

Specification

2MP HDR Camera Module

Product Model: HBVCAM-F2132HDR V22

Product Version:V22

Product Name:2MP HDR USB Camera Module

☐ **Customer Approved**

Customer:_____

Date:_____

By:_____

☐ **Huiber Vision Confirmation**

Approved By:_____

Prepared By:_____

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1. Profile

PS5260 Sensor: The PS5260 is a low power, highly integrated CMOS image sensor that output of **1920x1080 (Full HD-1080p)** pixels with rolling shutter readout. It embedded the new FinePixel™ and HDR sensor technology to perform the excellent image quality and single-shot high dynamic range synthesized image output. PS5260 outputs 12bit/10-bit compressed RGB raw data through a parallel digital video port or via serial MIPI interface through one-lane or dual-lane transmission. It is available in CSP package.

The PS5260 can be programmed to set the exposure time for different luminance condition via I2C™ serial control bus. By programming the internal register set, it performs on-chip black level correction and high temperature image quality control.

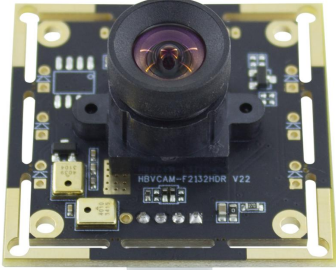


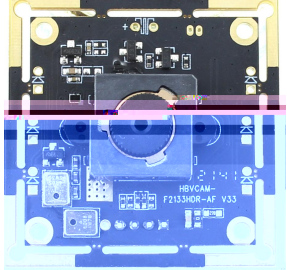
Applications

- Surveillance HD-CCTV Camera
- Surveillance IP Camera
- Car Video Recorder
- Video Door Phone

Specifications

Parameter	Typical Value
Active array size	1928(H) x 1088(V)
Pixel size	3.0um (H) x 3.0um (V)
Shutter type	Electronic rolling shutter (ERS)
Optical format	1/2.7-inch
Lens chief ray angle	17 degree
ADC	10-bit
Sensitivity	4700 mV/Lux-sec
SNRmax	TBD dB
Dynamic range	83 dB
Scan mode	Progressive scan
Input clock	Max 50MHz
Pixel clock	Max 148.5MHz
Max. frame rate	1080p: 1920x1080 @ 60fps 1080p: 1920x1080 HDR @30fps
Supply voltage	Analog: 3.3 V Digital: 1.2 V I/O: 1.8V / 3.3V
Power consumption	92mW @HDR 1080p30 (MIPI) 77mW @HDR 1080p30 (DVP w/o I/O)
Operating temperature	-30°C ~ 85°C

2. Product Picture

			
100 Degree Lens	145 Degree Lens	180 Degree Lens	76 Degree Lens

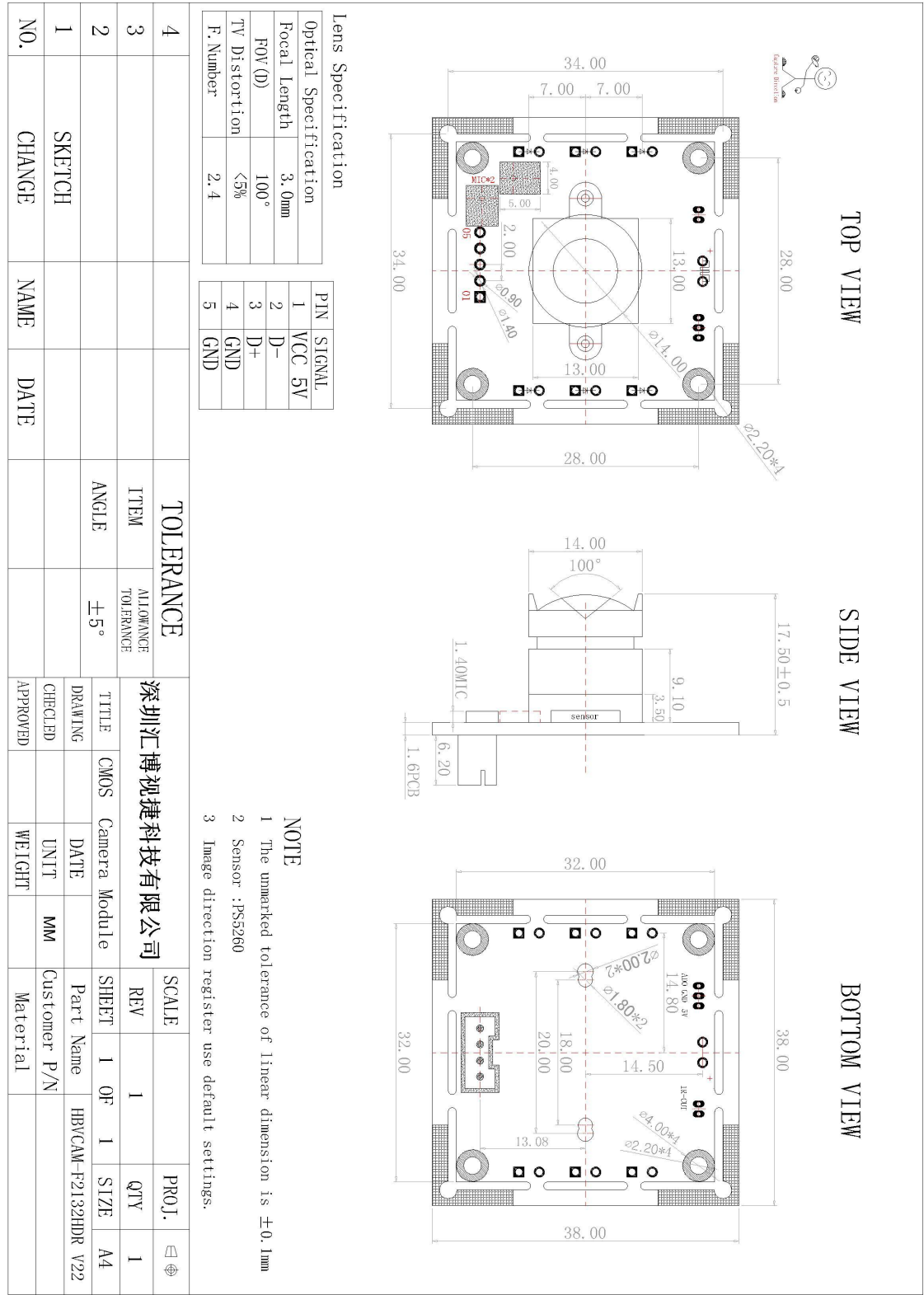
3. (5pin 1.0mm pitch) Connector Definition

Pin No.	Symbol
1	VCC-5V
2	D-
3	D+
4	GND
5	GND

4. Key Specifications (主要规格)

Module No.	HBVCAM-F2132HDR V22			
Module Size	38mm × 38mm × 17.50mm±0.5MM			
Temperature (Operation)	-30℃ to 70℃			
Temperature (Stable Image)	0℃ to 50℃			
Assembly technique	SMT (ROSH)			
Focus	Fixed			
Object distance	30CM-infinity			
Resolution	600LW/PH (Center)			
PCB printing ink	Black			
interface	USB 2.0			
Power supply	USB bus power			
supply voltage	DC 5V ± 5%			
Maximum Power consumption	800mW			
Operating system request	Win XP/win 7、8 / vista /android 4.0/ mac /Linux with uvc			
Sensor	PS5260 (1/2.7")			
Seneor Package	CSP,Bare Die			
Maximum resolution	1920*1080			
Sensitivity	4700mV / (lux-sec)			
Pixel Size	3μm x 3μm			
Maximum Image Transfer Rate	MJPEG 320x240	30FPS /	YUY2 320x240	30FPS
	MJPEG 640x480	30FPS /	YUY2 640x480	30FPS
	MJPEG 1024x768	30FPS /	YUY2 1024x768	30FPS
	MJPEG 1280x720	30FPS /	YUY2 1280x720	30FPS
	MJPEG 1280x800	30FPS /	YUY2 1280x800	10FPS
	MJPEG 1920x1080	30FPS /	YUY2 1920x1080	5FPS
S/N Ratio	46 db			
Max Dynamic Range	83 db			
Shutter type	Electronic rolling shutter			
AGC/AEC/Whiter balance	Auto			
Output Formats	YUY2/MJPEG			
Microphone	Support			
Lens Construction	2G2P			
F/No	2.4			
EFL	3.0mm			
FOV	100°			
TV Distortion	<5%			
Relative Illumination (Sensor)	70%			
IR Filter	650±10nm			
Module Package	Anti-electrostatic tray			
Certifications	FCC/CE/ROSH			

5.Module Mechanical Dimension(模组结构图)



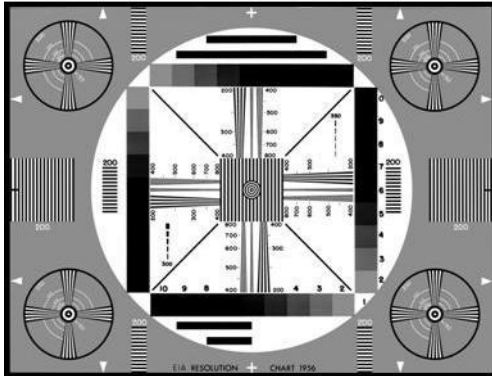
6. Function Test

➤ MODULE Function Test.

✓ Optical Test Condition:

- ◆ All the tests are under the environment level of 100K without dust.
- ◆ The brightness of Test Board: Brightness 400~500Lux, the brightness difference between center and four corners will be less than 15%.

✓ Resolution Test (Chart & Condition).



Items	Contents
Test Picture	MTF Test drawings
Condition(Effective distance: 35cm~∞)	Lamp Source: Cold lamp - house Color Temperature: 6500K Brightness: 450±50Lux, Test height:400mm
MTF Spec.	Center: 300TV/LINES Four Corners: 200TV/LINES

✓ Dark Corner Test:

Item	Contents
Test Drawings	Test Drawing(Right Drawings)
Condition	Lamp Source: Cold lamp - house Color Temperature: 6500K Brightness: 450±50Lux, Test height:400mm
Standard	No obviously dark corner by eyes.



✓ Spot Test.


Condition	Specification
Makes the camera to white light board and check if have spots	The difference of brightness between spot and nearby this spot will be less than 5%

7. Wounded &Dead pixel Test

✓ Wounded &Dead pixel Test

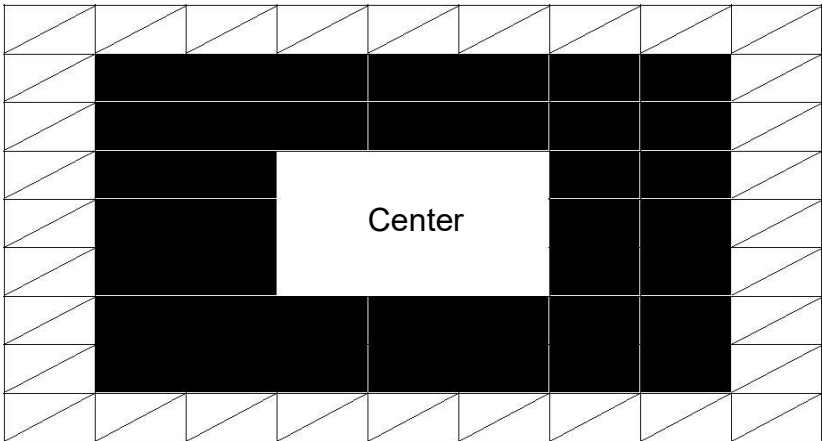
Product name: All of the Semi finished Product and Finished - Products

Contents : Make the picture to nine frames after getting it. (P1 - 1), not allowed any CSP spots at the center ,

The area of labeled as  in the picture , allowed 2 WOUNDED PIXEL or only 1 DEAD

PIXEL. The area of labeled as  in the picture , allowed 1 WOUNDED PIXEL or 1 DEAD pixel.

DEAD Pixel			No any reaction for light, it looks like either white pixel or black pixels. The brightness of pixels changed nothing.
WOUNDED Pixel			Will be appeared in irregularly because the light ray bright or dark, and pixels will have difference brightness because bright or dark light ray.
Pixel	All blocks	Total pixels	Pixels each block in
0.3	81	307200	3793
1.3	81	1336400	16499



8. Packing



9. Attention

1. Don't input the voltage higher than prescriptive value.
2. **Don't make the connector in converse, if yes, the board will be broken very easy.**
3. The product is electornic product; please take care to protect it in static.
4. Lens are glasswork, please take it very careful.
5. Lens are glasswork, please notice it without dust and damage

10.Contact Us

We can customize the camera according to your requirement, welcome to contact us!!!

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