

- ▲ Sony Polarization CMOS Image Sensor
- ▲ Global Shutter
- ▲ High Sensitivity and Low Readout Noise
- ▲ 5M Resolution
- ▲ Trigger Mode Supported
- ▲ USB3 Vision Supported



Latest Sensor Technology

With SONY's Polarization CMOS image sensor, FB Series can apply to various applications which has been difficult in tradition.

High speed imaging capability avoids image distortion on motion objects. It also eliminates the CCD smear effect and enables high speed inspection capability.

★ The Polarsens logo is trademark of Sony Corporation.

SONY

Polarsens ★

Super Speed USB 3.1 Gen1

With the USB3.1 Gen1 super speed interface, FB Series provides high speed image transferring capability.



Easy Integration

Compatible with USB3 vision and GenICam standards, FB Series offers smooth end-to-end configuration interface which reduces the integration effort and accelerates system deployment.

USB
VISION

GEN*i*CAM

Features

- SONY Polarization CMOS Image Sensor
- Global Shutter
- 5M resolution
- External Trigger and Software Trigger
- Trigger with minimum latency and jitter
- Easy integration by API library
- Accurate clock synchronization
- Extensive firmware features
- Onboard frame buffer

Specification

| | |
|--------------------------|--|
| Model | FB-SP-P |
| Sensor | Sony IMX250MZR |
| Sensor Size | 2/3" |
| Sensor Technology | Polarized Global Shutter |
| Resolution (pixels) | H x V= 2448 x 2048 (5M) |
| Pixel Size | 3.45 μm |
| System Clock | 74.25 MHz |
| Frame Rate | 74 fps @ 8-bit |
| Read-out modes | Full – 2448 x 2048 ROI – with X offset and width in 2-pixel steps, with Y offset and height in 2-line steps |
| Type | Mono |
| Camera | |
| SNR | TBD |
| Interface | USB 3.1 Gen1 |
| Video Output Format | 8, 12 bit |
| Gain | 0dB ~ +48dB |
| Synchronization | hardware trigger, software trigger, free-run |
| Trigger Input | trigger source, opto-isolated, GPIO, software |
| Trigger modes | exposure mode, timed, trigger width |
| Electronic Shutter | 13 μs to 29.999990 sec |
| Power Requirements | 8~24VDC or 5V via USB3 |
| Power Consumption | TBD |
| Mechanical Design | |
| Lens Mount | C Mount |
| Dimensions | W=29mm, H=29mm, L=30mm |
| Weight | 36g |
| Operation Temperature | 0°~50°C |
| Storage Temperature | TBD |
| Humidity | 20 – 80%, non-condensing |
| Standard | |
| Compliance | EMC: CE / FCC |
| Protocol Standard | USB3 Vision, GenICam |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|---|-----------------------|---------------------|-----|-------------------------------------|---|----------------------|----------------------------------|----------------------|---|---|---|--|-----------|---|---|---|---|---|---|---|--|-----------|---|---|--|----|---|--|
| Dimension | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Top view: 29mm x 29mm. Side view: 30mm total length, 6.3mm height, 12mm sensor offset, 26.8mm sensor width. Front view: 18mm USB port offset, 22mm total length, 16.5mm sensor offset, 20mm sensor height, 12mm sensor offset, 15mm sensor width, 23.7mm sensor offset, 4X M2 mounting holes, 3X M3 mounting holes.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DC Input/Trigger | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 5 | Opto-isolated ground | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Camera power ground | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| USB Interface | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Spectral Response | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Relative response [] vs WaveLength [nm]. The graph shows a broad peak in the visible spectrum, with relative response values ranging from approximately 0.4 at 400nm to 1.0 at 650nm, and then decreasing to about 0.3 at 900nm.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |