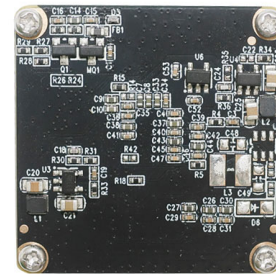


## IMT-USB-HM3-01100-F72

### 1.3MP Fixed Focus USB 2.0 Camera Module



Front View



Back View

IMT-USB-HM3-01100-F72 is a 1.3MP Fixed Focus USB camera module based on 1/3.55" SoC image sensor. It delivers 1340 x 1020 resolution at 3.0um ultra large pixels plus HDR algorithm ensures high quality images in high brightness areas and shadows. The camera has high performance in backlighting and scenes under strong light sources (sunlight, lamps or reflections, etc.), with wide dynamic range up to 120dB. This camera module is ideal solution for vehicle-road collaboration, industrial inspection, industrial equipment, media equipment, advertising machines, outdoor/indoor scenes requiring wide dynamic range.

#### Key Features

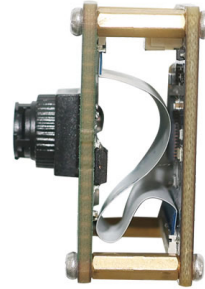
- 1.3 Megapixels 1340 x 1020 array at 30 FPS
- High speed USB 2.0 Plug and Play
- MJPEG output format
- Low power consumption
- Compact size 32x32 mm or 38x38 mm
- UVC compliant to Windows, Linux, OS with UVC UAC driver
- USB OTG (On-The-Go) Support

## IMT-USB-HM3-01100-F72

### 1.3MP Fixed Focus USB 2.0 Camera Module



Top View



Side View



Bottom View



USB Cable

## IMT-USB-HM3-01100-F72 1.3MP Fixed Focus USB 2.0 Camera Module

Camera Module No.	IMT-USB-HM3-01100-F72
Image Sensor	1.3MP
Sensor Type	1/3.55"
Resolution	1340 x 1020 @ 30 FPS
Pixel Size	3.00 um x 3.00 um
TTL	7.80 mm
F. NO.	3.00
View Angle	72.5°(DFOV) 65.1°(HFOV) 39.3°(VFOV)
Lens Dimensions	10.00 x 10.00 mm
Module Type	Fixed Focus
Interface	USB 2.0
Output Format	MJPEG
Auto Control	Saturation, Contrast, Acutance White Balance, Exposure
Audio (Optional)	Digital Microphone, Single, Dual Channel
Input Voltage	DC 5V
Working Current	Max 500mA
PCB Size	32.0 x 32.0 x 21.3 mm
System Compatibility	Windows XP (SP2, SP3), Vista, 7, 8, 10, 11 Android, Mac OS, Linux or OS with UVC UAC Driver, Raspberry Pi by USB Port
Software for USB Camera	AMCAP, Webcam Viewer, V4L2 Controls Contacam, VLC Player, MotionEye OS iSpy, ZoneMider, Yawcam
Lens Type	650nm IR Cut
Operating Temperature	-40°C to +105°C

Wide Compatibility with Windows, Android, Mac OS, Linux, and Raspberry Pi



Windows

Android

Mac OS

Linux

Raspberry Pi

## IMT-USB-HM3-01100-F72

### 1.3MP Fixed Focus USB 2.0 Camera Module

Additional Lens Options				
Lens Specs	A	B	C	D
TTL (mm)	25.00	18.00	14.50	15.00
EFL (mm)	2.52	2.13	1.43	2.09
F. No.	2.0	1.9	2.0	2.4
DFOV (degree)	75	112	200	142
HFOV (degree)	60	102	200	125
TV Distortion	5.5%	2.7%	<122%	<-16%

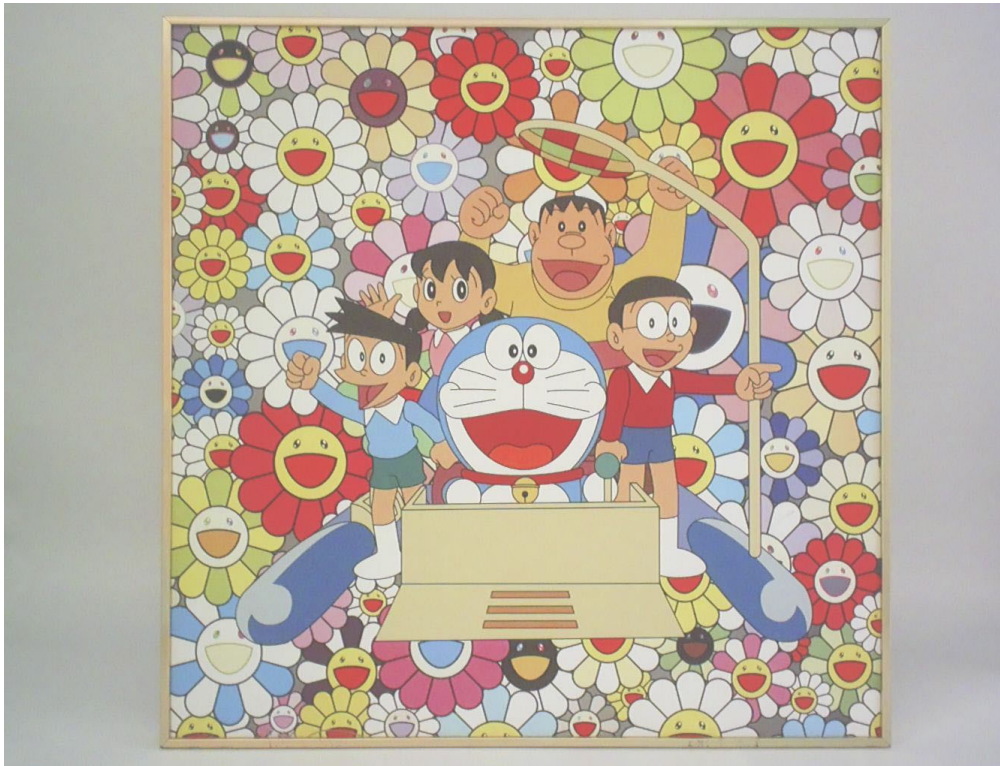
Format	Resolution	Frame Rate
		USB 2.0
MJPEG	640 x 480 (VGA)	30 FPS
	1280 x 720 (720P)	30 FPS
	1340 x 1020	30 FPS





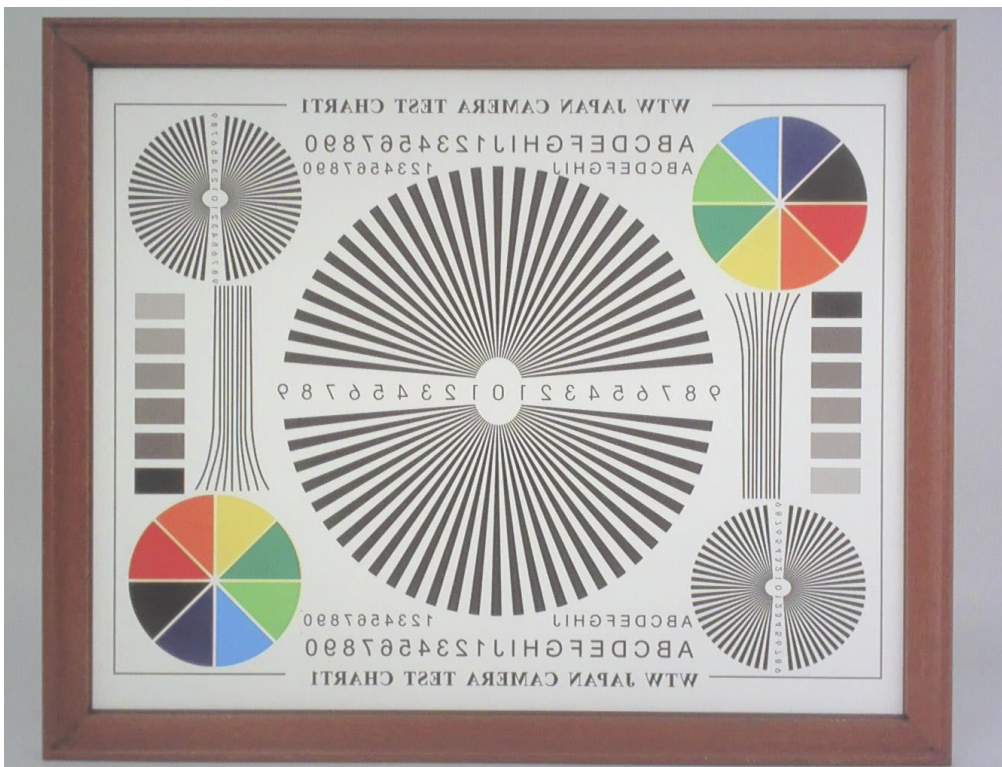
## IMT-USB-HM3-01100-F72

### 1.3MP Fixed Focus USB 2.0 Camera Module



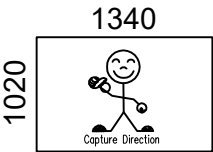
## IMT-USB-HM3-01100-F72

### 1.3MP Fixed Focus USB 2.0 Camera Module

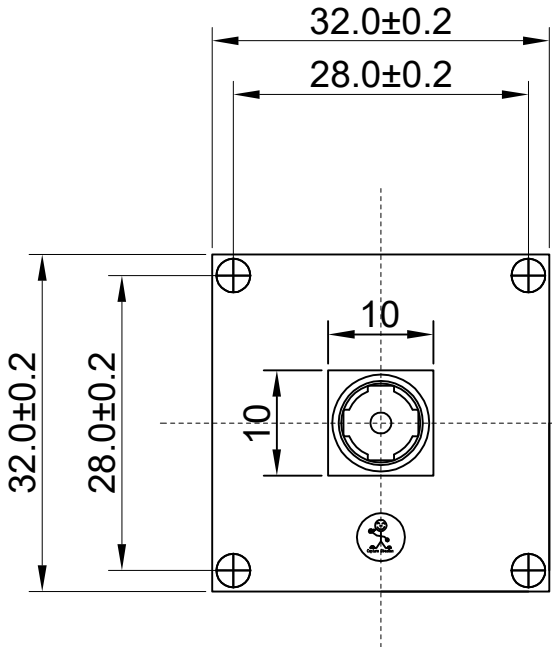




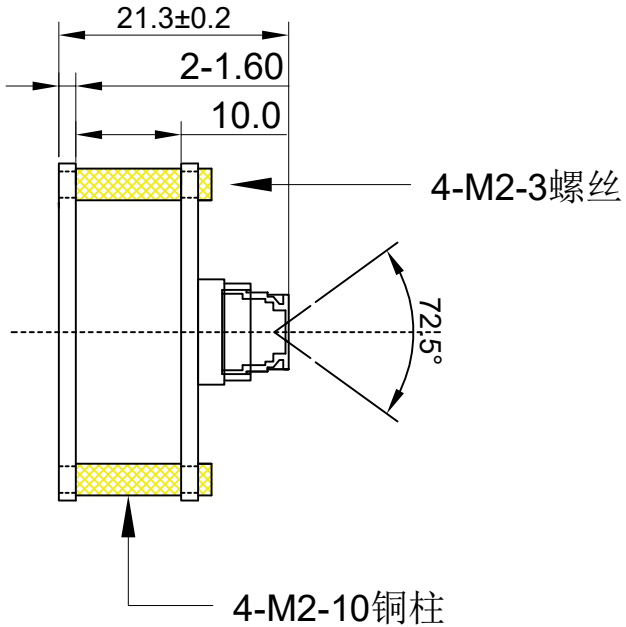
ROHS	
PIN	SIGNAL
1	USB_5V
2	DM(-)
3	DP(+)
4	GND
5	GND



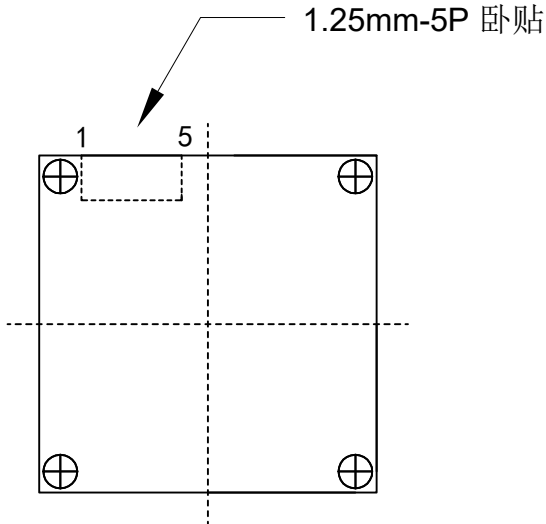
Version	Mark	Information	Date
V1.0	PD	First Version	2024-01-12



TOP VIEW



SIDE VIEW



BOTTEM VIEW

Parameters:

1、Sensor specification:

Image Sensor : 1.3M  
Pixel Size: 3.0umX3.0um  
Image Size: 1/3.55

2、Lens specification:

FOV: D:72.5°,H:65.1°,V:39.3°  
F/N0.: 2.5  
TV distortion: ≤0.33%  
TTL: 7.8mm  
Composi3tion: 3G+1MG

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Designed By	Lu	Model Name:	HM3-01100		
Checked By	He cheng	Projection Type:	Unit: mm	Material: _____	
			Scale: 1:1	Sheet: 1 of 1	Version: 1/0

## Cameras Applications



Automotive Driver Pilot



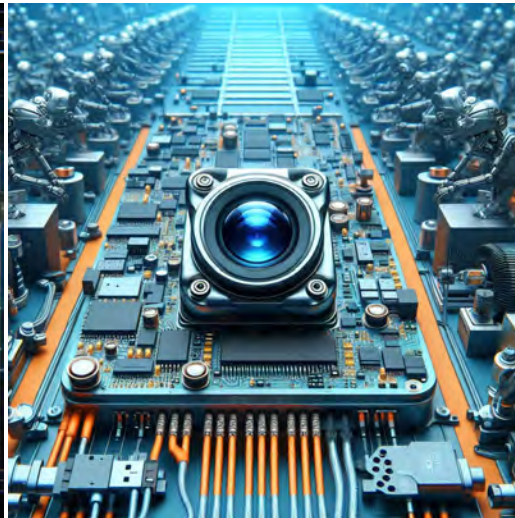
Live Streaming



Video Conference



Eye Tracker Biometric Detection



Machine Vision



Agricultural Monitor



Night Vision Security



Drone and Sports Eagle Eyes



Interactive Pet Camera



## Camera Module Pinout Definition Reference Chart

OmniVision Sony Samsung On-Semi Aptina Himax GalaxyCore PixArt SmartSens Sensors	
<b>Pin Signal</b>	<b>Description</b>
DGND GND	ground for digital circuit
AGND	ground for analog circuit
PCLK DCK	DVP PCLK output
XCLR PWDN XSHUTDOWN STANDBY	power down active high with internal pull-down resistor
MCLK XVCLK XCLK INCK	system input clock
RESET RST	reset active low with internal pull-up resistor
NC NULL	no connect
SDA SIO_D SIOD	SCCB data
SCL SIO_C SIOC	SCCB input clock
VSYNC XVS FSYNC	DVP VSYNC output
HREF XHS	DVP HREF output
DOVDD	power for I/O circuit
AFVDD	power for VCM circuit
AVDD	power for analog circuit
DVDD	power for digital circuit
STROBE FSTROBE	strobe output
FSIN	synchronize the VSYNC signal from the other sensor
SID	SCCB last bit ID input
ILPWM	mechanical shutter output indicator
FREX	frame exposure / mechanical shutter
GPIO	general purpose inputs
SLASEL	I2C slave address select
AFEN	CEN chip enable active high on VCM driver IC
<b>MIPI Interface</b>	
MDN0 DN0 MD0N DATA_N DMO1N	MIPI 1st data lane negative output
MDP0 DP0 MD0P DATA_P DMO1P	MIPI 1st data lane positive output
MDN1 DN1 MD1N DATA2_N DMO2N	MIPI 2nd data lane negative output
MDP1 DP1 MD1P DATA2_P DMO2P	MIPI 2nd data lane positive output
MDN2 DN2 MD2N DATA3_N DMO3N	MIPI 3rd data lane negative output
MDP2 DP2 MD2P DATA3_P DMO3P	MIPI 3rd data lane positive output
MDN3 DN3 MD3N DATA4_N DMO4N	MIPI 4th data lane negative output
MDP3 DP3 MD3P DATA4_P DMO4P	MIPI 4th data lane positive output
MCN CLKN CLK_N DCKN	MIPI clock negative output
MCP CLKP MCP CLK_P DCKN	MIPI clock positive output
<b>DVP Parallel Interface</b>	
D0 DO0 Y0	DVP data output port 0
D1 DO1 Y1	DVP data output port 1
D2 DO2 Y2	DVP data output port 2
D3 DO3 Y3	DVP data output port 3
D4 DO4 Y4	DVP data output port 4
D5 DO5 Y5	DVP data output port 5
D6 DO6 Y6	DVP data output port 6
D7 DO7 Y7	DVP data output port 7
D8 DO8 Y8	DVP data output port 8
D9 DO9 Y9	DVP data output port 9
D10 DO10 Y10	DVP data output port 10
D11 DO11 Y11	DVP data output port 11

## Camera Reliability Test

Reliability Inspection Item			Testing Method	Acceptance Criteria
Category		Item		
Environmental	Storage Temperature	High 60°C 96 Hours	Temperature Chamber	No Abnormal Situation
		Low -20°C 96 Hours	Temperature Chamber	No Abnormal Situation
	Operation Temperature	High 60°C 24 Hours	Temperature Chamber	No Abnormal Situation
		Low -20°C 24 Hours	Temperature Chamber	No Abnormal Situation
	Humidity	60°C 80% 24 Hours	Temperature Chamber	No Abnormal Situation
	Thermal Shock	High 60°C 0.5 Hours Low -20°C 0.5 Hours Cycling in 24 Hours	Temperature Chamber	No Abnormal Situation
Physical	Drop Test (Free Falling)	Without Package 60cm	10 Times on Wood Floor	Electrically Functional
		With Package 60cm	10 Times on Wood Floor	Electrically Functional
	Vibration Test	50Hz X-Axis 2mm 30min	Vibration Table	Electrically Functional
		50Hz Y-Axis 2mm 30min	Vibration Table	Electrically Functional
		50Hz Z-Axis 2mm 30min	Vibration Table	Electrically Functional
	Cable Tensile Strength Test	Loading Weight 4 kg 60 Seconds Cycling in 24 Hours	Tensile Testing Machine	Electrically Functional
Electrical	ESD Test	Contact Discharge 2 KV	ESD Testing Machine	Electrically Functional
		Air Discharge 4 KV	ESD Testing Machine	Electrically Functional
	Aging Test	On/Off 30 Seconds Cycling in 24 Hours	Power Switch	Electrically Functional
	USB Connector	On/Off 250 Times	Plug and Unplug	Electrically Functional



## Camera Inspection Standard

Inspection Item		Inspection Method	Standard of Inspection	
Category				
Item				
Appearance	FPC / PCB	Color	The Naked Eye	Major Difference is Not Allowed.
		Be Torn/Chopped	The Naked Eye	Copper Crack Exposure is Not Allowed.
		Marking	The Naked Eye	Clear, Recognizable (Within 30cm Distance)
	Holder	Scratches	The Naked Eye	The Inside Crack Exposure is Not Allowed
		Gap	The Naked Eye	Meet the Height Standard
		Screw	The Naked Eye	Make Sure Screws Are Presented (If Any)
		Damage	The Naked Eye	The Inside Crack Exposure is Not Allowed
	Lens	Scratch	The Naked Eye	No Effect On Resolution Standard
		Contamination	The Naked Eye	No Effect On Resolution Standard
		Oil Film	The Naked Eye	No Effect On Resolution Standard
		Cover Tape	The Naked Eye	No Issue On Appearance.
	Function	Image	No Communication	Test Board
Bright Pixel			Black Board	Not Allowed In the Image Center
Dark Pixel			White board	Not Allowed In the Image Center
Blurry			The Naked Eye	Not Allowed
No Image			The Naked Eye	Not Allowed
Vertical Line			The Naked Eye	Not Allowed
Horizontal Line			The Naked Eye	Not Allowed
Light Leakage			The Naked Eye	Not Allowed
Blinking Image			The Naked Eye	Not Allowed
Bruise			Inspection Jig	Not Allowed
Resolution			Chart	Follows Outgoing Inspection Chart Standard
Color			The Naked Eye	No Issue
Noise			The Naked Eye	Not Allowed
Corner Dark			The Naked Eye	Less Than 100px By 100px
Color Resolution			The Naked Eye	No Issue
Dimension			Height	The Naked Eye
	Width	The Naked Eye	Follows Approval Data Sheet	
	Length	The Naked Eye	Follows Approval Data Sheet	
	Overall	The Naked Eye	Follows Approval Data Sheet	

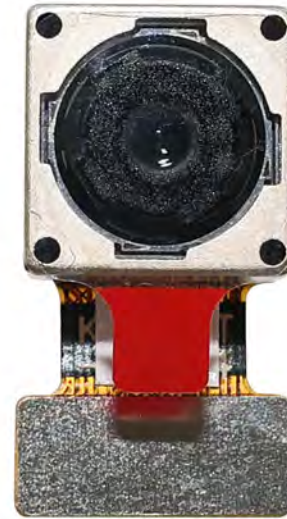


## IMT Package Solutions

IMT Camera Module



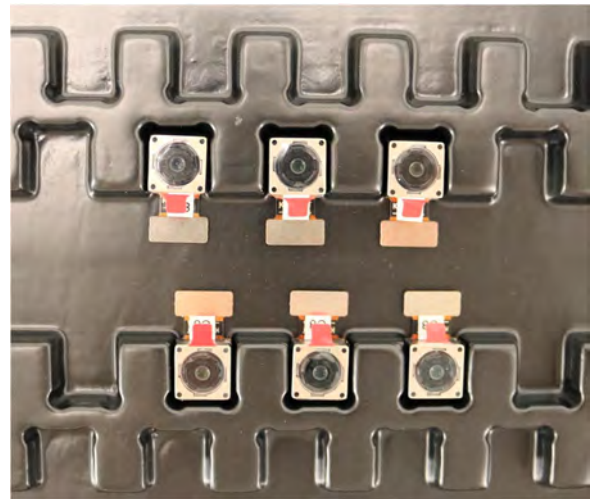
Complete with Lens Protection Film



Tray with Grid and Space

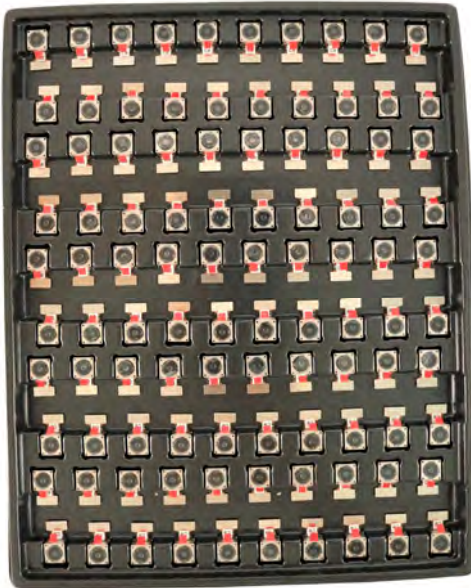


Place Cameras on the Tray

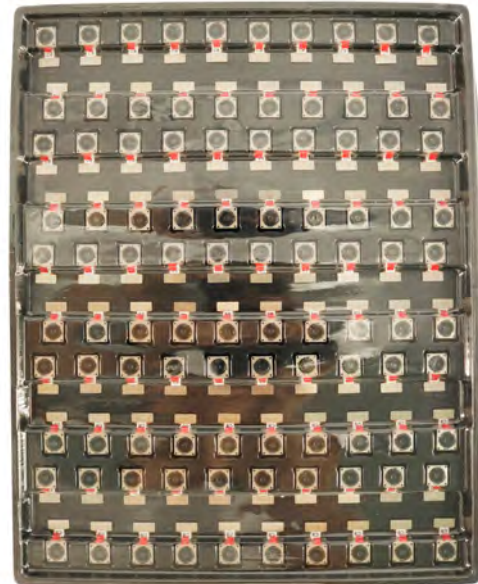


## IMT Package Solutions

Full Tray of Cameras



Cover Tray with Lid



Place Tray into Anti-Static Bag



Vacuum the Anti-Static Bag





## IMT Package Solutions

### Sealed Vacuum Anti-Static Bag with Labels

1. Model and Description   2. Quantity   3. Manufacturing Date Code   4. Caution





## IMT Package Solutions

Place Foam Sheets Between Tray Bags



Foam Sheets are Larger Than Trays



Place Foam Sheets and Trays into Box



Foam Sheets are Tightly Fitting in Box



Seal the Carbon Box



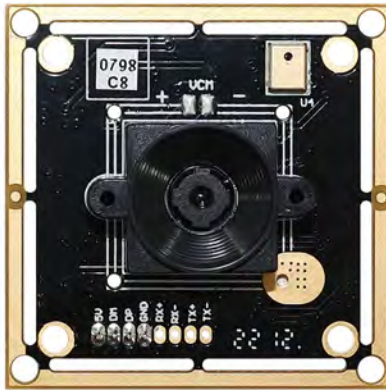
Label the Carbon Shipping Box



## IMT Package Solutions

USB Camera Module

Complete with Lens Protection Film



Place Camera Sample into Anti-Static Bag

Place USB Cameras into Tray



Seal the Tray with Anti-Static Bag

Label the Carbon Shipping Box





## IMT Package Solutions

Place Camera Sample into Anti-Static Bag



Place Connectors into Anti-Static Bag



Label the Sample Bags



Place Connectors into Reel



Place Samples into the Carbon Box



Place Connectors into the Carbon Box



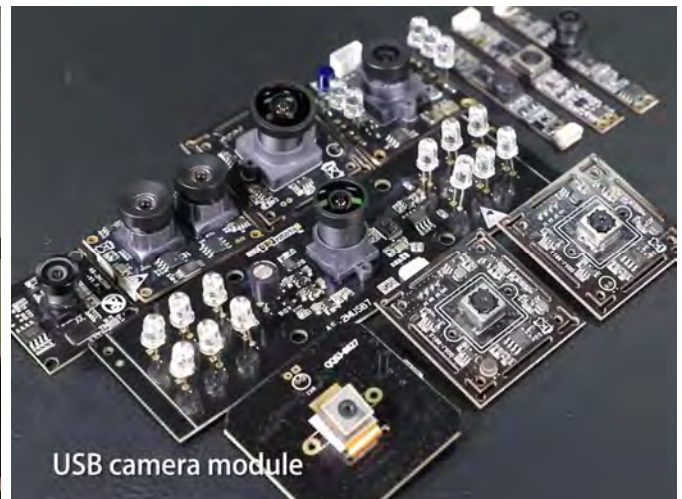


## Company INNOMAKER

InnoMaker Technologies Limited (IMT) was established in 2017, a next-generation technology driven manufacturer specialized in research, design, and produce of audio and video products. IMT is occupying 20,000 square feet automated plants with 100 employees of annual throughput 30,000,000 units cameras.

IMT provides OEM, ODM design, contract manufacturing, and builds the camera products. You may provide the requirements to us, even with a hand draft, our sales and engineering work together to meet your needs. We consider ourselves your last-term partner in developing practical and innovative solutions.

Our team covers everything from initial concept development to mass produced product. IMT specializes in customized camera design, raw material, electronic engineering, firmware/software development, product testing, and packing design. Our experienced strategic supply systems offer a robust and dependable manufacturing capacity for orders of various sizes.



## Limited Warranty

IMT provides the following limited warranty if you purchased the Product(s) directly from IMT company or from IMT's website [www.InMakerTech.com](http://www.InMakerTech.com). Product(s) purchased from other sellers or sources are not covered by this Limited Warranty. IMT guarantees that the Product(s) will be free from defects in materials and workmanship under normal use for a period of one (1) year from the date you receive the product ("Warranty Period").

For all Product(s) that contain or develop material defects in materials or workmanship during the Warranty Period, IMT will, at its sole option, either: (i) repair the Product(s); (ii) replace the Product(s) with a new or refurbished Product(s) (replacement Product(s) being of identical model or functional equivalent); or (iii) provide you a refund of the price you paid for the Product(s).

This Limited Warranty of IMT is solely limited to repair and/or replacement on the terms set forth above. IMT is not reliable or responsible for any subsequent events.







# InnoMaker Technologies

*Your Trusted Optical Partner*

## Our Company Strength

### Powerful Factory



### Professional Service



### Promised Delivery

