

ARCHES

Autonomous cUAS for
Detection, Decision, & Response



Detect → Track → Classify → Decide → Respond

Autonomous cUAS, Built for Real-World Threats

- Detects both RF-active and RF-silent drones
- Evaluates payload and intent using onboard AI
- Enables rapid, autonomous response at the edge

ARCHES Interceptor

Autonomous aerial interceptor platform for real-time threat detection and response.

- ~100 mph max speed
- Up to ~5 kg payload capacity
- Onboard AI (Jetson platform)
- 4K vision with night capability
- Optional RF-silent fiber control

ARCHES Fiber Variant (RF-Silent)

Tethered interceptor for contested electromagnetic environments.

- Zero RF emissions, undetectable by enemy cUAS
- 300-800 m armored single-mode fiber optic tether
- HD video, telemetry, and C2 over a single fiber
- Sub-5ms control latency, immune to jamming and spoofing
- Shared airframe and autonomy stack with baseline ARCHES

Detection & Tracking

RF-based sensing and onboard systems detect and track aerial objects

AI Classification

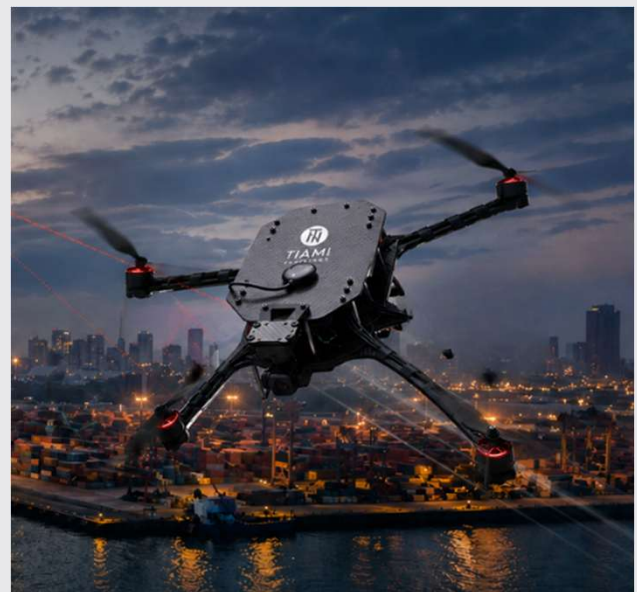
Identifies drone type, behavior, and payload

Autonomous Decision Making

Fuses data and selects appropriate response

Response Integration

Supports soft-kill and hard-kill systems



CONNECT WITH THE
TIAMI NETWORKS TEAM:

Tiami Networks Inc | 801 K Street, Suite 900; Sacramento, CA 95814

www.tiaminetworks.com

info@tiaminetworks.com



PolyEdge (Detect & Track)

- Passive sensing using ambient 4G and 5G signals
- Detects drones from disturbances and reflections in the RF environment
- Tracks RF-silent and fiber optic-controlled threats in real time



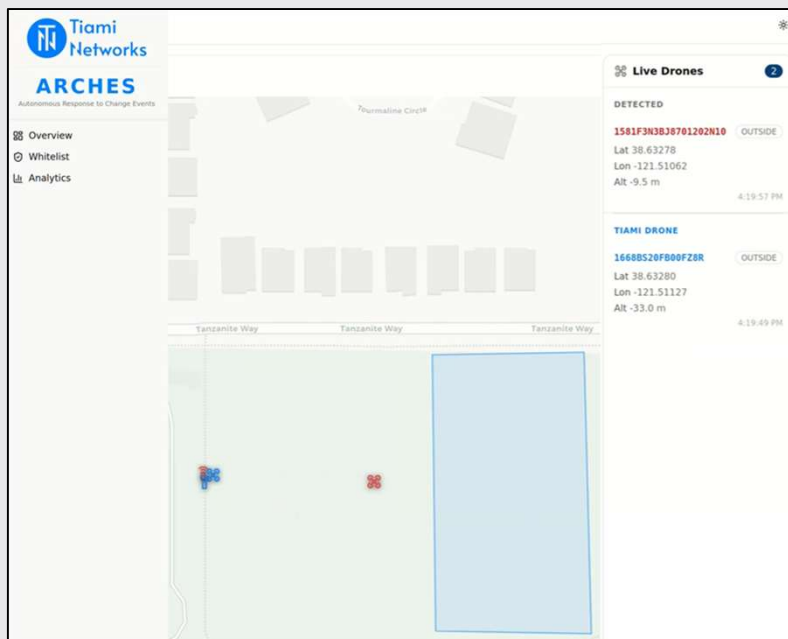
ARCHES Interceptor (Classify & Decide)

- Onboard AI system enabling real-time understanding of aerial threats:
 - Identifies drone type, behavior, and movement
 - Evaluates payload and threat level
 - Determines appropriate response action



Autonomous Response (Respond)

- Prioritizes threats in real time
- Determines appropriate response
- Executes via integrated systems
- Supports:
 - Soft-kill (e.g., jamming, forced landing)
 - Hard-kill (e.g., intercept / neutralization)



ARCHES Interceptor autonomous aerial response platform

Detected Drone Model

DJI Mavic Air 2



Confidence (%)



Payload Evaluation

Potentially Hazardous

Detected Features

- "Flame Hazard Symbol" - confidence (92%)
- "Cylindrical Metal Container"
- Alt prediction - Industrial container (12%)

Proposed Action

Soft kill using cUAS jamming

Real-time drone classification, payload assessment, and response recommendation

About Tiami Networks Inc

Tiami Networks develops sensing and AI solutions using ambient 4G and 5G signals. Its ARCHES platform enables autonomous detection, classification, and response to aerial threats in complex environments.

Connect

Tiami Networks Inc
801 K Street, Suite 900
Sacramento, CA 95814
www.tiaminetworks.com
info@tiaminetworks.com