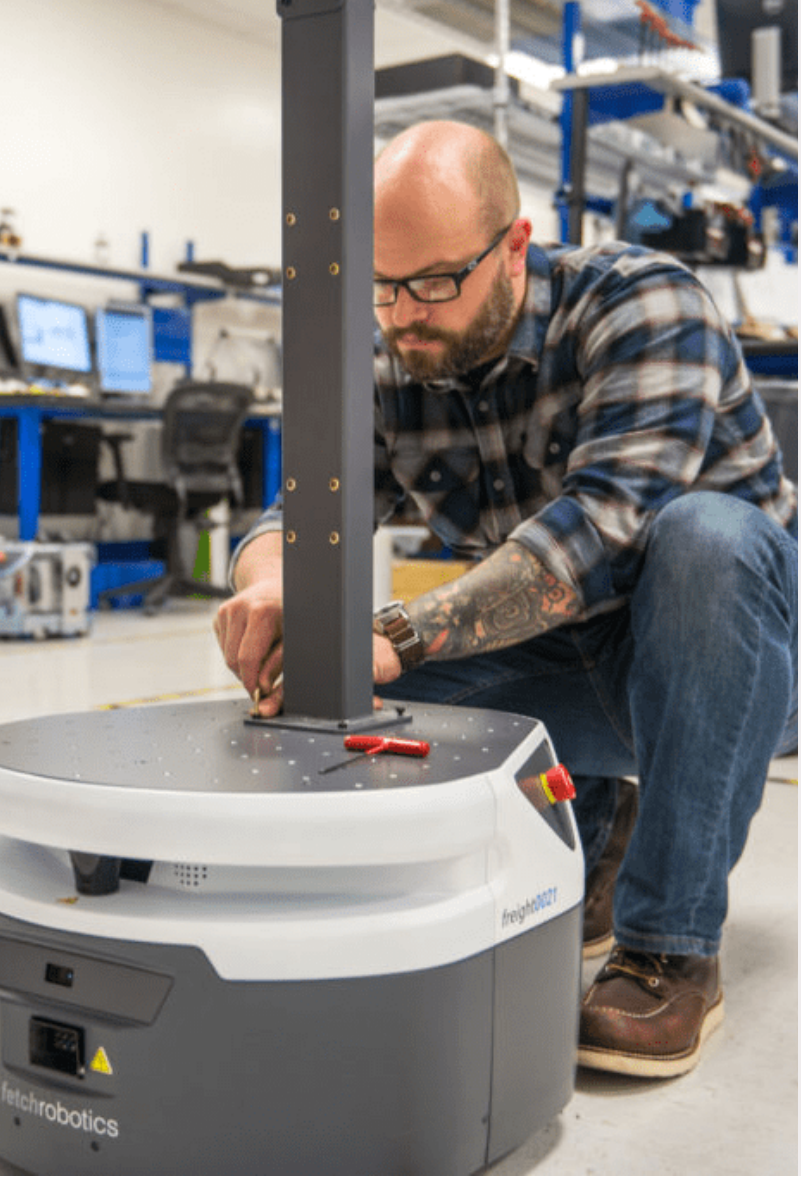


freight100 Base

Autonomous Mobile Robot Platform

Create your own customized automated solution

Autonomous mobile robots have become great enablers for individuals and companies looking to develop automated products and solutions that operate safely amongst people. Freight100 was designed as a highly extensible platform to help accelerate these development efforts. Integrators and software partners can take advantage of Freight100's hardware and software extensibility features to quickly bring up custom automated solutions.

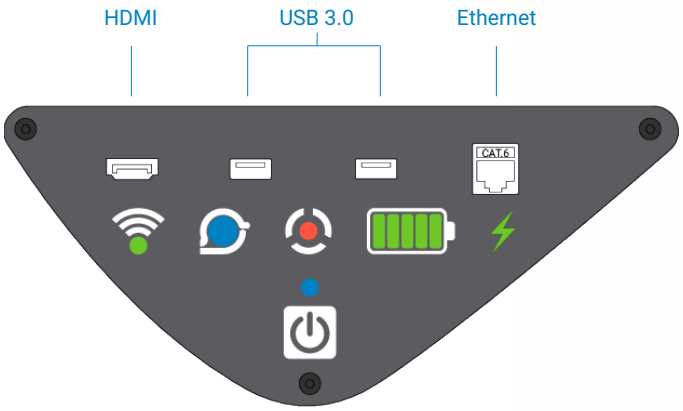
Freight100 Base Features

- Collaborative fully autonomous mobile robot base
- Modular top plate with 74-threaded mount points
- Auxiliary access via top surface to power, direct communication bus, and optional Ethernet or USB 2.0 ports
- Side interface panel with Ethernet, USB 3.0, and display port
- Indicators providing WiFi, power, battery, runstop status and FetchCore status
- FetchCore software for precise and reliable movement and position

CE Freight100 carries a CE mark and meets regulatory requirements for product safety.

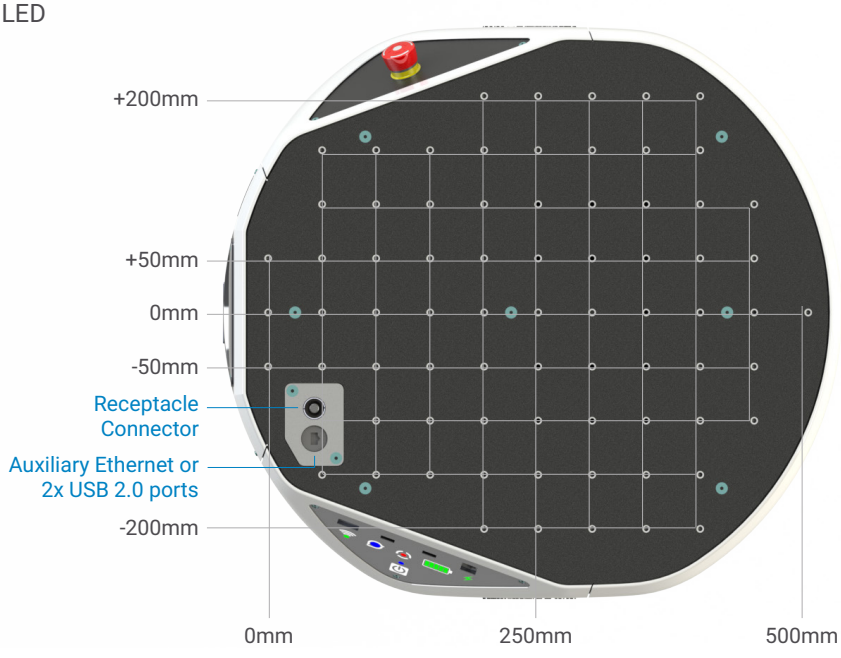
Freight100 Interface Panel

Interfacing with the Freight100 is direct and easy. The access and status panel features a display port to attach a screen, as well as (2) USB 3.0 ports and an Ethernet port. Battery, charge, wireless, runstop, and FetchCore status are also provided via LED indicators on the panel.



Freight100 Top Surface

The Freight100 top plate provides (74) threaded M5x0.8x4mm mounting points, oriented in a 50mm x 50mm grid, for easily and securely mounting hardware and additional sensors.



Freight100 Specifications

Weight	68 kg (150 lbs)
Height	359 mm (14 in)
Base footprint	508 mm (20 in) wide, 559 mm (22 in) dia.
Payload	100 kg (220 lbs)
Maximum Speed	1.5 m/s (3.4 mph)
Turning Radius	Turn in place
Battery	Deka 8G22NF Sealed Lead Acid
Nominal continuous runtime	9 hrs
Charging	Autonomous Docking
Charge Time	3 hrs to 90%
2D Laser Sensor	SICK TiM 571, 25 m, 220 degrees
3D Depth Cameras	2x Intel RealSense D435
Processor	Intel i5, Haswell
RAM	16GB
Hard Drive	120GB SSD
Wireless	Integrated 802.11abgn and 802.15.1
Interface Panel Peripherals	HD video, 2x USB 3.0, Ethernet port
Audio	4x Speakers, 10W per channel
Environment	Indoor
Traversable Aisle	95 cm (37.4 in)
Traversable Gap	15 mm (0.59 in)
Torque for M5 Mounting Points	3.6 N-m (31.9 in-lb)

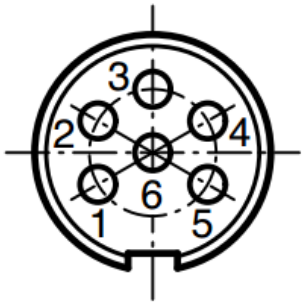
About *fetch*robotics

Fetch Robotics is an award-winning intralogistics automation company headquartered in Silicon Valley. We provide innovative, on-demand automation solutions for material handling and inventory management by combining mobile robotics with the power of the cloud to find, track, and move almost anything in any facility. Fetch Robotics' solutions and services are deployed in leading distribution, fulfillment, and manufacturing centers around the world, augmenting workforces to drive increased efficiency and productivity.

Power and Signal Specifications:

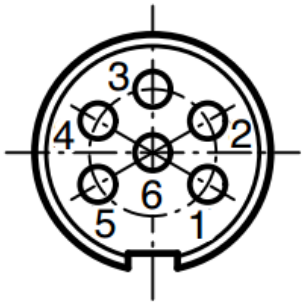
The top plate connector of the Freight100 robot is the female Amphenol Tuchel connector T 3404 100 shown below and located in the Freight100 top surface image above.

Receptacle Connector (Mounted on Base):



Pin #	Signal
1	GND
2	GND
3	PWR
4	PWR
5	RS485A
6	RS485B

Corresponding Plug Connector:



Pin #	Signal
1	GND
2	GND
3	PWR
4	PWR
5	RS485A
6	RS485B

Recommended Connectors: Amphenol Tuchel T 3400 001, T 3400

Output Power Specifications:

The output power is supplied by an internal 24V nominal battery pack.

Output Power	Minimum	Typical	Maximum
Voltage	20V	25V	33V
Current	-	10A	12A*

*10A is guaranteed by design. Absolute maximum varies based on internal circuitry tolerances, 11A to 13A.

Communication Signals:

The communications bus is a standard RS485, half duplex, 120ohm impedance. 2Mbit default bit rate and is designed to be used with Fetch approved peripherals. For more information please contact Fetch Robotics.

www.*fetch*robotics.com | ***sales*@*fetch***robotics.com | 1.408.300.9056