

## Breakout board based on the VL53L7CX Time-of-Flight 8x8 multizone ranging sensor with 90° FoV



### Features

- [VL53L7CX](#) Time-of-Flight 8x8 multizone ranging sensor with 90° FoV
- Accurate absolute ranging distance, independent of the reflectance of the target
- Multizone ranging output with 4x4 or 8x8 separate zones
- 60° x 60° square FoV (90° diagonal)
- 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-53L7A1](#)

### Description

The [SATEL-VL53L7CX](#) package includes two breakout boards, which can be easily integrated into the customer's devices.

The PCB section that embeds the [VL53L7CX](#) 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.

The [VL53L7CH](#) artificial enabler Time-of-Flight sensor is also supported by the [SATEL-VL53L7CX](#).

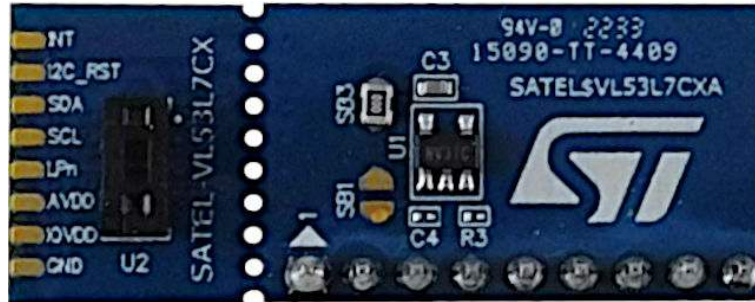
This makes it easier to integrate the [SATEL-VL53L7CX](#) breakout boards into the development and evaluation devices, thanks to their small size.

Product summary	
Breakout board based on the VL53L7CX Time-of-Flight 8x8 multizone ranging sensor with 90° FoV	<a href="#">SATEL-VL53L7CX</a>
Time-of-Flight 8x8 multizone ranging sensor with 90° FoV expansion board based on the VL53L7CX for STM32 Nucleo	<a href="#">X-NUCLEO-53L7A1</a>
Time-of-Flight 8x8 multizone ranging sensor with 90° FoV	<a href="#">VL53L7CXV0GC/1</a>
Applications	Personal Electronics - Audio and Video  Gaming and Drones  Virtual - Augmented Reality  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 VL53L7CX breakout boards directly onto the X-NUCLEO-53L7A1 expansion board through two six-pin connectors (Figure 2), or connect them to the board through flying wires (Figure 3).

Figure 2. SATEL-VL53L7CX breakout boards connected to the X-NUCLEO-53L7A1 expansion board

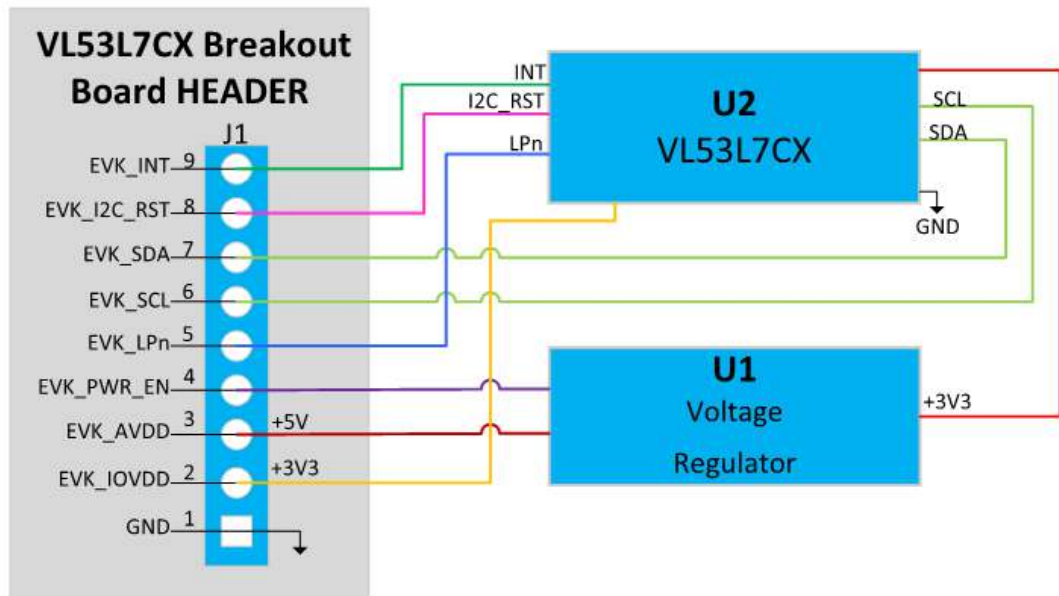


Figure 3. SATEL-VL53L7CX mini-PCB flying wire connection to the X-NUCLEO-53L7A1 expansion board



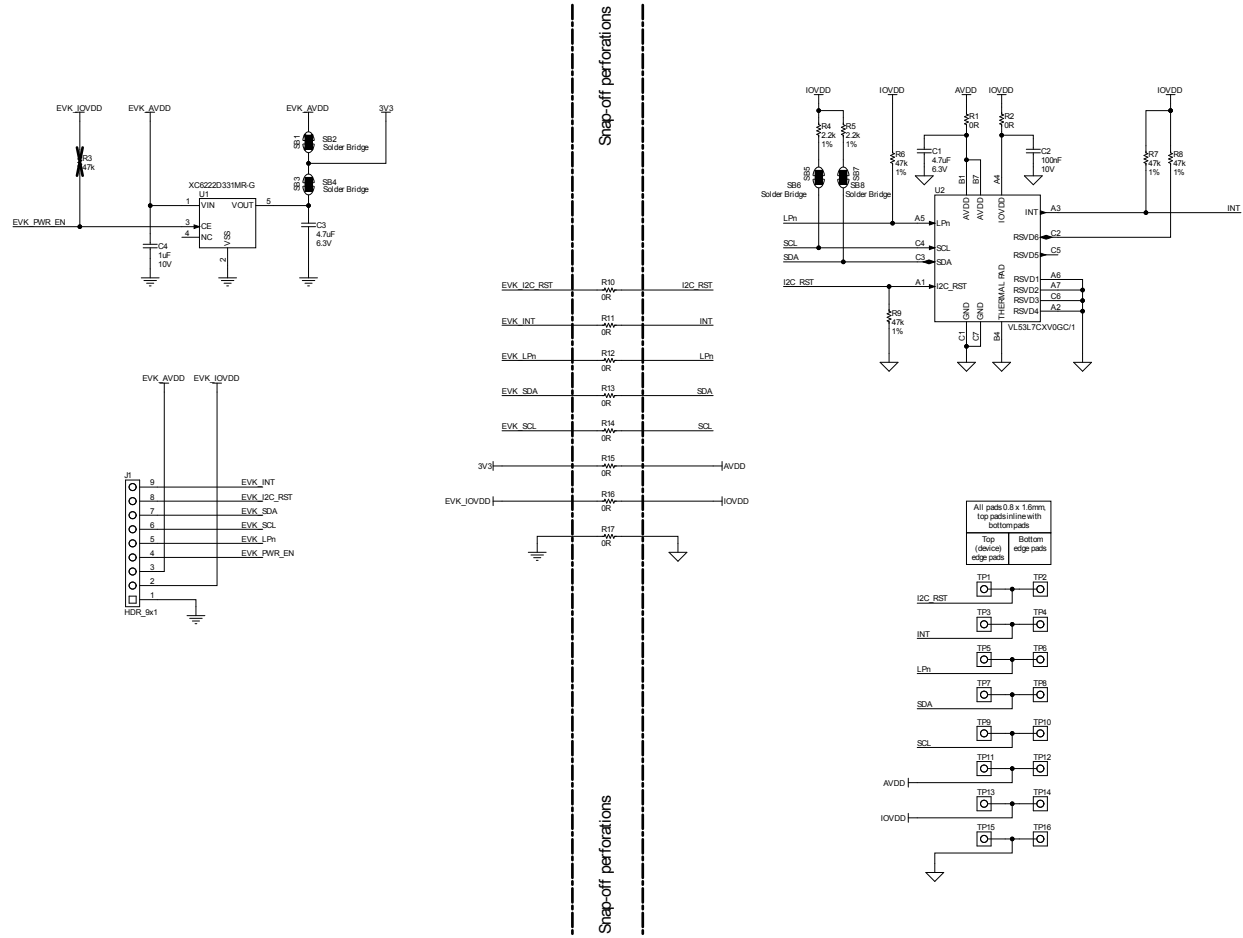
## 2 Simplified schematic

Figure 4. SATEL-53L7CX simplified schematic



### 3 Schematic diagrams

Figure 5. SATEL-VL53L7CX circuit schematic



## 4 Board versions

**Table 1. SATEL-53L7CX versions**

Finished good	Schematic diagrams	Bill of materials
SATEL\$VL53L7CXA <sup>(1)</sup>	SATEL\$VL53L7CXA schematic diagrams	SATEL\$VL53L7CXA bill of materials

1. This code identifies the SATEL-VL53L7CX expansion board first version.

## Revision history

**Table 2. Document revision history**

Date	Revision	Changes
26-Sep-2022	1	Initial release.
28-Jun-2023	2	Updated the description.

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