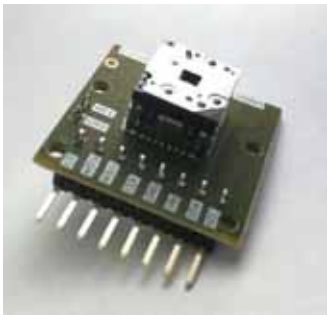
FLIR LEPTON®



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

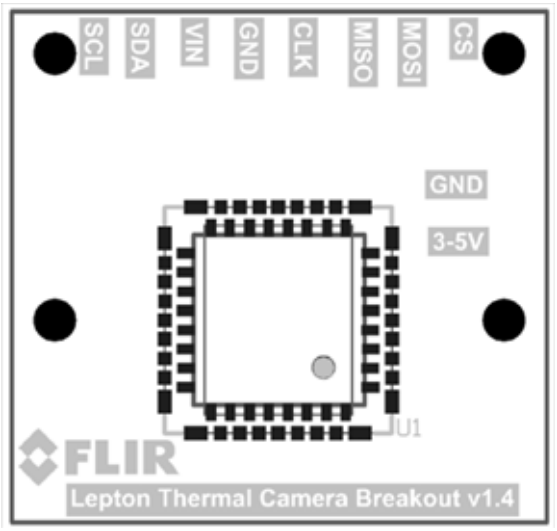
- *Input Voltage: 3 V to 5.5 V*
- *Space-Saving, (25 mm × 24 mm)*
- *Works with the FLIR Lepton® modules: 50 degree shuttered, 50 degree, and 25 degree*
- *Access to SPI and I2C camera module interfaces*
- *Provides 25-MHz reference clock*
- *Power Efficient 1.2 V core voltage*
- *Dual Low Noise LDO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

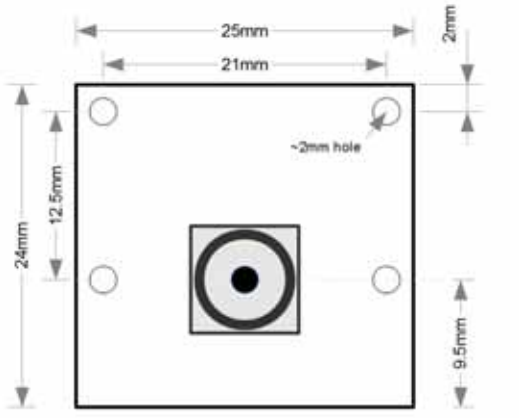
- *Thermal Imaging*
- *Motion Sensor*
- *Night Vision*
- *Gesture Recognition*

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



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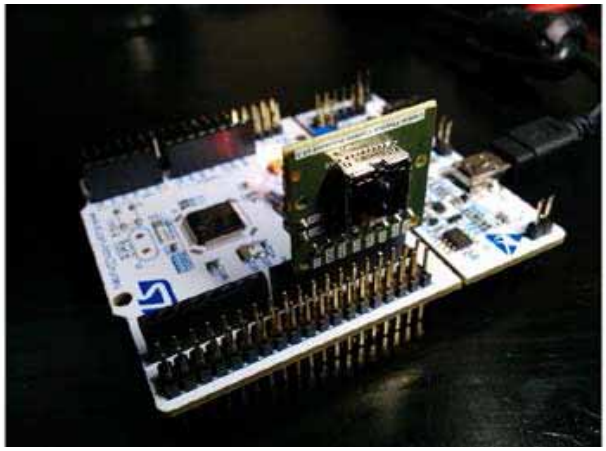
Application Information

The figure below shows a typical application.



Getting Started

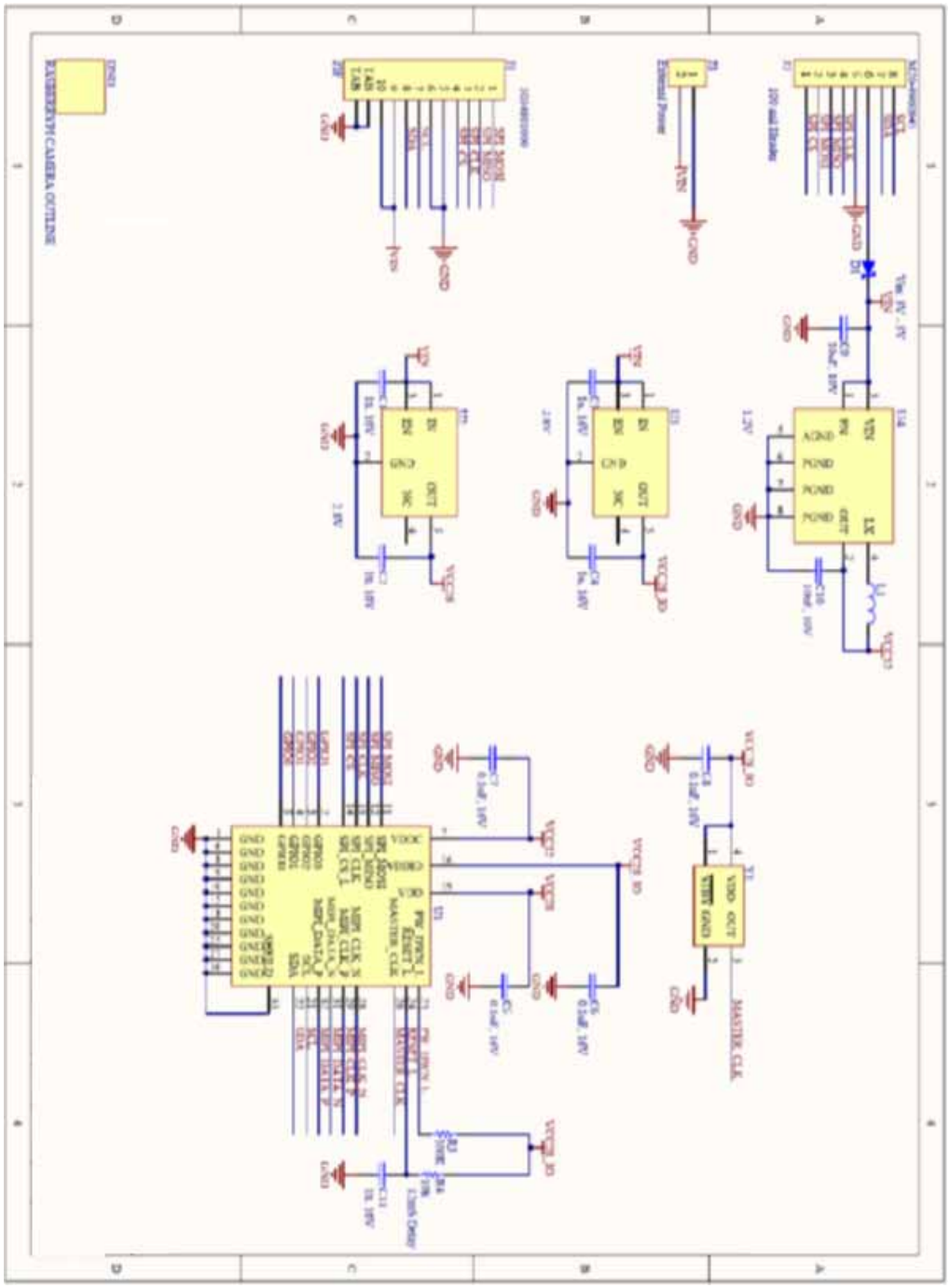
A basic code example has been posted to the Pure Engineering github site at the following URL: https://github.com/PureEngineering/LeptonModule. Please Note that these are examples to get one started and not for use in final designs. Familiarity of programming and compiling are highly recommended.

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.