



Excavator

Selective Material Extraction

Key Features

- Standard APIs for third-party integration
- Unrivaled machine learning architecture leveraging reinforcement learning
- Articulated robotic arm-integrated tools for selective excavation
- 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

Excavator is a state-of-the-art rugged autonomous robotic system for mission-critical use cases in extreme environments across industries. The robot conducts rock face mapping before and during its precision excavation of ore, limiting waste rock excavation, enabling selective sorting of excavated material, and increasing downstream efficiency. It uses advanced controls and AI with customizable hard rock-cutting tools and configurations that suit the specific needs of the excavation profile resulting in the world's first autonomous laparoscopic mining system.

Smart & Customizable

Excavator's behavior can be customized to each use case. It can share sensor data aggregation, allowing it to learn from humans and other robots. Everything from excavation height (min. of 0.85 meters) to target rock strength cutting capability is customizable. Tool sizes and materials are also tailored to your use case.

www.offworld.ai

Built Strong

Excavator 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. Its interactions with the material have been tested over hundreds of hours in varying conditions.

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 robot species are built from industrial-grade interoperable modules 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.

OFFWORLD

Items

Specifications

Dimensions	200 cm L x 150 cm W x 78 cm H
Dry Mass	800 kg
Mobility	1 m/s tramping speed High-stability platform capable of operating in inclined terrain up to 25°
Power	All electric 80 kWh 4h+ continuous operations Battery module swapping capability
Environmental Rating	-20°C to 40°C (-20°C to 60°C range available upon request) 5-95% RH (non-condensing) IP65 (IP68 for dust-tight and water immersion available upon request)
Sensor Suite	RGBD camera (360° surround view, payload facing camera) Industrial RGBD cameras
Tools	High-power robotic saw and chisel dual excavation system Articulated robotic arms Autonomous excavation algorithms that continuously map and excavate selectively.
Safety	Emergency stop, warning/Information lights, headlights, audio alarms on remote controller, steel plate to protect against rocks
Features	Turn-key system inclusive of robot and remote operator equipment. 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
sales@offworld.ai



*Robot design and specifications are subject to change.

