Overview

Our namesake BURRO robot is where all of this began. BURRO was forged in the fields, running side-by-side with our customers since 2017. BURRO, in its standard configuration, is primarily a carrying vehicle, designed for use in harvesting of specialty crops. BURRO utilizes computer vision, high-precision GPS and AI to navigate autonomously in outdoor environments.

BURRO has also proven to be a formidable mobility platform for complementary systems to ride on, such as spraying, mowing, monitoring, and more.



Dimensions & Weight

LENGTH
54.4 in (138.2 cm)

WIDTH
36.25 in (92.1 cm)

WEIGHT
400lb (182 Kg)

HEIGHT
28.6 in (72.64 cm)

PAYLOAD AREA
36 (91.44 cm) x 47.825 (121.48 cm)
Slatted Steel Tray

Carrying & Towing Capacity

MAX CARRYING PAYLOAD[1]
500 lbs (226 kg)

MAX TOWING PAYLOAD[2]
2000 lb (907 kg)

[1]Rated for concrete/asphalt. Up to 500lbs (xx kg) allowable on mud/gravel

[2]Will vary based on speed, terrain, and carrying/towing payload

Power & Range

MOTORS
4 x Right angle drive brushed motors

PEAK POWER
5.2 hp (3.88 kW)

CONTINUOUS TORQUE
92.7 ft-lb (125.68 Nm)

PEAK TORQUE
323.8 ft-lb (439 Nm)

MAX SPEED[4]
4.8 mph

BATTERY
2.4 kWh / 24V

BATTERY RANGE[5]
10 mi (16km)

OPERATING TEMPERATURE
-4°F to 113°F (-20°C to 45°C)

CHARGE TIME
8 hours

CHARGING INPUT
100-240 VAC, 50-60Hz: 8-10A at 120 VAC, 4-5A at 240 VAC

CHARGING OUTPUT
Onboard: 24VDC, 13A

CHARGING TEMPERATURE
32°F to 122°F (0°C to 50°C)

[4] BURRO can go up to this speed. Autonomy, load, and field conditions can/will reduce its maximum speed

[5] Additional batteries can be added for extended range. Will vary based on speed, carrying/towing payload, and terrain (type & grade)

Wheels & Tires

WHEEL
6” split rim (2-13/16” Bolt pattern)

TIRE[6]
R1, 14 x 4.5-6 in; Tube - 13 x 5-6

TIRE PRESSURE
15 psi (xx kPa)

[6]This is the standard/default tire for BURRO. Alternative tire options can be available in the future

Computing & Sensors

CAMERA SYSTEM
4 x Stereo Camera (12 Cameras in Total)

GPS
RTK (NTRIP Compatible)

LIDAR
3D LiDAR

MODEM
4G LTE Modem

CPU & GPU
All Computing Onboard/Local

RAM
16GB (upgradeable to 32GB)

STORAGE
256 GB SSD

COOLING
Zero-ingress Forced-Air Cooling System

Interface & Safety Features

SCREEN
7” LCD Touch Monitor

BRIGHTNESS
1000 nits

RESOLUTION
1024 x 600

BUMPER BAR/SAFETY EDGE
Front & Rear

REMOTE VIEW
Online dashboard view: See robot on map, what it’s doing, and what it’s seeing

VISUAL
Front & Rear LEDs provide cues & safety/area lighting

AUDIO
Cues inform users of Burro’s autonomy & when it’s in motion

Autonomy

PERSON FOLLOWING
Vision Based

AUTONOMOUS ROUTES (TEACH & REPEAT)
Vision + GPS

ROW NAVIGATION + ROW TO ROW
Vision Based

DOCKING
Vision + GPS

ATLAS (ONLINE ROUTE CREATION & MANAGEMENT + DESTINATION BASED NAVIGATION)
GPS

OBSTACLE HANDLING (STOPPING & AVOIDANCE/PATH PLANNING)
Vision

DATA COLLECTION
Up to 1 TB/hour

CROP SCOUTING
Vision Based