

Pixelfarming Robotics Robot One is a tough and robust tool for innovative farming

We are happy to explain how Robot One is constructed.

The frame of the robot is made of steel plate with gray powder coating, the roof is made of aluminum on which solar panels are mounted. Rechargeable batteries provide energy storage and provision.

Robot One is equipped with general lighting, an alarm light and a work light that can be operated separately. The speakers incorporated in the roof give alarm signals in case of calamities.

The robust wheels provide a powerful all-electric 4-wheel drive with a torque of 500 Nm per wheel. Control takes place via the remote controller, or 'autonomous driving' mode is switched on. For this Robot One is equipped with dual GPS RTK, with an accuracy of 2 cm. The maximum speed is 1m per second.

Robot One comes standard with 2 rows of 5 arms with universal tool holders. Standard tools such as a cultivator or hoe can be mounted in these holders. The tools are controlled via the supplied Touch display. It displays a dashboard with items such as vehicle speed, GPS position, settings, network status, running hours counter, head height, etc.

4 cameras with high resolution and accuracy complete the Robot One for the data collection.

For the communication and connection with Pixelfarming Academy, the digital platform, Robot One is equipped with a powerful CPU with 4G.

Dimensions

External dimensions: 3500mm x 1700mm x 2300mm (l×w×h).

The working width is set to 2980 mm by default.

The weight is approximately 1100 kg.

FACTSHEET

Computing

GPS		dual GPS RTK, 2 cm accuracy
CPU		Nvidia Jetson Xavier, 8 core 64 bit CPU, 512 core GPU, 16 GB 256 bit memory
Connectivity		4G, 100 Mbps
Camera		4 x Intel D415
Resolution	XY	1920 x 1080 RGB
	Depth	1280 x 720 Z16, 1 mm accuracy

Drive system

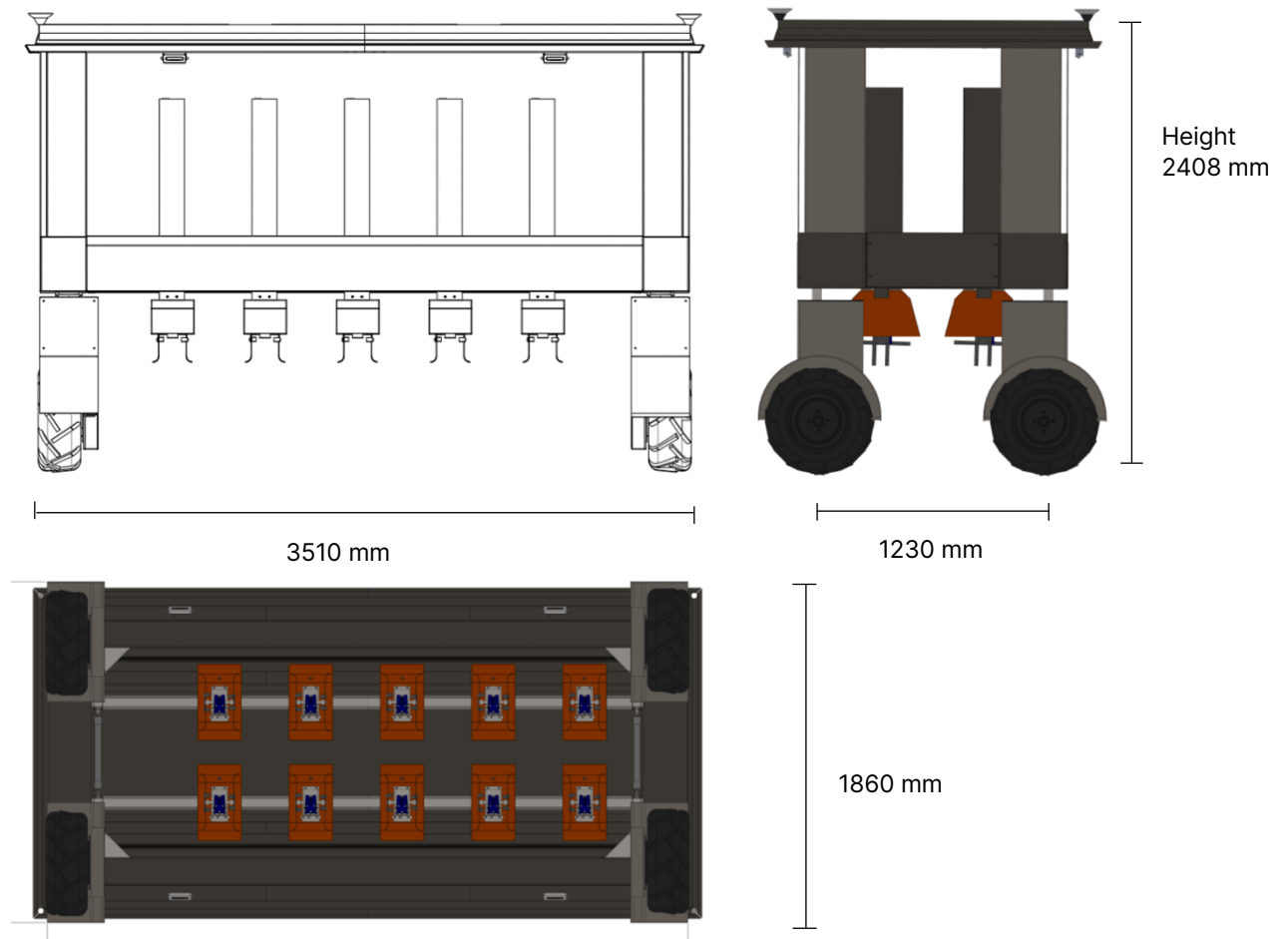
Voltage	48VDC
Torque	500 Nm per wheel
Maximum speed	1 m/s
Position accuracy	1 cm GPS, 8000 steps per wheel rot.
Wheel size	60 cm diameter
Drive inclination	30 degrees
Battery pack	10 x 1020 Wh
Rotation angle	360°

Robot system

Dimensions	2 x 2980 mm wide, 900 mm depth
Rails	2
Arms	2 x 5 arms, configurable
Dimensions	100 mm wide
Performance	peak power 1900 w, 300 rpm
	300 Nm peak torque, 30 kg max
	1,7 m/s max speed
	450 Nm peak torque
	1,3 m/s max speed
Weight	1100 KG

FACTSHEET

Views



Tools

