

---

## How to connect the SATEL-VL53L4 series to an STM32 Nucleo-64 board

### Introduction

The purpose of this document is to show how to connect the SATEL-VL53L4CD, SATEL-VL53L4CX, or SATEL-VL53L4ED to an STM32 Nucleo-64 board.

The SATEL boards are composed of one miniaturized breakout board, that enables easy integration into customer development and evaluation devices. The PCB section supporting the sensor is perforated, so developers can break off the mini-PCB for use in a 3.3 V supply application using flying wires.

The SATEL boards are designed to connect the sensor remotely to any type of electronic controller.

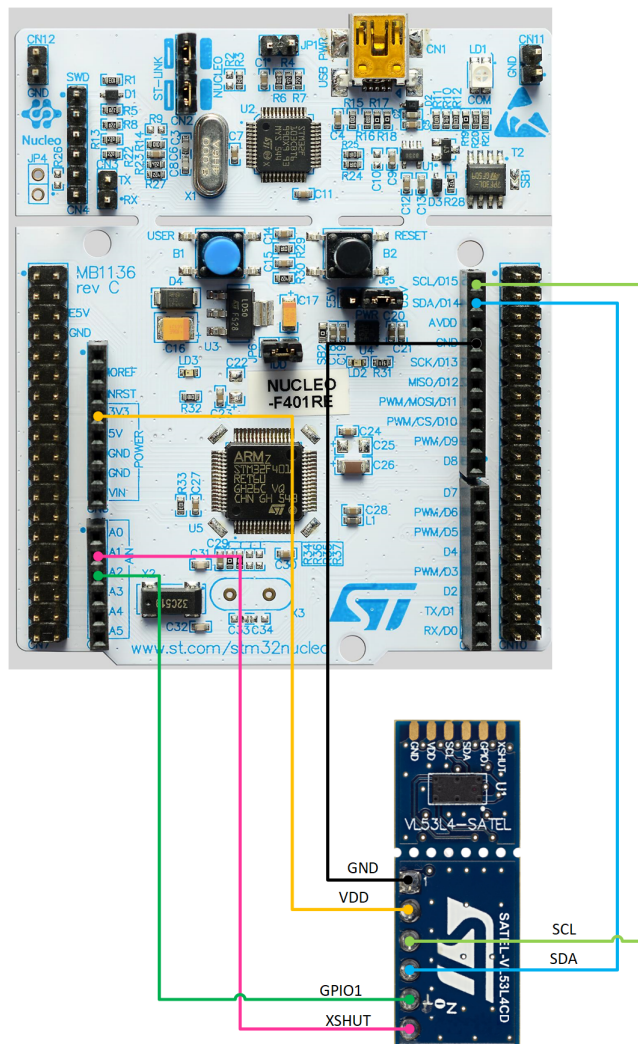
# 1 Hardware connection guidelines

In the following section, the SATEL-VL53L4CD is taken as an example. The same can be reproduced for SATEL-VL53L4CX or SATEL-VL53L4ED.

## Use of flying wires to connect a SATEL-VL53L4CD board to a NUCLEO-F401RE board

Figure 1. Flying wires to connect a SATEL-VL53L4CD board and a NUCLEO-F401RE board shows how to connect the SATEL-VL53L4CD board directly to a NUCLEO-F401RE board, without an X-NUCLEO-53L4A2 expansion board.

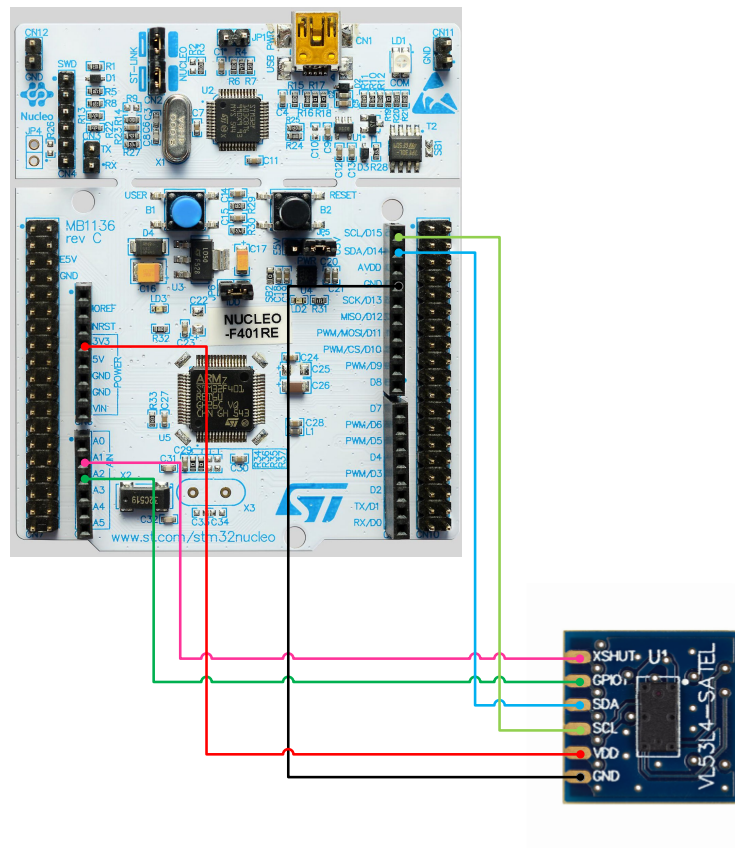
**Figure 1. Flying wires to connect a SATEL-VL53L4CD board and a NUCLEO-F401RE board**



### Use of flying wires to connect a SATEL-VL53L4CD mini-PCB to a NUCLEO-F401RE board

Solder the wires from the satellite breakout PCB to connect it to the NUCLEO-F401RE (see Figure 2. Flying wires to connect a VL53L4CD mini-PCB board and a NUCLEO-F401RE board).

**Figure 2.** Flying wires to connect a VL53L4CD mini-PCB board and a NUCLEO-F401RE board



### Reference documents

VL53L4CX datasheet: DS13805

VL53L4CD datasheet: DS13812

VL53L4ED datasheet: DS14256

## Revision history

**Table 1. Document revision history**

Date	Version	Changes
11-Dec-2023	1	Initial release
09-Sep-2024	2	Use of flying wires to connect a SATEL-VL53L4CD mini-PCB to a NUCLEO-F401RE board: Removed the note and updated the image.

**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