Features

- Main supply voltage 32 V maximum
- 4 L6360 IO-Link master devices
- RS-485 serial interface
- CAN serial interface
- USB interface
- DC-DC converter
- On-board reverse polarity protection
- Designed to meet IEC requirement for industrial standards
- RoHS and WEEE compliant

Description

The STEVAL-IDP004V1 evaluation board with STM32 microcontroller has four separate L6360 ICs.

Communication with the ICs is via I²C in master mode and is managed by the STM32F205RB MCU; each L6360 has its own address and shares the bus with the other devices.

The STEVAL-IDP004V1 is developed to create a multi-port master based on serial asynchronous communication to support the IO-Link protocol. Each node is equipped with an industrial M12 connector (as required by the standard) for connection with a single slave node using a cable 20 meter long; the wire is a normal three-pole: one for the IO-Link bus, one for the L+ line (positive supply voltage pole) and one for the L- line (negative supply voltage pole).

Beyond the IO-Link connection, the board includes RS-485 bus, CAN bus and USB hardware interfaces.

The layout is designed to meet the requirements for IEC61000-4-2/4/5 for industrial segment.
Block identification

Figure 1. STEVAL-IDP004V1 block identification
2 Schematic diagrams

Figure 2. STEVAL-IDP004V1 circuit schematic (1 of 13)

Figure 3. STEVAL-IDP004V1 circuit schematic (2 of 13)
Figure 8. STEVAL-IDP004V1 circuit schematic (7 of 13)

Figure 9. STEVAL-IDP004V1 circuit schematic (8 of 13)
Figure 10. STEVAL-IDP004V1 circuit schematic (9 of 13)
Figure 13. STEVAL-IDP004V1 circuit schematic (12 of 13)

Figure 14. STEVAL-IDP004V1 circuit schematic (12 of 13)
# Revision history

**Table 1. Document revision history**

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Changes</th>
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<tbody>
<tr>
<td>17-May-2017</td>
<td>1</td>
<td>Initial release.</td>
</tr>
<tr>
<td>05-Jul-2017</td>
<td>2</td>
<td>Minor text changes.</td>
</tr>
<tr>
<td>27-Jun-2018</td>
<td>3</td>
<td>Updated cover image and Figure 1. STEVAL-IDP004V1 block identification.</td>
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