



P-NUCLEO-IOD5A1

4-channel IO-Link actuator Nucleo pack with L6364 and IPS4140HQ



Comprehensive ready-to-use ecosystem for intelligent actuation in factory automation with IO-Link connectivity

This STM32 Nucleo pack (P-NUCLEO-IOD5A1) is a cost-effective, user-friendly development environment for IO-Link and standard input/output (SIO) applications. Built around an L6364Q 2-channel transceiver, IPS4140HQ 4-channel high-side switch, and Arm Cortex-M0+ STM32G071RB MCU, developers can easily evaluate and fine-tune their prototypes.

In addition to the boards, a comprehensive STM32Cube function pack (FP-IND-IODOUT1) includes complete firmware and IO-Link stack libraries as well as ready-to-use binaries and sample applications to quickly get your designs up.

A complete set of user-friendly tools, this pack helps develop efficient IO-Link gateways designed to economically optimize factory automation and industrial operations.

KEY FEATURES AND BENEFITS

- Embedded components:
 - L6364Q dual-channel transceiver for industrial sensor applications
 - IPS4140HQ quad-channel high-side smart power switch
 - STM32G071RB microcontroller with Arm Cortex-M0 core
- ARDUINO® Uno V3 and ST morpho connectivity
- Dedicated STM32Cube function pack for IO-Link applications in industrial processes and operations

- Easy-to-use solution to rapidly evaluate intelligent actuation systems with IO-Link connectivity

KEY APPLICATIONS

- Factory automation
- IO-link gateways

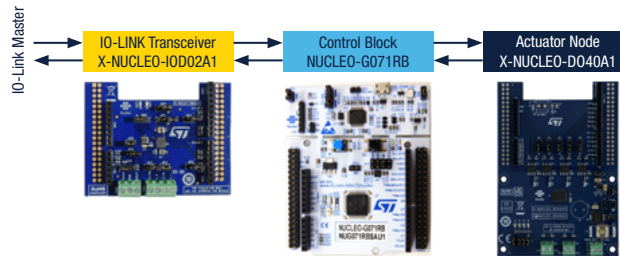
Detailed description

Our STM32 Nucleo pack for IO-Link applications (P-NUCLEO-IOD5A1) comes with the dual-channel IO-Link device (X-NUCLEO-IOD02A1) and Industrial digital output (X-NUCLEO-DO40A1) expansion boards stacked on the STM32G071 Nucleo-64 development board (NUCLEO-G071RB).

The X-NUCLEO-IOD02A1 features the L6364Q IO-Link transceiver for the physical connection to an IO-Link master, while the X-NUCLEO-DO40A1 is an industrial digital output expansion board based on the IPS4140HQ 4-channel intelligent power switch.

The NUCLEO-G071RB includes an STM32G071RB microcontroller and provides all the necessary hardware resources to control the transceiver and the power switch, maintaining overall system performance.

Additionally, the NUCLEO-G071RB runs the STM32Cube function pack (FP-IND-IODOUT1), which integrates an IO-Link demo stack library (from X-CUBE-IOD02) with the X-CUBE-IPS expansion software for driving an industrial digital output. It also features an example application of an IO-Link device sensor and actuator node.



P-NUCLEO-IOD5A1



Order code	Description	Related documents	Software	Start your design
P-NUCLEO-IOD5A1	IO-Link actuator STM32 Nucleo pack	DB5489	STM32Cube function pack for IO-Link applications (FP-IND-IODOUT1) STM32Cube IO-Link expansion software (X-CUBE-IOD02) STM32Cube industrial digital output expansion software (X-CUBE-IPS)	Order P-NUCLEO-IOD5A1
NUCLEO-G071RB	STM32G071 Nucleo-64 development board	DB2196		Order NUCLEO-G071RB
X-NUCLEO-IOD02A1	L6364Q transceiver dual-channel IO-Link device expansion board	DB3883		Order X-NUCLEO-IOD02A1
L6364	Dual-channel transceiver IC for SIO and IO-Link sensor applications	DS13363		Order L6364Q
X-NUCLEO-DO40A1	IPS4140HQ actuator and Industrial digital output expansion board	DB5346		Order X-NUCLEO-DO40A1
IPS4140HQ	Quad-channel high-side smart power switch	DS14694		Order IPS4140HQ



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