



LEOPARD IMAGING INC

Rev. 1.1

LI-OV580-OV9281ST

Data Sheet

Key Features

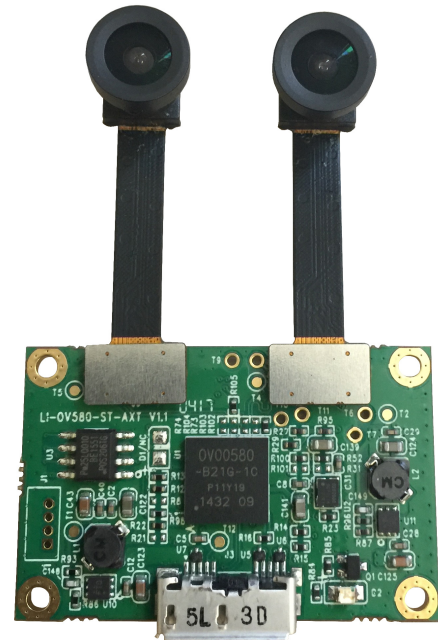
- USB 3.0 Super Speed support
- 8-bit RAW output without compression
- UVC compliance
- USB 2.0 backwards compatible
- Dual Camera
- Global shutter
- Provide customization services
- USB +5VDC powered device
- CMOS 1MP image sensor
- 3 Parts: 1 OV580 and 2 OV9281
- Weight: 6 g
- Part#: **LI-OV580-OV9281ST**

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



OV9281 module Spec

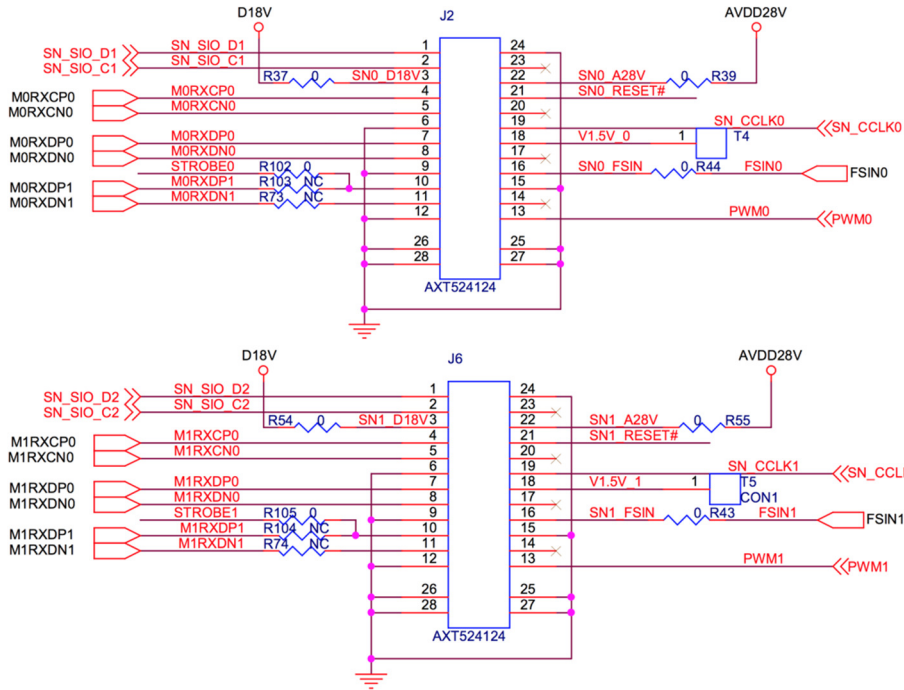
- Part#: LI-OV9281M-FF
- Resolution: 1296 x 816
- Sensor size: 1/4"
- Mono sensor
- MIPI Interface
- Connector: AXT624124
- Focusing range: 60cm ~ Infinity
- Focal Length: 2.0 mm
- Aperture, F/#: 2.5
- FOV (H): 103°
- TV Distortion: < -88%



Leopard Imaging Inc.

1130 Cadillac Ct., Milpitas, CA 95035, USA
Phone: +1-408-263-0988
Fax: +1-408-217-1960
Email: sales@leopardimaging.com
Website: www.leopardimaging.com

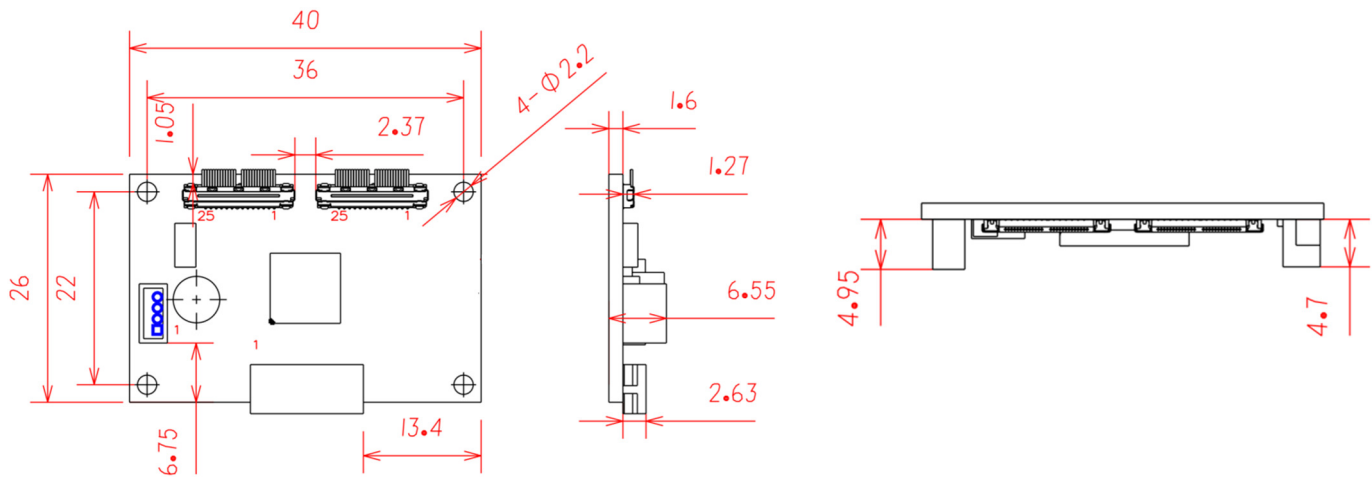
Pin Assignment (OV580)



Pin Assignment (OV9281)

| No. | Name | No. | Name | No. | Name | No. | Name |
|-----|-----------|-----|------|-----|----------|-----|----------|
| 1 | SDA | 7 | MDP0 | 13 | NC | 19 | XCLK |
| 2 | SCL | 8 | MDNO | 14 | ILPWM | 20 | STROBE |
| 3 | DOVDD1.8V | 9 | GND | 15 | GND | 21 | RESET |
| 4 | MCP | 10 | MDP1 | 16 | FSIN | 22 | AVDD2.8V |
| 5 | MCN | 11 | MDN1 | 17 | SID | 23 | ULPM |
| 6 | GND | 12 | GND | 18 | DVDD1.2V | 24 | GND |

Dimensions (OV580)



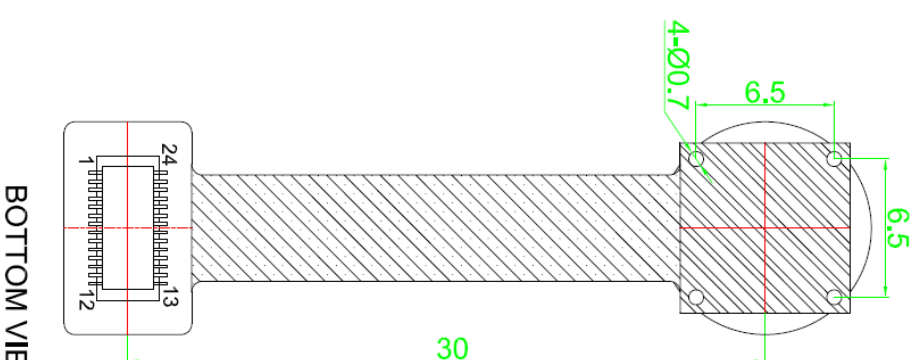
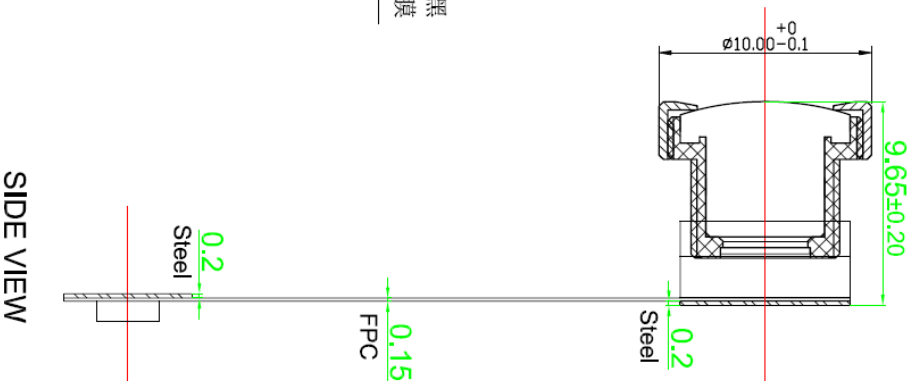
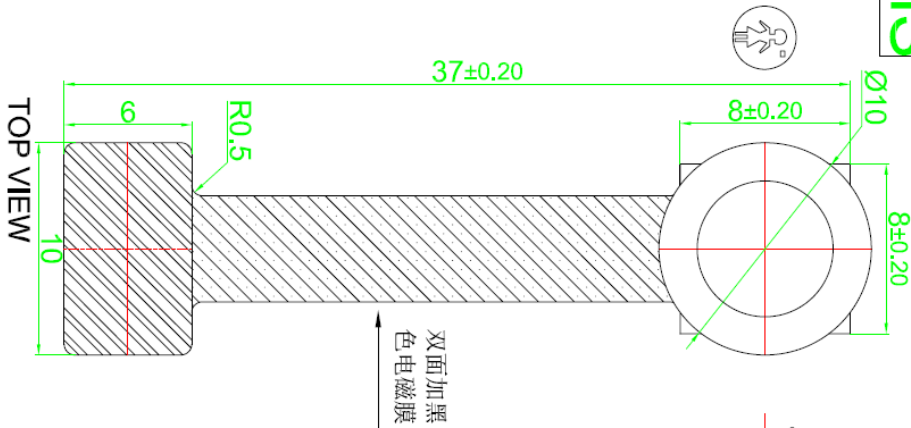
Leopard Imaging Inc.

1130 Cadillac Ct., Milpitas, CA 95035, USA
 Phone: +1-408-263-0988
 Fax: +1-408-217-1960
 Email: sales@leopardimaging.com
 Website: www.leopardimaging.com

| | | |
|-------------------------------|--|--------------------------------|
| General Behavior | | |
| Video Resolution @ Frame rate | 1280 x 800 @ 100 fps 1280 x 800 @ 50 fps 640 x 480 @ 200 fps 640 x 480 @ 50 fps | |
| Sensitivity | TBD | |
| Interface (Optical) | | |
| IR cut filter | No | |
| Sensor specification | OmniVision mono 1MP image sensor OV9281 | |
| Shutter | Global Shutter | |
| Format | 1/4" | |
| Resolution | H:1296, V:816 | |
| 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. 250mA at 5 VDC | |
| Interface (Mechanical) | | |
| Dimensions | OV580 | L: 40 mm, W: 26 mm, H: 6.55 mm |
| | OV9281 | L: 37 mm, W: 8 mm, H: 10 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 | |



ROHS



Autodesk 教育版产品制作
LI-OV9281-MIP1-H103

QR-RD-F002 Rev-A

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

Optical Lens Specification:
 Focusing Range 60cm ~ Infinity
 Focal Length 2.0mm
 F Number 2.5
 Fov(H) 103°
 TV Distortion <-25%

| NO. | SYMBOL | QTY | DESCRIPTION |
|-----|-----------|-----|-------------|
| 1 | SDA | 1 | |
| 2 | SCL | 1 | |
| 3 | DOVD01.8V | 1 | |
| 4 | MCP | 1 | |
| 5 | MCN | 1 | |
| 6 | DDND | 1 | |
| 7 | MDPO | 1 | |
| 8 | MDNO | 1 | |
| 9 | DDND | 1 | |
| 10 | MDP1 | 1 | |
| 11 | MDN1 | 1 | |
| 12 | DDND | 1 | |
| 13 | ILPM | 1 | |
| 14 | GPI02 | 1 | |
| 15 | AGND | 1 | |
| 16 | FSN | 1 | |
| 17 | SID | 1 | |
| 18 | DVDD1.2V | 1 | |
| 19 | XCLK | 1 | |
| 20 | STROBE | 1 | |
| 21 | RESET | 1 | |
| 22 | AVDD2.8V | 1 | |
| 23 | ULPM | 1 | |
| 24 | DDND | 1 | |

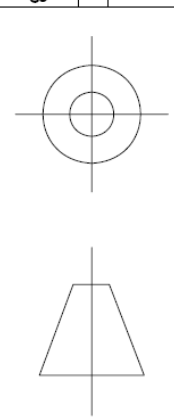
| NO | ITEM | QTY | DESCRIPTION |
|----|-------------|-----|-------------|
| 1 | Steel | 2 | |
| 2 | FPC | 1 | |
| 3 | TAKING LENS | 1 | |
| 4 | Sensor | 1 | OV9281 CSP |
| 5 | Connector | 1 | AXT824124 |

Note:# Image direction register use default settings.
 Output format: Mono RAW No Filter FPC 做4层板

Leopard Imaging Inc.



Reinforcement: 10F1 Version: 1.0
 Proportion: 1:1 Unit: MM



| NO | Change item | Version | Date |
|----|-------------|---------|------------|
| | Original | V1.0 | 2017-07-04 |

| Draft: | Date: | Project Name: |
|-----------|-------|---------------------|
| Check: | Date: | LI-OV9281-MIP1-H103 |
| Approval: | Date: | |

张健平 刘良森 ksapdntv



Leopard Imaging Inc.

1130 Cadillac Ct., Milpitas, CA 95035, USA
 Phone: +1-408-263-0988
 Fax: +1-408-217-1960
 Email: sales@leopardimaging.com
 Website: www.leopardimaging