

Technical Specifications

OTTO 1500

OTTO 1500 is a heavy-duty autonomous mobile robot (AMR), designed to move materials up to 1,900 kg in the most demanding environments. Maximize your fleet productivity by moving the heaviest payloads faster than any AMR on the market, without compromising on safety.



MAXIMIZED ROI

OTTO 1500 achieves unmatched throughput by moving your materials in fewer and faster trips.

AGILE & STRONG

Move your heaviest payloads at top speeds while safely navigating around people, equipment and tight turns.

VERSATILE

Extend the capability of your OTTO 1500 with a wide range of attachments that are compatible with your existing equipment.

PERFORMANCE

Max. Capacity	1,900 kg (4190 lbs) Includes payload and attachment, if any
Max. Speed	2.0 m/sec (4.5 mph)
Docking Accuracy Standard	± 10 mm (x,y), $\pm 1^\circ\varphi$ (yaw) Repeatable to 3σ
Docking Accuracy Precision Upgrade ¹	± 5 mm (x,y), $\pm 1^\circ\varphi$ (yaw) Repeatable to 3σ

Max. Turning Speed	1.5 rad/sec (90°/sec)
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Max. Docking Speed	0.3 m/sec (0.7 mph)
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Min. Aisle Width (One Way)	1915 mm (78 in)
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Min. Aisle Width (One Way)	3570 mm (146 in)
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¹Requires OTTO High Accuracy Docking System (HADS) upgrade, sold separately

CHASSIS

Dimensions	1837 x 1283 x 351 mm (72.3 x 50.5 x 13.85 in)
Mass	627 kg (1382 lbs)
Turning Radius	Turn in place

Suspension	Passive, Rocker
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Ground Clearance	16 mm (5/8 in)
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Traversable Gap	16 mm (5/8 in)
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ENERGY SYSTEM

Battery Capacity	80 Ah
Runtime (90% to 10%)	10 hr
Charge Time (10% to 90%)	60 min

Battery Voltage	52.8 V
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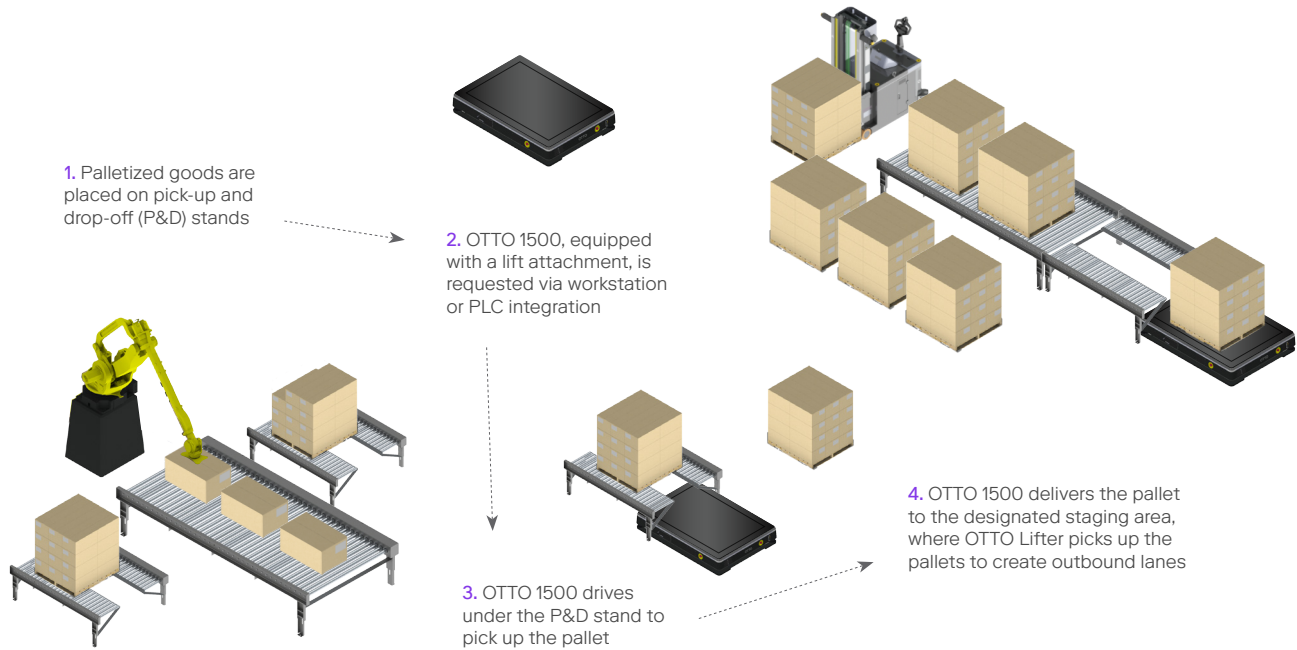
Max Charge Rate	80 A
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Battery Life	3,000 full charge cycles
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Battery Charging Options	Autonomous Opportunity Charging (Default) Manual Charging
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SAMPLE WORKFLOW

Palletized Finished Goods to Outbound



SAFETY SYSTEM

Intelligent Braking	Redundant monitoring with safety-system interlock	Standards Compliance	ISO 12100, ISO 13849-1, ISO 3691-4, ANSI/RIA 15.08-1, ANSI/ITSDF B56.5, FCC Part 15 Subpart B, ICES-003, ICES-002
Adaptive Fieldsets	Intelligent PL-d rated switching fieldsets (patent-pending)	Manual Control	Pendant-based manual control. Guided autonomous control available via OTTO software interface.
E-Stop	4 E-Stops (1 per side) + user E-Stop circuit interface		

AUTOMATION INTERFACE

Power Interface	24 VDC, 10 A, regulated, unswitched 52.8 VDC nominal, 50 A, unregulated	Safety Interface	Dual-channel E-Stop breakout, 2 safety-rated GPIO, 1 attachment interface fault line
Signal Interface	1x Ethernet, 1x USB 3.1, 1x HDMI 1 CAN Bus, 5 GPIO (2 safety rated) 1 interface control line		

CONTROL SYSTEM

Sensors	4x Intel RealSense Cameras 2x SICK Microscan3 (360° FOV) Embedded 6-axis IMU	Computer	Solid-state Military Spec Computer with dedicated GPU
		Communication	WiFi 2.4 / 5 GHz (802.11 a/b/g/n/ac) 2x Long-range Omnidirectional Antennae

ACCESSORIES (SOLD SEPARATELY)

Load-Handling Attachments	1500 kg (3300 lbs) Hydraulic Lift 1500 kg (3300 lbs) In-line Conveyor 1900 kg (4190 lbs) Load plate	Charging	Autonomous Supercharger (80 A) Manual Trickle Charger (25 A)
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ENVIRONMENTAL

IP Classification	IP20	Humidity	0-95%, non-condensing
		Temperature	0 to 40° C

For more information visit ottomotors.com/1500
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