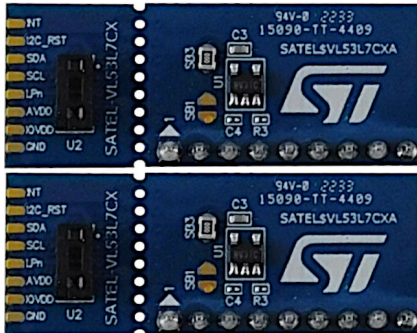


Breakout board based on the VL53L7CX Time-of-Flight 8x8 multizone ranging sensor with 90° FoV



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](#).

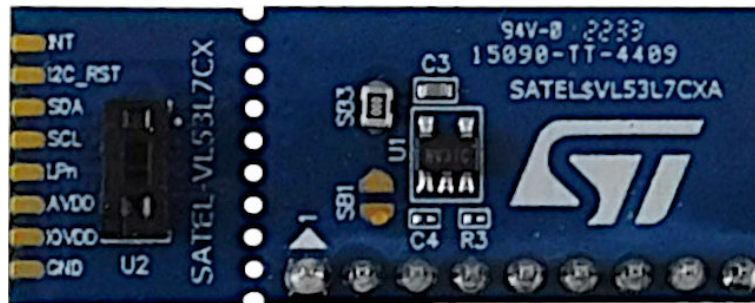
This makes it easier to integrate the [SATEL-VL53L7CX](#) breakout boards into the development and evaluation devices, thanks to their small size.

Product summary	
Breakout board based on the VL53L7CX Time-of-Flight 8x8 multizone ranging sensor with 90° FoV	SATEL-VL53L7CX
Time-of-Flight 8x8 multizone ranging sensor with 90° FoV expansion board based on the VL53L7CX for STM32 Nucleo	X-NUCLEO-53L7A1
Time-of-Flight 8x8 multizone ranging sensor with 90° FoV	VL53L7CXV0GC/1
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



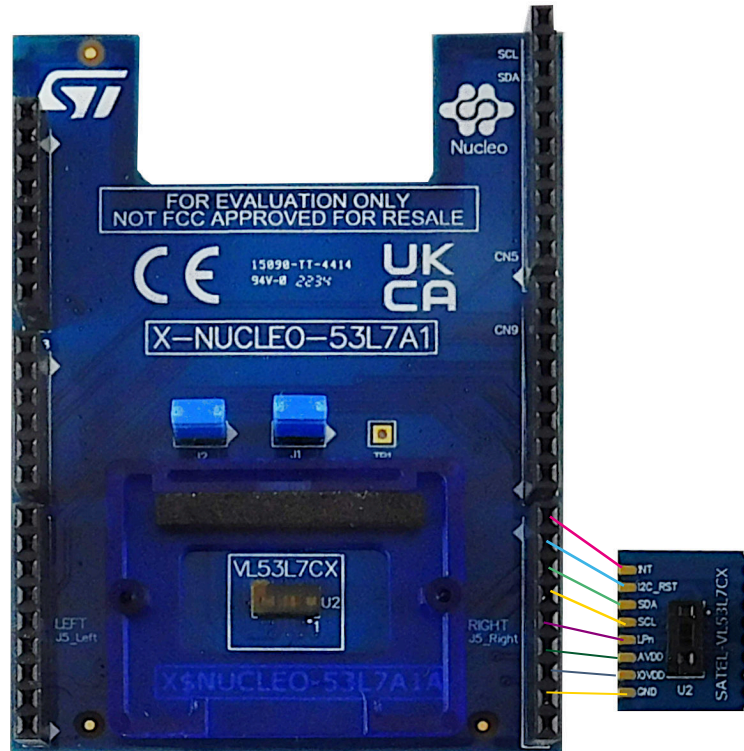
This setup is easier to integrate into a customer's device thanks to its small form factor.

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

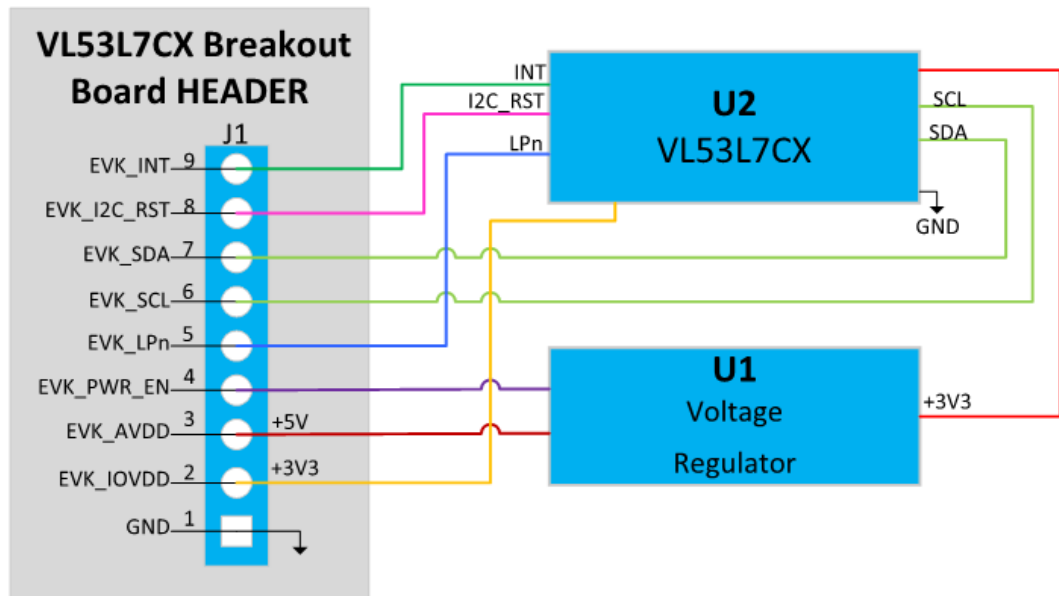


Figure 3. SATEL-VL53L7CX mini-PCB flying wire connection to the X-NUCLEO-53L7A1 expansion board



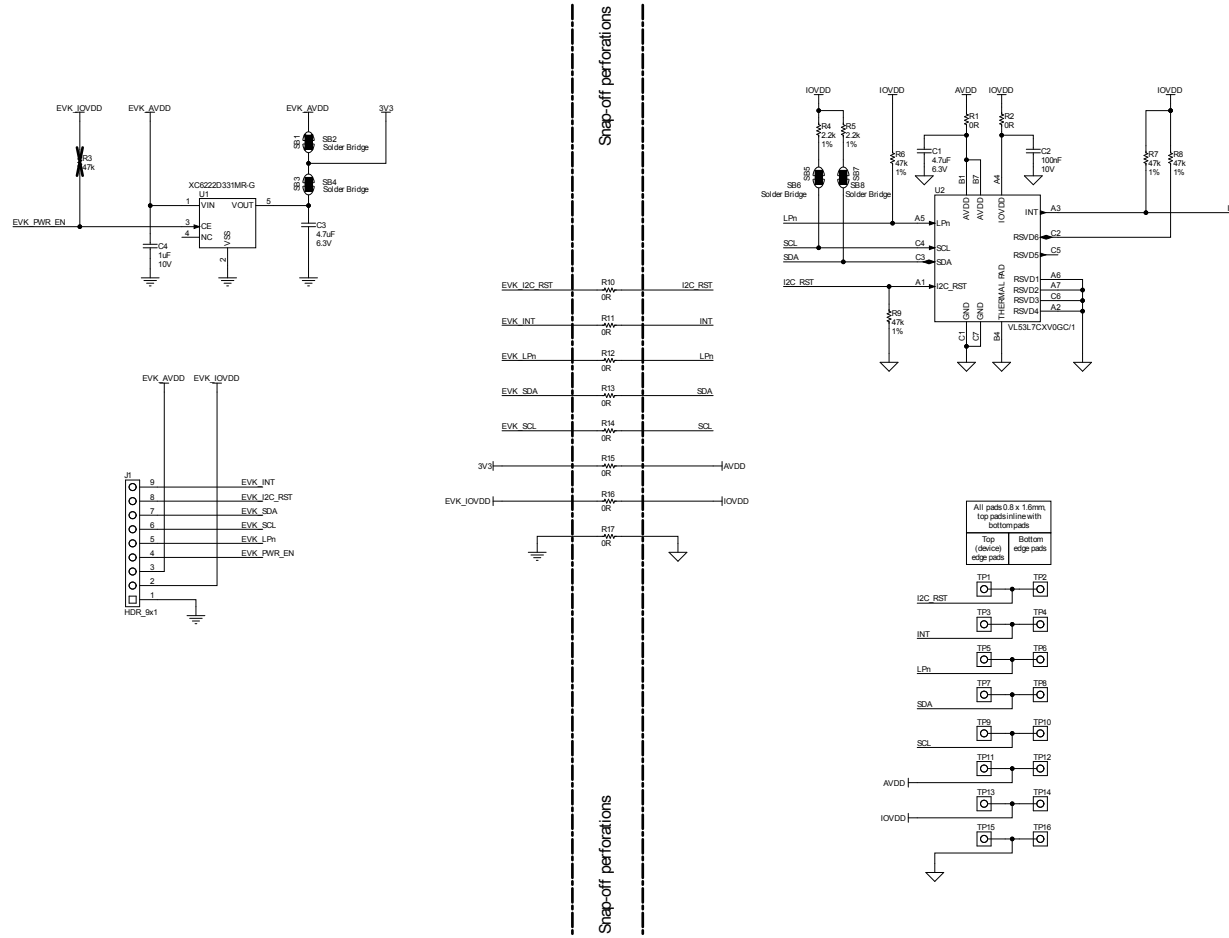
2 Simplified schematic

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 ⁽¹⁾	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.

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. 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.

© 2023 STMicroelectronics – All rights reserved