

STM32 Nucleo pack for IO-Link device applications based on L6364Q transceiver, IPS4260LM power switch and STM32G071RB



Features

- [X-NUCLEO-IOD02A1](#) IO-Link transceiver expansion board based on the [L6364Q](#) device
- [X-NUCLEO-OUT07A1](#) 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 [IPS4260LM](#) (quad low-side intelligent power switch) in a digital output module connected to 0.5 A (per channel) / 2 A (one channel) industrial loads
- [NUCLEO-G071RB](#) development board embedding the [STM32G071RB](#) based on high-performance Arm® Cortex®-M0+ 32-bit RISC core operating at up to 64 MHz frequency. Offering a high level of integration, it is suitable for a wide range of applications in consumer, industrial and appliance domains and ready for the Internet of Things (IoT) solutions. The device incorporate a memory protection unit (MPU), high-speed embedded memories (36 Kbytes of SRAM and up to 128 Kbytes of Flash program memory with read protection, write protection, proprietary code protection, and securable area), DMA, an extensive range of system functions, 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-OUT07A1](#)

Product summary

STM32 Nucleo pack for IO-Link and power switch device applications based on L6364Q transceiver, IPS4260LM power switch and STM32G071RB	P-NUCLEO-IOD7A1
STM32Cube function pack for P-NUCLEO-IOD7A1, 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 IPS4260LM for STM32 Nucleo	X-NUCLEO-OUT07A1
Applications	Factory Automation IO-Link connectivity

Description

The [P-NUCLEO-IOD7A1](#) is an STM32 Nucleo pack composed of the [X-NUCLEO-IOD02A1](#) and [X-NUCLEO-OUT07A1](#) expansion boards stacked on the [NUCLEO-G071RB](#) 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-OUT07A1](#) features an industrial digital output expansion board for STM32. The [NUCLEO-G071RB](#) features the necessary hardware resources to run the [FP-IND-IODOUT1](#) function pack and to control the transceiver and the power switch.

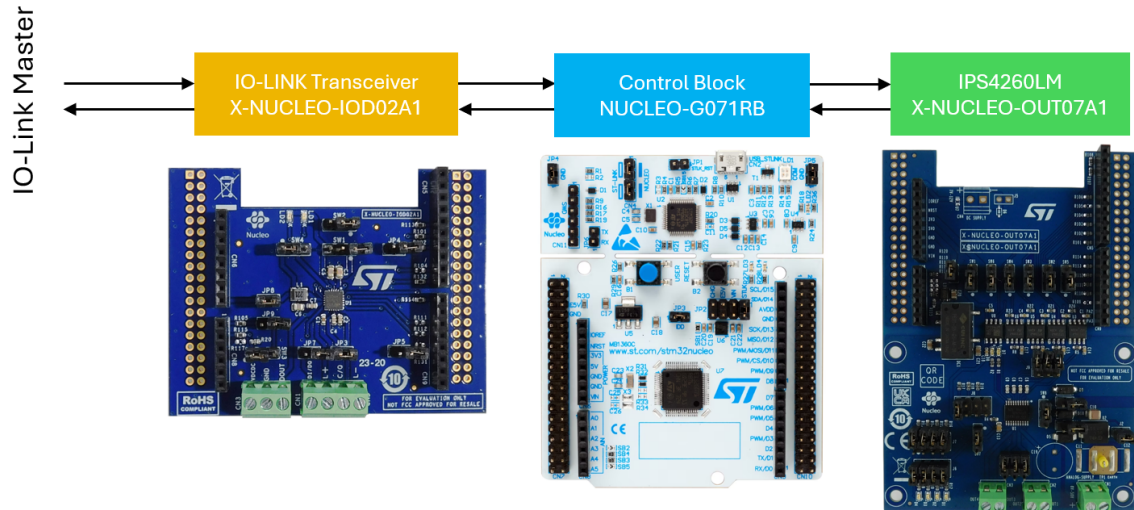
The [FP-IND-IODOUT1](#) combines an IO-Link demo stack library (derived from [X-CUBE-IOD02](#)) with the [X-CUBE-IPS](#) and features an example of IO-Link device sensor and actuator node.

The [P-NUCLEO-IOD7A1](#) 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 [IPS4260LM](#) low side capabilities together with the [STM32G071RB](#) computation performance.

1 P-NUCLEO-IOD7A1 main blocks

Figure 1. P-NUCLEO-IOD7A1 block details



Revision history

Table 1. Document revision history

Date	Revision	Changes
03-Sep-2024	1	Initial release.

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