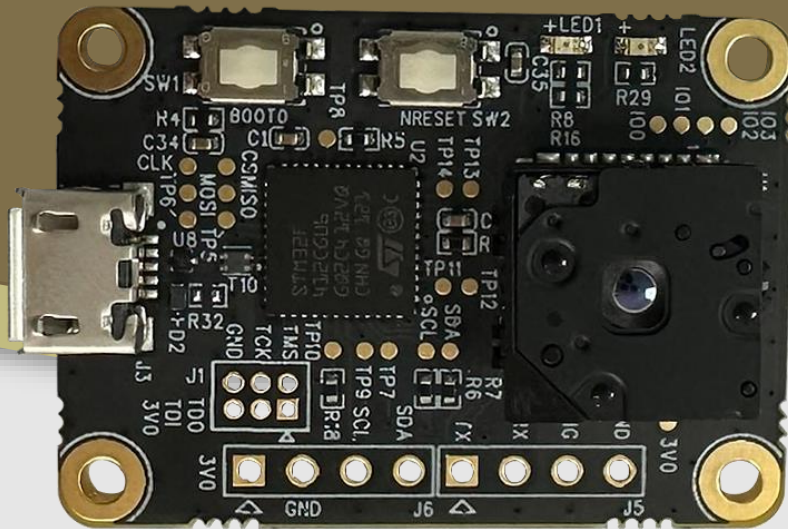




**LEOPARD**  
IMAGING

# LI-ThermalCAM-USB20-057H



**Address:**

910 Auburn Ct  
Fremont, CA 94538  
USA



**Phone:**

+1 (408)263-0988

**Fax:**

+1 (408)217-1960



**Sales:**

[sales@leopardimaging.com](mailto:sales@leopardimaging.com)

**Support:**

[support@leopardimaging.com](mailto:support@leopardimaging.com)

## INTRODUCTION

The LI-ThermalCAM-USB20-057H is installed with TELEDYNE FLIR radiometric thermal camera Lepton® 3.5 which features enhanced IR sensor and Micro thermal imager. The infrared thermal imaging system can be used in multiple applications such as night vision, gesture recognition, thermal imaging, building automation, etc.

## FEATURES

Camera	TELEDYNE FLIR Thermal Camera Lepton® 3.5
Working Distance	Up to 50 meters
Thermal Sensitivity	< 50 mK (0.050°C)
Resolution	160 (H) x 120 (V)
Pixel Size	12 µm
Frame Rate	8.7 Hz (effective)
Output Format	User-selectable 14-bit, 8-bit (AGC applied), or 24-bit RGB (AGC and colorization applied)
Spectral Range	Longwave infrared, 8 ~ 14 µm
Scene Dynamic Range	High gain mode: -10°C ~ +140°C Low gain mode: -10°C ~ +400°C
Radiometric Accuracy (35°C Blackbody)	High gain: ± 5°C @ 25°C Low gain: ± 10°C @ 25°C
Connector	USB2.0 Micro-B
UVC Compliant	Yes
Power Consumption	Approx. 54 mA @ 5 VDC (160 x 120 @ 8.7 fps)
Part#	LI-ThermalCAM-USB20-057H

## APPLICATIONS

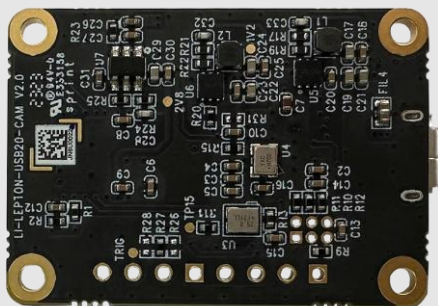
- Thermal Imaging
- Night Vision
- Gesture Recognition
- IoT
- Building Automation
- Robot

## MECHANICAL & ENVIRONMENTAL

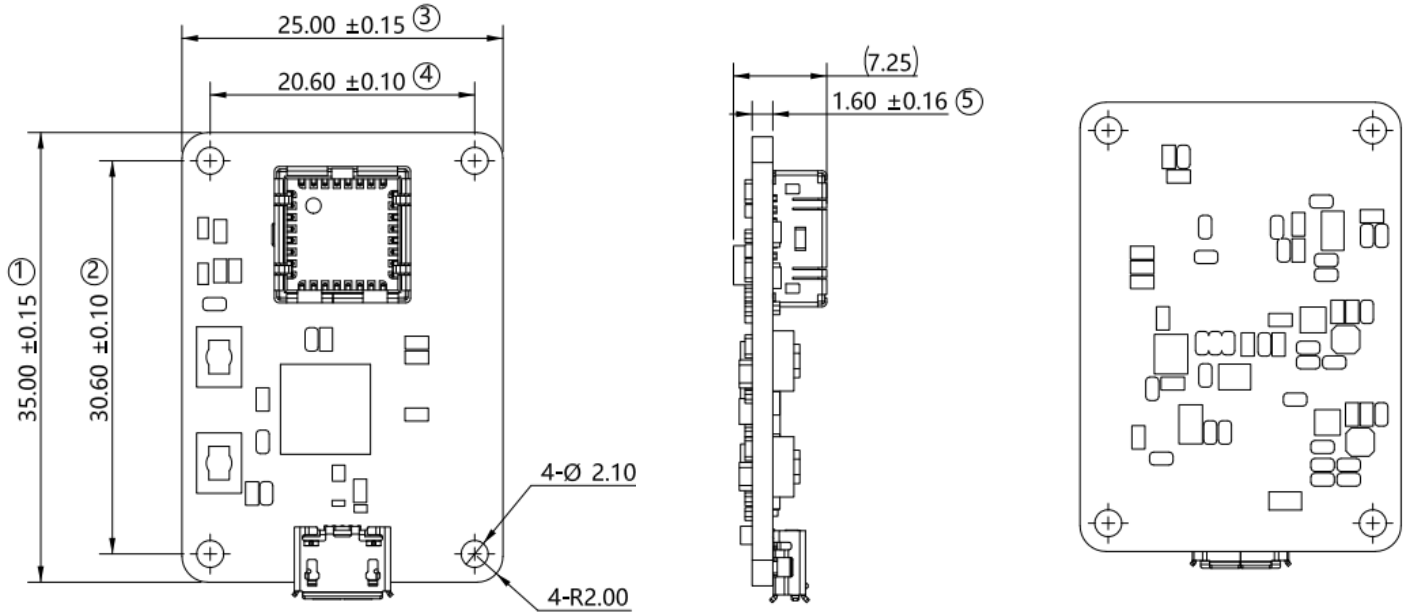
Weight	~ 5 g (Camera only)
Operating Temp	-10°C ~ +75°C
Storage Temp	-10°C ~ +75°C

## OPTICS & IMAGING

Field of View (FOV)	57° horizontal
Aperture, F/#	1.1
Time to Image	< 1.2 sec
Sensor Technology	Uncooled VOx microbolometer
Solar Protection	Integral
Shutter	Integral shutter configuration



## DIMENSIONS



TOLERANCE TABLE					
LENGTH TOLERANCE		CHAMFER TOLERANCE		ANGLE TOLERANCE	
Size X	Tolerance	Size X	Tolerance	Size X	Tolerance
$0.5 < X \leq 3$	$\pm 0.1$	$0.5 < X \leq 3$	$\pm 0.2$	$X \leq 10$	$\pm 1^\circ$
$3 < X \leq 6$	$\pm 0.1$	$3 < X \leq 6$	$\pm 0.5$	$10 < X \leq 50$	$\pm 30'$
$6 < X \leq 30$	$\pm 0.2$	$6 < X \leq 30$	$\pm 1$	$50 < X \leq 120$	$\pm 20'$
$30 < X \leq 120$	$\pm 0.3$	$X > 30$	$\pm 2$	$120 < X \leq 400$	$\pm 10'$
$120 < X \leq 400$	$\pm 0.5$			$X > 400$	$\pm 5'$
$400 < X \leq 1000$	$\pm 0.8$				
$X > 1000$	$\pm 1.2$				

### NOTE:

- ⊗ marked are important sizes.
- Other unmarked tolerances refer to the Tolerance table.

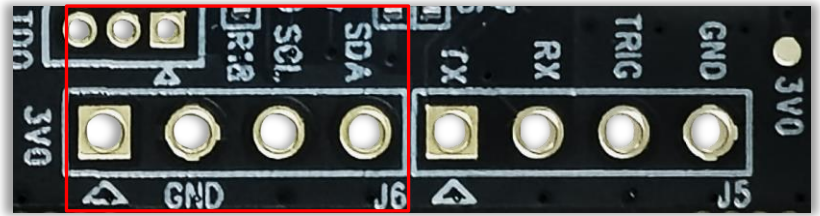
Unit: mm

## BOM

#	Items	QTY
1	LI-LEPTON-USB20-CAM V2.0 board	1
2	USB 2.0 Micro-B to Type A	1

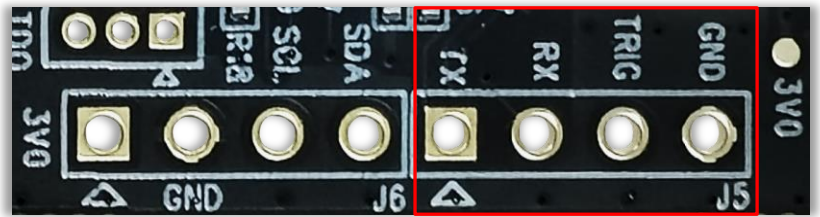
● INTERFACE J6 (Reserved Connector for I2C)

- Part#: 22102041
- Number of positions: 4
- Pitch: 2.54 mm



● INTERFACE J5 (Reserved Connector for Trigger Input)

- Part#: 22102041
- Number of positions: 4
- Pitch: 2.54 mm



● SW1 & SW2 (Buttons for Boot & Reset)

- Part#: EVQ-P2202M



## ● REVISION HISTORY

Revision	Description	Release date
1.0	First release.	20 Jul 2023
1.1	Updated Part#.	28 Sep 2023

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