Connect-it! Ethernet EC-1 Solution Kit

Cut EtherCAT® Remote I/O development time with the EC-1 Remote I/O Solution Kit

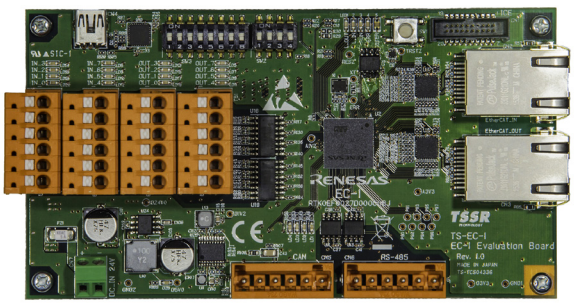
EC-1 is an EtherCAT dedicated communication system-on-chip (SoC) intended for high-speed, high-precision control of slave applications that require higher CPU performance. Featuring a standard ARM® Cortex®-R4 controller with a low latency, tightly-coupled memory with Error Correcting Code (ECC) as well as a two port EtherCAT Slave Controller, the EC-1 is ideal for intelligent I/O modules equipped with EtherCAT communication functions.

The EtherCAT-enabled remote I/O solution kit features a robust remote I/O board, software, documentation, and circuit diagrams. It allows users to start developing an EtherCAT slave with significantly lower risk. Moreover, based on Renesas research, it reduces up to 60 percent of the development time. Developers can refer to the supplied circuit diagrams when designing applications in a configuration very close to that of the actual solution kit. Targeted at remote I/O applications, the board is designed to operate on the same 24-Volt (V) power supply typical of actual products. The sample software has been certified using a conformance test tool.

Kit, CD-ROM and Box







Features

- EC-1 Remote I/O reference board
- Software
  - » Remote I/O application processing
  - » EtherCAT communication processing
  - » ESI file for EtherCAT master/slave communication
- Documentation (application note)
- Circuit diagrams (OrCAD data, layout PDF file)

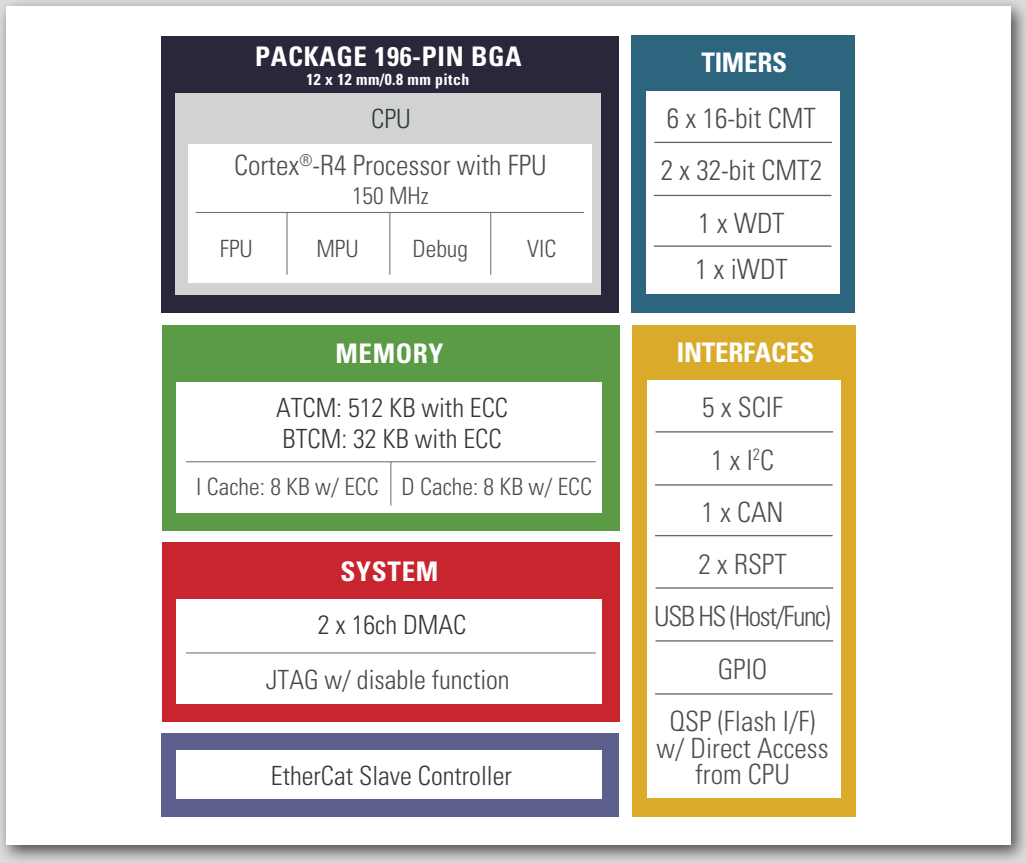
The hardware information includes power supply configuration and constants optimized for the specifications of the EC-1 as well as component information optimized for Bill of Materials (BOM) cost while taking account of safety standards.

Hardware Specifications of Remote I/O Board

- S24 V digital output
  - » NPN type: 8 channel
  - » Rated output voltage: 24 V
  - » Rated output current: 0.1 A/channel, 2 A/module
- 24 V digital input
  - » NPN type: 8 channel
  - » Rated output voltage: 24 V
  - » Rated output current: Under 4 mA/channel
- Power Supply
  - » Rated voltage: 24 V
  - » Internal consumption current: Under 100 mA
- LED
  - » Status LED: RUN (Green), ERR (Red), IN/OUT (Green)

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Block Diagram EC-1



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