

# FLIR LEPTON®



## Camera Breakout v1.4

*The FLIR Lepton® Thermal Camera Breakout is an easy to interface to evaluation board to quickly evaluate the FLIR Lepton® Camera module. It is compatible with a number of low-cost ARM based evaluation boards such as the NUCLEO-F401RE. In addition it is easy to wire to any nonstandard pin outs as well such as the raspberry PI..*

### FEATURES

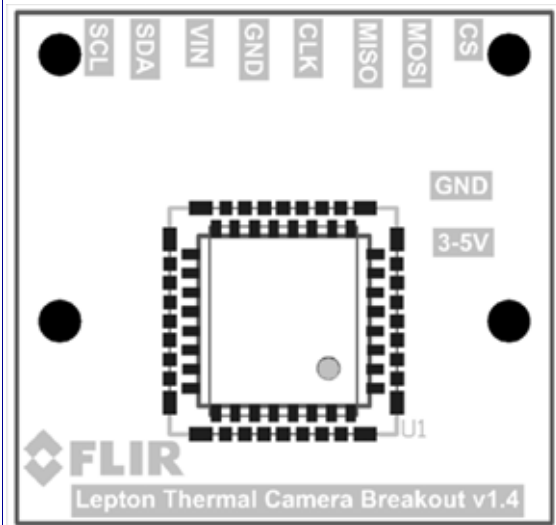
- *Input Voltage: 3 V to 5.5 V*
- *Space-Saving, (25 mm × 24 mm)*
- *Works with the FLIR Lepton® modules: 50 degree shuttered, 50 degree, and 25 degree*
- *Access to SPI and I2C camera module interfaces*
- *Provides 25-MHz reference clock*
- *Power Efficient 1.2 V core voltage*
- *Dual Low Noise LDO for 2.8 V voltage*
- *32-pin Molex camera socket for Lepton® Module*
- *100 mil header, pinout compatible with Arduino® headers*
- *PCB size and mounting holes same as standard Raspberry camera*
- *Additional low profile .5mm FPC connector for embedded applications*

### APPLICATIONS

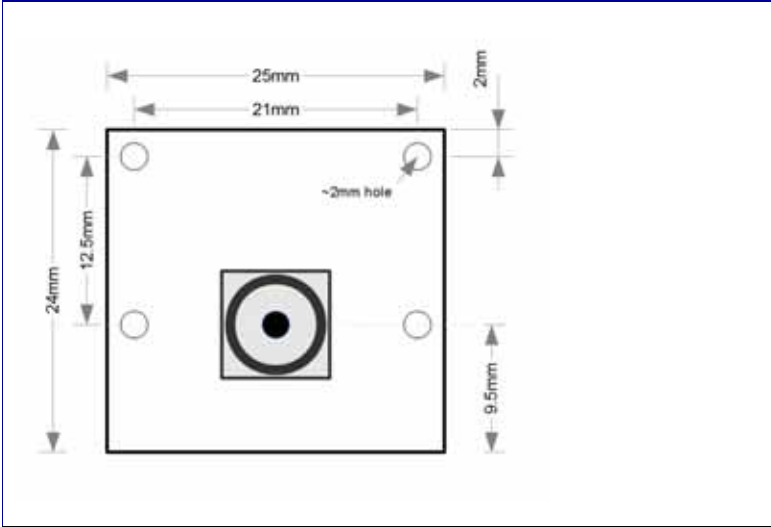
- *Thermal Imaging*
- *Motion Sensor*
- *Night Vision*
- *Gesture Recognition*

Lepton Specifications and Pinouts

Item	Description
Specifications	
Input Voltage (Vi)	5.5 V continuous
Operating Temperature Range	0° C to 55° C (over Vi range)
Breakout Board Pins	
Pin 8 - SCL	Camera Control Interface Clock, I2C
Pin 7 - SDA	Camera Control Interface Data, I2C
Pin 6 - VIN	3-5 V Supply input
Pin 5 - GND	Common Ground
Pin 4 - SPI CLK	Video Over SPI Slave Clock
Pin 3 - SPI MISO	Video Over SPI Slave Data Out
Pin 2 - SPI MOSI	Video Over SPI Slave Data In
Pin 1 - SPI CS	Video Over SPI Slave Chip Select (active LOW)



Dimensions



SANTA BARBARA

FLIR Systems, Inc.  
70 Castilian Drive  
Goleta, CA 93117  
USA  
PH: +1 805.964.9797

EUROPE

FLIR Systems  
Luxemburgstraat 2  
2321 Meer  
Belgium  
PH: +32 (0) 3665 5100

www.flir.com  
NASDAQ: FLIR

PORTLAND

Corporate Headquarters  
FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
USA  
PH: +1 866.477.3687

CHINA – SHANGHAI

FLIR Systems, Co., Ltd.  
K301-302, No.26 Lane  
168, Daduhe Road,  
Putuo District, Shanghai  
200062,P.R.China  
PH: +86-21-5169 7628

Equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. Specifications are subject to change without notice. ©2014 FLIR Systems, Inc. All rights reserved. (Created 11/21/14)

## Application Information

The figure below shows a typical application.



### Getting Started

A basic code example has been posted to the [Pure Engineering github site](https://github.com/PureEngineering/LeptonModule) at the following URL: <https://github.com/PureEngineering/LeptonModule>. Please Note that these are examples to get one started and not for use in final designs. Familiarity of programming and compiling are highly recommended.

### Support

For support that extends beyond this datasheet please consult the following google groups site at the following URL: <https://groups.google.com/d/forum/flir-lepton> Please search for your question before posting as your question may already be answered.

### Additional Information

All additional information about the breakout board, SDK's, Lepton® Datasheet, and Purchase Information will be maintained at the Following URL: <http://www.pureengineering.com/projects/lepton>

### Example Application

See the schematic on the following page for an example application.

