

IO-Link device with 8 digital input channels based on L6364



Features

- Standard M12-A 5 pin Male connector meeting IO-Link Class-A interface specifications
- IO-Link communication supported by [L6364](#) and software stack inside [STM32G071CB](#)
- Input DC voltage range: 19-32 V (IO-Link VBUS)
- High speed 8 digital input channels support by [SCLT3-8BQ7](#)
- Standard M12-A 4 pin female connectors used for each digital input channel
- Each connector provides VBUS, input channel pin and ground pin, which supports both 2-wire or 3-wire high-side sensor
- ESD protection provided by [SMBJ30CA](#)
- Reset button
- SWD connector for debugging and programming capability
- UART connector for debugging and serial data transmission
- Protections against surge pulse (up to $\pm 3\text{APK}$ with $500\ \Omega$ coupling) and reverse polarity
- RoHS compliant

Product summary

IO-Link device with 8 digital input channels based on L6364Q	STEVAL-IOL8DICB
Applications	Factory automation

Description

The [STEVAL-IOL8DICB](#) is an IO-Link device that features 8 digital input channels. This device is designed to provide a turnkey solution for industrialization, making it an ideal choice for industrial applications and an easy way to evaluate all chips.

With its IO-Link communication (supported by [L6364](#) and software stack inside [STM32G071CB](#)) and standard M12-A 5 pin Male connector meeting IO-Link class-a interface specifications, the [STEVAL-IOL8DICB](#) allows for easy integration with existing industrial IO-Link systems. Additionally, the input voltage range of 19-32 V (IO-Link VBUS) ensures reliable and stable performance in various industrial environments.

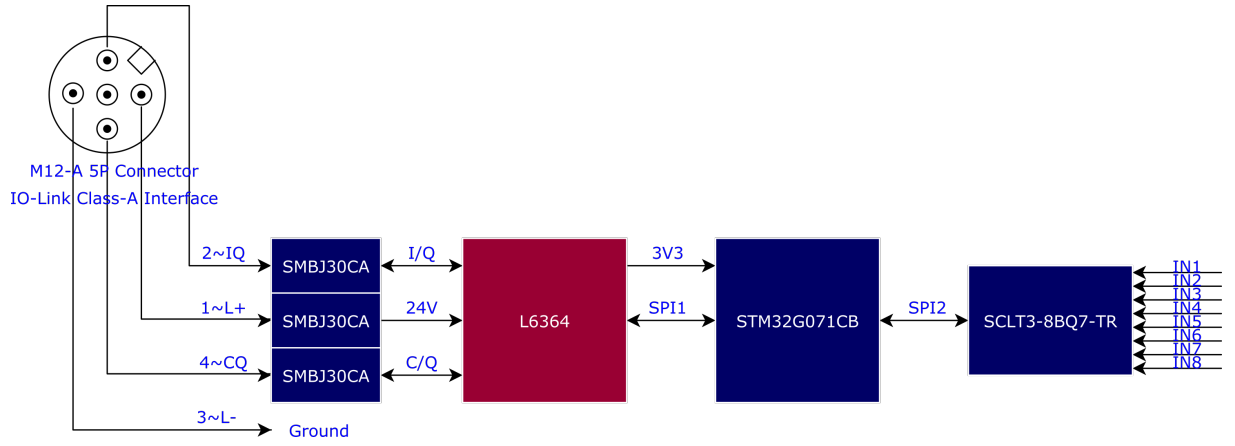
The high-speed 8 digital input channels supported by [SCLT3-8BQ7](#) and standard M12-A 4 pin female connectors for each channel make the [STEVAL-IOL8DICB](#) a reliable and practical solution for digital input applications. Each connector provides VBUS, input channel pin, and ground pin, supporting both 2-wire or 3-wire high-side sensors.

Furthermore, the [STEVAL-IOL8DICB](#) has considered ESD protection provided [SMBJ30CA](#), ensuring the safety and longevity of the device.

Overall, the [STEVAL-IOL8DICB](#) is a reliable and efficient IO-Link device that offers high-speed digital input channels and easy integration with existing industrial systems, helping industrial module makers evaluate all chips easier and speed up their prototype development.

1 Block diagram

Figure 1. Block diagram

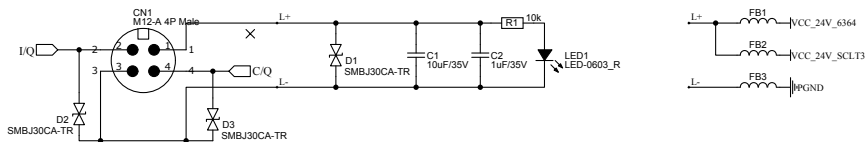


2 Schematic diagrams

Notice: These schematics are for illustration purpose only. Actual product may vary depending on buyer's selection and availability.

Figure 2. STEVAL-IOL8DICB circuit schematic (1 of 3)

M12 5Pin Connector



L6364

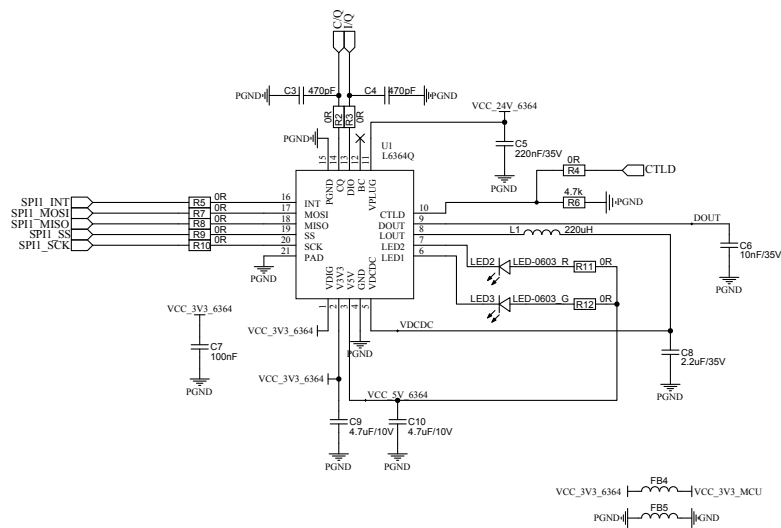


Figure 3. STEVAL-IOL8DICB circuit schematic (2 of 3)

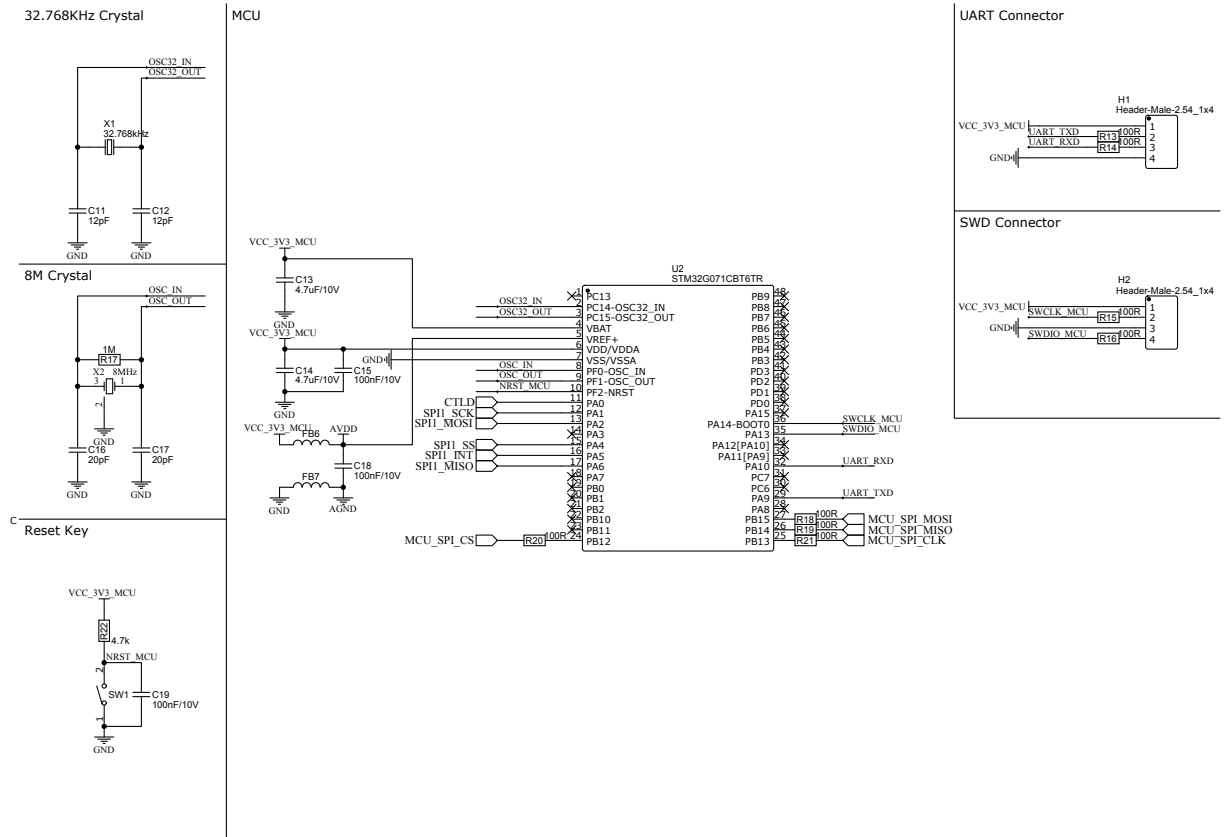
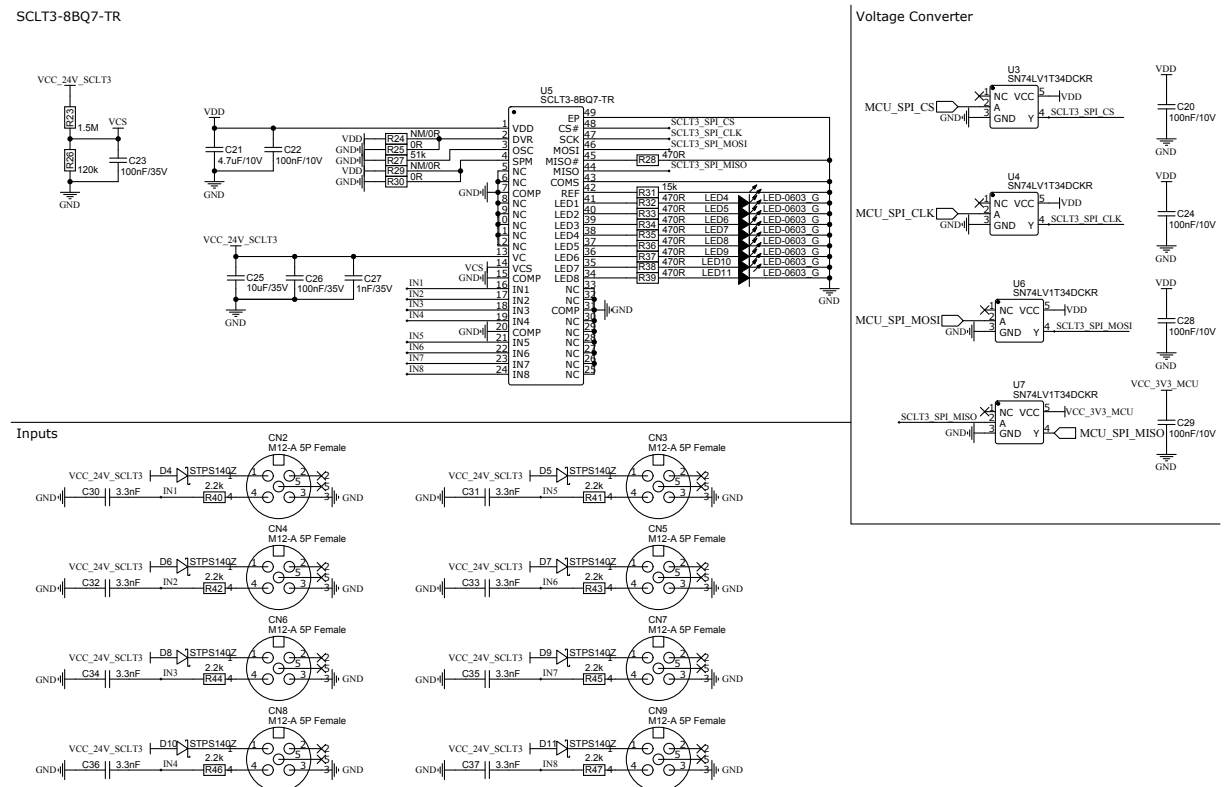


Figure 4. STEVAL-IOL8DICB circuit schematic (3 of 3)



3 Custom evaluation boards information

Notice: These evaluation boards are custom designed and built, in small quantities, according to specific requests from customers and are destined for evaluation and testing of ST products in a research and development setting. Please contact ST to provide your specific requests and get your custom built board(s).

Revision history

Table 1. Document revision history

Date	Revision	Changes
30-Apr-2024	1	Initial release.

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