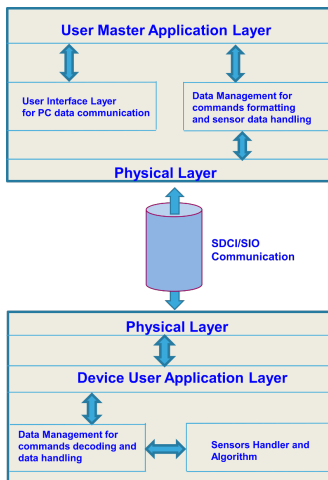


IO-Link demonstration kit firmware



Features

- Firmware package developed for STM32 microcontroller ARM[®] Cortex[®]-M0+ and ARM Cortex-M3
- Compliant with [STM32Cube](#) framework
- Portable across other STM32 platforms
- PC interface based on RS-485 communication
- Communication layer for exchanging data between master and sensor nodes
- Sensor configuration and sensor data acquisition
- Fast Fourier Transform (FFT) calculation to evaluate the vibration spectrum

Description

This kit includes a complete firmware release for [STEVAL-IDP004V1](#) and [STEVAL-IDP003V1](#) evaluation boards to facilitate system management in terms of configuration, data exchange and processing. It is based on the STM32CubeHAL library and uses the powerful [STM32CubeMX](#) tool to configure the microcontroller and update the created workspace without data loss.

A simple command interface lets you manage PC and system configuration using the RS-485 interface and Master-Device communication between STEVAL-IDP004V1 and STEVAL-IDP003V1.

Data exchange with a sensor is implemented via on-board data acquisition through an I²C interface. Data processing (i.e., vibration monitoring with the IIS2DH sensor) is implemented through dedicated routines using the DSP_Lib to perform Fast Fourier Transform (FFT) calculations.

Product summary	
IO-Link demonstration kit firmware	STSW-IO-LINK
IO-Link industrial modular sensor board based on L6362A	STEVAL-IDP003V1
IO-Link master multi-port evaluation board based on L6360	STEVAL-IDP004V1

Revision history

Table 1. Document revision history

Date	Version	Changes
01-Jun-2017	1	Initial release.
01-Sep-2017	2	Updated cover page image.
27-Jun-2018	3	Updated cover page image.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2018 STMicroelectronics – All rights reserved