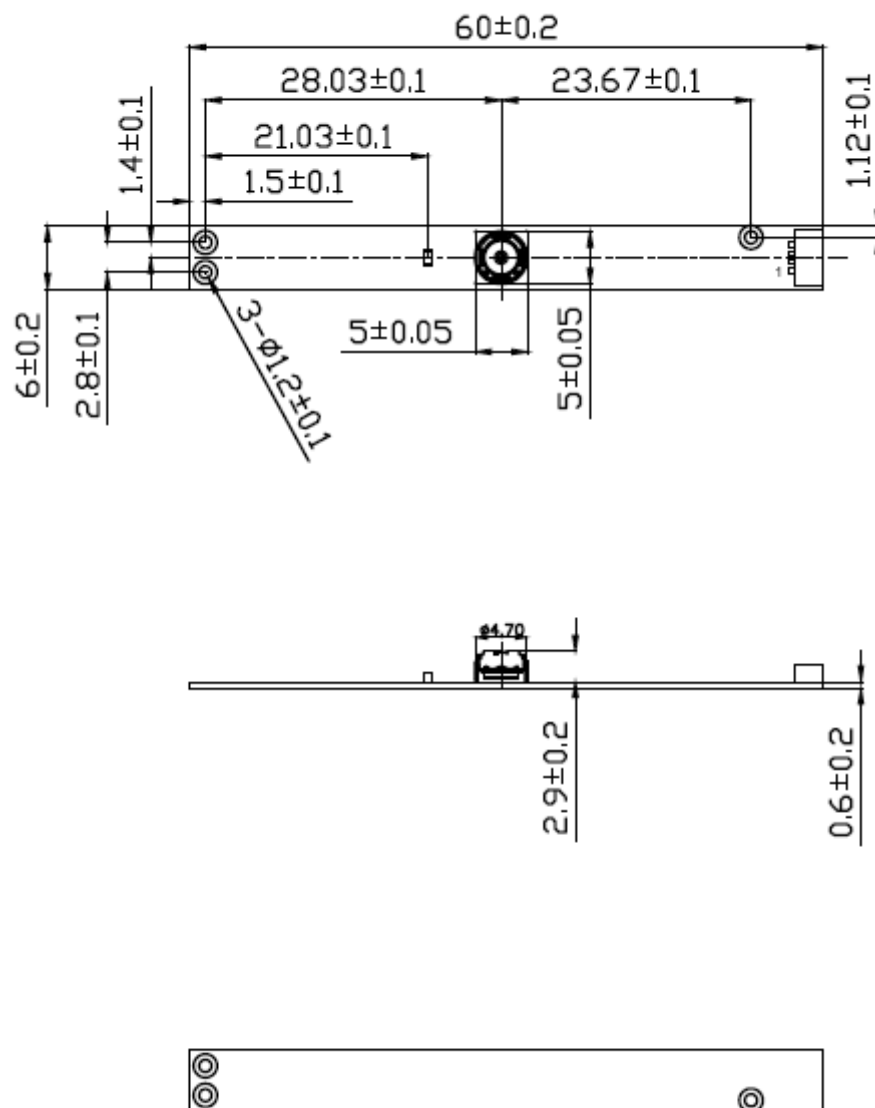
Lens Specification	
F/No.	2.4 $\pm$ 5%
Field of View	68.6° (D) 61.1° (H) 36.5° (V)
Focus Distance	60cm

5. Pin Description

Pin Number	Name	Pin Type	Function Description
1	VCC	Power	USB Power Supply +5V
2	D-	Data Pin	USB Data Transmission
3	D+	Data Pin	USB Data Transmission
4	GND	GND	System Ground

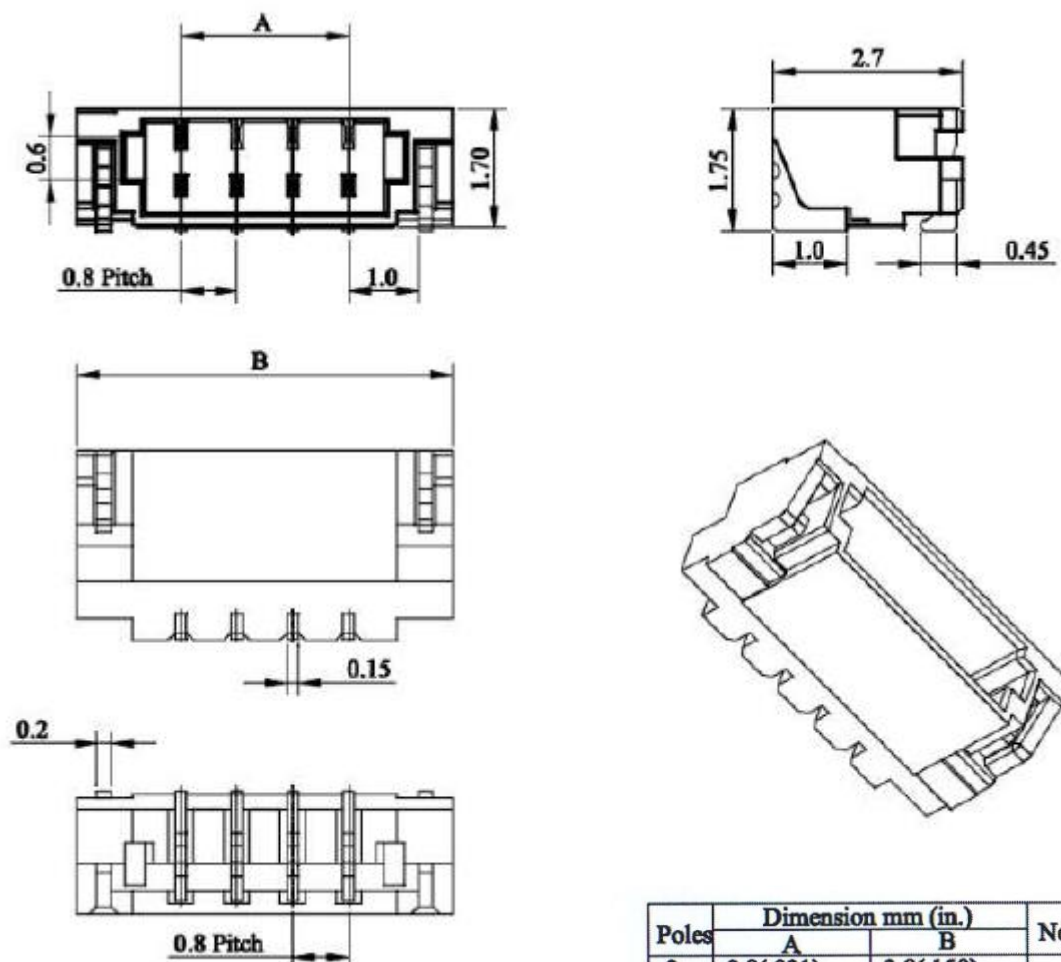


6. Outline Specification



7. Connector Specification

Wire to Board 0.8mm pitch



Poles	Dimension mm (in.)		Note.
	A	B	
2	0.8(.031)	3.8(.150)	Qty/reel=2000pcs
3	1.6(.063)	4.6(.181)	
4	2.4(.094)	5.4(.213)	
5	3.2(.126)	6.2(.244)	
6	4.0(.157)	7.0(.276)	
7	4.8(.188)	7.8(.307)	
8	5.6(.220)	8.6(.339)	
9	6.4(.251)	9.4(.370)	
10	7.2(.283)	10.2(.401)	
12	8.8(.346)	11.8(.463)	
14	10.4(.409)	13.4(.528)	
15	11.2(.441)	14.2(.559)	
16	12.0(.472)	15.0(.591)	
17	12.8(.504)	15.8(.622)	
20	15.2(.598)	18.2(.717)	