

# Connect it! - Ethernet R-IN

Solution Kit for R-IN32M3-EC Device

Renesas  
**R-IN**

The R-IN solution kit is an all-in-the-box package for fast evaluation and rapid prototyping of multiple industrial Ethernet protocols. It comes with several pre-qualified software stacks from EtherCAT, PROFINET, EtherNet/IP and Modbus TCP and includes hardware, software and integrated development environment necessary for safe, quick and easy evaluation and development.

## Product Features

The Connect It! solution kit is based on the IAR Kickstart Kit. It features a small R-IN32M3-EC board for evaluation of the industrial Ethernet interfaces, an evaluation version of IARs embedded workbench for ARM (30-days trial or code size limited version), an I-jet Lite ARM Cortex-M3 JTAG debugger, as well as sample software including evaluation versions of several industrial Ethernet protocols.

The evaluation board carries a R-IN32M3-EC device, a serial flash memory as boot media, switches and LEDs for application IO-data control, two 100 Mbps Ethernet ports and a serial-to-USB connection for an external terminal emulation. Power supply is available by the dedicated power plug or by the USB connector.

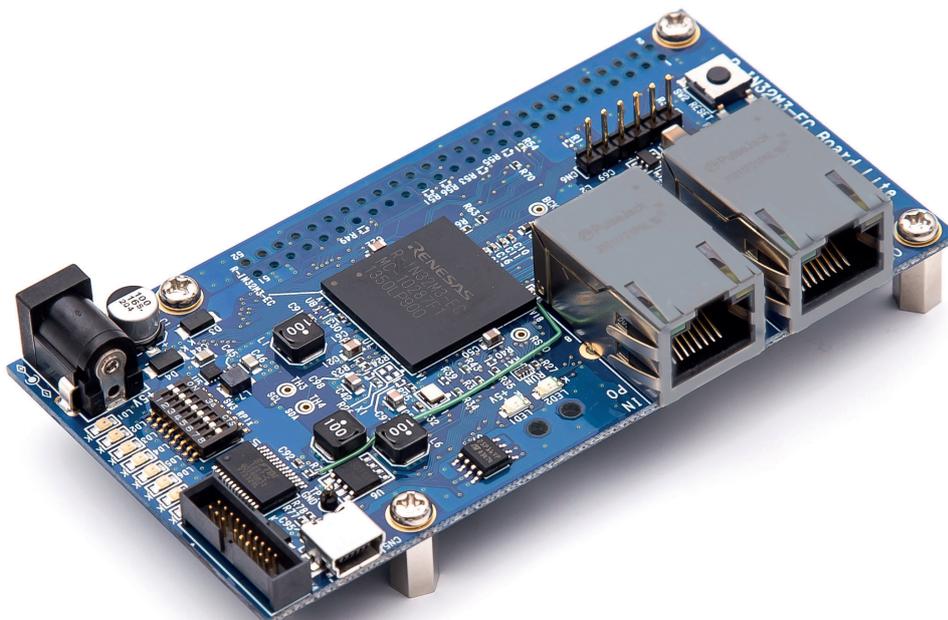
Like other Renesas Solution Kits the Connect it! – Ethernet R-IN comes with a large software bundle of protocol stacks. The highly integrated R-IN solution provides exceptional real-time response and Ethernet processing capabilities at best-in-class low power performance.

EtherCAT®

PROFI®  
NET

EtherNet/IP™

Modbus



## Content of the Solution Kit

- Evaluation board (R-IN32M3-EC Board Lite)
- IAR EWARM Evaluation CD
- I-jet Lite debugger
- Comprehensive software package
- Free TCP/IP stack
- BSP and Sample projects
- Documentation and tutorial video
- Access to evaluation versions of major industrial Ethernet stacks from our partner network

## Board Features

- R-IN32M3-EC Cortex-M3 device
- 16 MB Serial Flash M25P16
- 8 x user LEDs
- 8 x User switches
- Reset button
- Trace connector 20-pin 0.05"
- 2 x Ethernet (RJ45) connectors
- USB mini B connector for USB-Serial converter
- 52-pin interface compliant with Beckhoff's EL9800 Base Board
- Power up through I-jet Lite (pin 11/13 Trace connector), USB-mini B connector or with external power supply
- RoHS/CE compliant

## I-jet Lite Debug Probe

- MCU support: ARM7/9/11, Cortex-M/A/R devices
- JTAG/SWD /SWO debugging support
- Flash and memory download into supported evaluation boards
- Up to 5 V target interface voltage
- MIPI-20 cable, USB-micro cable and ARM-20 adaptor included
- Fully integrated with IAR Embedded Workbench (v6.70 or later)
- RoHS/CE compliant

## Available Software

- Samplsoft software package containing
  - » Drivers for all interfaces
  - » Middleware for serial and parallel flash access
  - » HW-RTOS start-up and library for µltron RTOS
  - » Different project examples (EtherCAT, OS/OS-less and other)
- PROFINET evaluation stack and application from TMG/Molex
- EtherNet/IP evaluation stack and application from TMG/Molex
- Flash tool
- TCP/IP evaluation stack\*
- CC-Link and CC-Link IE stack
- Modbus TCP stack\*

\*Free of charge but requires licence agreement.

Further software can be downloaded from the Renesas web site <http://www.renesas.eu/r-in>

Before purchasing or using any Renesas Electronics products listed herein, please refer to the latest product manual and/or data sheet in advance.

