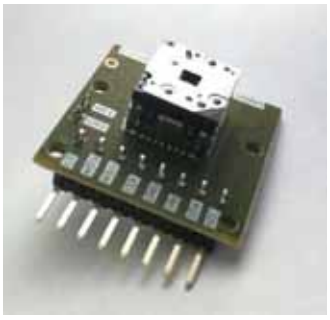
FLIR LEPTON®



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

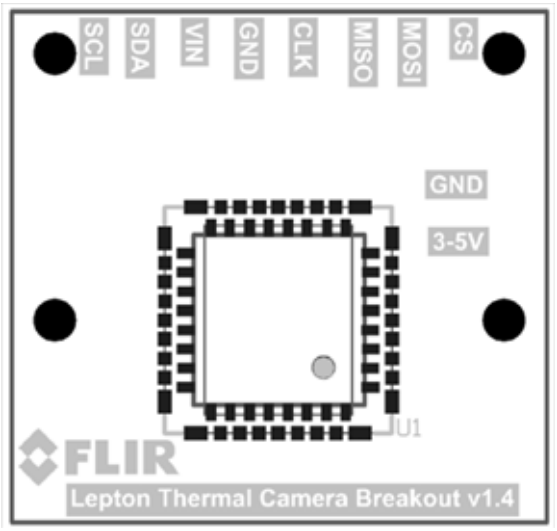
- *Input Voltage: 3 V to 5.5 V*
- *Space-Saving, (25 mm × 24 mm)*
- *Works with the FLIR Lepton® modules: 50 degree shuttered, 50 degree, and 25 degree*
- *Access to SPI and I2C camera module interfaces*
- *Provides 25-MHz reference clock*
- *Power Efficient 1.2 V core voltage*
- *Dual Low Noise LDO 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

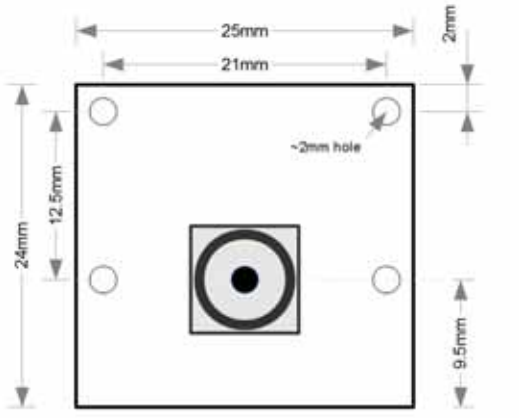
- *Thermal Imaging*
- *Motion Sensor*
- *Night Vision*
- *Gesture Recognition*

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

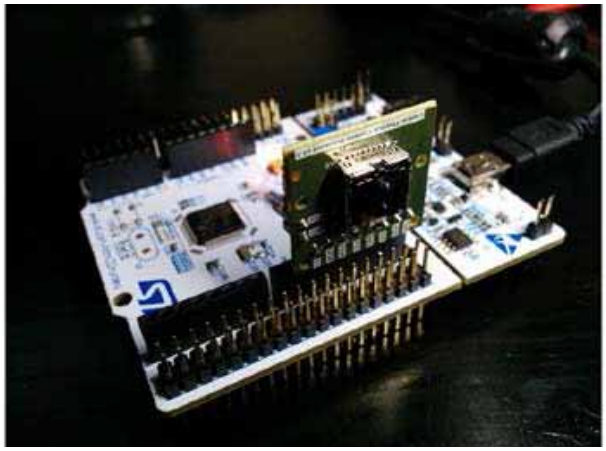
CHINA – SHANGHAI

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 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

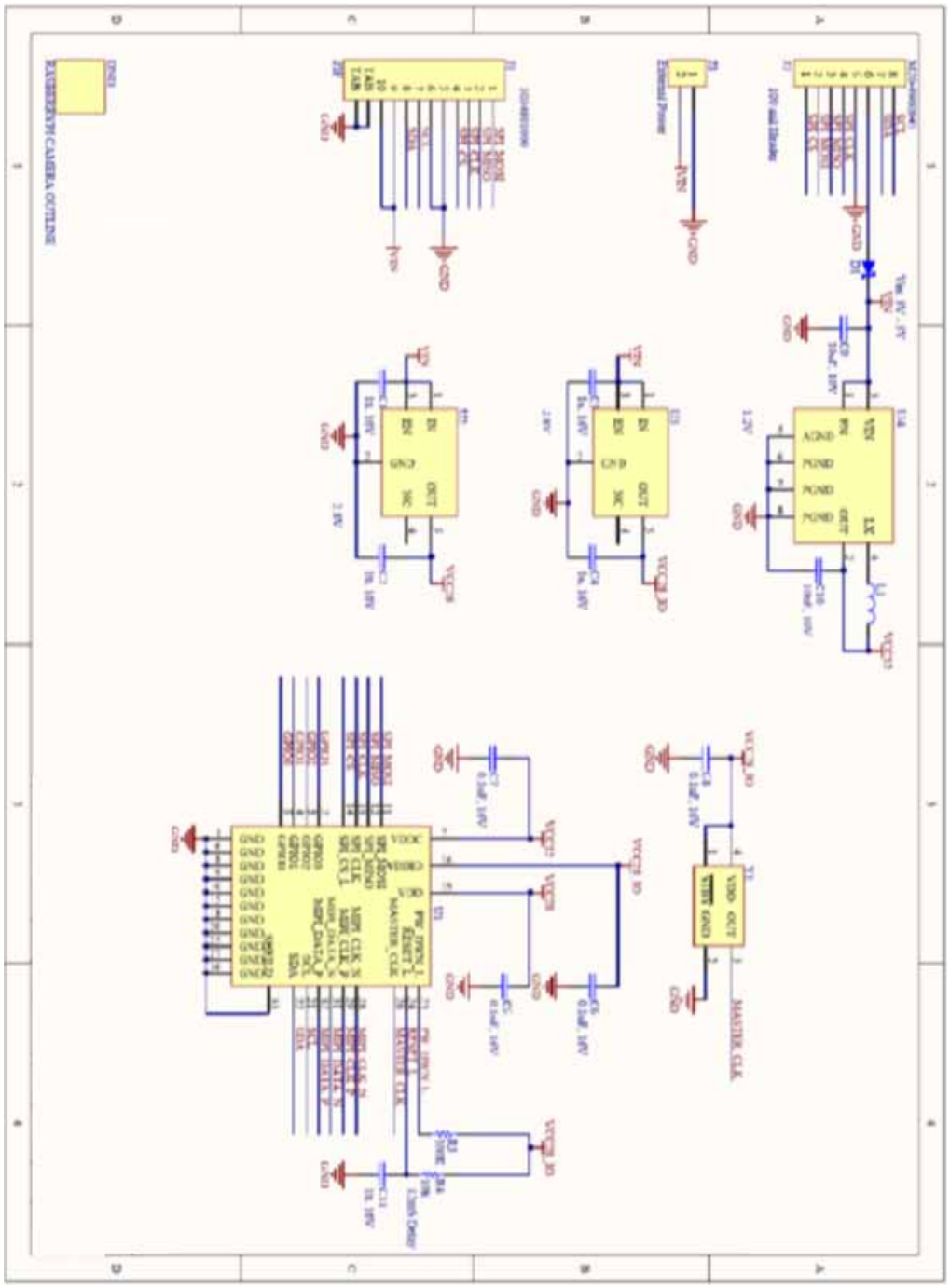
For support that extends beyond this datasheet please consult the following google groups site at the following URL: https://groups.google.com/d/forum/flir-lepton Please search for your question before posting as your question may already be answered.

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.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Glenair:

102-002-008 102-002-024 102-002-040 102-002-016 102-002-004 100-002A1375 100-002A188 100-002A1250 100-002A1500 100-002A500L 100-002A781 100-002A625 100-002A781L 100-002A109 100-002A031 100-002A375 100-002A062 100-002A156L 100-002A625L 100-002A203 100-002A250L 100-002A750 100-002A1000 100-002A2000 100-002A500 100-002A937 100-002A125 100-002A078 100-002A156 100-002A171 100-002A2500