



# Collector

*Collecting Selective Material*

## Key Features

- Standard API for third-party integration.
- Unrivaled machine learning architecture leveraging reinforcement learning
- Payload capacity: 250 kg
- Autonomous detection and fast collection of excavated material within a defined particle size distribution all the way to micron-size fines
- Extreme terrain autonomous navigation with object detection and collision avoidance
- Built-in behaviors to avoid unsafe operation beyond max specification
- Turn-key system, establishes its own network to operate and transmit data to the remote supervisor
- Operates in comms and GPS-denied environments
- Articulated robotic arm-integrated tools for selective excavation

Collector is a state-of-the-art rugged autonomous robotic system for mission-critical use cases in extreme environments across several industries. Using a collection tool and hauler tray the robot can pick up, stow, and haul away fragmented material. Collector also vacuums, stores, and hauls away dust, fines, and small-size rock chips.

## Smart & Customizable

Collector's behavior can be customized. It can share sensor data aggregation, allowing it to learn from humans and other robots. The collection tool is tailored based on material particle size distribution. Collector can sort into designated heaps based on defined use case behaviors.

[www.offworld.ai](http://www.offworld.ai)

## Built Strong

Collector can handle working in extreme environments and confined spaces. It has been built with a strong chassis and rugged dust-proof sensor mounts to enable continuous operations. It collects material in defined areas and transfers it to designated dump sites. It can work with other swarm robots to collect excavated material from Excavator and transfer it to Hauler for fast long-distance hauling.

## Works Well With Others

We are developing a new generation of rugged AI-powered robots based upon our core swarm robotic architecture that enables multi-robot collaborative behaviors and collective intelligence. All our robot species are built from industrial-grade interoperable units sharing a common structure, power, sensing, and data design.

## Supervise Instead Of Operate

Our robots are fully autonomous with intuitive interfaces to define and customize behaviors. Users monitor each robot's progress in a purely supervisory role, as opposed to remote operation with real-time or frequent intervention.

## Training & Support

We're here for you every step of the way. User friendly product documentation accelerates easy deployment, supervision, and maintenance. Product training and customer adoption program options are available. Every one of our robots comes with a one-year standard warranty. We also offer extended support through our OffWorld Care program.

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## Items

## Specifications

|                      |   |
|----------------------|---|
| Dimensions           | 200 cm L x 125 cm W x 75 cm H   |
| Dry Mass             | 400 kg  |
| Mobility             | 2 m/s max speed<br>Zero-turning radius<br>Over 3 kN of push force   |
| Power                | All electric 20 kWh<br>4h+ continuous operations<br>Battery module swapping capability  |
| Environmental Rating | -20°C to 40°C (-20°C to 60°C range available upon request)<br>5-95% RH (non-condensing)<br>IP65 (IP68 for dust-tight and water immersion available upon request)  |
| Sensor Suite         | RGBD camera (360° surround view, payload facing camera)<br>Industrial stereo cameras  |
| Collection System    | Collect rocks from 1 cm to 30 cm in size using abrasion resistant mechanical system<br>Vacuum collects rock chips, fines, and dust under 1 cm down to micron size leaving no ore behind<br>Dual storage system (bin for large rocks and bag for vacuum)<br>Autonomous material identification and collection algorithms |
| Safety               | Emergency stop, headlights around the bot, warning/information lights, audio alarms on remote controller, steel plate to protect against rocks  |
| Features             | Turn-key system inclusive of robot and remote operator equipment.<br>Full suite survey software capability (offline/real-time planning, autonomous execution, instant data analysis, and reporting)   |

## Company Overview

- Deployed the world's first autonomous excavation robot in an operating mine
- Integrated novel microwave technology for weakening and preconditioning materials
- Multi-year contracts with top-tier mining companies
- We reduce the carbon footprint of heavy industrial applications
- Adapting our universal robotics platform for applications in the space sector
- First company to have mining development contracts on two celestial bodies
- ISO 9001 Certified

Now accepting orders.  
For inquiries, contact  
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*\*Robot design and specifications are subject to change.*

