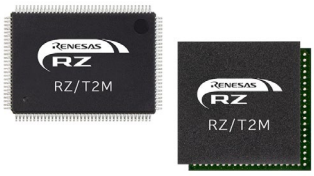
Industry Leading High-Speed, High Precision Control MPU

RENESAS RZ/T2M GROUP

The RZ/T2M microprocessor (MPU) combines fast and highly precise real-time motor control capabilities, together with the latest Industrial Ethernet system architecture on a single chip, while supporting functional safety operation. The RZ/T2M provides all essential peripheral functions for motor control, enabling customers to reduce the number of external components reducing BOM costs and product size.



Key Features

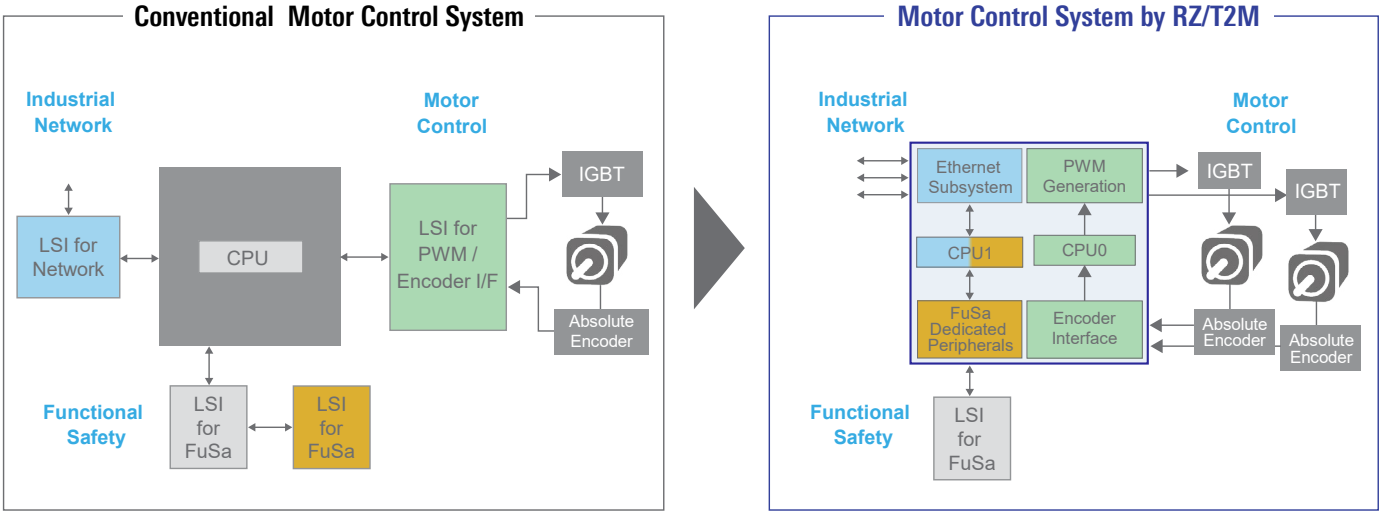
- Perform high-speed and high-precision real time control by Cortex®-R52 CPU (Max 800MHz), implement large Tightly Coupled Memory(576KB) and Low Latency Peripheral Port bus.
- Support major Industrial Ethernet protocols including PROFINET IRT, and the next-generation network standard – TSN – with an embedded Ethernet switch.
- Support functional safety processing with one of the dual CPU and dedicated peripheral functions used together with Functional Safety Software.
- Support dual axes motor control using rich peripherals. (PWM, ΔΣ I/F, Encoder I/F, etc)

Benefits

- Reduce BOM cost of motor control system
- Control dual axes using one chip

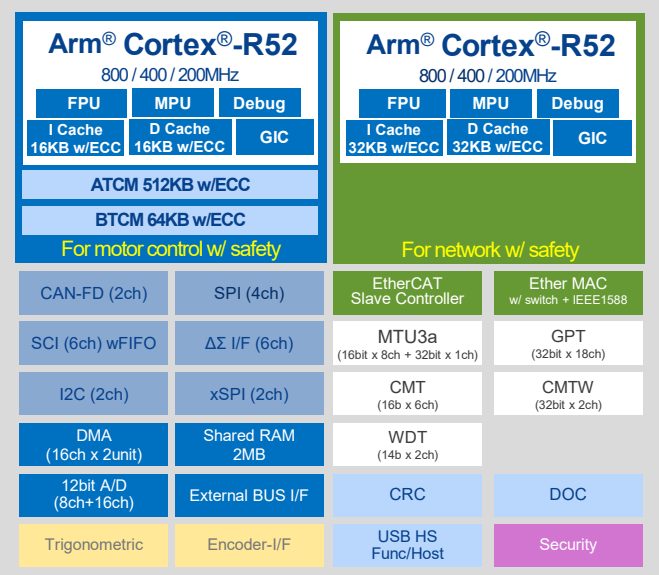
Applications

- AC servo
- Industrial motor
- Inverter
- Motion controllers
- Robot



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Block Diagram



Evaluation Environment and Software

- Renesas e²studio + J-Link by Segger
- IAR Embedded Workbench for Arm + I-Jet ICE/ I-Jet Trace by IAR
- Flexible Software Package (FSP)
- Encoder I/F library
- Industrial network protocols (sample code)
- RZ/T2M Renesas Starter Kit Plus (RSK+)



RZ/T2M RSK+

Product Information

Security	R9A07G075M28GBG	R9A07G075M26GBG	R9A07G075M28GBA	R9A07G075M26GBA	R9A07G075M27GBA	-	R9A07G075M05GFP	R9A07G075M05GFA
Non-Security	R9A07G075M24GBG	R9A07G075M22GBG	R9A07G075M24GBA	R9A07G075M22GBA	-	R9A07G075M21GBA	R9A07G075M01GFP	R9A07G075M01GFA
CPU	Dual Cortex®-R52 (800+800MHz)						Single Cortex®-R52 (800MHz)	
Package	BGA320 (17mmx17mm, 0.8mm pitch)		BGA225 (13mmx13mm, 0.8mm pitch)				QFP176 (24mmx24mm, 0.5mm pitch)	QFP128 (14mmx20mm, 0.5mm pitch)
System RAM	2.0MB wECC						1.5MB wECC	
TCM Memory	CPU0 : ATCM: 512KB wECC, BTCM: 64KB wECC CPU1 : ATCM: none, BTCM: none						CPU0 : ATCM: 512KB wECC, BTCM: 64KB wECC	
∑Δ interface	3ch x 2 units							
Encoder I/F Protocol	A-format™, BiSS-C, EnDat2.2, Tamagawa, HIPERFACE DSL®							
Motor Control Peripherals	PWM Timer (MTU3, GPT), ∑Δ Interface, 12bit ADC, Encoder Interface, Trigonometric Accelerator							
Ethernet Port	3ports(100/1000Mbps)				None			
EtherCAT Port	Max 3ports (Exclusive with Ethernet)				None			
Industrial Ethernet Protocol	EtherCAT®, PROFINET RT/IRT, EtherNet/IP™, CC-Link IE Basic, TSN (IEC/IEEE 60802 Industrial Profile), OPC UA over TSN				None			
CAN	CAN FD x2ch	Classic CAN x2ch	CAN FD x2ch	Classic CAN x2ch	CAN FD x2ch	Classic CAN x2ch	Classic CAN x2ch	Classic CAN x2ch
Power Supply	1.1V, 1.8V, 3.3V							
Operating Temperature	Tj = -40 to +125°C							

*More protocols will be supported in the future

Visit www.renesas.com/rzt2m to learn more about RZ/T2M

Visit www.renesas.com/rzt2m-rsk to learn more about RZ/T2M RSK+

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