



RoboCar

OSEK RTOS



Since 1984

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Product specifications and appearance of this catalog are subject to change without notice.

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IT Convergence

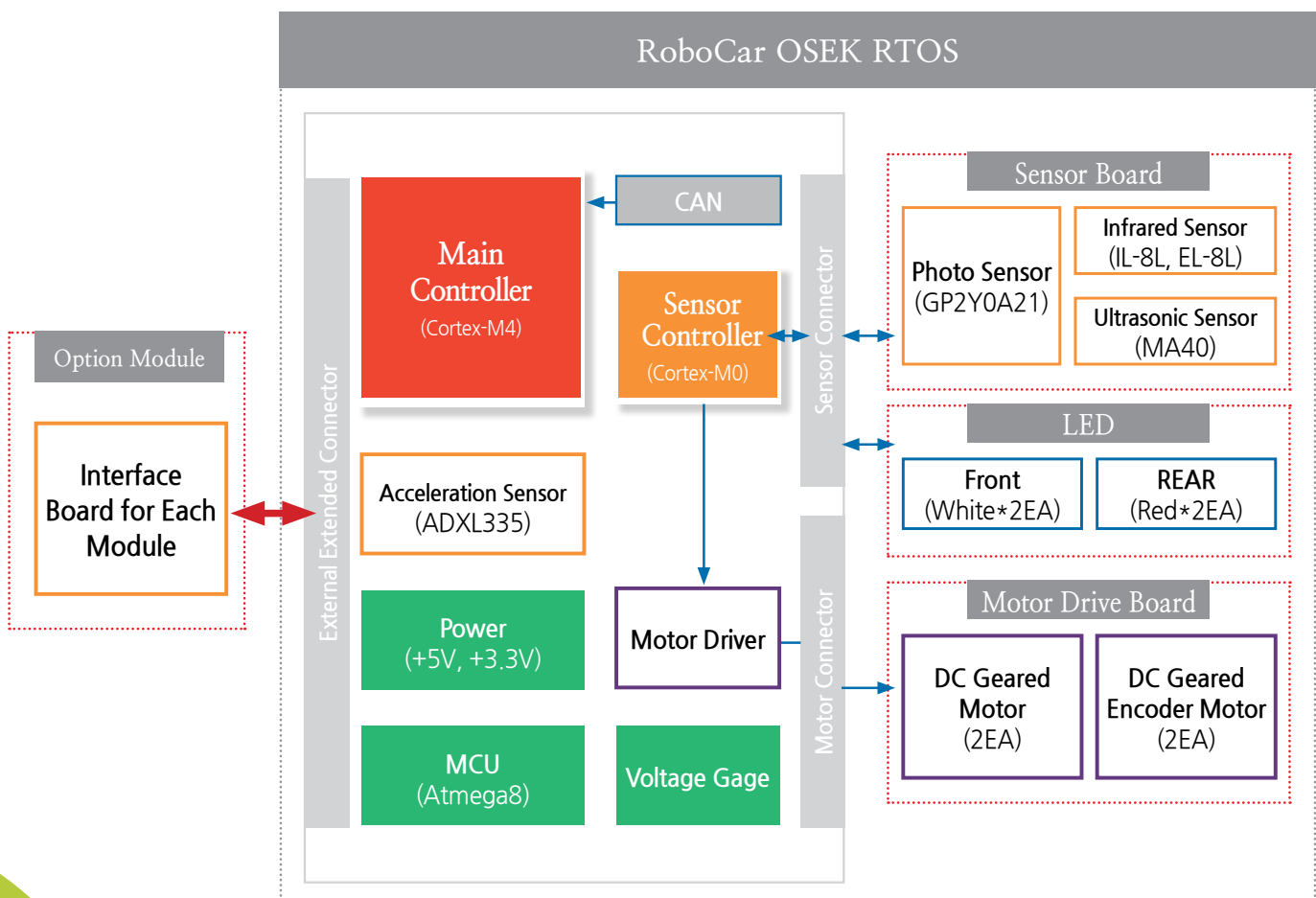
RoboCar **OSEK RTOS**

- Independent driving experiment through 32-bit microprocessor (M4)
- Learning how to use real-time operating system for automobile through practical exercises
- Supports about 20 examples and programs of OSEK RTOS
- Supports priority-based real-time scheduling function
- Provides development convenience through development tools for OS setting and utilization
- Supports standard APIs for application developers to easily develop applications
- Supports CAN for internal communication in vehicles, LIN network technology and Cortex-M4 core
- Obstacle detection through ultrasonic and infrared sensors
- Robot motion detection through acceleration sensor
- Line tracing through phototransistor under the main body
- Practice wireless control and additional sensor utilization through USB interface
- Experiment for driving operation through DC Encoder Motor
- Built-in large capacity battery for unconstrained experiment environment

Product Features

- Sensor value control and driving (DC motor) control can be performed using 32 bit microprocessor (Cortex-M4) mounted on the main body, which enables independent driving training.
- For robot control in various environments, sensors such as ultrasonic sensor, infrared sensor, acceleration sensor, photo sensor, etc. are provided.
- Through USN interface, it is possible to practice wireless control and additional sensor exercises through various application modules in wireless network environment.

Block Diagram



Product Configuration and Name



Front



Back

- | | |
|-------------------------------|---------------------|
| 1. Power Switch | 7. LED |
| 2. Power LED & Reset | 8. Phototransistors |
| 3. Interface Connector | 9. Voltmeter |
| 4. Wireless Network Connector | 10. Adapter In |
| 5. Ultrasonic Sensor | 11. Charge In |
| 6. PSD Sensor | 12. Battery In |

Hardware Specifications

Category	Specifications
M4	STM32F407, 32bit Microcontroller with 1Mbyte Flash Memory, Main control
M0	STM32F072, 32bit Microcontroller with 128Kbyte Flash Memory, Sub control
ATmega8L	8-bit AVR, Microcontroller with 8K Bytes Flash Memory, Voltmeter control
L298P	Up to 4A DC Motor Driver 2EA
Ultrasonic Sensor	40.0±0.5KHz Frequency, 2.0KHz Bandwidth, 2EA
Accelerometer Sensor	Dual-Axis Accelerometer sensor 1EA, Duty Cycle
PSD Sensor	Distance Measuring sensor 1EA, 10-80cm
Phototransistors	8-groups Infrared rays sensor
Motors	DC geared motor 2EA, DC geared encoder motor 2EA
Buzzer	5V input Buzzer 1EA
LED	10mm high brightness LED, White 2EA, RED 2EA
7-Segment	Voltmeter Display, 3-Digit 1EA