

产品概览

PYTHON5000: CMOS 图像传感器，5.3 MP，全局快门

欲看完整文档，请参阅数据表。

PYTHON 5000 是一款 1" 530 万像素 CMOS 图像传感器，像素阵列列为 2592 X 2048。高灵敏度的 4.8 μm x 4.8 μm 像素支持低噪点“管线”和“触发”全局快门读取模式。另外，全局快门模式下的关联双采样 (CDS) 支持可降低噪点，提高动态范围。该传感器具有片上可编程增益放大器和 10 位 A/D 转换器。集成时间和增益参数可以重新配置，而不会出现任何可见的图像瑕疵。可选的片上自动曝光控制环路 (AEC) 动态控制这些参数。图像的黑度等级可自动校准或通过增加用户可编程的偏移进行调整。使用四线串行外围接口的较高编程能力让用户能够读取感兴趣的具体区域。最多可编程 16 个区域，实现更高的帧速率。该传感器的 P1 版本具有 8 个 LVDS 通道，在零 ROT 模式下实现最高每秒 100 帧的帧速率。P3 版本具有 4 个 LVDS 通道，在零 ROT 模式下实现最高每秒 45 帧的帧速率。每个沟道均以 720 Mbps 运行。提供了一个包含负载信息的单独同步沟道，实现了接收端的图像重构。PYTHON 5000 采用 84 引脚 LCC 封装，提供带和不带保护胶带的单色、彩色和扩展近红外 (NIR) 版本。

特性

- IP-CDS global shutter technology
- True HW scalable family concept
- High configurability
- Fast adaptability
- Multiple windowing
- Higher frame rates
- High Dynamic Range

应用

- Image Capture

优势

- Enables global shutter imaging with single digit noise performance
- Easily adopt multiple resolutions (5 resolutions with single PCB)
- High flexibility to optimize sensor for customer application
- Fast switching between operating modes
- Speed increase from windowing in x- and y- direction
- Faster image capturing capabilities
- Retain image detail in high-contrast scenes

终端产品

- Industrial cameras and systems
- Inspection systems (food, bottles, recycling labels)
- Machine Vision camera
- Medical Imaging Systems
- Intelligent Transportation Systems (ITS) camera

器件电气规格

| 产品 | Pricing (\$/Unit) | Compliance | Status | Type | Megapixels | Frame Rate (fps) | Optical Format | Shutter Type | Pixel Size (μm) | Output Interface | Color | Package Type |
|------------------|-------------------|------------------------|--------|------|------------|------------------|----------------|--------------------------------|-----------------|------------------|-------------|--------------|
| NOIP1FN5000A-QTI | | Pb-free Halide free | Active | CMOS | 5.3 | 100 | 1 inch | Pipelined and Triggered Global | 4.8 x 4.8 | LVDS | NIR | LCC-84 |
| NOIP1SE5000A-LTI | | Pb-free Halide free | Active | CMOS | 5.3 | 100 | 1 inch | Pipelined and Triggered Global | 4.8 x 4.8 | LVDS | Bayer Color | LBGA-128 |
| NOIP1SE5000A-QTI | | Pb-free Halide free | Active | CMOS | 5.3 | 100 | 1 inch | Pipelined and Triggered Global | 4.8 x 4.8 | LVDS | Bayer Color | LCC-84 |
| NOIP1SN5000A-LTI | | Pb-free Halide free | Active | CMOS | 5.3 | 100 | 1 inch | Pipelined and Triggered Global | 4.8 x 4.8 | LVDS | Mono | LBGA-128 |
| NOIP1SN5000A-QTI | | Pb-free Halide free | Active | CMOS | 5.3 | 100 | 1 inch | Pipelined and Triggered Global | 4.8 x 4.8 | LVDS | Mono | LCC-84 |
| NOIP3SE5000A-QTI | | Pb-free Halide free | Active | CMOS | 5.3 | 45 | 1 inch | Pipelined and Triggered Global | 4.8 x 4.8 | LVDS | Bayer Color | LCC-84 |
| NOIP3SN5000A-QTI | | Pb-free Halide free | Active | CMOS | 5.3 | 45 | 1 inch | Pipelined and Triggered Global | 4.8 x 4.8 | LVDS | Mono | LCC-84 |

欲了解更多信息，请联系您当地的销售支援 www.onsemi.cn。

创建于：7/9/2020