

The Caltrop family of low-cost UAS are a rapidly deployable and extremely affordable aircraft for small payload aerial delivery. Using a Modular Open System Architecture, the Caltrop can be deployed quickly and in large numbers at cost-imposing prices.

This user-friendly system enables single and potentially swarms of vehicles operated by a single ground station to deliver up to 2 Kg of payload up to 100 Km or maintain a loiter time of up to 90 minutes. Designed and manufactured in the USA from non-aerospace materials

The smaller Caltrop-1 and Larger Caltrop-2 leverages robust supply chains and common non-aerospace manufacturing techniques. Large quantities of Caltrops' can be rapidly manufacture and deployed for one-way attack missions, and are recoverable and durable for missions that call for re-usability.

Applications include kinetic one-way attack, airborne communications node, low cost targets, Swarm Artificial Intelligence Research, and low cost payload testing.



Caltrop 2 Key Specifications

- Payload Capacity: 2 kilograms
- Range: 100 kilometers
- Endurance: 90 minutes
- Runway: hand or rail launched
- NDAA compliance: all digital components are NDAA compliant
- Price: \$1,500 for flight ready FPV aircraft, Ground Control Station \$2,500

Key Features

- Extreme low cost platform
- Single operator
- User friendly control system
- Swarm integration ready
- Rapid order fulfillment
- Customizable payload capacity
- Customizable Autonomy Core
- Multi-component adaptability
- Robust structural design
- Easy to repair or replace



Caltrop sUAS



Cross Domain
Systems

Extremely Low-Cost Fixed-Wing All Weather FPV Vehicle

Cost Driven Design for Cost Driven CONOP

In a peer conflict resources are limited and cost is the first force multiplier



	CAL-1	CAL-2
Unit Cost	\$1,200	\$1,500
Payload	0.45Kg	2 Kg
Range	100Km	100Km
Endurance	1.5 Hours	1.5 Hours
Battery	Generic Lithium – 30A and 16V at launch	
Logistics	<ul style="list-style-type: none"> All Weather Hand Launch RF Transparent Airframe RF Transparent Wings 	

Multi-Mission

- ISR
- Kinetic one-way attack
- Airborne comms node
- Training targets
- Swarm and swarm research
- Payload testing

Low-logistic burden

- 2 kilograms of payload
- All-weather operation
- Single operator
- Generic lithium battery (any connector: XT60, XT90, Deans T, EC3, EC5, Bullet)

Customizable payload capacity

- MOSA compliant
- Payload volume: 97mm diameter X 600mm length
- Payload bus voltage: 3V, 5V, 12V, 24V (36V upon request)

Manufacturing

- Uses only commonly available manufacturing processes and materials
- Rapid order fulfillment / Surge manufacturing

USA designed & assembled

- All digital logic is NDAA compliant