RX Ecosystem Partner Solution

CT Green Tech Flying Start Control

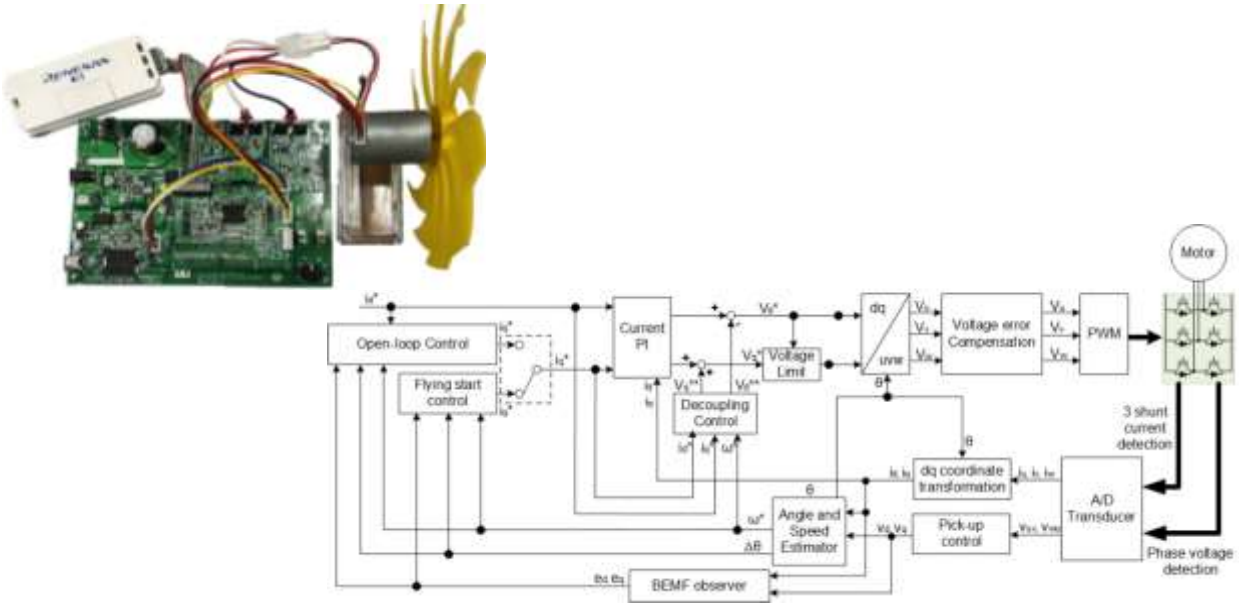
Solution Summary

The FLYING START CONTROL provides users motor evaluation and development environment to start Motors adding Moment of Inertia to design with reduction of the maximum stress on mechanical components. The permanent magnet synchronous motor is used with sensor-less field-oriented control in flying start control algorithm. FLYING START CONTROL supports Renesas RX MCU family.

Features/Benefits

- Supports to start up the motor with attached inertia
- Supports sensor-less motor control
- Supports to estimate angle and speed by feedback current
- Supports on toolchains including e2studio

Diagrams/Graphics



Target Markets and Applications

- DC motor control applications with attached inertia:
  - Outdoor compressors
  - Fans
  - Air extractors
  - Pumps
  - Industrial drives
  - Electric vehicles
  - Electric bikes
  - Electric assist bikes

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Flying start control for motor with attached inertia

This flying start function was developed to start the motor with attached inertia. When this function is activated, it will search for the current actual speed of the motor and use this as the basis for activation. So, the motor doesn't start spinning from zero speed. Flying start allows forward (same direction as inertia) or reverses (opposite inertia) start. If started in the forward direction, the motor will start to rotate from the current speed until the specified rotation speed. If it is started in the reverse direction, the motor will start decelerating to zero according to the current inertia speed and then perform reverse rotation control until the specified rotation speed. Therefore, high current and high mechanical vibration will not be generated. With the maximum reduction of stress on mechanical components, the system can also operate normally.

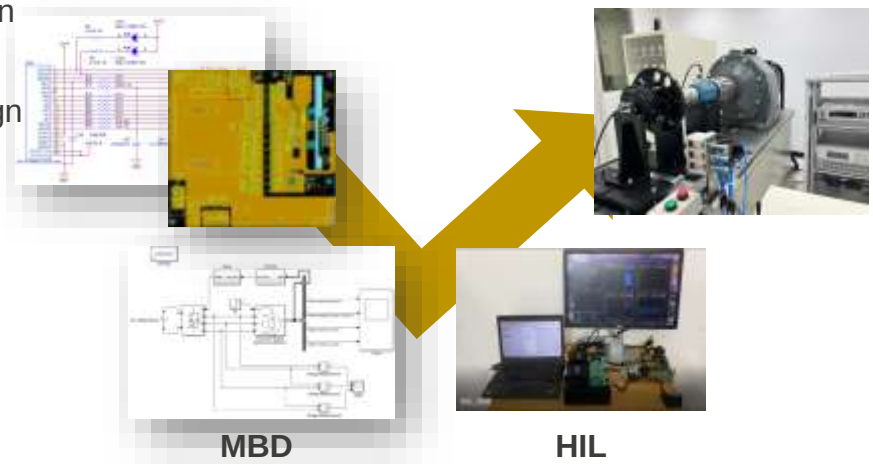
About Us

CT Green Tech. is a development company focused on hardware and software design of various electric vehicles. We are research and development in the filed of advanced of motors and controllers for electric vehicles, electric e-bike, power chain, and industrial control.

Our mission is to develop for customized and provide expectation solution for customers with adequate laboratory equipment. We aim to connect and communicate partners for working in transferring knowledge and technical expertise, offering innovative, research, and education.

Application area:

- DC Motor design
- Vehicle controller design
- LEV power chain
- Soft and firmware design
- Electric scooter
- Electric bike
- Electric assisted bike



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