YCONNECT-IT-TPS-1L

Low-cost Solution Kit for TPS-1 – The PROFINET IRT Device Chip

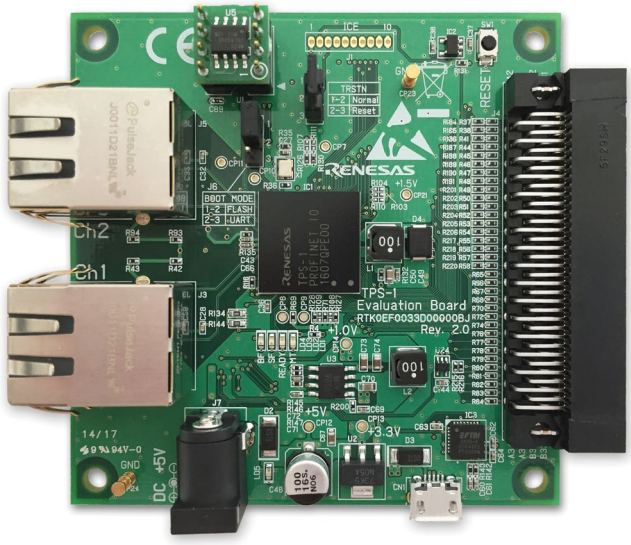
The new TPS-1 low-cost Solution Kit allows a simple and efficient PROFINET IRT design with the TPS-1 PROFINET IRT device chip. Beside the TPS-1 board, the kit features a passive adapter board that allows a simple connectivity to almost any MCU, a DVD with software and several cables.

TPS-1 Development Board & Passive Adapter Board

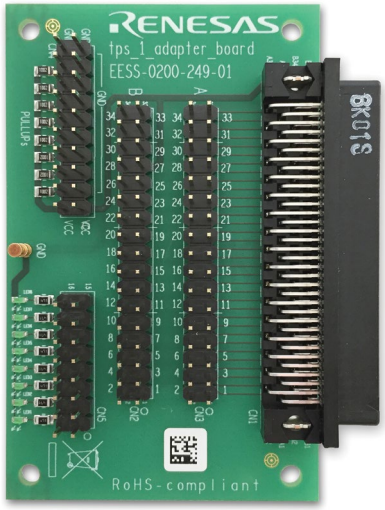
The passive adapter board features several connectors that expose the GPIOs and additional control signals from the TPS-1 board. Using the adapter board, developers can build a simple I/O application without investing in additional hardware. It features 8 LEDs and 8 pull-up resistors that can be connected to arbitrary TPS-1 GPIOs. Furthermore the adapter board can be used for individual host CPU connections via the TPS-1 serial or parallel communication interfaces. Control signals like interrupt or watchdog signals are as well accessible on multi-pin connectors. Application notes describe, how the connections should be realized for Renesas RX630, RX66T, RX231 and Synergy S7G2 MCUs.

The corresponding software package includes the latest 1.8.1 version of the PROFINET IRT stack from Phoenix Contact Software. It is based on the PROFINET specification V2.4MU4, and it fulfills the most stringent netload requirements. The pre-certified stack eases the PROFINET certification process significantly. Furthermore, the package includes configuration tools, firmware updater, a software PROFINET controller, host drivers and service programs, all at no additional cost.

The host drivers for the high-performance Synergy S7G2 MCU Group give system designers access to the Synergy MCU's connectivity and superior security features. The host drivers for Renesas' RX630, RX66T, and RX231 MCUs on the other hand, offer a wide choice of Renesas MCUs for various application requirements. You can buy the solution kit at Renesas distribution partners listed at www.renesas.com/buy-sample/locations.



TPS-1 Development Board



Passive Adapter Board

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TPS-1 Board Features

- Basic TPS-1 design for optimized cost
- Single 5 V supply via USB (alternative ext. power supply connector)
- TPS-1 UART access via USB
- Selectable boot mode
- GPIOs, host CPU interface and additional control signals (reset, watchdog, interrupt, IRT synchronization signals) available on connector
- Easy exchange of serial Flash memory
- PROFINET LEDs wired
- 2 x RJ-45 connectors

Adapter Board Features

- GPIOs, host CPU interface and additional control signals (reset, watchdog, interrupt) available on standard multipoint connectors
- Easy connection to Renesas (and competition) µC evaluation boards
- 8 LEDs for configurable use
- 8 pull-up resistors for configurable use
- Simple 1-byte I/O application possible without extra HW

Included Software

- PROFINET IRT-capable stack firmware
- TPS-1 Configurator
- TPS-1 Firmware Updater
- PROFINET Configurator
- PROFINET Smart Control
- Supplementary programs (netnames+, FS_PROG,...)
- API adaptations and simple sample projects for
  - RX630 (for use with e2studio and RX630 Starter Kit board)
  - RX231 (for use with e2studio and RX231 Starter Kit board)
  - Synergy S7G2 (for use with e2studio and S7G2 Starter Kit board)
  - RX66T (for use with e2studio and RX66T CPU card)

Order Code

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