

## Breakout board embedding the VL53L4CD Time-of-Flight high-accuracy proximity sensor

### VL53L4CD

Breakout Boards



- Time-of-Flight proximity sensor with high accuracy based on **FlightSense™** technology
- Breakout boards for easy and fast prototyping
- Compatible with X-NUCLEO-53L4A1



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ST part number: SATEL-VL53L4CD
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### Features

- **VL53L4CD** Time-of-Flight high-accuracy proximity sensor
- High-performance proximity ranging, independent of the target size and reflectance
- From 0 to 1300 mm with full field of view (FoW)
- Short distance linearity down to 1 mm
- Divisible board that can be used as a mini-PCB breakout board, easy to integrate into the customer's device
- Two breakout boards available in the package
- Compatible with **X-NUCLEO-53L4A1**

### Description

The **SATEL-VL53L4CD** package includes two breakout boards, which can be easily integrated into the customer's devices.

The PCB section that embeds the **VL53L4CD** module is perforated. The developers can then break off the mini-PCB and use it in a 3.3 V supply application via flying wires.

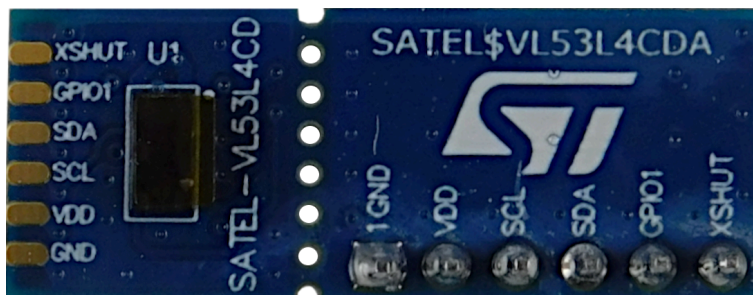
This makes it easier to integrate the **SATEL-VL53L4CD** breakout boards into the development and evaluation devices thanks to their small size.

| Product summary  |   |
|--|---|
| Breakout board embedding the VL53L4CD Time-of-Flight high-accuracy proximity sensor                  | SATEL-VL53L4CD  |
| Time-of-Flight high-accuracy proximity sensor expansion board based on the VL53L4CD for STM32 Nucleo | X-NUCLEO-53L4A1   |
| Time-of-Flight high-accuracy proximity sensor  | VL53L4CD  |
| Applications   | Personal Electronics<br>- Audio and Video<br>Gaming and Drones<br>Virtual - Augmented Reality<br>Wearable |

## 1 Breakout boards

You can break the breakout boards along the perforations to use the mini-PCB.

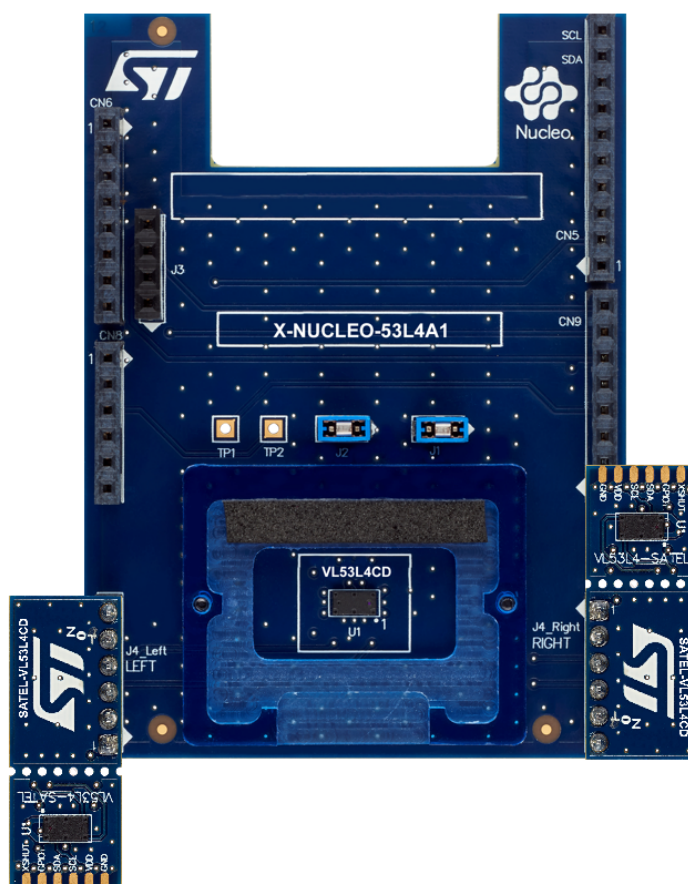
**Figure 1. Breakout board**



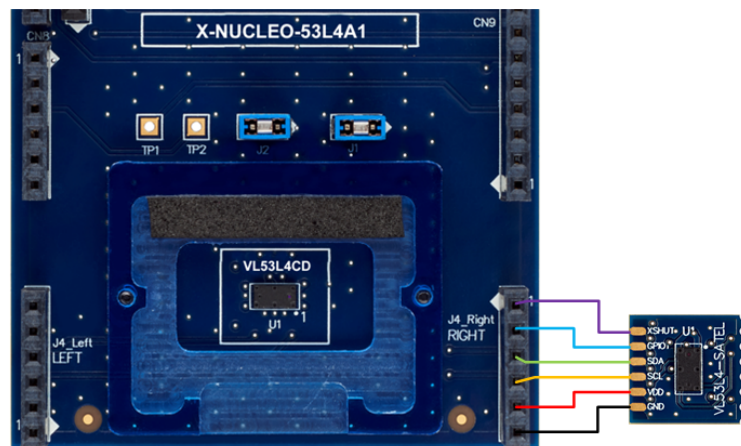
This setup is easier to integrate into a customer's device thanks to its small form factor.

You can plug the VL53L4CD breakout boards directly onto the X-NUCLEO-53L4A1 expansion board through two six-pin connectors (Figure 2), or connect them to the board through flying wires (Figure 3).

**Figure 2. SATEL-VL53L4CD breakout boards connected to the X-NUCLEO-53L4A1 expansion board**

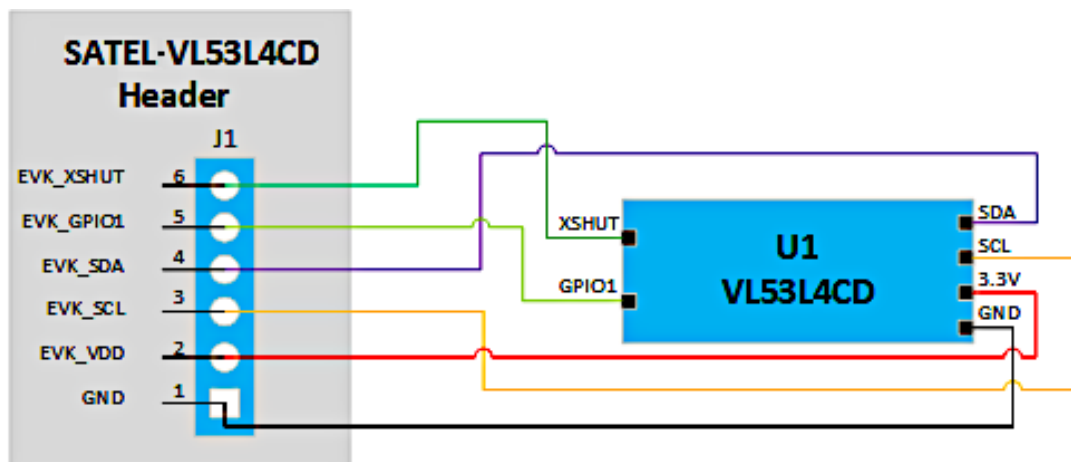


**Figure 3.** SATEL-VL53L4CD mini-PCB flying wire connection to the X-NUCLEO-53L4A1 expansion board



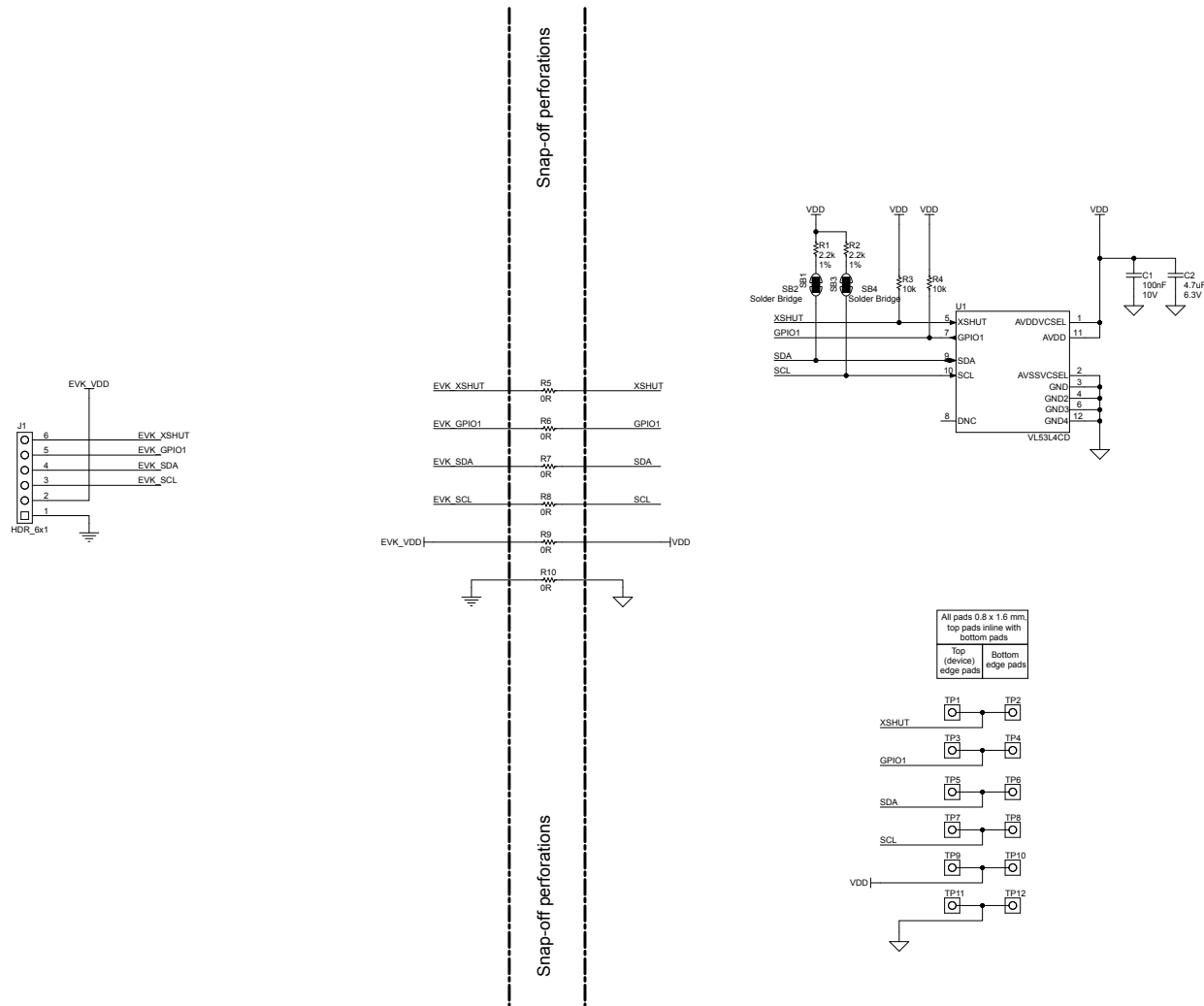
## 2 Simplified schematic

Figure 4. SATEL-53L4CD simplified schematic



### 3 Schematic diagrams

Figure 5. SATEL-VL53L4CD circuit schematic



## 4 Board versions

**Table 1. SATEL-53L4CD versions**

| Finished good                   | Schematic diagrams                                  | Bill of materials                                  |
|---------------------------------|---|--|
| SATEL\$VL53L4CDA <sup>(1)</sup> | <a href="#">SATEL\$VL53L4CDA schematic diagrams</a> | <a href="#">SATEL\$VL53L4CDA bill of materials</a> |

1. This code identifies the SATEL-VL53L4CD expansion board first version.

## Revision history

**Table 2. Document revision history**

| Date        | Revision | Changes                      |
|-------------|----------|------------------------------|
| 24-Jan-2022 | 1        | Initial release.             |
| 08-Mar-2022 | 2        | Updated cover page features. |
| 09-May-2022 | 3        | Updated cover image.         |

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