

ADT

AVIATION DEFENCE TECHNOLOGIES

LOIT- R02 - KMKZ

LOIT-R02-KMKZ a Fixed-Wing Autonomous Tactical Attack UAV is designed for both reconnaissance and surveillance and for striking targets outside the line of sight with high accuracy, can be carried by a single soldier, and can operate autonomously or with remote control.

LOIT-R02-KMKZ can be effectively used day and night against fixed or moving targets with the help of embedded and real-time image processing and deep learning algorithms that we have developed with national facilities.

The system is comprised of "Fixed-Wing Smart Ammunition System", Launcher-Catapult" and "Ground Control Station" components.

AMMUNITIONS

Many different types of standard munition can be mounted with adaptable system and fuse drive. This is very important for changing munition for different scenario. Possible to install normal 60 or 80mm Mortar round fragmentation or similar ammunitions.

GROUND CONTROL SYSTEM

The ground control station suitcase can command many and select autonomous flights with waypoint maps or switch to semi-automatic flight on the last trip.

CAMERA

Using the HD front camera to fly and hit the target and another payload camera below for surveillance and target detection during flight. Possible to select many types of payload night and day vision or multi spectral.

ASSEMBLY

Assembly in 10 minutes and ready to fly. Total weight systems is 10kg. Take off with light and easy to assemblage catapult, without power supply or air compress required to launch.

ENGINE

Gasoline or Electrical options are available upon request.

FLEET MISSION

Fleet missions upto 255 units can be planned with Ground Control Unit. One Master and the other fleet members are slave mode.



- ### General Features
- >>> Reliable Day and Night Operation
 - >>> Autonomous precision strike with minimum collateral damage
 - >>> Tracking Moving Targets
 - >>> High Performance Navigation, Flight Control and Guidance Algorithms
 - >>> Deployable and Operable by Single Soldier
 - >>> In-Flight Mission Abort and Emergency Self-Destruction Modes
 - >>> Indigenous Electronic Ammunition Safety, Setup and Trigger Systems
 - >>> Indigenous National Embedded Hardware and Software
 - >>> Wide Lateral View Angle Image Processing-Based Control Applications
 - >>> Embedded and Real-Time Object Tracking, Detection and Classification

Weight

12 Kg

Operational Range (* Gasoline)

> 100 km

Warhead

< 3 kg

Launch Method

Pnömatik Kanister

Operational Features

Engine displacement

125 ccm

Power

7 HP

Max static engine thrust

21 kg

Bore

2x48 mm

Engine weight

4300 g

Engine & ignition weight

4580 g

Arrangement of the engine

two-cylinder

Cooling

air-cooled

Lubrication

petrol 95 oct. + 2% oil

RPM

1100 - 6000

Fuel system

Carburettor

ANTI JAMMING - SPOOFING GPS RECEIVER

Antennas

4

DATALINK OPTIONS

Frequency

2.4 GHz 20 km

Bandwidth

10MHz (uplink)

10MHz (downlink)

Power

27dBm-30dBm

Modulation

OFDM

Working temperature

-20°C ~ 65°C

Video Interface

Ethernet

Encryption

AES128/256

- Omnidirectional Antenna Ground 0km-100km
- Auto-Tracking Antenna System
- Ground Interference Resistance
- Retransmission Adaptive frequency hopping





AVIATION DEFENCE TECHNOLOGIES

Use Cases

- Perimeter / border security
- Emergency portable cell phone tower
- Port/stadium security
- Traffic monitoring
- Air quality monitoring
- Radio range extension of unmanned boats and ground vehicles
- Telecommunications
- Long endurance environmental assessments & surveys
- Soldier/ convoy over-watch
- Increased battlefield communications and situational awareness

TUAV - R02

KIS Tethered UAV (TUAV) is drone system that lifts payloads, such as cameras or radios/antennas up to 150 m. with 400+ hr. endurance. Just by lifting up an antenna, the TUAS system can extend ground/boat radio line of site upto 40+ km.

Designed for harsh conditions, KIS TUAV supports boarder security, stationary operations, small tactical units, and it dismounts in all terrain. With an 8 lb payload capacity, the TUAS can lift multiple payloads including EO/IR cameras and a radio for data back-haul.

KIS TUAV: Features

Stabilized, vehicle-agnostic tethered UAV: Deploy from manned or unmanned platforms (boats/vehicles). Intelligently follows the host vehicle at speeds up to 60 km/h
Deploy/recover in under 2 minutes

24/7 Endurance: operate as long as needed for without landing to change batteries

Automation: automated take-off, flight and following, and landing

User interface: simple, easy, 1-screen interface for UAV control

Installation: Vehicle agnostic; non-permanent installation

Speed/altitude: 25+ kts (46+ kmh), at up to 150 m above ground level

Secure Ethernet command/control through tether prevents jamming/hacking

Technical Description

Payload: 10 kg (SIGINT, DF, EO/IR and Comm relay payloads)

Altitude: 150 m.

Small Footprint: Three Pelican cases

UAV Case: 90 x 90 x 40 cm

Tether Management System (TMS): 80 x 50 x 40 cm

Ground Power Unit (GPU): 90 x 50 x 50 cm

Power: 100-240 VAC, 4000W (Generator, inverter, etc)

Speed: 60 KMH

Reduced operators: Payload operator flies UAV.

Simple GUI and minimal operator input: Enable, Takeoff, Land & Change Altitude.

Payloads

Modular Payload Capabilities: HFI, EO/IR/LD/LR, DF, SIGINT, & jamming capabilities.

SIGINT: Provides 24 hr overwatch with DF capabilities

Datalink : Fiber Ethernet 1 gbps or Secure WiFi

