tēnaka Station Product Information

AI-Powered marine life monitoring

Continuous underwater observation combining modular imaging hardware and AI-driven biodiversity analysis.

Key features

360° Underwater Observation
Four cameras capture a wide field of view around the monitoring site.

Self-Cleaning Optics
Maintains clear images during long deployments.

Modular Platform
A single core camera compatible with multiple power and sensor modules.

Built for the Ocean
Marine-grade materials and corrosion protection.

AI-Powered Biodiversity Analysis
Captured imagery is automatically processed to detect bio-indicator species and generate long-term biodiversity datasets.

Applications

Marine Biodiversity Monitoring

- Marine species identification and count
- Biodiversity trending / impact analysis

Environmental Monitoring

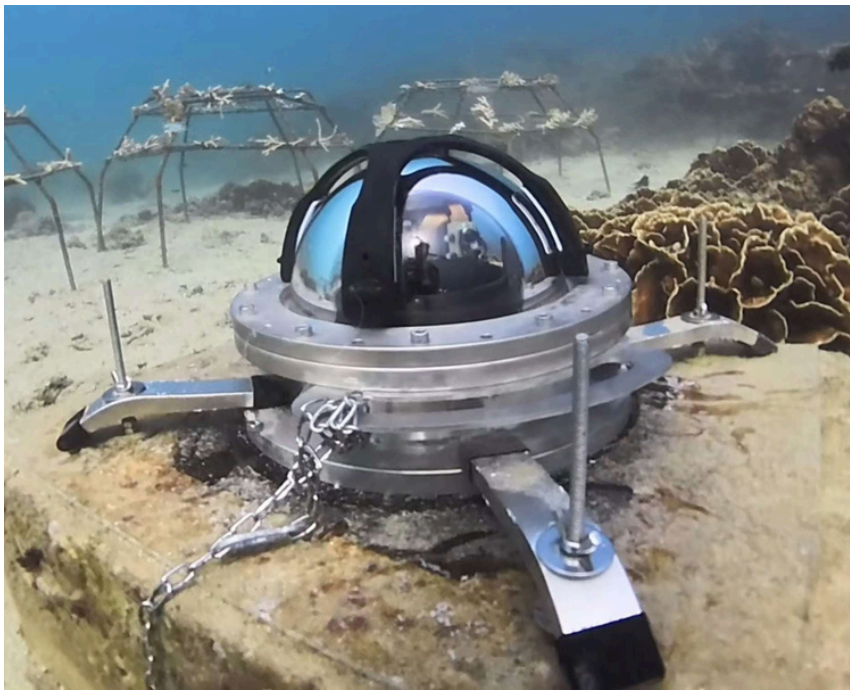
- Long-term observation of marine ecosystems / habitats
- Conservation programs impact assessments
- Climate change impact monitoring

Coastal Ecosystem Monitoring

- Marine protected areas
- Ports
- Coastal factories

Offshore Infrastructure Observation

- Environmental impact monitoring



The **Tēnaka Station** is a modular underwater monitoring system designed for **long-term environmental observation**.
A robust **underwater camera** collects 360° images every 30 seconds (configurable frequency). The thousands of pictures taken every day are then analysed by an **AI algorithm** which automatically identifies and quantifies marine species.
The **Tēnaka Science®** web portal enables centralised visualisation of the resulting data, from multiple Stations and locations, in the form of customizable dashboards.

As a fixed device deployed on the seabed, the Tēnaka Station **detects and tracks bio-indicating species and environmental changes**.

Station versions

Wired	Up to 250m distance from shore
Battery-based	Up to 3 weeks battery autonomy
Solar buoy	Solar energy + 4G connectivity

Station specifications

Installation	Fixed seabed mounting system
Depth	Tested at 20 m. Tests ongoing for 100m
Deployment duration	Designed for long-term deployments
Self-cleaning	Integrated mechanical anti-biofouling system
Field of view	360°
Data collection span	Daylight hours, every day. Images collected at programmable interval
Quantification of all species	Yes
Number of species identified by our AI to date	17
Possible customisations	New identified species, new dashboards, fixing system, addition of sensors...

Data & AI Platform - Tēnaka Science®

The Tēnaka Station integrates with **Tēnaka Science®**, Tēnaka's environmental monitoring platform designed to transform underwater imagery into actionable biodiversity insights.

One single web portal can monitor multiple cameras in multiple locations.

Through the dashboards, users can access:

- Automated species identification and counting
- Long-term biodiversity monitoring
- Image datasets and time-lapse visualization

The platform can also support **custom dashboards and analytics** tailored to specific projects.