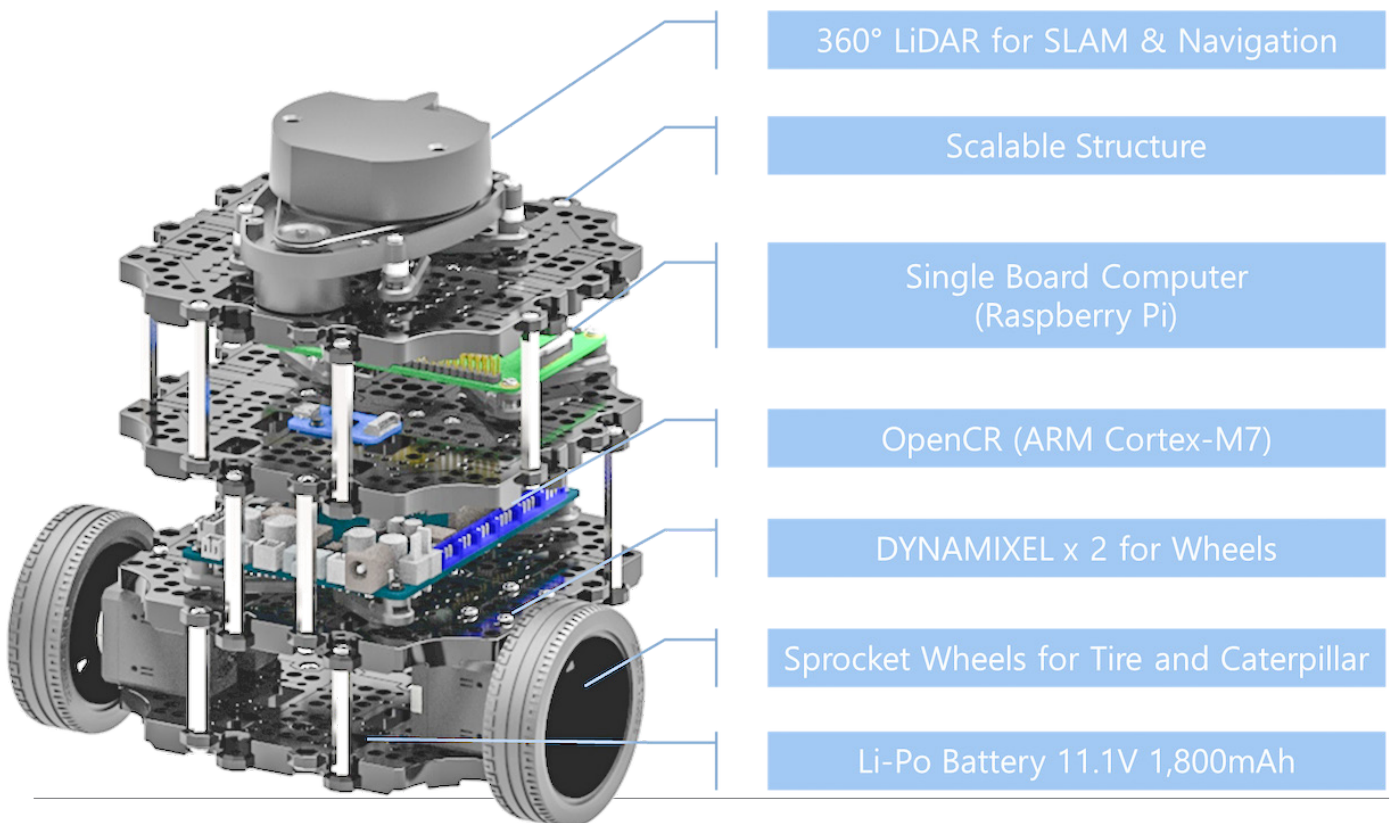
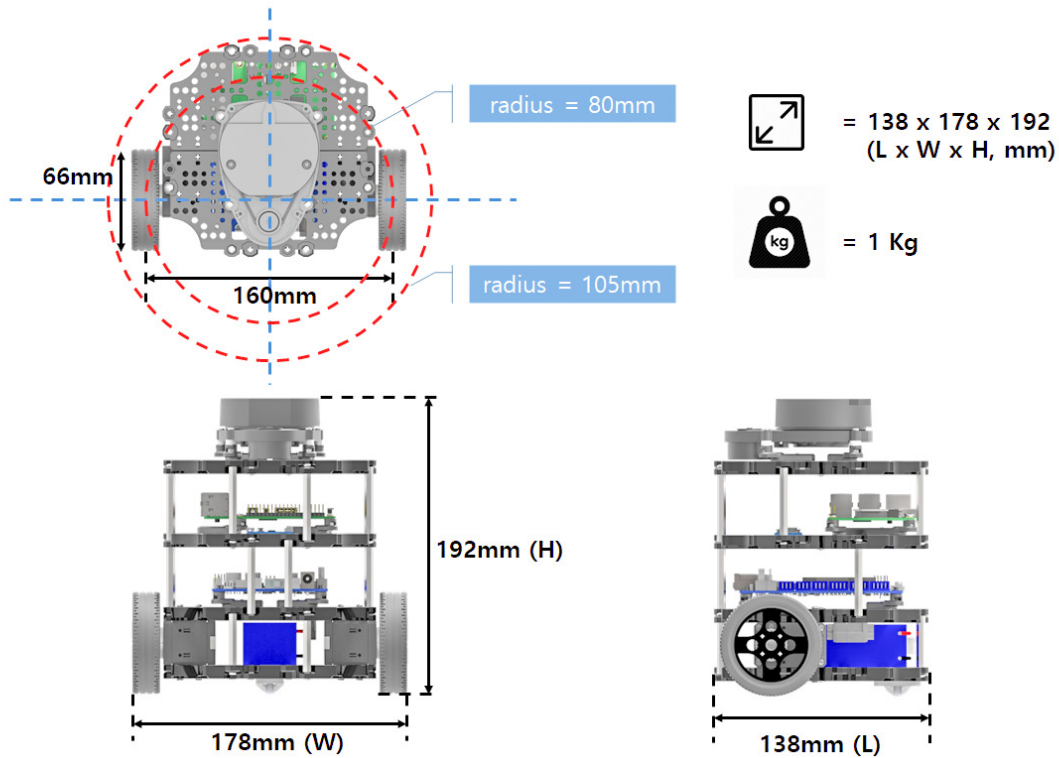


TURTLEBOT3

TURTLEBOT3 IS A NEW
GENERATION MOBILE ROBOT
THAT'S MODULAR, COMPACT &
CUSTOMIZABLE





HARDWARE SPECIFICATIONS

Maximum translational velocity	0.22 m/s	Audio	Several programmable beep sequences
Maximum rotational velocity	2.84 rad/s (162.72 deg/s)	Programmable LEDs	User LED x 4
Maximum payload	15kg	Status LEDs	Board status LED x 1 Arduino LED x 1 Power LED x 1
Size (L x W x H)	138mm x 178mm x 192mm	Buttons and Switches	Push buttons x 2, Reset button x 1, Dip switch x 2
Weight (+ SBC + Battery + Sensors)	1kg	Battery	Lithium polymer 11.1V 1800mAh / 19.98Wh 5C
Threshold of climbing	10 mm or lower	PC connection	USB
Expected operating time	2h 30m	Firmware upgrade	via USB / via JTAG
Expected charging time	2h 30m	Power adapter (SMPS)	Input : 100-240V, AC 50/60Hz, 1.5A @max Output : 12V DC, 5A
SBC (Single Board Computers)	Raspberry Pi 3 Model B		
MCU	32-bit ARM Cortex®-M7 with FPU (216 MHz, 462 DMIPS)		
Remote Controller	-		
Actuator	Dynamixel XL430-W250		
LDS(Laser Distance Sensor)	360 Laser Distance Sensor LDS-01		
Camera	-		
IMU	Gyroscope 3 Axis Accelerometer 3 Axis Magnetometer 3 Axis		
Power connectors	3.3V / 800mA 5V / 4A 12V / 1A		
Expansion pins	GPIO 18 pins Arduino 32 pin		
Peripheral	UART x3, CAN x1, SPI x1, I2C x1, ADC x5, 5pin OLLO x4		
Dynamixel ports	RS485 x 3, TTL x 3		

COMPONENTS

SBC	Raspberry Pi 3 Model B Intel® Joule™
Sensor	360 Laser Distance Sensor LDS-01 Intel® Realsense™ R200 The Raspberry Pi Camera Module v2.1
Control Board	OpenCR1.0
Actuator	Dynamixel X series