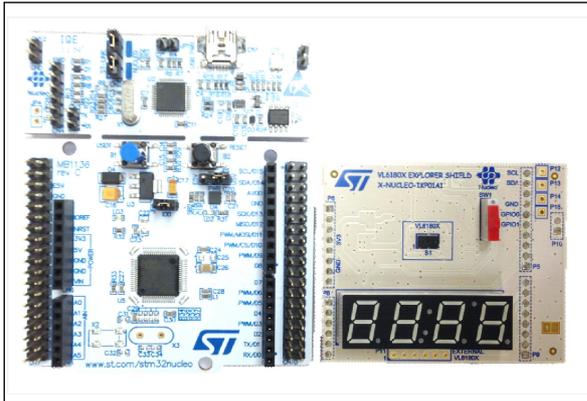


## VL6180X explorer kit, complete solution with STM32 F401RE nucleo board and VL6180X expansion board

Data brief



### Features

- 1 Nucleo board with STM32 F401RE microcontroller in LQFP64 package
- Flexible board power supply
  - USB VBUS or external source (3.3 V, 5 V, 7 - 12 V)
  - Power management access point
- 1 VL6180X Gesture, ALS and proximity sensor.
- Slider switch controlling 2 functions:
  - Ranging measurement, beyond 100mm.
  - Ambient light sensing, up to 9999 Lux.
- 4-digit display, displaying either the lux value from the ambient light sensing (ALS) or the target distance from the proximity sensor.
- Excellent ranging accuracy, whatever the reflectance of the target.
- External small PCB with VL6180X can be soldered to the expansion board through flying wires, in order to integrate the VL6180X in customer's application.
- Basic gesture recognition, or 2x VL6180X application can be featured, using together the sensor on the expansion board and an external sensor.
- Equipped with Arduino UNO R3 connector.

- RoHS compliant.
- Full system SW supplied, download from
- [www.st.com/vl6180x](http://www.st.com/vl6180x)

### Description

The EVALKIT-VL6180X is an evaluation kit that provides an introduction to the proximity, ranging and light sensing capabilities of the VL6180X sensor, combined with the powerful STM32 F401RE microcontroller.

The STM32 Nucleo board provides an affordable and flexible way for users to try out new ideas and build prototypes with any STM32 microcontroller line, choosing from the various combinations of performance, power consumption and features. The Arduino™ connectivity support and ST Morpho headers make it easy to expand the functionality of the STM32 Nucleo open development platform with a wide choice of specialized expansion boards.

The VL6180X explorer kit features the VL6180X proximity sensor, based on ST's FlightSense™, Time-of-Flight, technology, and provides very accurate ranging information, as well as ambient light sensing (ALS) information. The range measurements are independent of the target reflectance.

**Table 1. Ordering information**

Order code	Description
EVALKIT-VL6180X	VL6180X explorer Kit (1 STM32 F401RE Nucleo board +1 VL6180X expansion board)

## Revision history

**Table 2. Document revision history**

<b>Date</b>	<b>Revision</b>	<b>Changes</b>
24-Jun-2014	1	Initial release.
18-Aug-2014	2	replace "shield" by "expansion board"
26-Aug-2014	3	Correction of typo in the document title

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