STEVAL-IFP016V2

IO-Link communication master transceiver demonstration board based on the L6360, monolithic IO-Link master port

Data brief

Features

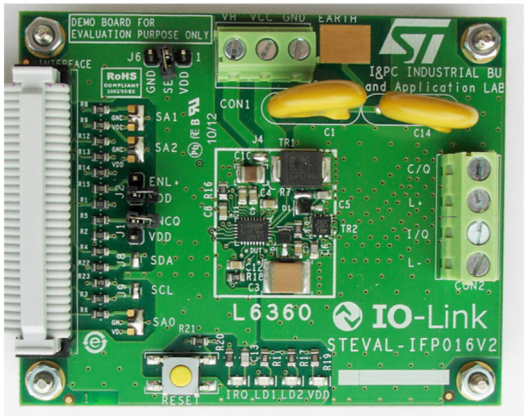
- Supply voltage from 18 V to 32.5 V
- Fully protected programmable output stages
- Supports COM1, COM2 and COM3 mode
- 5 mA IO-Link digital input
- Additional IEC61131-2 type-1 input
- 3.3 V / 5 V, 50 mA linear regulator
- Fast mode I^2C for IC control, configuration and diagnostic
- Diagnostic dual LED sequence generator and driver
- 5 V and 3.3 V compatible I/Os
- Interface compatible with STEVAL-PCC009V2 and STEVAL-PCC009V1
- EMC immune application against ESD, burst, surge, RF noise, etc., according to IEC61000-4-2, IEC61000-4-4, IEC61000-4-5, and IEC61000-4-6 standards
- RoHS compliant

Description

The STEVAL-IFP016V2 IO-Link communication master transceiver demonstration board is based on the L6360, monolithic IO-Link master port. A modular and customizable application that interfaces externally with the microcontroller. The purpose of the board is to demonstrate the capability of the L6360 monolithic IO-Link master, as communication transceiver for multiple I/Os.

The board uses input signal from the microcontroller and outputs the 24 V required for industrial applications.

The board demonstrates that the L6360 is both IO-Link master port mode and standard IO mode compliant.



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The interface is compatible with the STEVAL-PCC009V2 and STEVAL-PCC009V1 EMC-immune application against ESD, burst, surge, RF noise, etc., according to IEC61000-4-2, IEC61000-4-4, IEC61000-4-5, and IEC61000-4-6 standards.

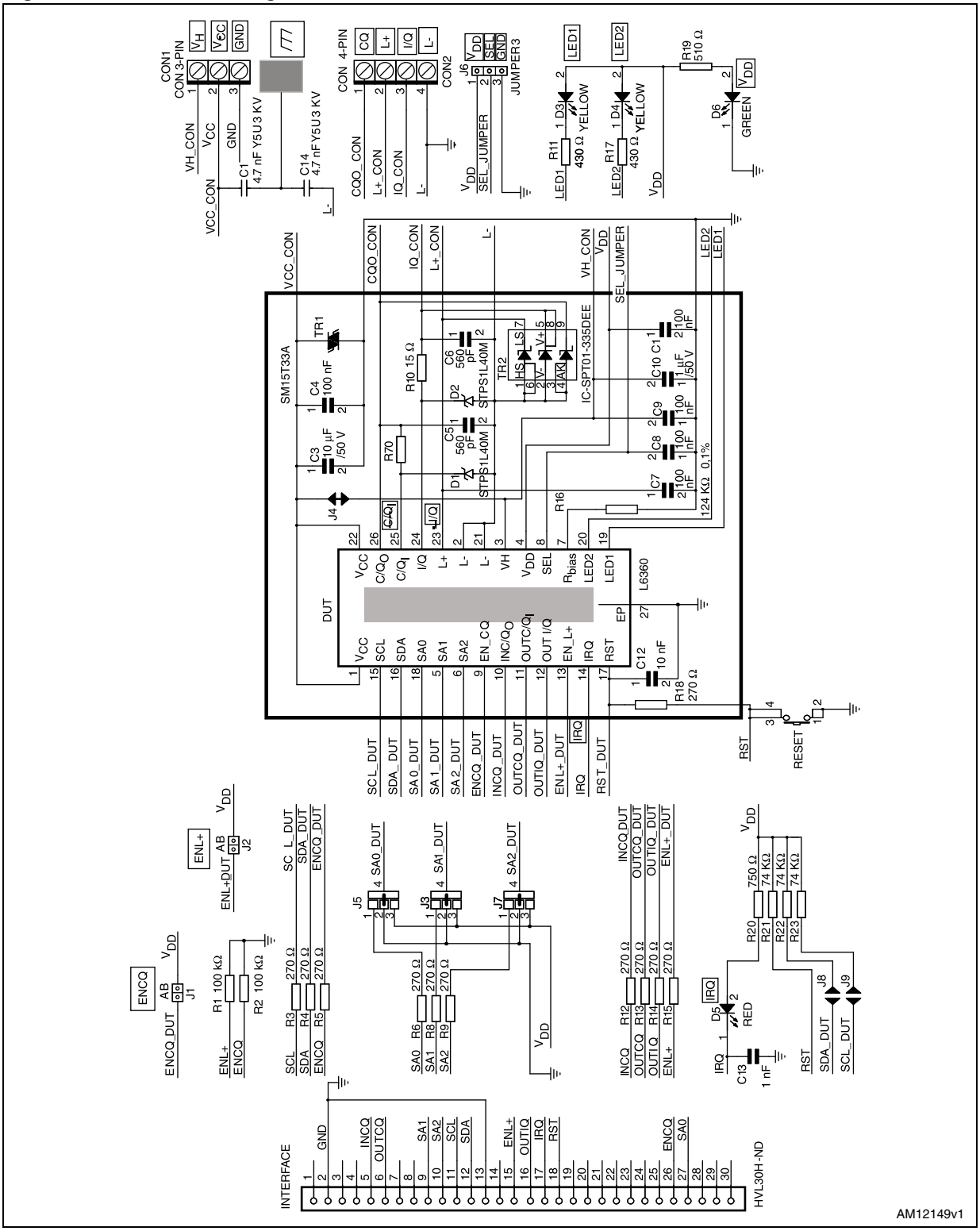
A large GND area on the printed circuit board has been designed in order to minimize noise and ensure good thermal performance.

The small size of the L6360 package with a reduced pin number, along with the small size of the application area, allow the user to work in applications where space constraint is critical. The L6360 is a monolithic IO-Link master port, compliant with PHY2 (3 wires) supporting COM1 (4.8 kbaud), COM2 (38.4 kbaud) and COM3 (230.4 kbaud) modes. The output stage (high-side, low-side or push-pull) as well as the cutoff current, cutoff current delay time, and restart delay, are programmable by I^2C protocol.

The cutoff current and cutoff current delay time, combined with the thermal shutdown and automatic restart, protect the device against overload and short-circuit. The output stages are able to drive resistive, inductive and capacitive loads. Fast demagnetization is able to dissipate the energy stored in the inductive loads.

1 Schematic diagram

Figure 1. Schematic diagram



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
17-Apr-2012	1	Initial release.
25-Sep-2012	2	Updated: Description and title

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