TESSERA TECHNOLOGY INC.

RA Ecosystem Partner Solution
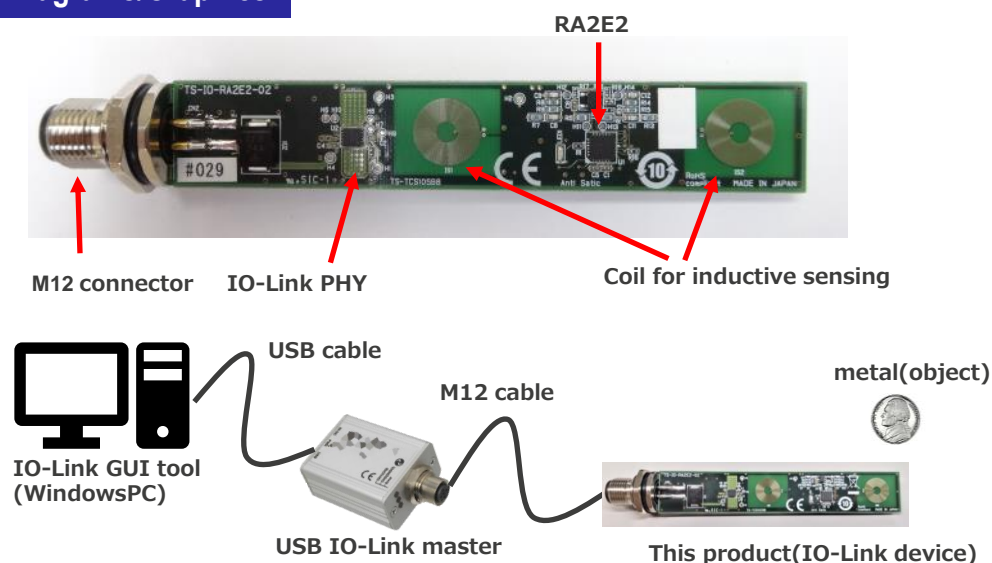# Tessera Technology TS-IO-RA2E2-02

Solution Summary

Tessera inductive sensor solution board is for evaluation of software and system development with Renesas general-purpose microcontroller RA2E2 and single-channel IO-Link PHY RH4Z2501. The board enables metal detection by measuring electrical resistance between the two coils. The energy-saving and compact RA2E2 MCU is ideal for battery-powered applications such as IoT sensor nodes, portable terminals, and industrial control equipment, which require space-saving and low power consumption.

Features/Benefits

- RA2E2 and RH4Z2501 onboard with standard M12 connector
- Inductive sensor detects metal within 5 mm and indicates with LED on/off on the board or onscreen GUI
- TMG evaluation stack can be downloaded free of charge from Renesas.com
- GUI enables confirmation of device information and parameter settings, ideal for initial evaluation of IO-Link communication
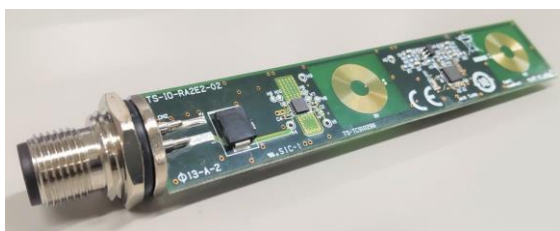
Diagrams/Graphics

RA2E2

M12 connector   **IO-Link PHY**   **Coil for inductive sensing**

IO-Link GUI tool (WindowsPC)   **USB cable**   **M12 cable**   **metal(object)**

USB IO-Link master   **This product(IO-Link device)**

Target Markets and Applications

- Industrial sensor
- Industrial actuator
- Inductive sensor
- Proximity switch

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2023.11

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Specification

Product name	RA2E2 Inductive Sensor Solution Board
Product model number	TS-IO-RA2E2-02
IO-Link PHY	RH4Z2501
MCU	R7FA2E2A72DNK(RA2E2)
Sensor	Inductive sensor (Configure pattern on substrate)
Power supply	Supplied through IO-Link connector
Interface	IO-Link connector : M12A 4-Pin male (IO-Link device) MCU debug connector: MIPI10 pin
Dimensions	104mm×18mm (Excluding connector)

Web / Documents

Category	Web
Application Note	RA2E2 Examples of IO-Link Solutions
Sample Code incl. evaluation stack	RA2E2 Examples of IO-Link Solutions (My Renesas registration required)
Winning Combination	IO-Link Sensor Solution | Renesas

Company information

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