Fetch100 OEM Base

Highly extensible and versatile, Zebra’s fully autonomous Freight100 OEM Base is a safe and cost-effective solution to accelerate the development of automated products and solutions for a wide range of applications.
**Fetch100 OEM Base**

**Build Your Own Custom Automated Solution**

Our Fetch100 OEM Base AMR brings the speed, adaptability, safety, and flexibility of the Zebra Robotics Platform to individuals and companies looking to develop automated solutions for a wide range of applications across various industries including healthcare, lab environments, hospitality, agriculture, retail, offices and more.

**Fetch100 Base Features**

- Collaborative fully autonomous mobile robot base
- Modular top plate with 73-threaded mount points
- Auxiliary access via top surface to 2 power ports, direct communication bus, Ethernet, and USB 3.0 ports
- Side interface panel with Ethernet, USB 3.0, and DisplayPort
- Indicators providing Wi-Fi™, power, battery, runstop status
- Zebra Symmetry™ software for precise and reliable movement and position
- REST API and PartnerAPI for task and function customizability
- Additional post accessory for increasing mounting height
- Available charge dock for autonomous charging
- CE, ANSI/RIA R15.08, and UKCA compliant

**Fetch100 OEM Base Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>68 kg (150 lbs)</td>
</tr>
<tr>
<td>Height</td>
<td>359 mm (14 in.)</td>
</tr>
<tr>
<td>Base Footprint</td>
<td>528 mm (20.8 in.) wide, 573 mm (22.6 in.) long</td>
</tr>
<tr>
<td>Payload</td>
<td>100 kg (220 lbs)</td>
</tr>
<tr>
<td>Maximum Speed</td>
<td>1.75 m/s</td>
</tr>
<tr>
<td>Turning Radius</td>
<td>Turn in place</td>
</tr>
<tr>
<td>Battery</td>
<td>Deka 8G22NF Sealed Lead Acid</td>
</tr>
<tr>
<td>Nominal Continuous Runtime</td>
<td>9 hrs</td>
</tr>
<tr>
<td>Charging</td>
<td>Autonomous docking</td>
</tr>
<tr>
<td>Charge Time</td>
<td>3 hrs to 90%</td>
</tr>
<tr>
<td>2D Laser Sensor</td>
<td>SICK TiM 571, 25 m, 220°</td>
</tr>
</tbody>
</table>

**3D Depth Cameras**

- 2x Intel RealSense D435

**Processor**

- Intel Core i7-9700E

**RAM**

- 32GB

**Hard Drive**

- 256GB SSD

**Wireless**

- Intel AX200 802.11.ax and Bluetooth® 5.1

**Side Interface Panel**

- DisplayPort, 2x USB 3.0, Ethernet

**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.)

Note: Product appearance is subject to change
Turn Your Mobile Automation Vision Into Reality
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. Fetch100 OEM Base was designed as a highly extensible platform to help accelerate these development efforts. Integrators and software partners can take advantage of Fetch100’s hardware and software extensibility features to quickly bring up custom automated solutions.

Fetch100 OEM Base Side Interface Panel
Interfacing with the Fetch100 OEM Base is direct and easy. The access and status panel features a DisplayPort interface to connect a screen, as well as (2) USB 3.0 ports and an Ethernet port. Battery, charge, wireless, runstop, and Zebra Symmetry status are also provided via LED indicators on the panel.

Fetch100 OEM Base Top Surface
The Fetch100 OEM Base top plate provides (73) threaded M5x0.8x4mm mounting points, oriented in a 50mm x 50mm grid, for easily and securely mounting hardware and additional sensors. There are also 2 auxiliary power and communication panels provided on the top surface for flexible connectivity to your custom top module.
Power and Signal Specifications

The top panel of the Fetch100 OEM Base robot has two accessory panels. AUX1 supports 360W, RS485, Runstop, and has 2 USB ports. AUX2 supports 180W (not connected to Runstop), RS485, as well as Ethernet.

**AUX1 Receptacle (Mounted on top panel):**

- **Pin #** | **Signal**
  - 1 | GND
  - 2 | AUX1 PWR
  - 3 | RS-485-1A
  - 4 | AUX1 PWR
  - 5 | RUNSTOP-A
  - 6 | GND
  - 7 | RS-485-1B
  - 8 | RUNSTOP-B

**Corresponding Plug Connector:**

- **Pin #** | **Signal**
  - 1 | GND
  - 2 | AUX1 PWR
  - 3 | RS-485-1A
  - 4 | AUX1 PWR
  - 5 | RUNSTOP-A
  - 6 | GND
  - 7 | RS-485-1B
  - 8 | RUNSTOP-B

**Recommended Connectors:**
- Amphenol T 3504 551 or T 3504 055

**AUX1 Output Power Specifications:**

<table>
<thead>
<tr>
<th>Output Power</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>20V</td>
<td>25V</td>
<td>33V</td>
</tr>
<tr>
<td>Current</td>
<td>-</td>
<td>15A</td>
<td>18A</td>
</tr>
</tbody>
</table>

*15A is guaranteed by design. Absolute maximum varies based on internal circuitry tolerances, 16A to 19A.

**AUX2 Receptacle (Mounted on top panel):**

- **Pin #** | **Signal**
  - 1 | GND
  - 2 | AUX2 PWR
  - 3 | NC
  - 4 | RS-485-2A
  - 5 | RS-485-2B

**Corresponding Plug Connector:**

- **Pin #** | **Signal**
  - 1 | GND
  - 2 | AUX2 PWR
  - 3 | NC
  - 4 | RS-485-2A
  - 5 | RS-485-2B

**Recommended Connectors:**
- Amphenol T 3356 551 or T 3360 055

**AUX2 Output Power Specifications:**

<table>
<thead>
<tr>
<th>Output Power</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>20V</td>
<td>25V</td>
<td>33V</td>
</tr>
<tr>
<td>Current</td>
<td>-</td>
<td>7.5A</td>
<td>10A</td>
</tr>
</tbody>
</table>

*7.5A is guaranteed by design. Absolute maximum varies based on internal circuitry tolerances, 9A to 11A.
Zebra Symmetry™ Makes It Simple To Deploy and Manage

Get up and running in hours with the ability to modify workflows on-demand

• Create and change workflows from anywhere with just a few clicks
• Track, analyze, and optimize robot performance
• Annotate, update, and share maps
• Schedule robot operations
• Find WiFi™ cold spots

WorkFlow allows you to program complex robot tasks using a dragging and dropping graphical blocks

• Send robot to multiple locations
• Manage exceptions
• Program conditionals
• Add triggers and actions

Uncompromising Safety

The Fetch100 OEM Base robot comes equipped with some of the most advanced safety features in the industry. A 2D laser scanner with 25m range enables mapping, localization, obstacle avoidance, as well as object detection. Two 3D depth cameras allow for superior robot vision to avoid both ground-based and overhanging dynamic obstacles.

Each Fetch100 OEM Base also has a runstop button for safe shutdown when needed. Fetch100 OEM Base carries the CE mark, FCC registration, and is an ISO 13849 PLb device.

Operating Environments

• Indoor use with WiFi availability
• Minimum 3.1 ft. aisle width for movement
• No significant temperature changes or wet floors

WARNING: This product uses components which emit invisible laser radiation. Incorrect use or observing the safety laser scanner through optical instruments (such as magnifying glasses, lenses, telescopes) may be hazardous for the eyes.

Discover how Zebra Robotics Automation can work for you—scan or click the QR code for more information

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