



STEVAL-IFP014V1

IO-Link device demonstration board based on STM32F103T6U6 and L6362

Data brief

Features

- IO-Link device - sensor/actuator functionality
- Connector for three-wire connection of the sensor board to the master
- Supports all communication speeds: 4.8, 38.4 and 230 kbps
- Additional digital Input/Output connector
- I2C communication between STM32 and L6362 physical layer (register access)
- Fully protected solution (overvoltage, overtemperature, short-circuit)
- Supply voltage 8 V - 32.5 V DC
- Selectable system supply voltage 5 V/3.3 V with L6362 integrated VREG
- Dual LED diagnostics
- Integrated surge protection according to IEC61000-4-5 / 500 Ω impedance
- 11.059 MHz system clock ($\pm 2\%$) from L6362
- Integrated sensors connected via SPI:
 - * LIS302DL MEMS accelerometer
 - * LY530AL MEMS gyroscope

Description

The STEVAL-IFP014V1 is a demonstration board designed for evaluation of "IO-Link device". It can be utilized with either sensor or actuator functionality depending on the firmware. It is based on IO-Link physical layer (L6362) controlled by STM32 (STM32F103T6U6), 32-bit Flash microcontroller based on the ARM® Cortex™-M3.

The design of the board allows evaluation of either IO-Link physical layer (L6362) or complete IO-Link device application.

The board is assembled with two sensors: LIS302DL MEMS accelerometer LIS302DL MEMS accelerometer and LY530AL MEMS gyroscope connected to STM32 microprocessor via SPI interface. Using STM32 and L6362 an



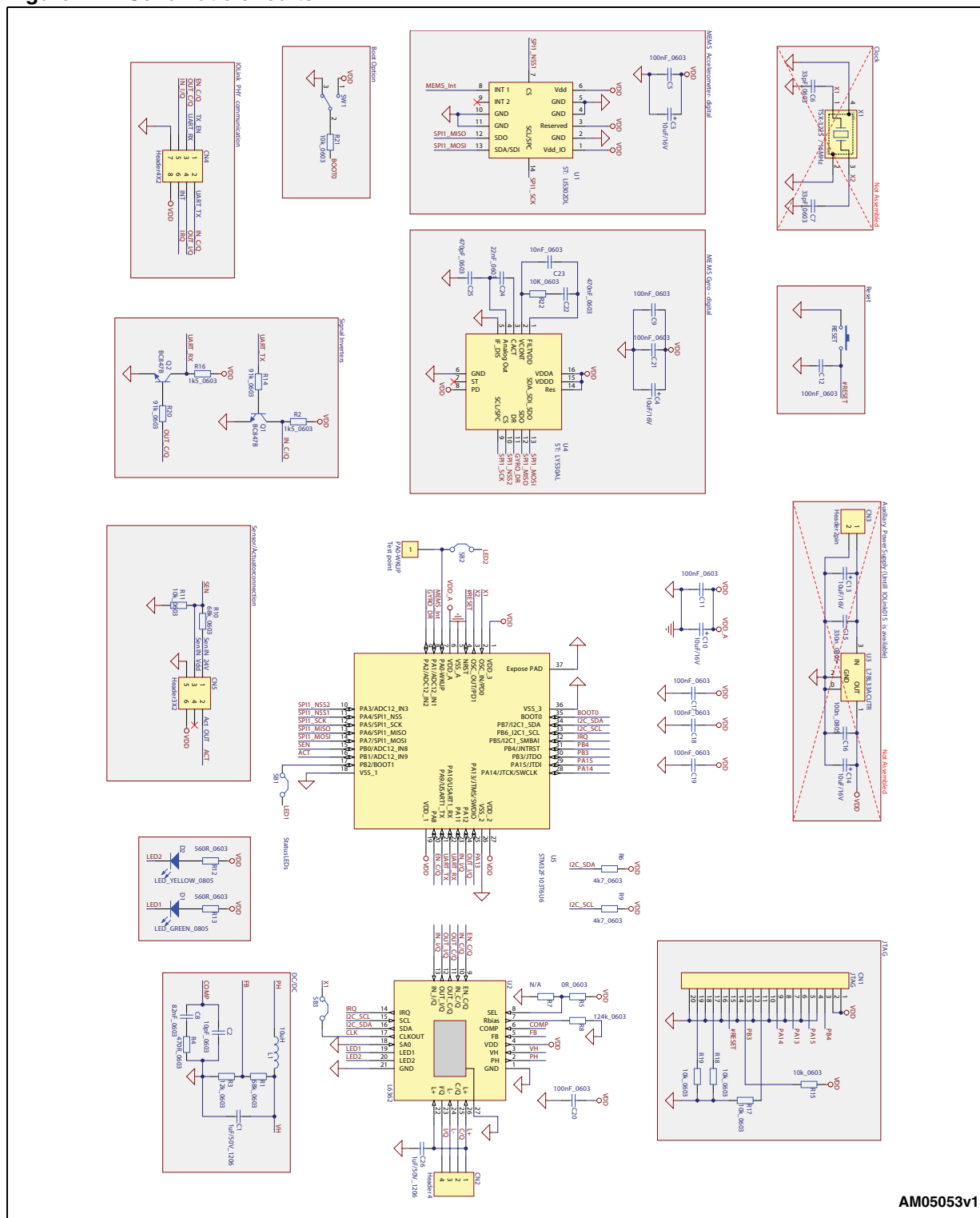
intelligent IO-Link device application can be implemented.

CD-ROM delivered with the board contains several firmware examples (IAR projects). The examples demonstrate usage of MEMS sensors as IO-Link devices and a binary actuator application.

IO-Link device software stack is available from our partner (third party) – MESCO Engineering GmbH.

1 Schematic circuit

Figure 1. Schematic circuits



AM05053V1



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
23-Jul-2009	1	Initial release.

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