



LEOPARD IMAGING INC

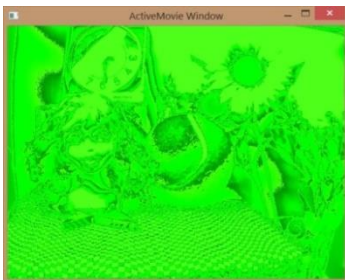
Rev. 1.0

LI-USB30-OV7251

Data Sheet

Key Features

- USB 3.0 Super Speed support
- 10-bit RAW data output without compression
- UVC compliance
- Monochrome sensor
- Global shutter
- Resolution: 640x480
- Frame rate: 100 fps
- Support register access function
- Support software and hardware trigger mode
- Provide customization services
- USB +5VDC powered device
- Compact Size: 26mmx26mm
- 2 Boards are stacked
- Part#: **LI-USB30-OV7251**
- Support multiple module options
- Default OV7251 module Part#: **LI-OV7251M-FF-80**



RAW data streaming



Camera Tool view mode



Lens Specification

- Focusing Range: 60cm to Infinity
- Focal length: 1.3 mm
- F/#: 2.8
- FOV (H): 80°
- TV Distortion < -25%

Applications

- Machine Vision
- Scientific Camera

SDK Supported

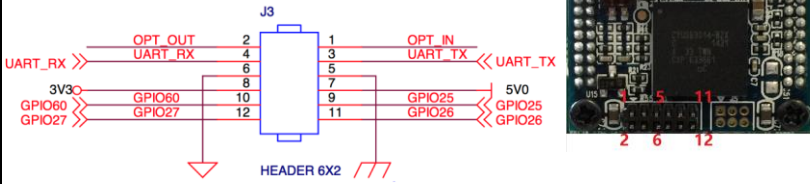
- Camera Tool Source Code in C#
- Capture & Display
- RAW to Grayscale Conversion
- Save file as BMP & RAW format
- Access registers



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Specification

General Behavior	
Video Resolution @ Frame rate	640 x 480 @ 100 fps
Sensitivity	10,800mV/(μ W.cm ⁻² .sec)@850nm
Dynamic range	10 bit
Interface (Optical)	
IR cut filter (on lens)	No
Sensor specification	OmniVision CMOS VGA image sensor OV7251
Shutter	Global shutter
Format	1/7.5"
Resolution	H:640, V:480
Pixel size	H: 3 μ m, V: 3 μ m
Interface (Electrical)	
Interface	USB 3.0
Supply voltage	USB 3.0 +5 VDC power source
Current consumption	Approx. 170 mA at 5 VDC
Software trigger	Support
Hardware trigger	Support Connect external trigger device to pin1 (OPT_IN) and pin5 (GND) of J3
 <p>The diagram shows a 6x2 pin header (J3) with the following connections:</p> <ul style="list-style-type: none"> Pin 1: OPT_IN (connected to UART_TX) Pin 2: OPT_OUT Pin 3: UART_RX Pin 4: UART_TX Pin 5: GND Pin 6: GND Pin 7: GND Pin 8: GND Pin 9: GPIO25 (connected to 5V0) Pin 10: GPIO60 Pin 11: GPIO26 Pin 12: GPIO27 <p>The photograph shows the physical device with the header J3 located near the bottom edge, with pins 1, 5, and 11 highlighted in red.</p>	
Interface (Mechanical)	
Dimensions	L: 26 mm, W: 26 mm, H: 20 mm
Mass	10 g
Adjustment (Manual)	
Shutter	Support
Gain	Support
Adjustment (Auto)	
Shutter	TBD
Gain	TBD
Environmental	
Max. temperature (operation)	0 °C ~ 50 °C (32 °F~ 122 °F)
Max. temperature (storage)	-20 °C ~ 80 °C (-4 °F~176 °F)
Max. humidity (operation)	20 % ~ 80 %, relative, non-condensing
Max. humidity (storage)	20 % ~ 80 %, relative, non-condensing

