



Covert Power for the Warfighter

[zeroei.com](http://zeroei.com)

## **PROBLEM:**

The U.S. Department of Defense cannot scale and deploy new capabilities quickly enough to replace legacy systems and counter critical threats, especially to prepare for potential conflict in the Indo-Pacific region.

## **SOLUTION:**

Give new life to existing or outdated equipment through targeted adoption of a select number of rapidly deployable solutions.

# INTRODUCING: MIOS

## MARITIME INTERDICTION OVERWATCH SYSTEM



July 2025: Identified in an Army Applications Lab Workshop as a *“most needed new capability for launched effects”*

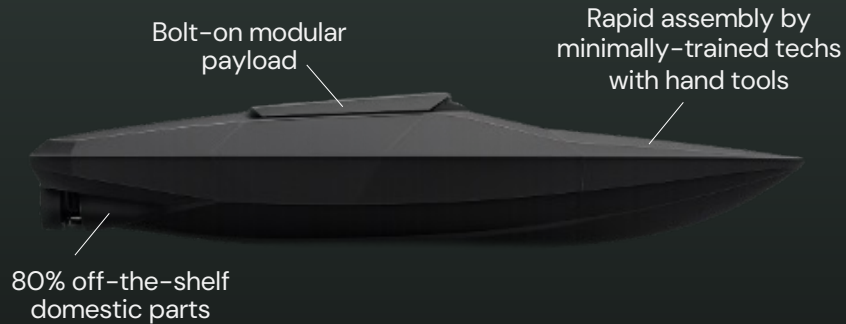
### First of a Kind Capabilities

- **Modular Sensor / Payload Suite**
  - Remote / Over the Horizon (OTH) Targeting, Battle Damage Assessment, Surveillance, Resupply and Extraction, Effects Delivery
- **Full Signature Management:**
  - No thermal, acoustic, or chemical signature, minimal radar signature
- **Long Range**
  - Up to 20x longer endurance than batteries
- **Hand Launchable from Shore and Boat**
  - 1.6 m long, <200 lb
- **Autonomy Enabled**

### Current Customer Interest:

- **US DoD**
  - ARMY
  - NSW & SOCOM
  - INDOPACOM
- **Foreign Allied Nations**
  - Europe
  - East Asia

# PRODUCED AT SPEED AND AT SCALE



## MIOS Saves \$ Billions

### Quickly Re-Use Existing DoD Assets

Cost effective, rapid force buildup

### Reduce Burden on US Industrial Base

Higher accuracy = less ammunition needed

### Massive In-Use Cost Savings

MIOS reduces cost per effect on target by 50%-70%

Army and USMC  
OTH Targeting and BDA

Navy  
OTH Targeting and BDA  
Mine Mapping & Hunting

SOCOM & JSOC  
Intelligence,  
Surveillance,  
Reconnaissance



# MIOS USE CASE: REMOTE FIRE CONTROL



**1** MIOS is hand-launched from friendly territory – from a beach or a boat – and travels undetected to the target area.



**2** MIOS's unique stealth capabilities enable it to avoid detection by enemy sensors.



**3** Loitering undetected near enemy ships or shores, MIOS provides persistent Over the Horizon (OTH) targeting and battle damage assessment (BDA).



**4** 1 MIOS fleet  
+ Existing low-cost fire systems  
= Instant precision strike for a fraction of the cost



ZEI's MIOS is the only no-signature USV capable of being hand launched from Taiwan territory and operating across the entire Taiwan Strait

# MIOS' NEXT GEN SIGNATURE MANAGEMENT

## Acoustic

MIOS remains below passive sonar detection thresholds, making it virtually silent in operational environments.

## Thermal (IR)

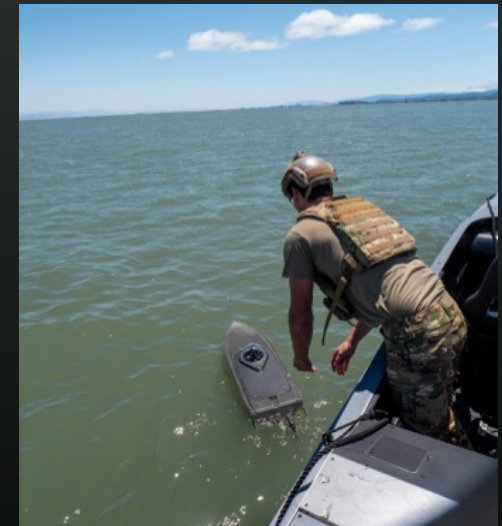
With less than 2°C differential from ambient water temperature, the vessel is functionally invisible to standard EO/IR sensors.

## Radar Cross Section

$\leq 0.02 \text{ m}^2$  cross section with hull geometry and coating optimized for minimal radar return. Carbon-fiber composite hull with radar-absorbing laminate.

## Unjammable Controls

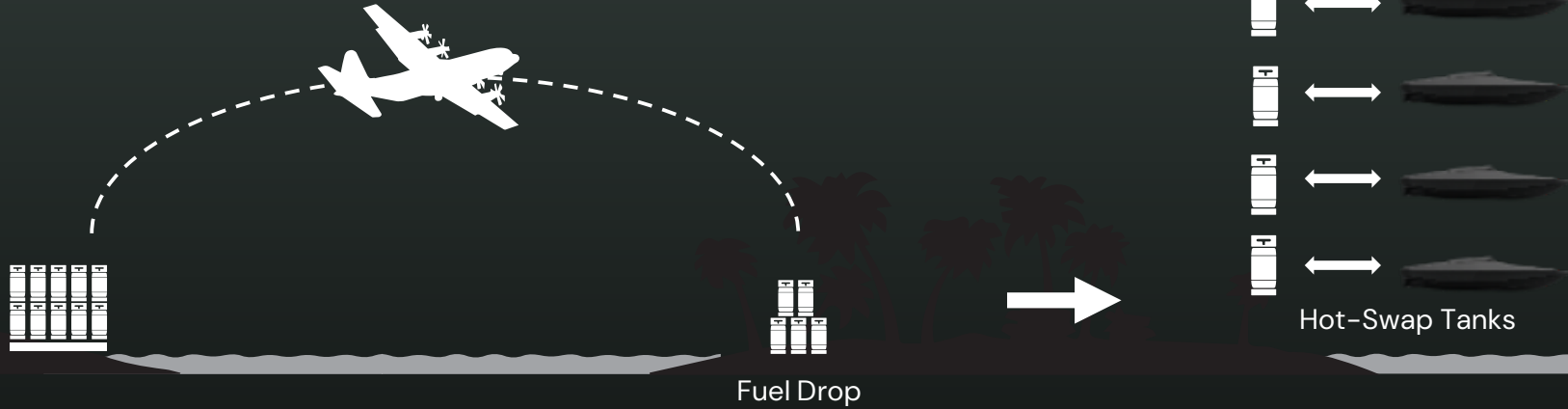
Operation in RF-jammed and GPS-denied environments, including C5-agnostic autonomy ready.



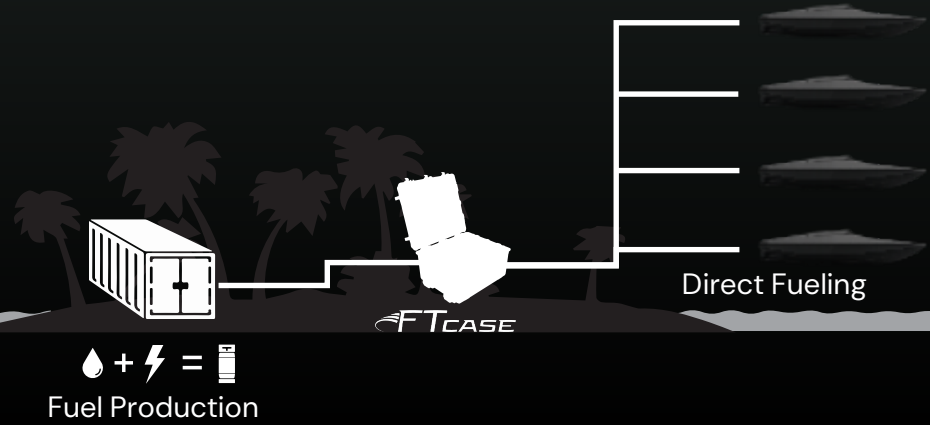
ZEI's 1/3 scale MIOS prototype hand launched for testing

# SIMPLE FUEL SUPPLY

## A. RAPIDLY DEPLOYABLE FUEL DELIVERY TEMPORARY / SMALL MISSIONS



## B. EDGE FUEL PRODUCTION LONGER TERM OR LARGER DEPLOYMENTS



# MIOS BRINGS UNIQUE, FIRST OF A KIND CAPABILITIES

	 ZERO EMISSION INDUSTRIES	 SARONIC			 BLACKSEA	 HAVOC AI		 AEVEX AEROSPACE	
Drone	MIOS	Spyglass	Cutlass	Corsair	GARC	Rampage	Seahound	Mako	Mako Lite
Size	5.2 ft (1.6m)	6 ft (1.8m)	14 ft (4.3m)	24 ft (7.3 m)	16 ft (4.9m)	14ft (4.3m)	38ft (11.6m)	11ft (3.4m)	9ft (2.7m)
Range	100 nm	30 nm	300 nm	1000 nm	600 nm	150 nm	~1,000 nm	250 nm	250 nm
Payload	60 lbs	40 lbs	200 lbs	1000 lbs	1000 lbs	300 lbs	~1000 lbs	200 lbs	100 lbs
Top Speed	~ 30 knots	~20 knots	~20 knots	35 knots	40 knots	~15 knots	N/A	50 knots	50 knots
Man Portable and Launchable	✓	—	—	—	—	—	—	—	—
Rapid Refuel	✓	—	✓	✓	✓	—	✓	✓	✓
Stealth Capability	✓	✓	—	—	—	✓	—	—	—



# ZEI'S OTHER PRODUCTS

**Z-CLASS**



Long Endurance,  
Low Signature  
Engine



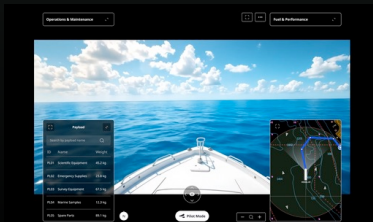
**FTCASE**



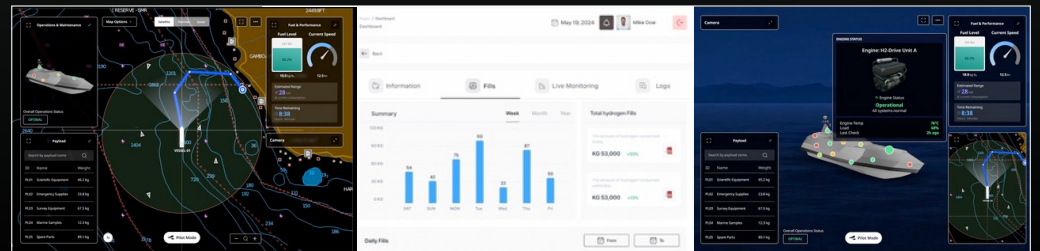
Simple Fueling



**H2OS**



All-In-One  
Command &  
Control Software



# ZEI'S BACKGROUND AND TRACK RECORD

ZEI is an American Hydrogen and Energy Technology Company founded in 2018. It is led by Dr. Joe Pratt (formally US DoE/NNSA Sandia National Laboratories), the world leading hydrogen expert for maritime.

2020-2022

## First Technology Deployment

Launched the world's first commercial hydrogen fuel cell hybrid ferry (Sea Change)



2023

## Series A

Received investment from Chevron (Energy Major), Trafigura (Global Fortune 12 Energy Trader), and Crowley (Largest US Maritime and Logistics Company)



2024

## Power System Launched

Developed and Deployed the World's Highest Performance Hydrogen-Battery Hybrid Power System for Maritime (Z-Class)

Developed and Launched World's Fastest and Highest Performance Hydrogen Hybrid Speedboat (FCV Vanguard)



2025

## Elite Customer Validation

Provided Remote Hydrogen Fueling Capability to Honda Racing to Enable the World's First Hydrogen Vehicle to Race in the Pikes Peak International Hill Climb



\$41m+ has been invested in developing our technology (<25% dilutive capital)

# ZEI'S CAPABILITIES

## Unmatched First-Mover Advantage

*Decades of dedicated hydrogen and hybrid expertise, making ZEI the undisputed leader in this rapidly growing sector.*

## Proven Execution with Industry Firsts

*Successfully built four World-First hydrogen hard tech systems that are operational today—not just concepts, but real, working technology.*

## Success in Actual Maritime Deployments

*Clear track record of delivering high-performance, real-world energy solutions, validated in demanding marine environments.*

## High-Value, Defensible IP Portfolio

*7 issued and 10 pending patents spanning 40+ countries, creating significant technological and competitive moats.*

## Elite, Mission-Driven Team

*20 world-class engineers and operators, including key talent with deep expertise in hydrogen, batteries, defense, and advanced energy systems.*

## State-of-the-Art Facilities

*Operating a 16,000 sqft advanced hydrogen energy technology development facility, built to rapidly scale cutting-edge solutions.*

**Zero Emission Industries, Inc.**

**UEID: U35KNCLKSKC3**

**CAGE: 82ED5**

