IO-Link actuator for industrial tower light based on L6364
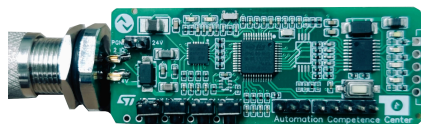

Fully assembled board developed for performance evaluation only, **not available for sale**

Features

- Input DC voltage: 19-32V_{DC} (IO-Link VBUS)
- Actuator for tower light (or other low-side outputs) based on L6364 dual channel IO-Link device transceiver
- 4-channel low-side output based on IPS4260L intelligent low-side switch
- 4-input button or outside input supported
- Power supply voltage for external low-side load 100mA/Ch
- IO-Link ministack running on STM32G071
- 4-pin M12 standard industrial connector

Description

The STDES-IODTLIGHT is an IO-Link actuator for traditional tower lights used in factory automation and system alarm indicator applications.

With IO-Link, the STDES-IODTLIGHT becomes a smart tower light. It can also be used as a funnel material indicator for material quantity or urgency level.

It can diagnose whether the LED is working or not, using the open load detect function of the IPS4260L.

The STDES-IODTLIGHT is a board designed with L6364Q as IO-Link device transceiver and low power STM32G071CB MCU.

The STDES-IODTLIGHT is a turnkey solution ready for industrialization.

With the use of an IPS4260L quad low-side switch, the solution can drive an external low-side loadsm, such as a tower light, valve, or pump.

A dedicated SWD 5-pin connector is used for MCU programming.

This STDES-IODTLIGHT works with an IO-Link master board and control tool GUI software with the correspondent IODD file.

Product summary	
IO-Link actuator for industrial tower light based on L6364	STDES-IODTLIGHT
Mainstream Arm Cortex-M0+ MCU with 128 Kbytes of Flash memory	STM32G071CBT6TR
Dual channel transceiver IC for SIO and IO-Link sensor applications in QFN package	L6364Q
Quad low-side intelligent power switch	IPS4260L
600 W, 26 V TVS in SMB	SMBJ26CA-TR
Applications	Factory Automation

1 Solution overview

The solution is based on a single STM32G071 MCU and an L6364Q transceiver. It uses the IPS4260L as the low-side load switcher to drive the 24 V output loads (tower light, valve, etc).

Figure 1. STDES-IODTLIGHT functional block diagram
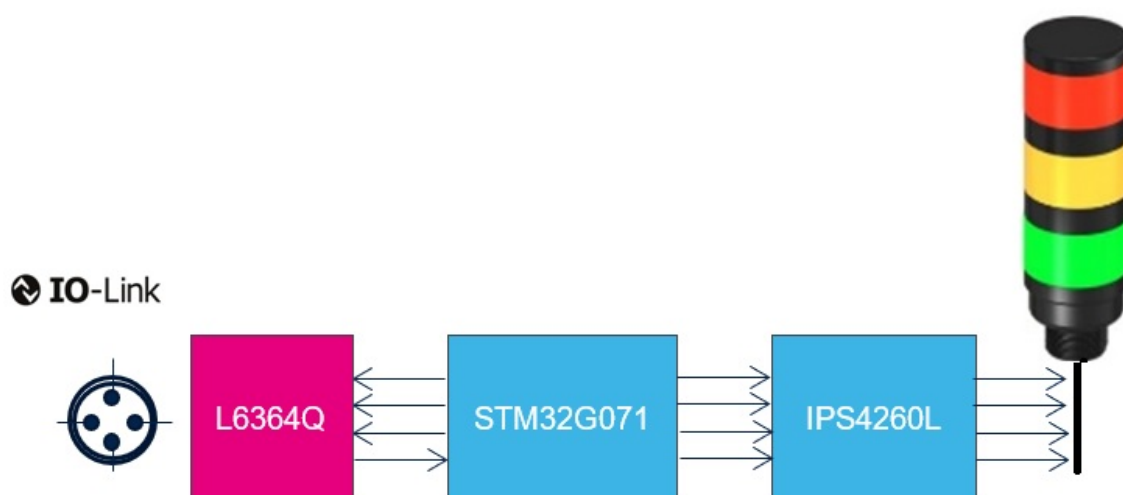
2 Schematic diagrams
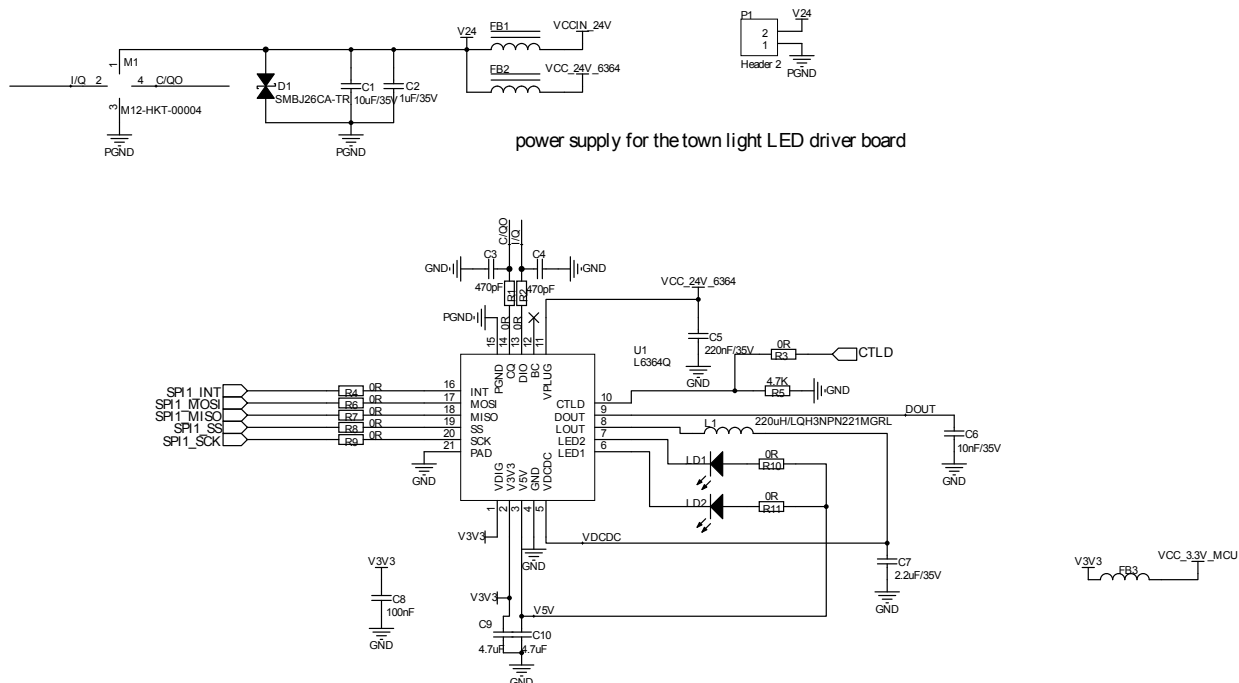
Figure 2. STDES-IODTLIGHT circuit schematic (1 of 3)

power supply for the town light LED driver board

Figure 3. STDES-IODTLIGHT circuit schematic (2 of 3)
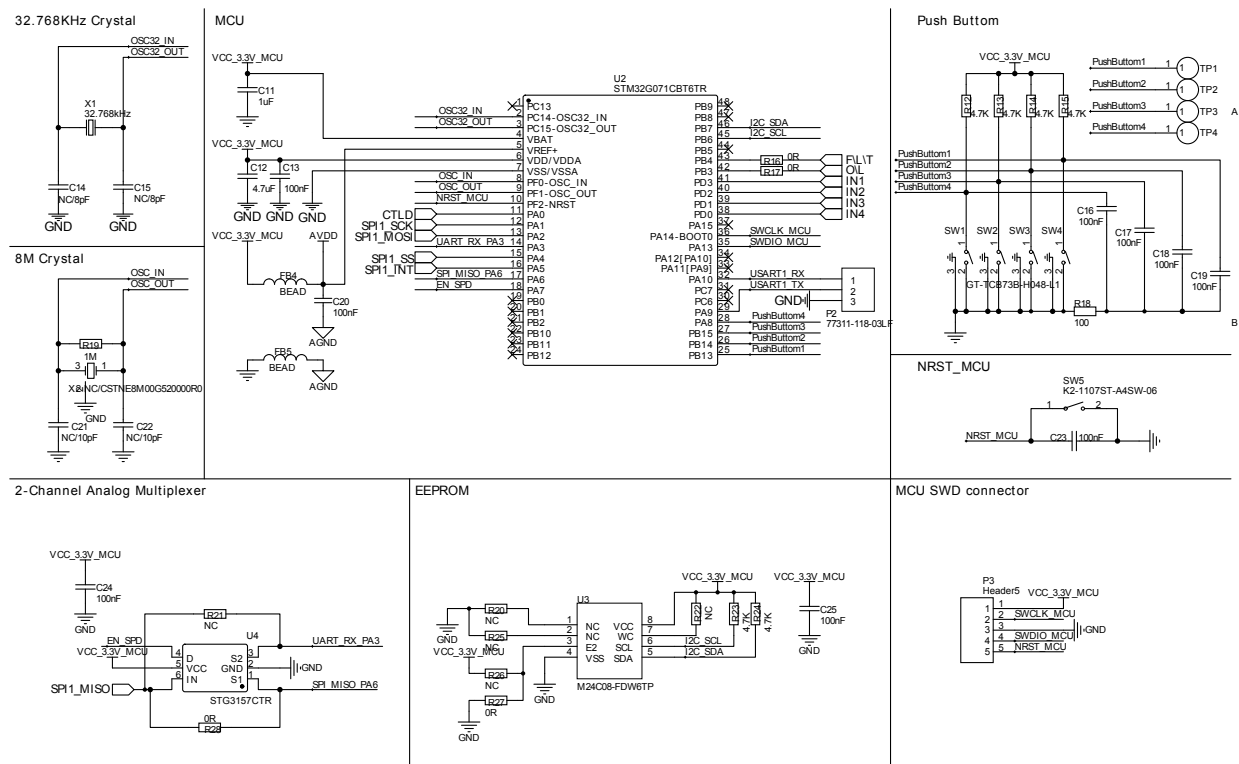
Figure 4. STDES-IODTLIGHT circuit schematic (3 of 3)
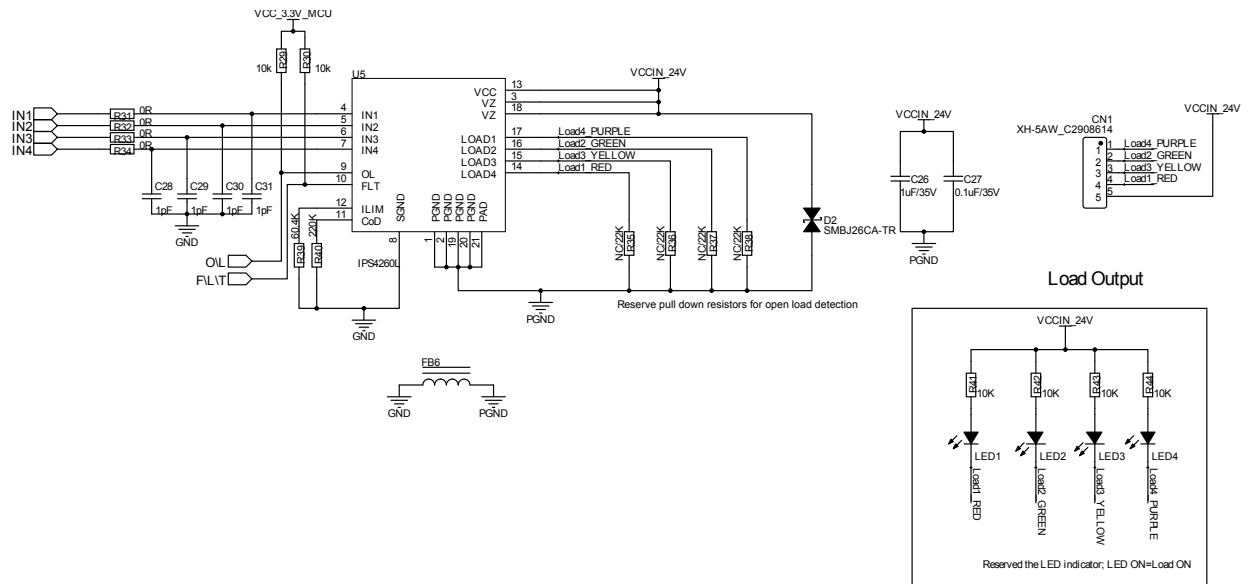
Revision history

Table 1. Document revision history

Date	Revision	Changes
14-Nov-2022	1	Initial release.
16-May-2023	2	Update Features, Product Summary, Description and Schematics diagrams.

IMPORTANT NOTICE – READ CAREFULLY