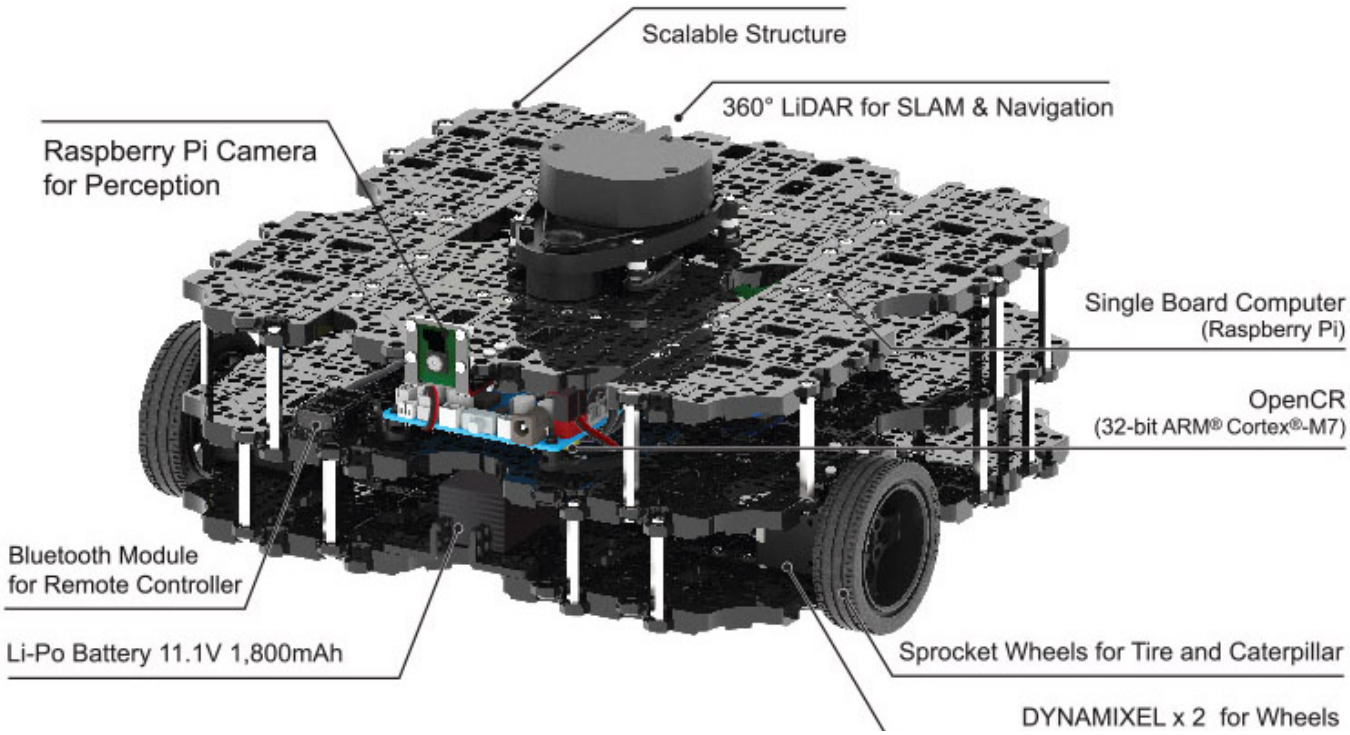
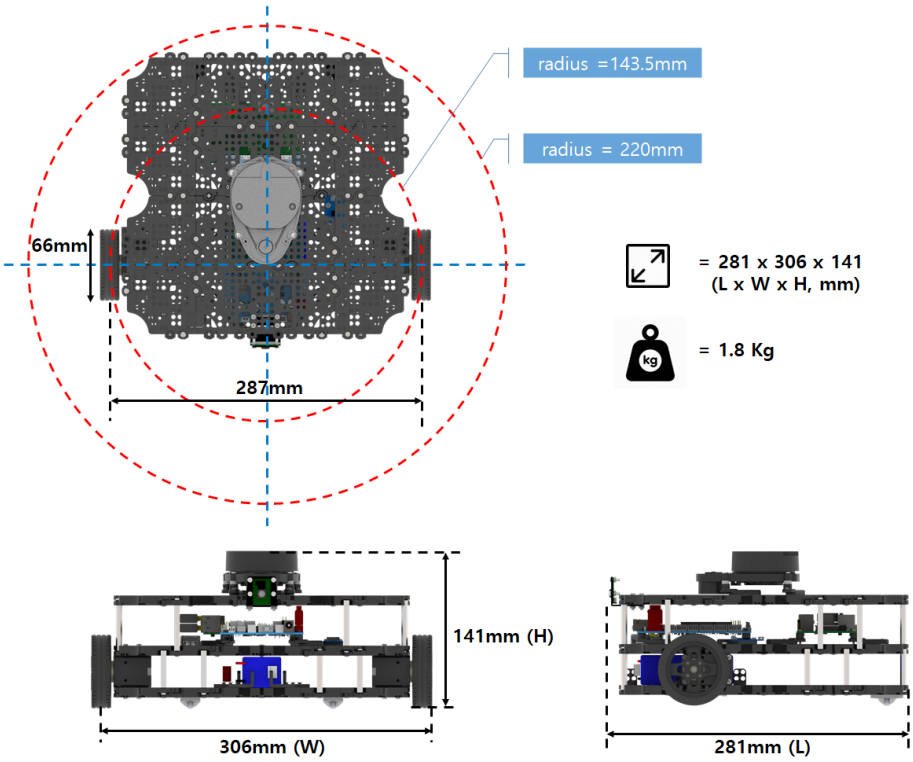
ROS
COMPONENTS

TURTLEBOT3 WAFFLE PI

TURTLEBOT3 IS A NEW GENERATION MOBILE ROBOT THAT´S MODULAR, COMPACT & COSTOMIZABLE



TURTLEBOT3 WAFFLE PI



HARDWARE SPECIFICATIONS

Maximum translational velocity	0.26 m/s
Maximum rotational velocity	1.82 rad/s (104.27 deg/s)
Maximum payload	30kg
Size (L x W x H)	281mm x 306mm x 141mm
Weight (+ SBC + Battery + Sensors)	1.8kg
Threshold of climbing	10 mm or lower
Expected operating time	2h
Expected charging time	2h 30m
SBC (Single Board Computers)	Raspberry Pi 3 Model B
MCU	32-bit ARM Cortex®-M7 with FPU (216 MHz, 462 DMIPS)
Remote Controller	RC-100B + BT-410 Set (Bluetooth 4, BLE)
Actuator	Dynamixel XM430-W210
LDS(Laser Distance Sensor)	360 Laser Distance Sensor LDS-01
Camera	Raspberry Pi Camera Module v2.1
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
Audio	Several programmable beep sequences
Programmable LEDs	User LED x 4
Status LEDs	Board status LED x 1 Arduino LED x 1 Power LED x 1
Buttons and Switches	Push buttons x 2, Reset button x 1, Dip switch x 2
Battery	Lithium polymer 11.1V 1800mAh / 19.98Wh 5C
PC connection	USB
Firmware upgrade	via USB / via JTAG
Power adapter (SMPS)	Input : 100-240V, AC 50/60Hz, 1.5A @max Output : 12V DC, 5A

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