XinaBox Datasheet SL07 - Passive InfraRed Sensor (PIR)

Passive Infrared Sensor

Product Highlight

- Calibration data for ambient and object temperature sensing.
- Interrupt function for presence, motion, over-temperature.
- Passive Infrared Sensor.

Overview

This xCHIP is equipped to measure infrared light (IR) (https://en.wikipedia.org/wiki/Infrared) radiating from objects in its field of view. SL07 is based on the TPIS 1S 1385 passive infrared (PIR) sensor.

It features a wide field of view and a low power consumption. The technology of a high sensitive thermopile combined with a smart data treatment allows for much more than the traditional temperature measurement of remote objects. Once configured via the I^{2}C interface an interrupt output can be used to monitor motion, presence or an over-temperature of remote objects. One typical application are very thin battery operated devices which have to be waked-up only when presence of a human has been discovered in a small distance of up to 3 m. The whole device can be designed very thin since no optical components such as Fresnel-lenses are required for that application.

Applications

- Near-field human presence sensing.
- Far-field human motion detection (with lens).

Specifications

- Based on TPiS 1S 1385 From Excelitas Technologies.
- High sensitivity thermopile with 120◦ field-of-view.
- I^{2}C interface, hardware configurable address.
- Calibration data for ambient and object temperature sensing.
- Serial Clock Input: The I^{2}C clock input for the data line. Up to 400 kHz are possible. The host must support clock stretching.
- Operating Temperature −20 - 85◦C.

External Links

Documents

- TPIS 1S 1385 From Excelitas Technologies. (https://media.digikey.com/pdf/Data%20Sheets/Excelitas%20PDFs/TPiS_1S_1385.pdf)

Shop

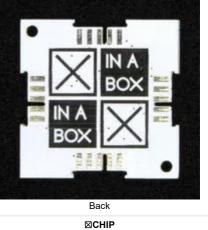- Buy SL07 (https://xinabox.cc/collections/sensors/products/sl07?variant=52457155268)

GitHub

- SL07 on GitHub (https://github.com/xinabox/xSl07)

SL07 - Passive InfraRed Sensor (PIR)

Front

Back

⊠CHIP	
Main Category	Sensor
Sub Category	Light
Introduced	1 January 2017
Current version	0.5.0
Current version date	1 January 2017
Dimensions	
Size	2U × 2U
Main Chip Set	
Main Chip	TPIS 1S 1385