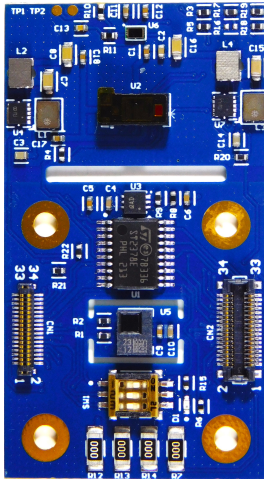


## Presence detection add-on for STWIN.box



### Features

- Kit content:
  - STEVAL-PDETECTS1 board
  - TMOS long range Fresnel lens: TMOS63-10
  - Plastic case for TMOS63-10 Fresnel lenses
  - Time-of-Flight cover glass: IR136C0-IC09-A066
  - STEVAL-FLTCB03 flex cable
- Compatible with [STEVAL-STWINBX1](#) (not included)
- Key sensor products:
  - [VD6283TX](#) ambient light sensor
  - [VL53L8CX](#) FlightSense sensor
  - [STHS34PF80](#) infrared sensor for motion and presence detection
- Ready to use data logging application

### Description

The **STEVAL-PDETECT1** is a presence detection add-on evaluation kit for STWIN.box, targeting human presence applications. It enables low-power applications, user privacy, and it reduces false triggers with multisensor modalities.

It is possible to use simultaneously up to three add-on boards in a daisy-chain configuration.

The kit is based on three sensors: [STHS34PF80](#), [VL53L8CX](#), and [VD6283TX](#).

The [STHS34PF80](#) sensor has been designed to measure the amount of IR radiation emitted from an object within its field of view. The information is digitally processed by the ASIC, which can be programmed to monitor motion, presence, or an overtemperature condition.

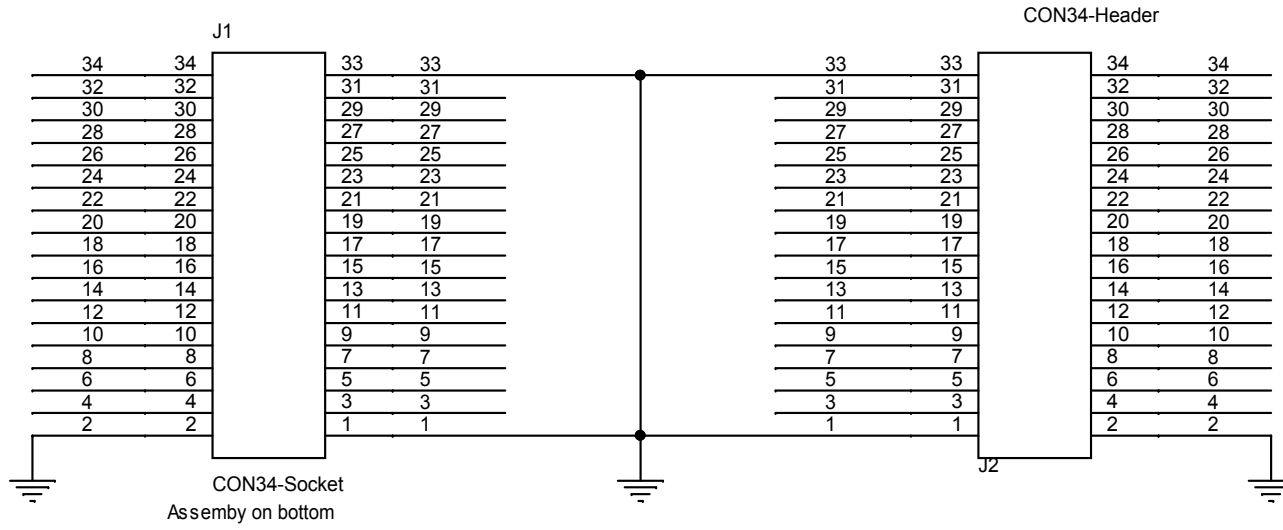
The [VL53L8CX](#) is a multizone (either 4x4 or 8x8) ToF ranging sensor, which enhances performance under ambient light with a reduced power consumption. Based on STMicroelectronics' FlightSense technology, the sensor is designed to provide accurate ranging up to 400 cm with a 65° diagonal field of view (FoV).

The [VD6283TX](#) (1.83 x 1.0 x 0.55 mm) is ST's new color sensor with advanced light flicker extraction. Light measurement is fast and accurate thanks to an individual ADC and a readout for each color channel. The [VD6283TX](#) uses hybrid color filters with precise responses allowing accurate computation of the correlated color temperature (CCT) and Lux information. The [VD6283TX](#) can be used for display brightness management or scene light correction.

Product summary	
Presence detection add-on for STWIN.box	<a href="#">STEVAL-PDETECT1</a>
Low-power, high-sensitivity infrared (IR) sensor for presence and motion detection	<a href="#">STHS34PF80TR</a>
Low-power high-performance 8x8 multizone Time-of-Flight sensor (ToF)	<a href="#">VL53L8CXV0GC/1</a>
Hybrid filter multispectral sensor with light flicker engine (Ambient Light Sensor)	<a href="#">VD6283TX45/1</a>
STM32Cube function pack for high speed datalogging and ultrasound processing	<a href="#">FP-SNS-DATALOG2</a>
STWIN.box - SensorTile Wireless Industrial Node Development Kit	<a href="#">STEVAL-STWINBX1</a>
Applications	<a href="#">Presence Sensing</a>



Figure 2. STEVAL-FLTCB03 circuit schematic



## 2 Kit versions

**Table 1. STEVAL-PDETECT1 versions**

PCB version	Schematic diagrams	Bill of materials
STEVAL\$PDETECT1A <sup>(1)</sup>	STEVAL\$PDETECT1A schematic diagrams	STEVAL\$PDETECT1A bill of materials

1. This code identifies the STEVAL-PDETECT1 evaluation kit first version. The evaluation kit with order code STEVAL-PDETECT1 contains the boards STEVAL\$PDETC1A and STEVAL\$FLTCB03A.



## Revision history

**Table 2. Document revision history**

Date	Revision	Changes
01-Mar-2024	1	Initial release.
17-Apr-2024	2	Updated <a href="#">Section Features</a> and product summary table.



**IMPORTANT NOTICE – READ CAREFULLY**

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgment.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, refer to [www.st.com/trademarks](http://www.st.com/trademarks). All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2024 STMicroelectronics – All rights reserved