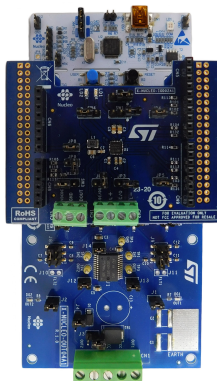


STM32 Nucleo pack for IO-Link device applications based on L6364Q transceiver, IPS2050H-32 power switch and STM32L073RZ



Features

- **X-NUCLEO-IOD02A1** IO-Link transceiver expansion board based on the **L6364Q** device
- **X-NUCLEO-OUT04A1** industrial digital output expansion board for STM32 Nucleo providing a powerful and flexible environment for the evaluation of the driving and diagnostic capabilities of the **IPS2050H-32** (dual high-side smart power solid state relay) in a digital output module connected to 5.7 A (max.) industrial loads
- **NUCLEO-L073RZ** development board embedding the **STM32L073RZ** 32-bit ultra-low-power STM32L073xx microcontrollers incorporate the connectivity power of the universal serial bus (USB 2.0 crystal-less) with the high-performance Arm Cortex-M0+ 32-bit RISC core operating at a 32 MHz frequency, a memory protection unit (MPU), high-speed embedded memories (up to 192 Kbytes of flash program memory, 6 Kbytes of data EEPROM and 20 Kbytes of RAM) plus an extensive range of enhanced I/Os and peripherals
- **FP-IND-IODOUT1** function pack featuring IO-Link demo-stack for **X-NUCLEO-IOD02A1** and control software for **X-NUCLEO-OUT04A1**

Description

The **P-NUCLEO-IOD04A1** is an STM32 Nucleo pack composed of the **X-NUCLEO-IOD02A1** and **X-NUCLEO-OUT04A1** expansion boards stacked on the **NUCLEO-L073RZ** development board.

The **X-NUCLEO-IOD02A1** features the **L6364Q** IO-Link device transceiver for the physical connection to an IO-Link master while the **X-NUCLEO-OUT04A1** features an industrial digital output expansion board for STM32. The **NUCLEO-L073RZ** features the necessary hardware resources to run the **FP-IND-IODOUT1** function pack and to control the transceiver and the power switch.

The **FP-IND-IODOUT1** combines an IO-Link demo stack library (derived from **X-CUBE-IOD02**) with the **X-CUBE-IPS** and features an example of IO-Link device sensor and actuator node.

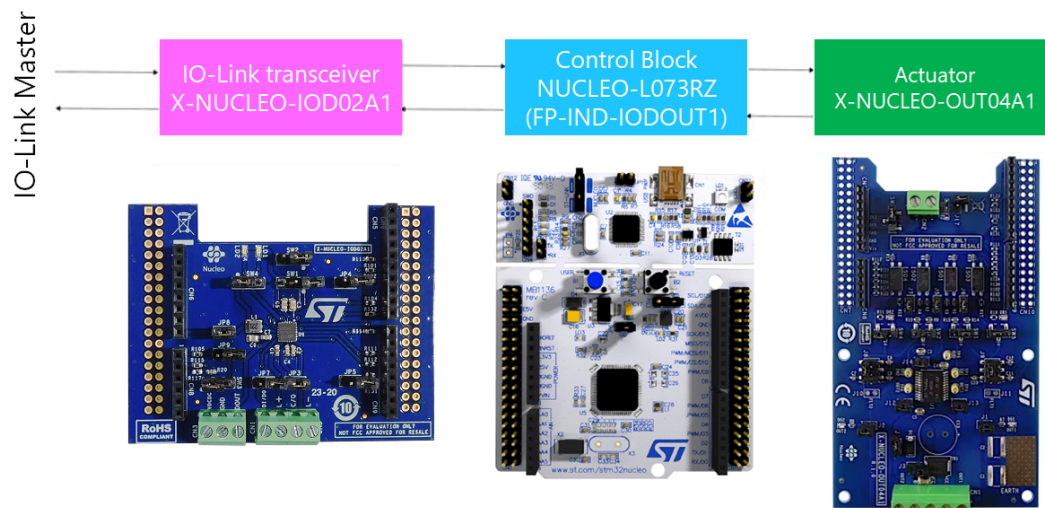
The **P-NUCLEO-IOD04A1** can be used for evaluation purpose and as a development environment.

The STM32 Nucleo pack provides an affordable and easy-to-use solution for the development of an IO-Link and SIO applications for the evaluation of **IPS2050H-32** high side capabilities together with the **STM32L073RZ** computation performance.

Product summary	
STM32 Nucleo pack for IO-Link and power switch device applications based on L6364Q transceiver, IPS2050H-32 power switch and STM32L073RZ	P-NUCLEO-IOD04A1
STM32Cube function pack for P-NUCLEO-IOD04A1, with IO-Link stack, IODD	FP-IND-IODOUT1
Dual channel transceiver IC for SIO and IO-Link sensor applications	L6364Q
Dual channel IO-Link device expansion board based on L6364Q for STM32 Nucleo	X-NUCLEO-IOD02A1
Industrial digital output expansion board based on IPS2050H-32 for STM32 Nucleo	X-NUCLEO-OUT04A1
Applications	Factory Automation IO-Link connectivity

1 P-NUCLEO-IOD04A1 main blocks

Figure 1. P-NUCLEO-IOD04A1 block details



Revision history

Table 1. Document revision history

Date	Revision	Changes
27-Sep-2023	1	Initial release.

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