RealityCheck™ Motor

Endpoint AI-enabled Tool Box

RealityCheck™ Motor is an advanced software toolbox that uses electrical information from the motor control process to enable development of predictive maintenance, anomaly detection, and smart control feedback without the need for additional sensors. It enables detection of small changes in system parameters to indicate maintenance issues and anomalies, allowing for early detection and reducing downtime. The software works seamlessly with Renesas MCUs, MPUs, and motor control kits and is fully integrated with Reality AI Tools® to create, validate, and deploy sensor classification or prediction models at scale.

RealityCheck Motor enables sensorless detection of minute changes in system parameters that are indicative of anomalies and maintenance issues. This toolbox can be deployed on the endpoint for early detection of faults in a motor system, allowing for timely maintenance, reducing downtime and intensive repair costs.

Features

- Performance optimized, real-time capable and extended data collection engine
- Enables sensorless ML models, reducing product BoM
- Embedded conditional monitoring, predictive maintenance, anomaly detection, and control feedback

Benefits

- Eliminates unexpected downtime for equipment owners and operators
- Extend equipment lifespan
- Reduces maintenance costs
- Optimizes energy efficiency

Block Diagram
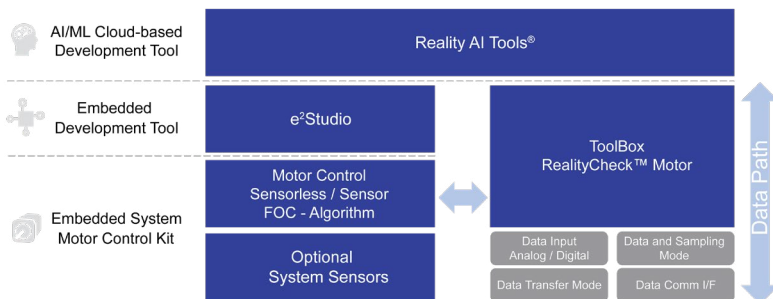
Applications

- Consumer appliances
- Industrial machinery and automation
- HVAC systems
- Automotive applications
- Renewable energy systems
- Building automation
- Home appliances
- Smart monitoring or predictive maintenance functionality for any motor driven system

Related Boards & Kits

- MCK-RA6T2 Renesas Flexible Motor Control Kit for RA6T2 MCU Group
  - RTK0EMA270S00020BJ

For more details, please visit:
renesas.com/realitycheck-motor