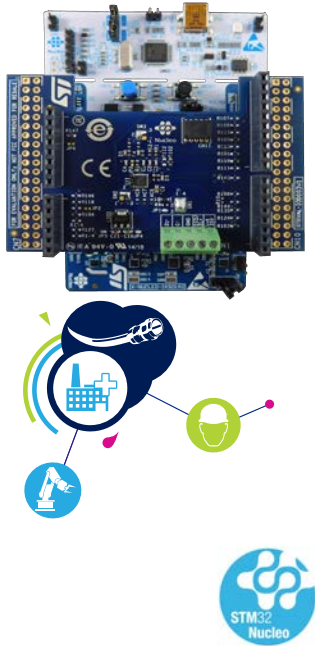


## STM32 Nucleo pack for IO-Link device fully compatible with IO-Link v1.1 (PHY and stack)



### Features

- Equipped with Arduino UNO R3 connectors and compatible with [STEVAL-IOD003V1](#), [X-NUCLEO-IKS01A2](#) and [NUCLEO-L073RZ](#) boards.
- The [STEVAL-IOD003V1](#) features:
  - IO-Link (PHY) device layer based on [L6362A](#)
  - Operating voltage range 6.5 to 35 V
  - Dedicated CQ overload pin (wake-up)
  - Diagnostics pin (UVLO, overtemperature and cut-off)
  - UART interface
  - Linear regulators for independent supply from +24 V bus (12 mA 3.3 V and 100 mA 12 V)
  - LEDs for status and diagnostics
  - Overload and overheating protections with non-dissipative cut-off function
  - Full reverse polarity on IO-Link interface pins
  - EMC protections according to IO-Link v1.1 and IEC 60947-5-2
  - Ground and  $V_{CC}$  wire break protections
- The [X-NUCLEO-IKS01A2](#) features:
  - [LSM6DSL](#) 3D accelerometer and 3D gyroscope
  - [LSM303AGR](#) 3D accelerometer and 3D magnetometer
  - [LPS22HB](#) pressure sensor
  - [HTS221](#) capacitive digital relative humidity and temperature
  - DIL24 socket for additional MEMS adapters and other sensors
  - Free comprehensive development firmware library and samples for all sensors compatible with [STM32Cube](#) firmware
- The [NUCLEO-L073RZ](#) features:
  - [STM32L073RZT6](#) 32-bit microcontroller based on ARM® Cortex®-M0+ core
  - Pre-programmed IO-Link device stack (v1.1 compatible)
  - Arduino UNO R3 connectivity and ST morpho extension pin headers
  - Mbed-enabled (<http://mbed.org>)
  - On-board ST-LINK/V2-1 debugger/programmer with SWD connector

Product summary	
STM32 Nucleo pack for IO-Link (PHY) device fully compatible with IO-Link v1.1 (PHY and stack)	<a href="#">P-NUCLEO-IOD01A1</a>
IO-Link device evaluation board based on <a href="#">L6362A</a> with Arduino connectors for STM32 Nucleo	<a href="#">STEVAL-IOD003V1</a>
IO-Link communication transceiver device IC	<a href="#">L6362A</a>
Motion MEMS and environmental sensor expansion board for STM32 Nucleo	<a href="#">X-NUCLEO-IKS01A2</a>

### Description

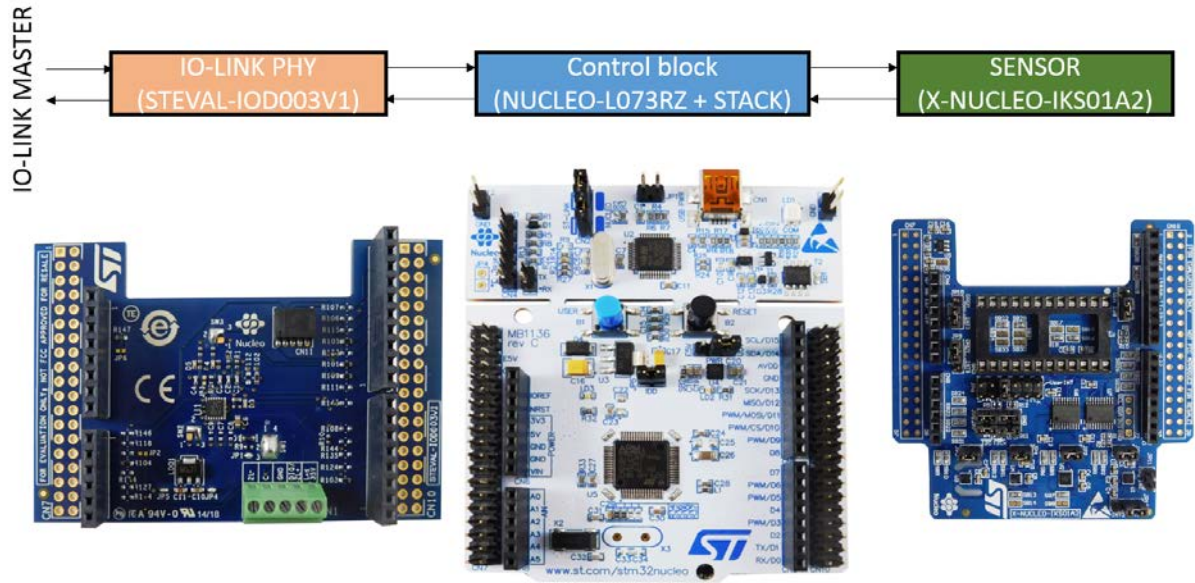
The [P-NUCLEO-IOD01A1](#) is an [STM32 Nucleo](#) pack composed of the [NUCLEO-L073RZ](#) development board, the [STEVAL-IOD003V1](#) evaluation board and the [X-NUCLEO-IKS01A2](#) expansion board.

The [STEVAL-IOD003V1](#) offers an IO-Link device PHY layer ([L6362A](#)) while the [NUCLEO-L073RZ](#) runs an IO-Link demo stack (developed by and property of TEConcept GmbH) compatible with rev 1.1 and firmware controlling the [X-NUCLEO-IKS01A2](#) sensors.

The [STM32 Nucleo](#) pack provides an affordable and easy-to-use solution for the development of IO-Link and SIO applications, [L6362A](#) communication features and robustness, together with the [STM32L073RZT6](#) computation performance.

# 1 P-NUCLEO-IOD01A1 main blocks

Figure 1. P-NUCLEO-IOD01A1 block details



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
06-Jun-2018	1	Initial release.
04-Jul-2018	2	Removed schematic diagrams.
09-Oct-2018	3	Updated cover page features.

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