



LEOPARD IMAGING INC

Rev. 1.1

# LI-OV580-OV7251ST

## Data Sheet

### Key Features

- USB 3.0 Super Speed support
- 8-bit RAW output without compression
- UVC compliance
- USB 2.0 backwards compatible
- Dual Camera
- Adjustable two cameras distance
- Provide customization services
- USB +5VDC powered device
- CMOS VGA image sensor
- 3 Parts: 1 OV580 and 2 OV7251
- Part#: **LI-OV580-OV7251ST**

### Interface

- Part#: AXT524124 (on OV580)
- Number of Positions: 24
- Pitch: 0.016" (0.40mm)
- Number of Rows: 2

### SDK Supported

- Camera Tool Source Code in C#
- Capture & Display



### OV7251 module Spec

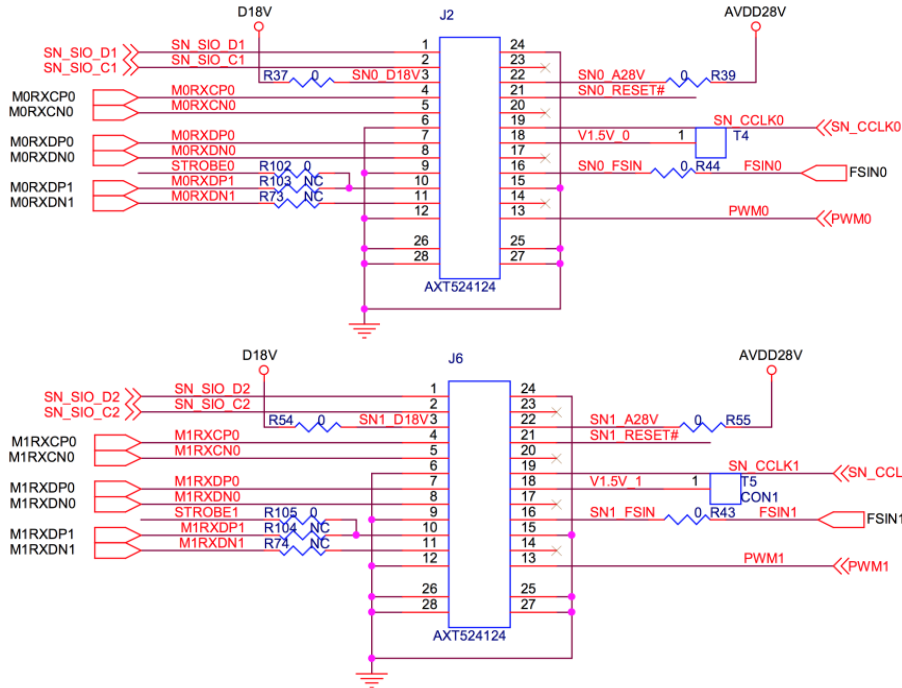
- Part#: LI-OV7251M-FF-80
- Resolution: 640 x 480
- Sensor size: 1/7.5"
- Mono sensor
- Global shutter
- MIPI Interface
- Connector: AXT624124
- Focusing range: 60cm ~ Infinity
- Focal Length: 1.3 mm
- Aperture, F/#: 2.8
- FOV (H): 80 °
- TV Distortion: < -25%



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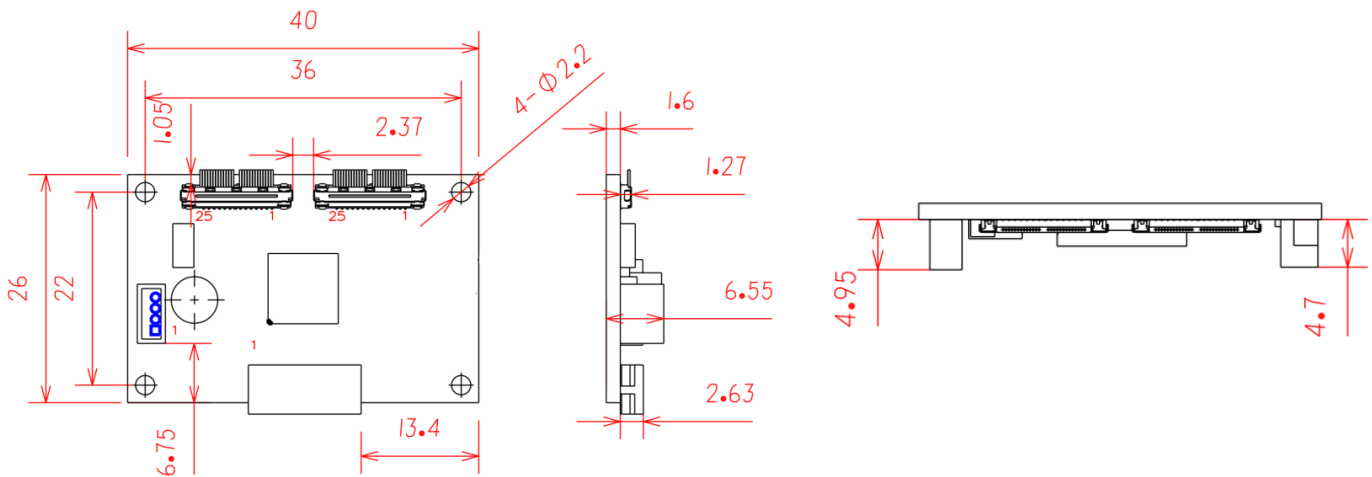
## Pin Assignment (OV580)



## Pin Assignment (OV7251)

| No. | Name      | No. | Name   | No. | Name     | No. | Name     |
|-----|-----------|-----|--------|-----|----------|-----|----------|
| 1   | SDA       | 7   | MDP    | 13  | PWM      | 19  | XCLK     |
| 2   | SCL       | 8   | MDN    | 14  | NC       | 20  | NC       |
| 3   | DOVDD1.8V | 9   | GND    | 15  | GND      | 21  | RESET    |
| 4   | MCP       | 10  | STROBE | 16  | FSIN     | 22  | AVDD2.8V |
| 5   | MCN       | 11  | ULPM   | 17  | NC       | 23  | NC       |
| 6   | GND       | 12  | GND    | 18  | DVDD1.5V | 24  | GND      |

## Dimensions (OV580)



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|                               |   |                                |
|-------------------------------|---|--------------------------------|
| General Behavior              |   |                                |
| Video Resolution @ Frame rate | 640 x 480 @ 100 fps<br>640 x 480 @ 60 fps                   |                                |
| Sensitivity                   | 7190 mV/ (uW.cm-2 .sec) @ 850nm<br>2800 mV/ Lux-sec @ 530nm |                                |
| Interface (Optical)           |   |                                |
| IR cut filter                 | No  |                                |
| Sensor specification          | OmniVision mono VGA image sensor OV7251                     |                                |
| Shutter                       | Global  |                                |
| Format                        | 1/7.5"  |                                |
| Resolution                    | H:640, V:480  |                                |
| Pixel size                    | H: 3 um, V: 3 um  |                                |
| Interface (Electrical)        |   |                                |
| Interface                     | USB 3.0   |                                |
| Supply voltage                | USB 3.0 +5 VDC power source                                 |                                |
| Current consumption           | Approx. 247mA at 5 VDC                                      |                                |
| Interface (Mechanical)        |   |                                |
| Dimensions                    | OV580   | L: 40 mm, W: 26 mm, H: 6.55 mm |
|                               | OV7251  | L: 61 mm, W: 8 mm, H: 10.9 mm  |
| Weight (with lens)            | 6 g   |                                |
| Environmental                 |   |                                |
| Max. temperature (operation)  | -30 °C ~ 70 °C (-22 °F~ 158 °F)                             |                                |
| Max. temperature (storage)    | 0 °C ~ 50 °C (32 °F~ 122 °F)                                |                                |
| Max. humidity (operation)     | 20 % ~ 80 %, relative, non-condensing                       |                                |
| Max. humidity (storage)       | 20 % ~ 80 %, relative, non-condensing                       |                                |



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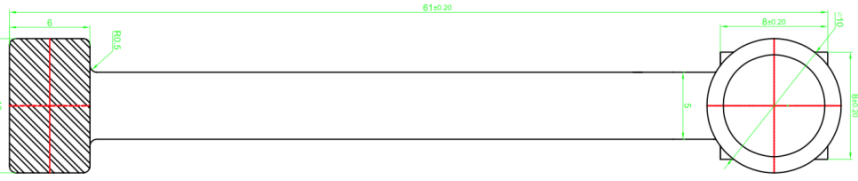
**ROHS**

Autodesk 教育版产品制作  
**LI-OV7251M-FF-80**

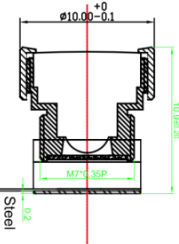
**QR-RD-F002 Rev-A**

advert:  
 basic tolerance: ±0.1mm  
 label have ""'s emphasis dimension

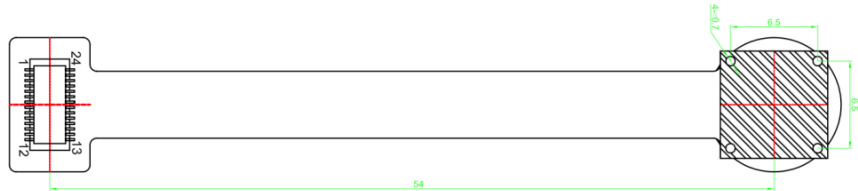
Optical Lens Specification:  
 Focusing Range 60cm ~ Infinity  
 Focal Length 1.3mm  
 F Number 2.8  
 Fov(H) 80°  
 TV Distortion <-25%



**TOP VIEW**



**SIDE VIEW**



**BOTTOM VIEW**

| NO. | SYMBOL    |
|-----|-----------|
| 1   | SDA       |
| 2   | SCL       |
| 3   | DOV0D1.8V |
| 4   | MCP       |
| 5   | MCN       |
| 6   | GND       |
| 7   | MDP       |
| 8   | MDN       |
| 9   | GND       |
| 10  | STROBE    |
| 11  | ULPM      |
| 12  | GND       |
| 13  | PWM       |
| 14  | NC        |
| 15  | GND       |
| 16  | FSIN      |
| 17  | NC        |
| 18  | DVD01.5V  |
| 19  | XCLK      |
| 20  | NC        |
| 21  | RESET     |
| 22  | AND02.8V  |
| 23  | NC        |
| 24  | GND       |

| NO. | ITEM        | Q'TY | DESCRIPTION |
|-----|-------------|------|-------------|
| 1   | Steel       | 2    |             |
| 2   | FPC         | 1    |             |
| 3   | TAKING LENS | 1    |             |
| 4   | Sensor      | 1    | OV7251 CSP  |
| 5   | Connector   | 1    | AXT624124   |

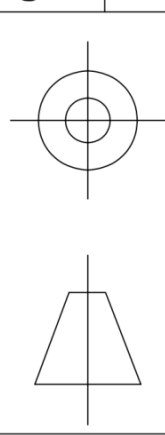
Reinforcement: 10F1 Version: 1.0

Proportion: 1:1 Unit: MM

**Leopard Imaging Inc.**

| NO | Change item | Version | Date       |
|----|-------------|---------|------------|
|    | Original    | V1.0    | 2015-11-17 |

|           |       |                  |
|-----------|-------|------------------|
| Draft:    | Date: | Project Name:    |
| Check:    | Date: | LI-OV7251M-FF-80 |
| Approval: | Date: |                  |



Note:# Image direction register use default settings.  
 Output format: Mono RAW No Filter

Autodesk



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