

BOXER™

INDOOR ROBOTIC PLATFORM



**INDUSTRIAL-GRADE
ROBOTIC PLATFORM WITH
BUILT-IN AUTONOMY**

RUGGED & RELIABLE

Boxer is a large, fully extensible indoor robotic platform designed for prototyping and development of industrial applications. It is built with industrial-grade components to withstand harsh indoor environments and move heavy payloads, including collaborative robotic arms, with ease.

ROS READY

Programming complex applications is made easy with the open-source Robot Operating System (ROS). Boxer is supported in Gazebo Physics Simulator, RViz and MoveIt! Motion planner, and data from onboard sensors including front-facing camera, LiDAR, IMU and wheel encoders are all available through ROS.

BUILT-IN AUTONOMY

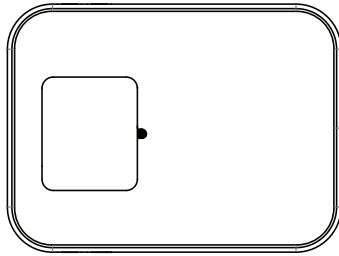
Boxer comes with Clearpath's indoor autonomous navigation software, providing robust point-to-point navigation in changing environments with dynamic path planning, simultaneous mapping and localization (SLAM), and obstacle avoidance.

A FEW OF THE INNOVATIVE FIRMS WHO USE OUR ROBOTS

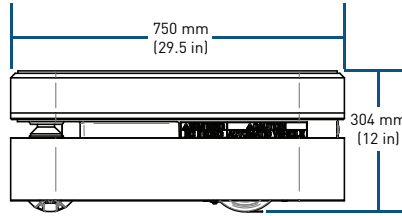


Contact us today for pricing and a free 30 minute technical assessment: 1-800-301-3863

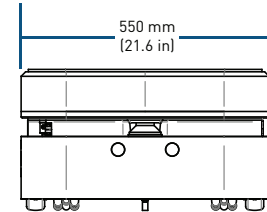
TECHNICAL SPECIFICATIONS



TOP



SIDE



FRONT

SIZE AND WEIGHT	
EXTERNAL DIMENSIONS (L X W X H)	750 X 550 X 304 mm (29.5 X 21.6 X 12 in)
WEIGHT	127 kg (280 lb)
SPEED AND PERFORMANCE	
PAYLOAD	100 kg (220 lb)
MAX SPEED / ACCELERATION	2.0 m/s (4.47 mph) / 1.0 m/s ²
SUSPENSION	Fixed
INTEGRATED LIFT	Up to 50 mm (2 in) stroke, up to 100 kg capacity
TURNING RADIUS / DRIVE CONFIGURATION	0 mm / Rear-wheel differential drive
MAX GRADE	Up to 0.5° for typical applications
TEMPERATURE RANGE OPERATION / STORAGE	20 °C to 40 °C (68 °F to 104 °F) / -20 °C to 30°C (-4 °F to 86 °F)
BATTERY AND POWER SYSTEM	
BATTERY CHEMISTRY / CAPACITY / VOLTAGE	Lithium Iron Phosphate / 924 W-h / 19 - 32 V
USER-FACING POWER INTERFACE	Unregulated, unswitched battery voltage, 12 A maximum
RUNTIME - NAVIGATING / STATIONARY	Approx. 8 hr / Up to 16 hr
CHARGE TIME - MANUAL	4 hr
INTERFACING AND COMMUNICATION	
INTERNAL COMPUTER INTERFACE	ROS2 API
ROS COMPUTER (Optional)	Vecow ECX-2000 series or EVS-2000 series
VISUAL COMMUNICATION	360° LED light pipe for status indication
PAYLOAD INTERFACE	1X ethernet, RJ-45 female, PoE, 1X USB 3.0a Type A female, e-stop loop breakout, dual-channel, serial interface, RS-232, 2-wire, 2X safety relay dry contacts, emergency stop reset interlock
WIFI	802.11 ac/a/b/g/n, 2.4 Ghz, 5 Ghz
SAFETY & NAVIGATION SENSOR	Hokuyo UAM-05LP 2D LiDAR, 270° FoV, 5 m safety-rated protective field range, 20 m non-safety-rated warning field range
REVERSING SENSOR / 3D OBSTACLE SENSOR	Pepperl+Fuchs R2100 2D LiDAR, 88° FoV / Intel RealSense D435
SOFTWARE	Clearpath Autonomous Navigation Software, ROS1 Noetic or ROS2 Foxy, Gazebo, RViz & URDF Support

CONTACT US FOR MORE INFORMATION

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Don't forget to find us online:

