

General Description

YY-M32A is an 32*32 thermopile array module having a digital output through UART-TTL interface. The module has the characteristics of non-contact, accurate temperature measurement and quick response. Not only the module can measure temperature in its FOV , but also having the function of Living-things such as human-body detected with long distance.

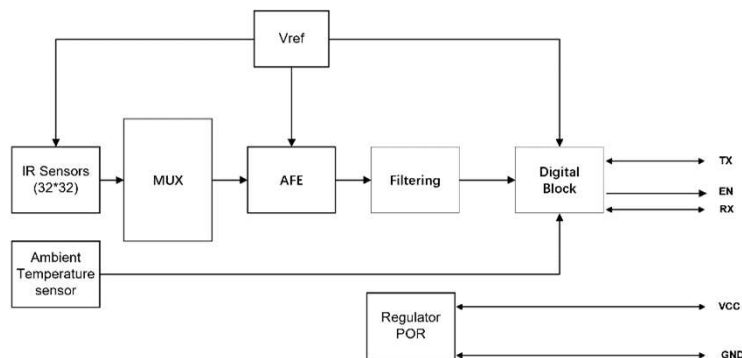
Features and Benefits

- Low-Cost With CH-2*2.0-10 Common Terminal
- Human-Body Temperature Measure Supported
- 5V Power Supply,3.3-TTL UART Interface With Current Consumption Less Than 40mA
- Thermal Image (RGB) Output or Array Temperature Data Output
- Support Middle, Highest, Lowest Three Types Temperature Data Output
- Operating Temperature Range: 0°C To +50°C
- Factory Pre-calibrated Object Temperature Detected Accuracy: $\pm 2^{\circ}\text{C}$ Or 2%

Applications

- Gesture control for interactive appliance
- Household electrical appliances
- Temperature measurements
- Movement detection

Block Diagram



Electrical Characteristics

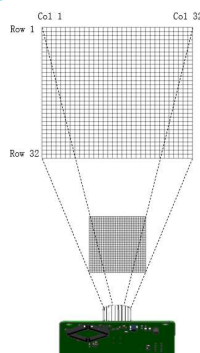
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{dd}	Supply voltage		4.5	5.0	5.5	V
I_d	Working current	VDD=5.0V	38	40	46	mA
FOV	Filed of view			33		°
B	Baud rate		9600	912600	912600	bps
V_{ttl_h}	I/O high voltage		2.8	3.3	3.6	V
V_{ttl_l}	I/O low voltage		-0.3	0	0.3	V
Co_{rgb}	RGB Color Format	RG+GB		565		

Thermometer Sensing Characteristics

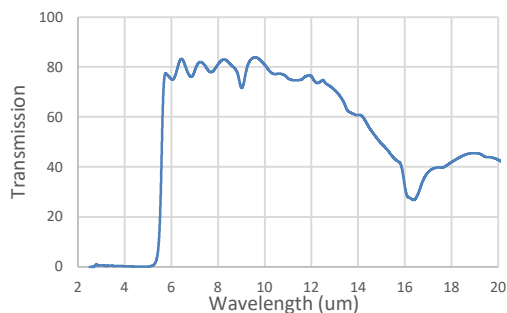
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
T_{amb_range}	Ambient reading range	VDD=5.0V	0		60	°C
T_{amb_res}	Ambient resolution			0.1		°C
T_{obj_range}	Object temperature range	VDD=5.0V	-20		550	°C
T_{obj_res}	Object resolution			0.1		°C

Optical Characteristics

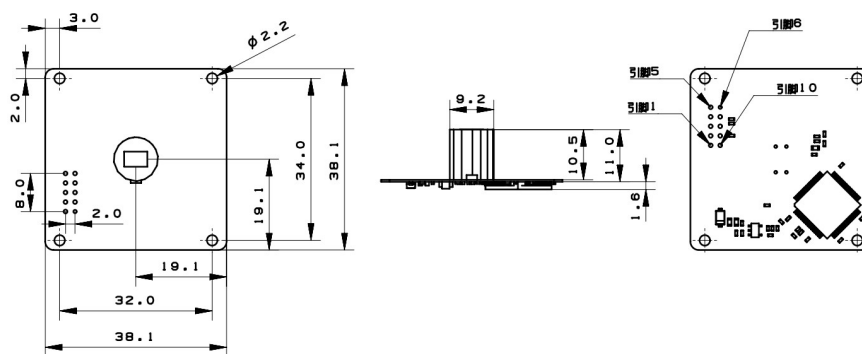
Optical characteristics



Filter parameters



Mechanical Drawings (Unit : mm)



Pin Definitions and Descriptions

Pin Name	Pin No.	Type	Description
VDD	10	Source	Power Supply
RXD	8	TTL-3.3V	Module UART Receiving Data
TXD	7	TTL-3.3V	Module UART Sending Data
EN	9	TTL-3.3V	Data-Ready Signal , this pin will go low when data is ready for output and returns high when data sending is over
GND	1,6	Source	Power Ground

Revision History

Revision Number	Release Date	Description
Rev1	2021/7/22	Initial Release