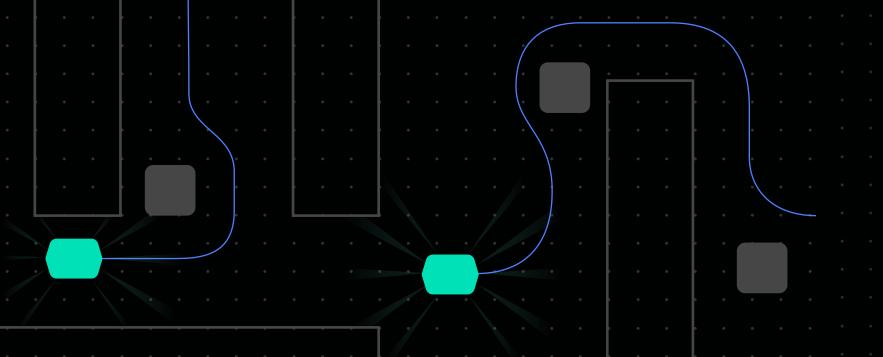


Unlock the Hidden Potential of your Facility

ОТТО

Increase your productivity without increasing your footprint or your workforce.



OTTO is more than a self-driving vehicle.

Our products work together to reduce manual touches in the production process and deliver uptime, throughput improvements, and safety.

OTTO™ finds a way.

No tape, guides, or predefined paths required.
OTTO analyzes the environment and makes
real-time decisions about its route depending
on where it needs to go.



Increase your plant's throughput

OTTO adds reliability and cadence to your material flow, which improves availability and overall effectiveness of equipment and process.

Reclaim unproductive floorspace

OTTO enables you to reduce buffer size by making smaller, more frequent deliveries, which reduces WIP and on-hand inventory.

Standardize manufacturing excellence

The best processes in each facility can be shared with all facilities, distinguishing your brand with a world-class culture of innovation.

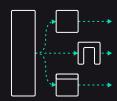
What can OTTO do for you?

OTTO is designed to quickly adapt to different tasks, floorplans, and workflows in a few clicks.

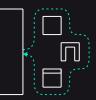
OTTO combines the flexibility of a person with the efficiency and reliability of automation so the right parts get to the right place at the right time.







Deliveries and Pickups



Bus Routes



Pull Calls by Operator



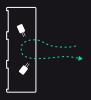
Lineside Delivery and Pickup



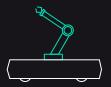
Kitting and Picking



Long Hauls



Fork Truck Handoffs



Custom Implementations and Workflows

3

Automate your material flow.

OTTO's core vehicle operating system is what transforms industrial material handling equipment into self-driving vehicles that can automate your material moves.

Safe

OTTO safely navigates around people and infrastructure.

Reliable

OTTO uses multiple sensors so it never gets lost in your plant.

Intelligent

OTTO intelligently plans routes through dynamic environments.



Kyle SmithGE Healthcare

OTTO. It's where it needs to be, when it needs to be there.

The OTTO App allows you to use a tablet to connect processes in the palm of your hand.



Map your facility

Show OTTO around and build a facility map in real time.



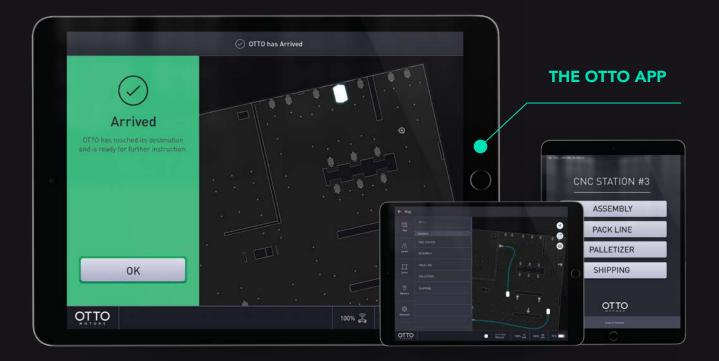
Add delivery points

Tell OTTO where pickups and dropoffs need to happen.



Put OTTO to work

Send OTTO to destinations in your facility or create bus routes and milk runs.



Automating your material flow doesn't require a robotics degree.

The OTTO App gives you the tools to improve your material flow minutes after taking OTTO out of the box.

 S

Put your material flow on autopilot.

The OTTO Fleet Manager connects multiple self-driving vehicles to your production process for higher levels of efficiency and control.

Material flow coordination

The OTTO Fleet Manager is your fleet's central dispatch and command center. It manages OTTO's job queue, dispatches work, and worries about material flow so you don't have to.

Uptime with little interruption

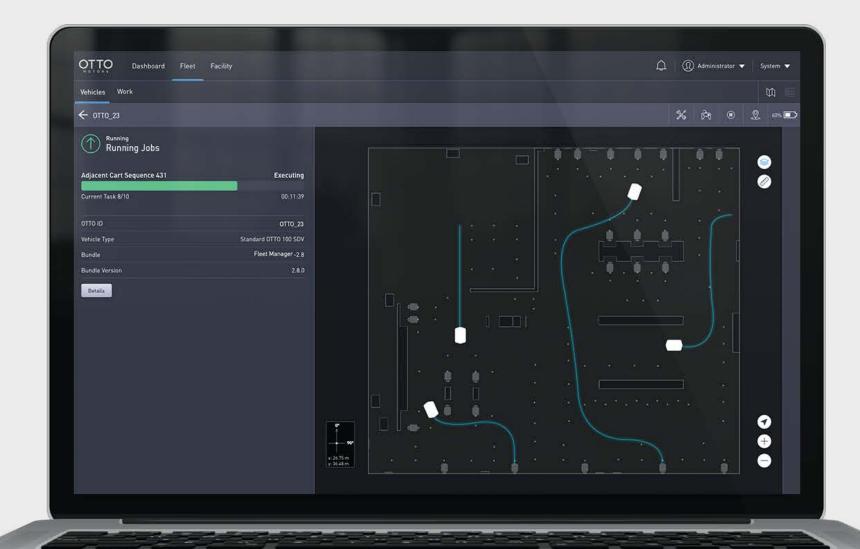
If OTTO is charging, it is not working. The OTTO Fleet Manager works to maximize uptime by sending OTTO automatically to the charger at opportune times for brief, high-powered super charges.

Data-driven decisions

OTTO connects processes, collects data, and closes the automation loop for insight and action on your production floor.

Industry 4.0 compatible

OTTO is designed for the factory of the future with powerful APIs for end-to-end automation and the digitization of your material flow.



Put OTTO to work.

Job assignments that work for your workflow. OTTO can receive simple directions or integrate with existing automation or software.

Workstation dispatch

Create jobs for OTTO manually with a tablet or computer in the workstation.

Scheduled dispatch

Create a customized schedule of jobs by shift, time, or production requirements.

Automated dispatch

Automated job generation by existing PLCs at process end-points.

Software dispatch

ERP, WMS, MES integrations for automated and coordinated moves.

Designed with your facility in mind.

OTTO 100

740 x 550 x 301 mm (29.1 x 22 x 12 in) 100 kg (220 lbs) PAYLOAD CAPACITY 2.0 m/s (4.47 mph) TOP SPEED 0 mm (0 in) TURNING RADIUS



OTTO is designed for work in your facility by using one of OTTO's standard attachments, or by connecting to the hardware, power, and communications attachment interface for more creative and customized deployments.

OTTO 1500

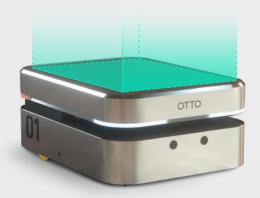
1810 x 1190 x 400 mm (71 x 47 x 16 in) 1500 kg (3306 lb) PAYLOAD CAPACITY 2.0 m/s (4.47 mph) TOP SPEED 0 mm (0 in) TURNING RADIUS





OTTO 100 CART BASE

application. "



OTTO 100 CUSTOM
ATTACHMENT INTERFACE



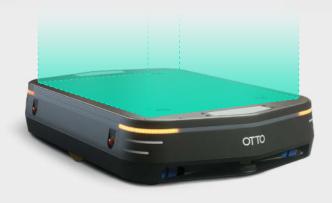
OTTO 1500 CONVEYOR



OTTO 1500 LIFT



OTTO CHARGE 100



OTTO 1500 CUSTOM ATTACHMENT INTERFACE



OTTO CHARGE 1500

9

Specifications

OTTO 100

OTTO 1500



ОТТО

Size and weight

Mass

740 x 550 x 301 mm (29.1 x 22 x 12 in) 127 kg (280 lbs)

1810 x 1190 x 400 mm (71 x 47 x 16 in)

525 kg (1157 lbs)

1500 kg (3306 lbs)

2.0 m/s (4.47 mph)

Speed and performance Maximum Total Payload

Maximum Speed

Turning Radius

Suspension

Positional Accuracy

100 kg (220 lbs)

2.0 m/s (4.47 mph)

+ / - 25 mm (0.98 in)

0 mm (0 in)

Fixed

0 mm (0 in)

Passive

+ / - 25 mm (0.98 in)

Battery and

Managed Battery Charging

24/7 continuous operation with 85% individual vehicle uptime is achieved with automated and brief visits to the OTTO charger at opportune times between jobs.

Battery charge levels are intelligently managed by the OTTO Fleet Manager so your fleet is always charged and ready for work.

Interfacing and communication

power system

Industrial API (OPC UA) that integrates with your PLCs for collaboration with existing

RESTful API that provides integration with web-based software such as ERP, WMS, MES.

Attachment Control Systems Power

Communication

Integrated Lift

Attachment Supply Power*

Custom Attachment Interface*

Safety Systems

Wi-Fi (802.11 a/b/g/n/ac, 2.4 GHz, 5 GHz)

62 mm (2.44 in) stroke, 100 kg capacity

27.6VDC nominal 10A, Unregulated, unswitched battery power

2x Ethernet POE, 2x USB 3.0, 16x DIO (8x DI, 8x DO), e-stop extension,

1x serial RS-232, 2x dry contact relays

Front safety-rated LIDAR sensor, 3D vision system for auxiliary object detection, 1x emergency stop button,

perceptive 360° LED lighting

24VDC 5A, regulated, unswitched

Wi-Fi (802.11 a/b/g/n, 2.4 GHz, 5 GHz)

51.2VDC nominal 50A, Unregulated battery power, switched with safety circuit

1x Ethernet, 1x USB 2.0, 1x CAN bus, 2x general purpose inputs and outputs, 1x payload attachment control line, 1x payload attachment fault line, dual channel emergency stop breakout

Front and rear safety-rated LIDAR sensors, perceptive 360° LED lighting, 4x emergency stop buttons



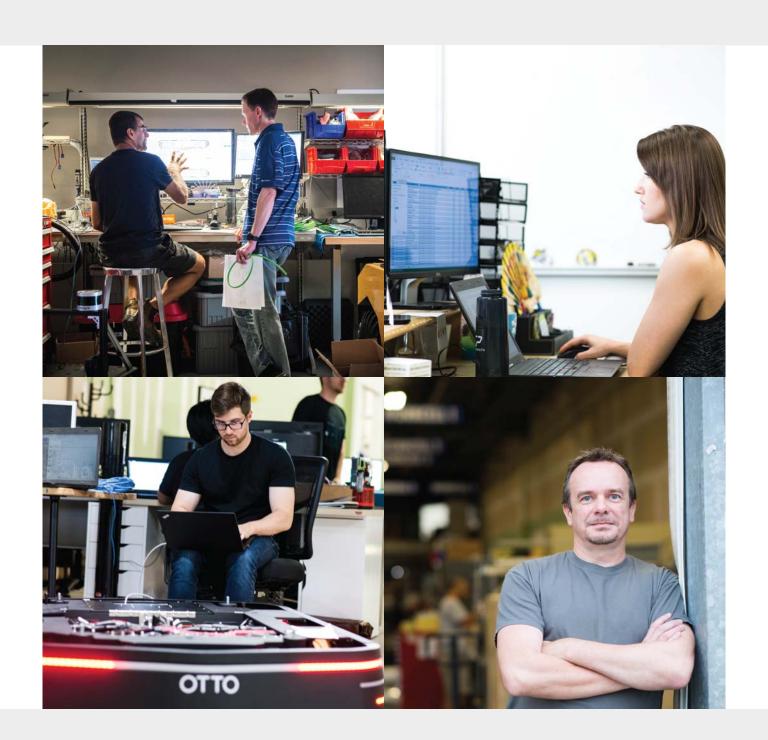
We're with you every step of the way.

Professional Services

Our dedicated team of material flow designers, simulation developers, and solution consultants are available to help you map processes and design a solution unique to your business.

Test Center

Each OTTO system is thoroughly tested 24/7 in our test facility to ensure that you are getting best in class automation that is up to the most critical tasks you can provide.



Customer Success

Your OTTO customer success team is by your side from your first OTTO to hundreds. Get around-the-clock support from the people who know your OTTO best.

Integrator Network

We partner with and train a network of industrial automation solution providers to help design, plan, and execute on your next project.

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The Future is Self-Driven

www.ottomotors.com



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