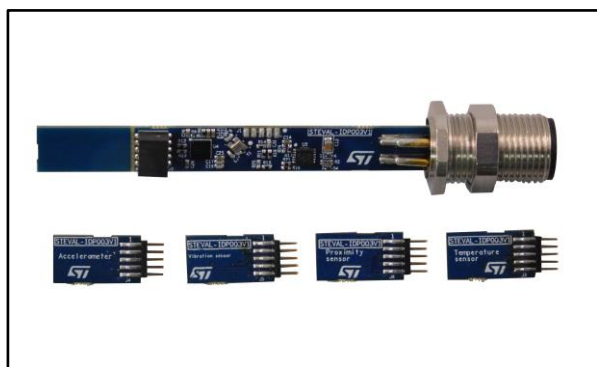


IO-Link industrial modular sensor board based on L6362A

Data brief



Description

The STEVAL-IDP003V1 kit includes the STEVAL-IDP003V1D evaluation board based on the L6362A IO-Link device transceiver and STM32L071CZ microcontroller for data processing, and the following sensor daughter boards: temperature sensor STTS751 hosted on the STEVAL-IDP003V1T, MEMS sensor IIS2DH hosted on the STEVAL-IDP003V1TV, MEMS sensor IIS328DQ hosted on the STEVAL-IDP003V1A and proximity sensor VL6180X hosted on the STEVAL-IDP003V1P.

The evaluation board is equipped with an industrial M12 connector (required by the standard) for connection with a single master IC using a 20-meter cable. The wire is a normal three-pole wire: one for IO-Link data, one for the L+ line (positive supply voltage pole) and one for the L- line (negative supply voltage pole).

The layout is designed to meet IEC61000-4-2/4 and EN60947 requirements for the industrial sector.

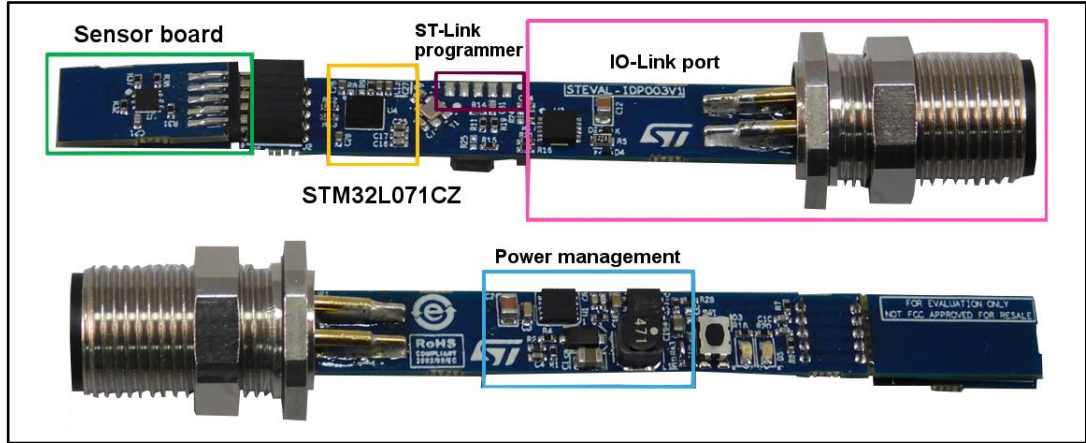
Features

- Main supply voltage: 32 V maximum
- STM32L071CZ microcontroller
- IO-Link PHY using the L6362A device for data communication with host unit
- DC-DC converter and linear regulator on board
- Integrated reverse polarity protection on L6362A ICs
- Multi-sensor connection
- 400 kHz I²C communication
- PCB designed to accept real industrial sensors (8 mm x 70 mm, with 0.8 mm thickness)
- Designed to meet IEC industrial standard requirements
- RoHS compliant

1 Block identification

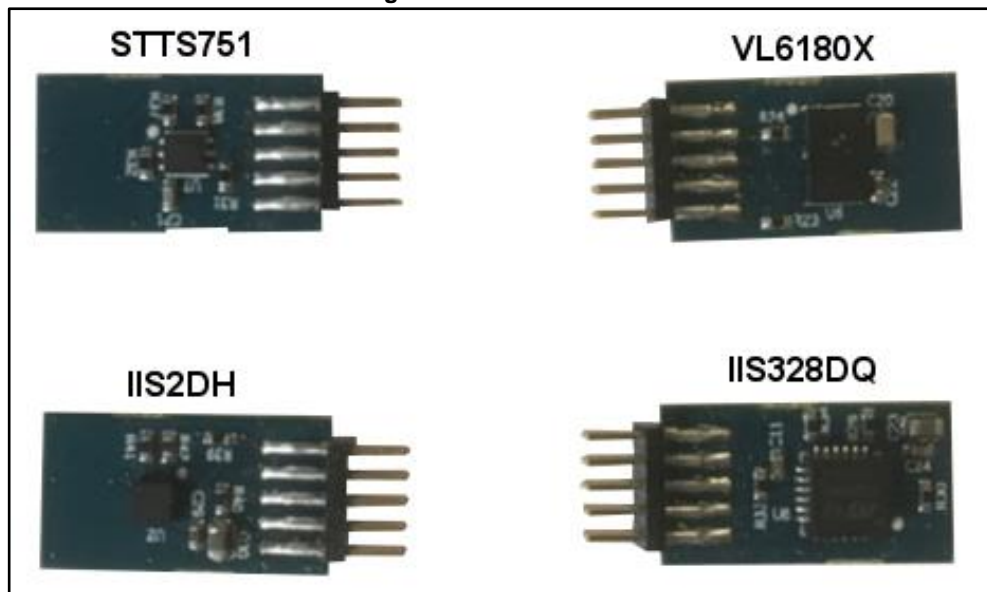
In the kit, the main board is the STEVAL-IDP003V1.

Figure 1: STEVAL-IDP003V1 block identification



The picture below shows the sensor daughter boards, from the top left corner in a clockwise direction: STEVAL-IDP003V1T, STEVAL-IDP003V1P, STEVAL-IDP003V1A and STEVAL-IDP003V1TV. The corresponding sensor part numbers are also shown.

Figure 2: Sensor boards



2 Schematic diagrams

Figure 3: STEVAL-IDP003V1 circuit schematic (1 of 6)

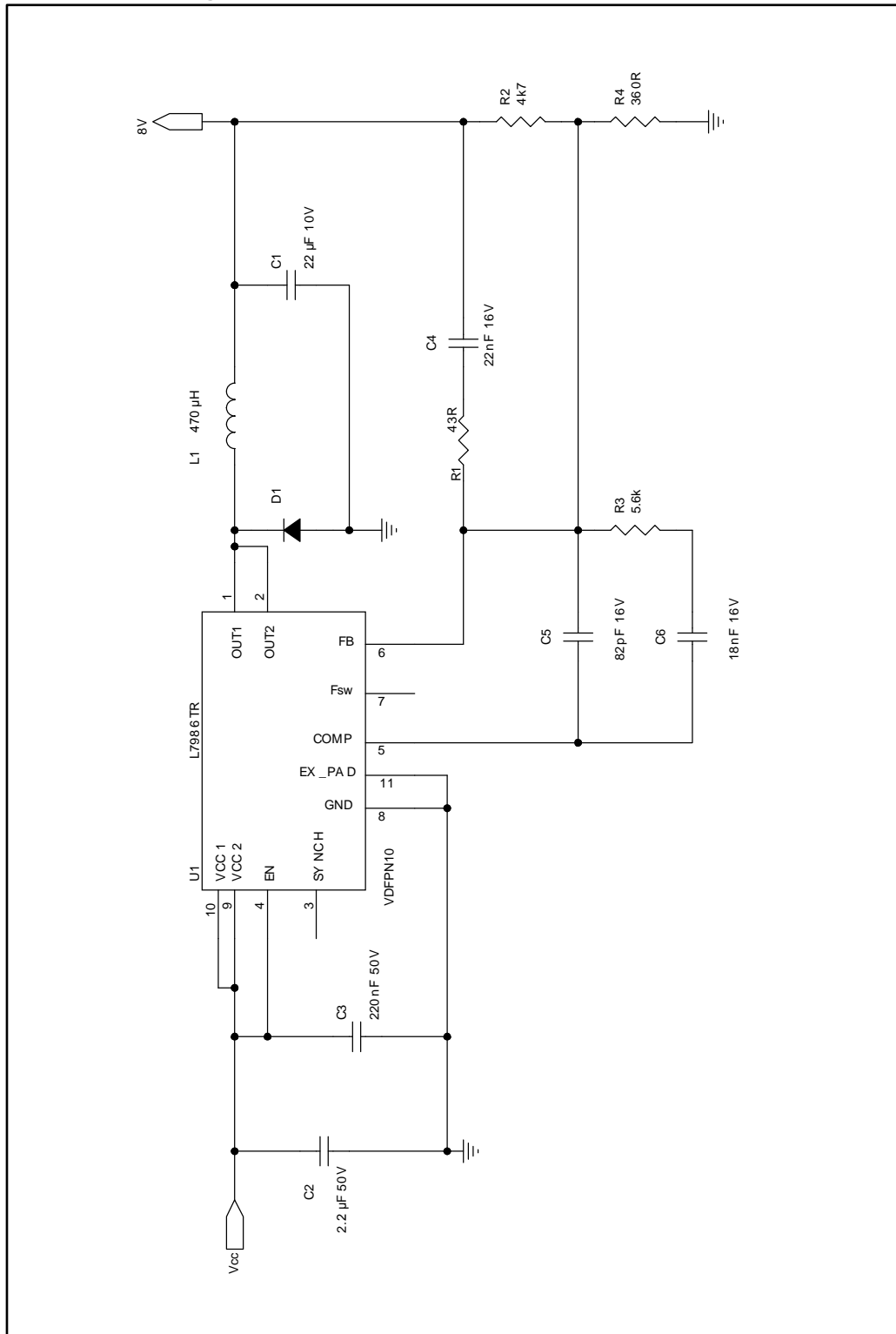


Figure 4: STEVAL-IDP003V1 circuit schematic (2 of 6)

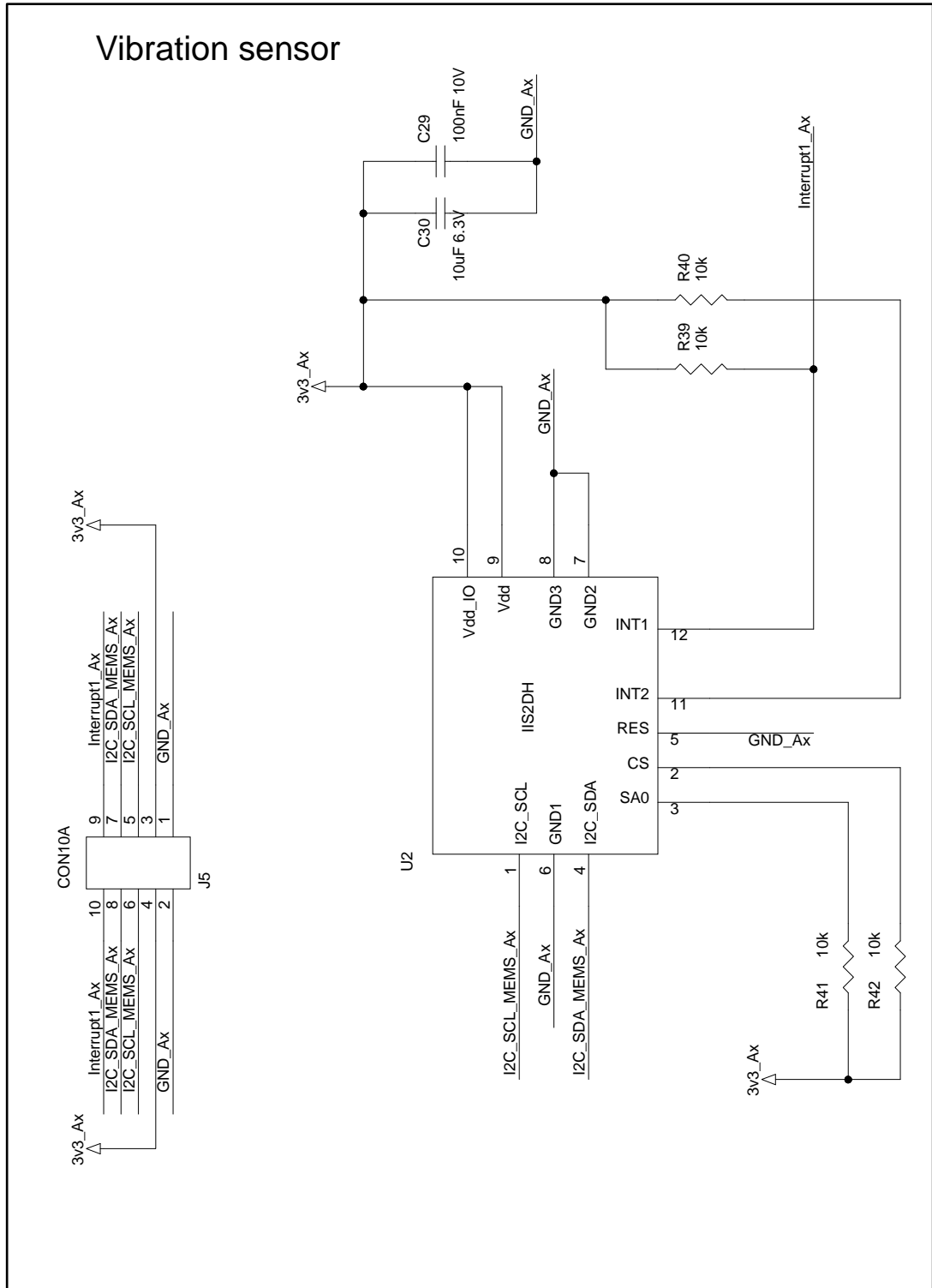


Figure 5: STEVAL-IDP003V1 circuit schematic (3 of 6)

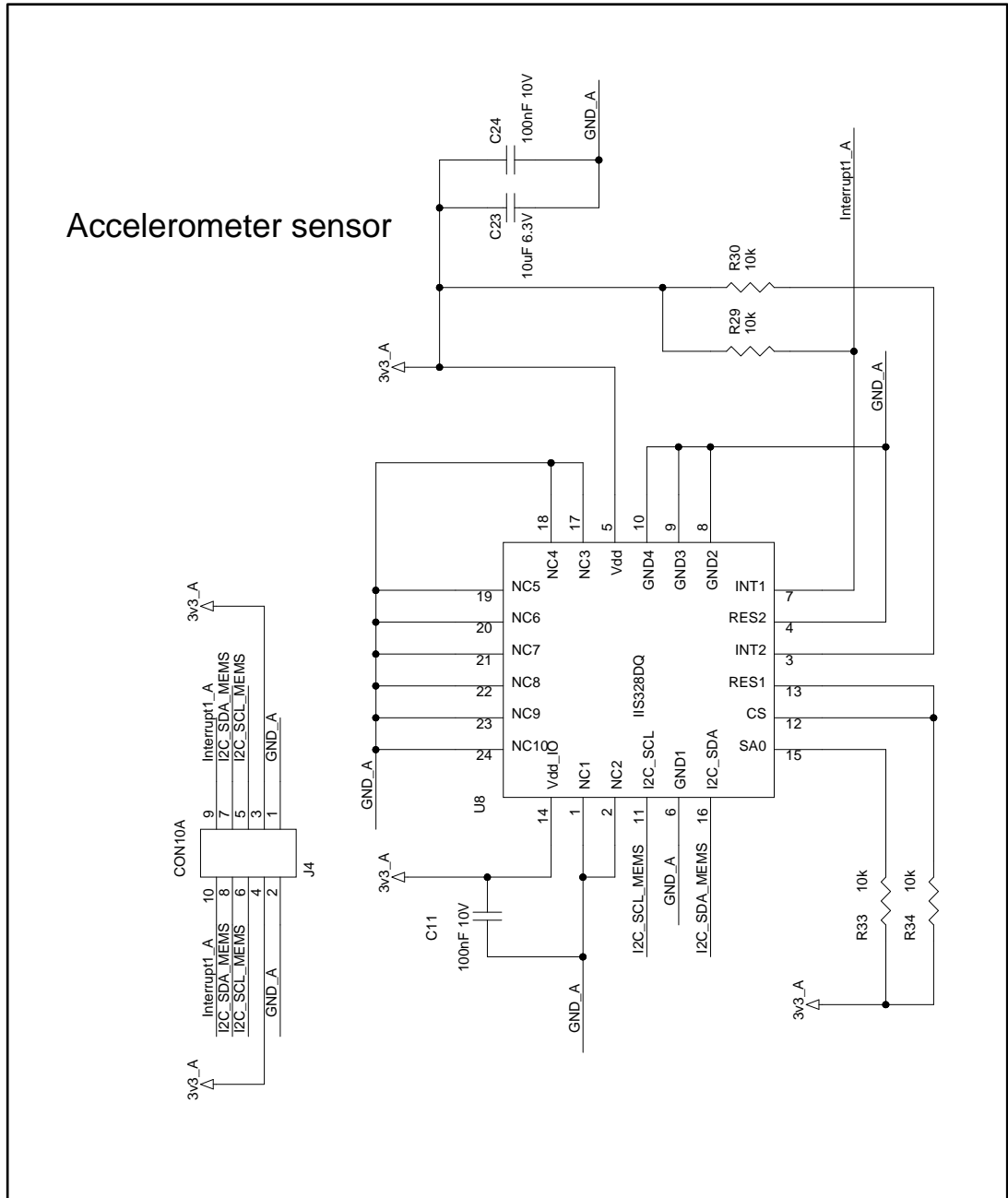


Figure 6: STEVAL-IDP003V1 circuit schematic (4 of 6)

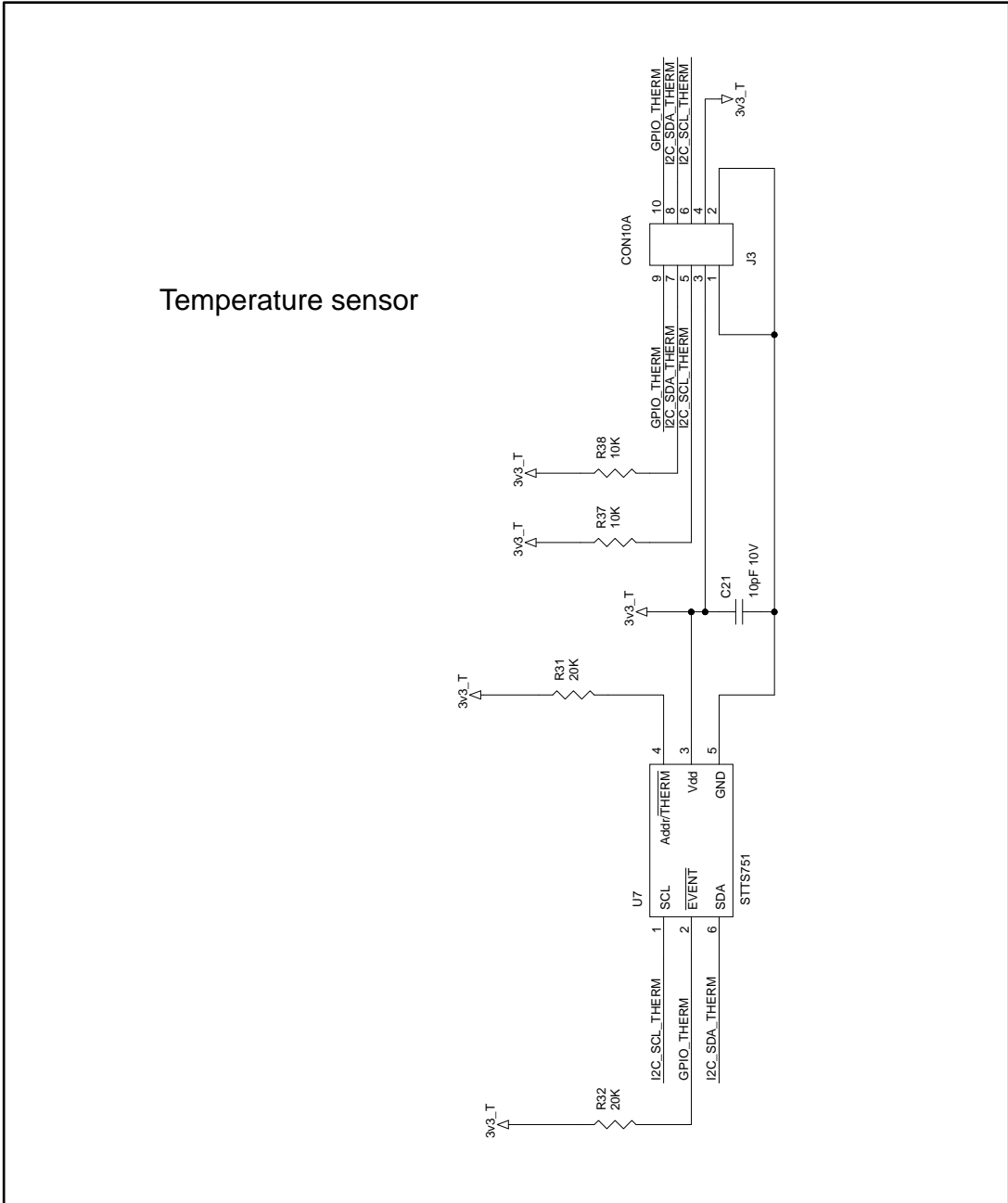


Figure 7: STEVAL-IDP003V1 circuit schematic (5 of 6)

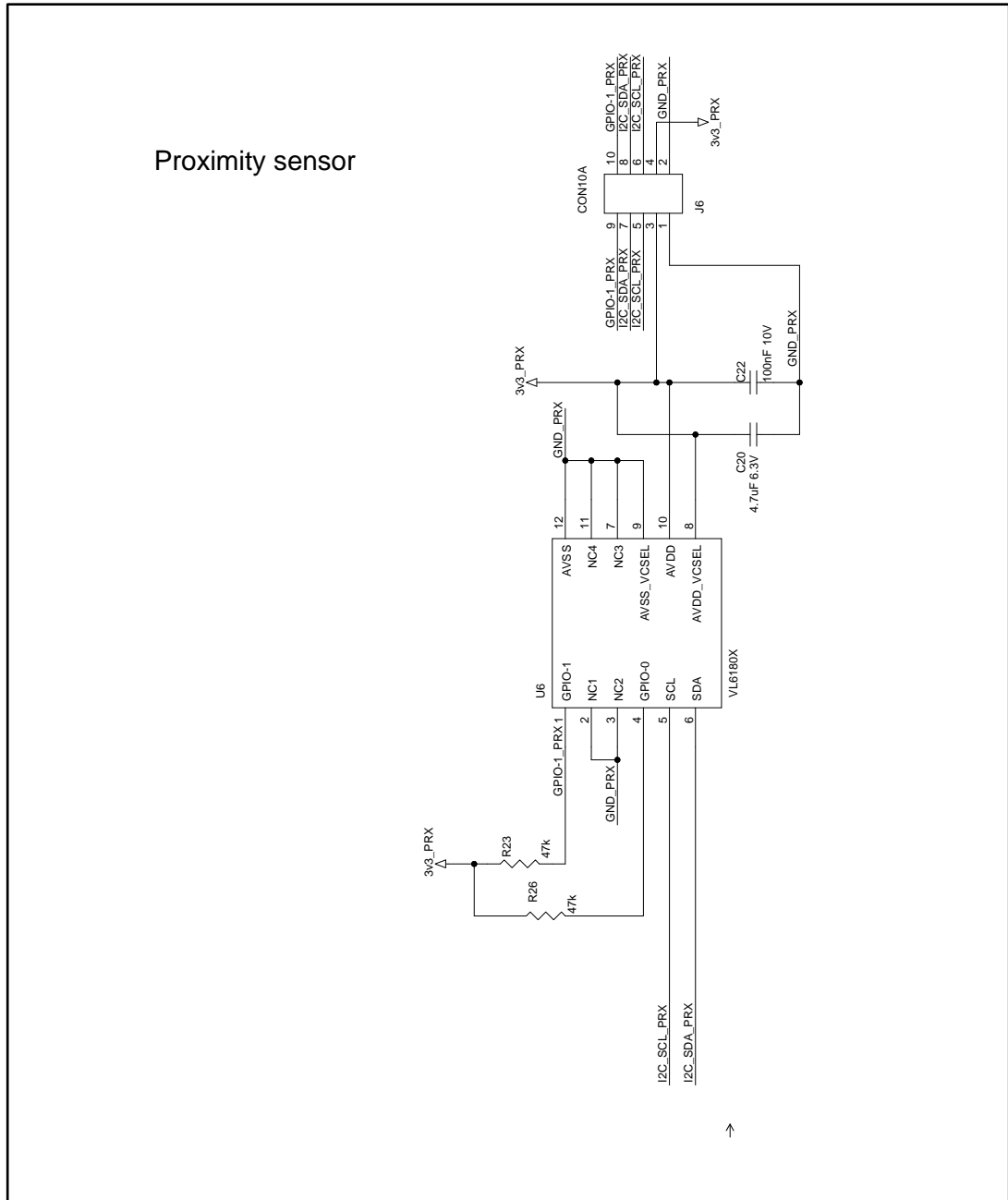
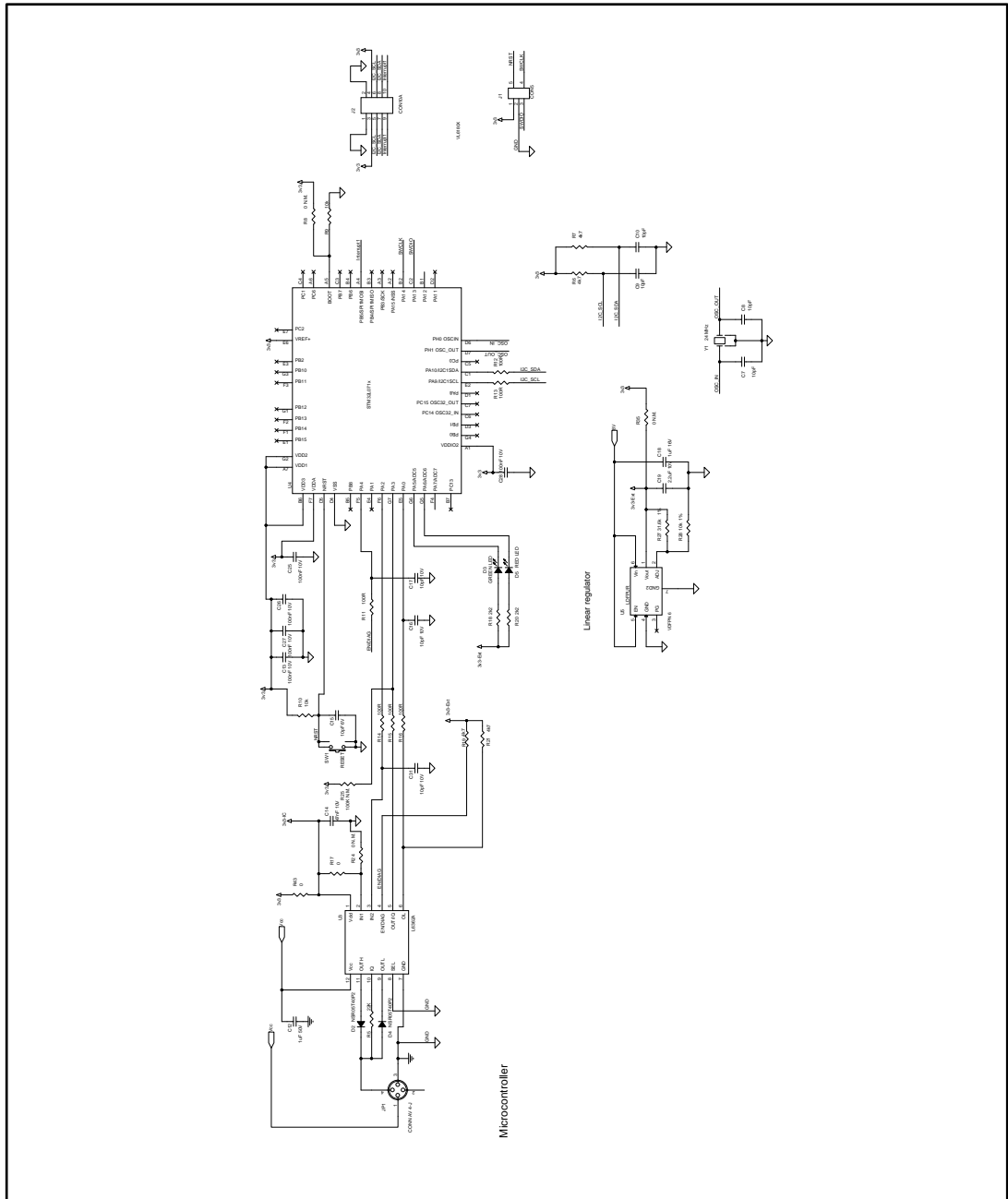


Figure 8: STEVAL-IDP003V1 circuit schematic (6 of 6)



3 Revision history

Table 1: Document revision history

| Date | Version | Changes |
|-------------|---------|---|
| 09-Jun-2017 | 1 | Initial release. |
| 25-Oct-2017 | 2 | Updated Figure 3: "STEVAL-IDP003V1 circuit schematic (1 of 6)" . Minor text changes. |

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