

RX72M for Industrial Applications

Vector Control for Permanent Magnet Synchronous Motor with Encoder via EtherCAT

For Evaluation System for BLDC Motor



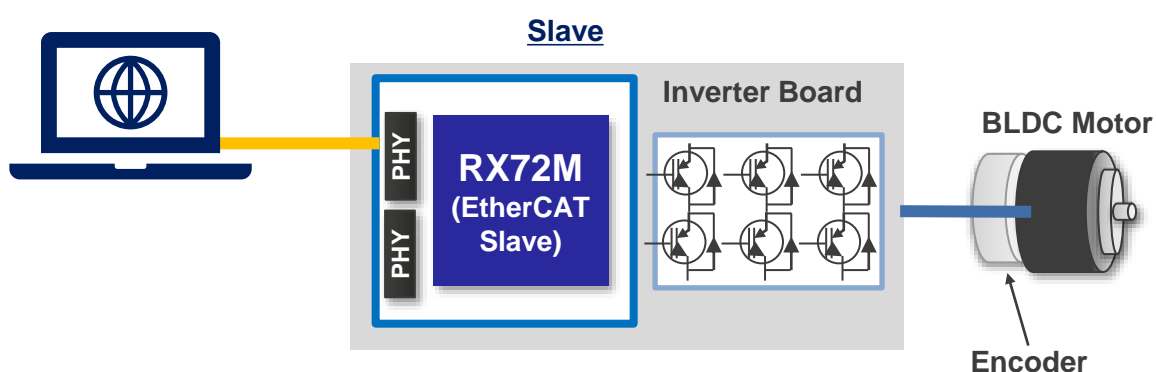
Overview

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. Best for BOM cost reduction and space saving, contributing to shortening development time.

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.
- EtherCAT® complies with CiA402 drive profile, provides synchronous and high performance.
- Application Note and Sample Code can be downloaded free of charge from the Web. Easily try out the evaluation.

Block Diagram



Target Markets and Applications

- | | | |
|---------------|---------------------|-------|
| • AC Servo | • Industrial Robot | • PLC |
| • AC Inverter | • Motion Controller | • CNC |

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

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Recommended Product • Solution

Category	Product/Solution	Overview
Micro Controller	RX72M	240MHz(RXv3 core), 4MB Flash, 1MB RAM
RX72M CPU Card	RX72M CPU Card with RDC-IC	CPU Card for Motor control with RX72M
Inverter Board	Evaluation System for BLDC Motor	Evaluation system for low-voltage permanent magnet synchronous motor (brushless DC motor) Using the included 48V inverter board*

Web • Documents

Category	Web
Solution Web site	RX72M Network Solution Renesas
	Motor Control Solutions Renesas
Application Note	Vector Control for Permanent Magnet Synchronous Motor with Encoder via EtherCAT (Doc: R01AN6295xx0100)
Sample Code	Vector Control for Permanent Magnet Synchronous Motor with Encoder via EtherCAT (Need My Renesas registration)
Blog	TBD



* This Evaluation System for BLDC Motor includes a brushless DC motor and USB mini-B cable. However, this solution uses brushless DC motor and encoder that are commercially available.