

DATASHEET



SHADOW RUNNER

RESEARCH RR 100

ROS-COMPATIBLE

FULL SENSORS

MAX. PAYLOAD : 50KG

LONG BATTERY LIFE

SHADOW RUNNER RR 100

RR100 Education, a mobile platform full ROS compatible

The RR100 mobile robot is provided with an inside PC. The following softwares are preinstalled and automatically launched at startup:

- ▶ **Ubuntu 18 & ROS**
- ▶ The **drivers to control the motors** at the low level and to get encoders values
- ▶ The **ROS nodes** to collect data from sensors (3D LIDAR, Realsense camera, GPS et IMU).



Speed and performance

Ground clearance	12 cm
Max. payload	50 kg
Max. speed	2,5 m/s
Max. slope	19°
Maximum height of obstacles	13 cm
Turning radius	50 cm
3 motors - 1 direction motor and 2 traction motors with brakes (option : 5 motors)	
Operating ambient temperature	0°C à 45°C

IP54

Included sensors

1 x LiDAR 3D 360°	Robosense RS-LIDAR-16
1 x GPS	
1 x IMU	
1 x Intel Realsense D435 camera	

Structure

External dimensions L 86,4 x l 65,8 x H 140 cm

Weight 90 kg

Battery and power system

Runtime	4,5 h of autonomy
1 x charger	(charging station on request)
Main battery	Lithium LiFePO4 48V 25Ah
2 x Lead-acid batteries	
1 x Coulomb meter to know the battery level (accessible via ROS)	

Interfacing and communication

1 x main PC: Zotac 8th Gen Intel Core i7 Processor, 16 GB RAM, SSD 500 GB
1 x Jetson Nvidia Xavier
External Waterproof connectors: USB and Ethernet
5V, 12V and 24V available inside the robot to power your sensors.