

RX72M for Industrial Applications Single-Chip Motor Control via EtherCAT Communications



Overview

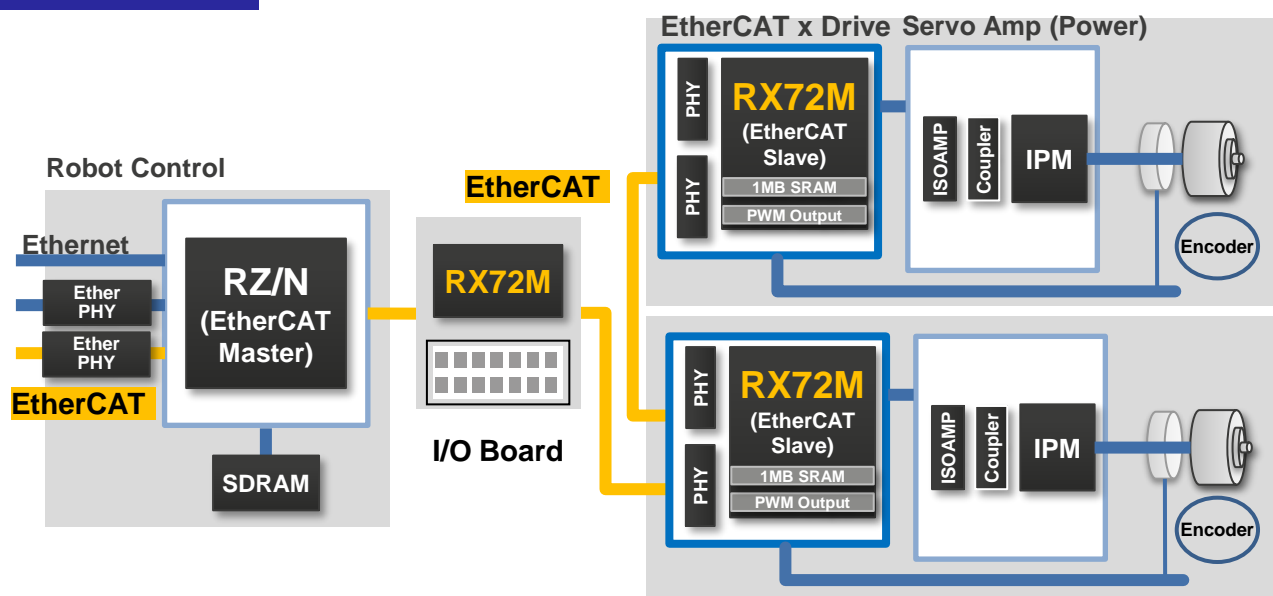
This solution is the RX72M with built-in EtherCAT® slave controller that provides a slave solution for high-speed communication and high synchronous control performance, also realizes EtherCAT® communication and motor control as a single chip.

In this Suitcase demo, RZ/N1D supports CODESYS Software PLC as EtherCAT® master and enabling visualization master-to-slave in factory as all-in-one package.

Key Features

- RX72M with built-in EtherCAT® slave controller is implemented encoder vector control software to realize motor control and EtherCAT® communication as a single chip.
- Control 2 brushless DC motors with encoder, and RX72M I/O board reproduces as motor control in factory line by switching 4 patterns of motor control.
- EtherCAT® complies with CiA402 drive profile, provides synchronous and high performance.

Block Diagram



Target Markets and Applications

- AC Servo
- Industrial Robot
- PLC
- AC Invertor
- Motion Controller
- CNC

EtherCAT® is a registered trademark and patented technology licensed from Beckhoff Automation GmbH(Germany)

RX72M for Industrial Applications

Single-Chip Motor Control via EtherCAT Communications



Recommended Product · Solution

| Category | Product/Solution | Overview |
|-------------------|---|---|
| Micro Controller | RX72M | 240MHz(RXv3 core), 4MB Flash, 1MB RAM |
| Master Board(PLC) | YCONNECT-IT-RZN1D | RZ/N1D Solution Kit (Available)* |
| I/O Board(Switch) | TS-RX72M-COM | RX72M Deployment Evaluation Kit (Tessera Technology) |
| Inverter Board | 24V Motor Control Evaluation System for RX23T | 24V Motor Control Evaluation System Using included 24V inverter board** |

Web · Documents

| Category | Web |
|-------------------|---|
| Solution Web site | RX72M Network Solution Renesas |
| Application Note | RX Group Single-Chip Motor Control via EtherCAT Communications Rev.1.10 |
| Sample Code | RX Group Single-Chip Motor Control via EtherCAT Communications Rev.1.10 - Sample Code (Need to register My Renesas) |
| Video | Renesas RX72M Motor + EtherCAT® Single Chip Solution |
| Blog | RX72M Single-Chip Motor Control via EtherCAT Communications |
| | Multiple industrial ethernet communication and Industrial motor control All-in-one solution by RX72M |



* Please contact a Renesas sales representative or distributor.

** This solution contains RX23T CPU card, brushless DC motor, and USB mini-B cable