

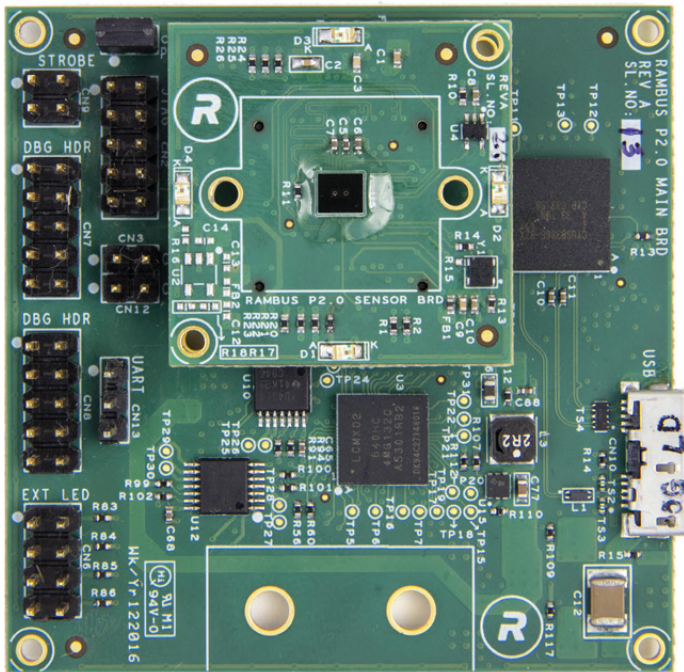


Lensless Smart Sensor POD 2.0 Evaluation Kit

Enables a quick and easy way to evaluate the application-specific performance of the Lensless Smart Sensor

Overview

Lensless Smart Sensor (LSS) is a low-power, low-cost visual sensor that captures information-rich scene data in a tiny form factor using a revolutionary new approach to optical sensing that uses tiny diffractive optics in place of a focusing lens. With its small size and wide field of view, LSS is ideal for many applications including head-mounted eye tracking, occupant sensing and counting, and point tracking.



POD 2.0 Board Stack

The POD 2.0 evaluation kit is designed to allow OEMs to analyze performance and develop algorithms for new applications with the Rambus LSS. The kit includes everything required to assess the fitness of LSS for many applications, and offers an ideal base for customized development. The simple, two-board design features the OmniVision OV7251 and a USB 3.0 interface for out-of-the-box use. Additionally, the kit comes with integrated NIR LEDs and a wide spectral response for use in a wide range of lighting conditions.

Highlights

Small Form Factor, Low Power, Low Cost

- Incredibly small size and low power allow for dramatic system cost reduction
- Protects privacy while still providing accurate data

Flexible Design

- Wide scene illumination range enabled by broad spectral response and integrated NIR LEDs
- Variable sensing speeds support a variety of operating scenarios

Simple Integration

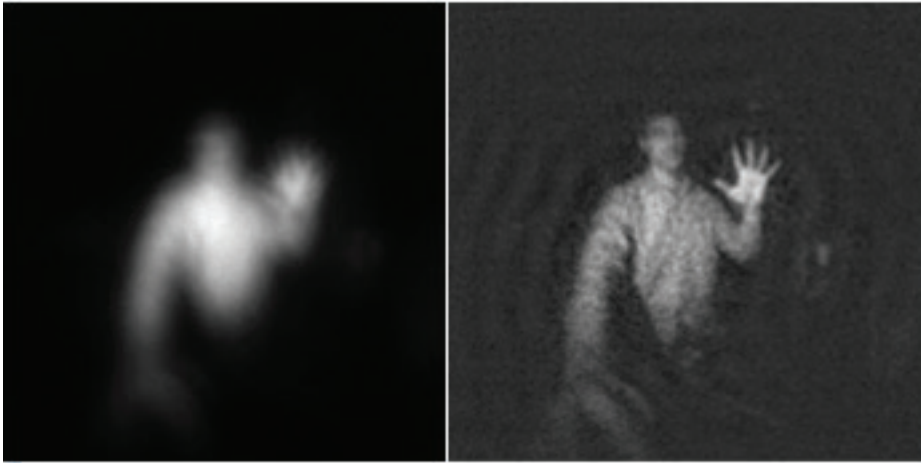
- Standard USB 3.0 interface
- Powerful control software and algorithms native to Windows

Use Cases

The uses for LSS are very diverse and the evaluation kit is designed to help you easily and quickly assess its use in your application.

- Near field eye tracking for AR/VR systems
- Occupancy detection and counting for Smart Building and Smart Home
- Spot/Point Tracking
- Foot traffic and location monitoring for sales data collection

LSS Blob Reconstruction



Blob Image

Reconstructed image

Deliverables

- LSS Module: Dual diffractive grating with OmniVision OV7251
- Sensor Board
- Interface Board
- USB cable
- Control Software
- Mounting Hardware
- Documentation

Also Available:

- Reference algorithms libraries
- Software Development Kit (SDK)

Key System Features

- Highly-sensitive LSS Module with a wide spectral response (350nm – 1000nm)
- Low power consumption
- Integrated NIR LEDs allow for a variety of lighting scenarios
- Dual gratings allow for reconstructed stereoscopic viewing
- Standard USB 3.0 interface
- Variable frame rate up to 100fps
- Simple, two-board design to minimize startup time
- Command and control signals can be accessed through onboard headers
- Integrated control software designed for Windows
- Provides actionable scene data, while preserving occupant's privacy
- Small form factor and wide depth of field allow for unparalleled near-field imaging ability



LSS Spiral Grating

rambus.com/lss

