



EYES ON SKY

# ACE - IV VTOL

IMAGES ARE FOR REPRESENTATIONAL PURPOSES ONLY

INDIA'S FIRST TACTICAL MAPPING & SURVEILLANCE VERSATILE HYBRID UAV

# ABOUT

## ACE-IV VTOL

Redefining Tactical Mapping and Surveillance for Defence and Security Forces

The ACE-IV VTOL is a cutting-edge hybrid vertical take-off and landing (VTOL) Unmanned Aerial Vehicle (UAV) designed specifically for the demanding needs of defense and security operations. Combining the agility of a multirotor with the endurance of a fixed-wing platform, the ACE-IV sets new benchmarks in aerial intelligence.

**Exceptional Endurance:** Extended flight time ensures comprehensive coverage of large areas during mapping, surveillance, reconnaissance, and tactical missions.

**Advanced Safety Systems:** Built with fail-safe redundancies for secure and reliable operations in high-stakes scenarios.

**Hot-Swappable Payloads:** Seamlessly swap between three mission-specific payloads in under 5 minutes, ensuring uninterrupted operations and mission flexibility.

# Engineered for Extremes

Your Trusted Drone for India's Toughest  
Terrains.

RELIABLE

**AI-Powered Analytics:** Equipped with an AI-driven camera and ground control software, enabling automatic target detection and tracking.

**Mission Adaptability:** Optimized for tactical deployments, border security, crowd monitoring, and high-resolution mapping.

### **Why Choose ACE-IV VTOL?**

**Unmatched Versatility:** Tailored for multi-role applications, from rapid reconnaissance to detailed geographic surveys.

**Easy to Operate:** Intuitive controls and straightforward workflows designed for field personnel with minimal training.

**High-Quality Data:** Delivers precise, actionable intelligence in real-time, enhancing mission success rates.

Whether it's for securing perimeters, aiding disaster response, or conducting in-depth mapping operations, the ACE-IV VTOL is a trusted ally for defense forces like security personnel. Your reliable eye in the sky—Ready to deliver, wherever and whenever needed.

RELIABLE

# TECHNICAL SPECIFICATIONS

VERSATILE

MAXIMUM TAKEOFF WEIGHT 15 KGS

MAXIMUM ALTITUDE 3000 meters

RUNWAY INDEPENDENT

2500MM WINGSPAN

PAYLOAD 1.5 KG

DUAL GPS

CARBON FIBER FRAME



MAXIMUM DISTANCE 150  
KM



120+ MINUTES  
WITH 1.5 KG PAYLOAD



MAXIMUM SPEED 120 KMPH  
CRUISING SPEED 75KMPH



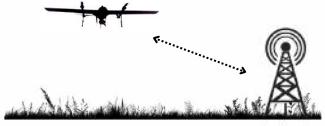
WORKING TEMPERATURE  
-20°C~45°C;



COMMUNICATION RANGE  
10KM (LOS)

# FEATURES

# PRECISE



## 10 KM Encrypted Communication

Secured communication between the GCS and UAV with Daylight/night streamed & stored on the operator's system



## Rain & Dust proof

Ensuring mission success even in tough conditions



**Target Detection at Over 1 km Altitude**  
With HD 40X Optical Zoom payload



**Manual Mode/Autonomous mode**  
Take control when needed



## Waypoint Based Navigation

Suitable for customised waypoint mission plan for survey and surveillance



**Tested to operate between -20°C to +55°C**  
Operate with confidence in diverse climates



**Less than 15 min Deployment Time**  
User-friendly assembly to conduct survey and surveillance operations faster



## Portable

All in one package with weather proof carrying case



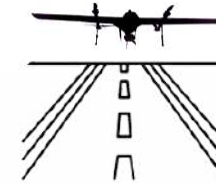
## Vertical Takeoff

Achieve unparalleled terrain independence without relying on traditional runways or launch infrastructure.



## AUTO-Return to home

- Low battery
- High winds
- Mission complete
- Communication loss



## Robust Build Quality

ACE-IV UAV's airframe is built for over 2000 mission flights





# PAYLOAD



# Recon-TR30

## Surveillance Camera

"Features day and night vision cameras combined with a Laser Range Finder (LRF) and AI-powered computer vision for enhanced decision-making."



40x optical zoom



Full HD Streaming



Thermal Resolution 640 X 512



Geo Tagging



Car and Human Auto Tracking

### Capabilities

Day Light	HD 1280x720 pixles
Zoom Capacity	Total zoom 360x Optical Zoom 40X
Target Detection Range (Human and Vehicle)	2000 meters typical Night vision 1000meters
Payload Field of control	pan:360° continous Tilt:110°
Video Recording	Onboard and GCS

EFFICIENT

& OPTIMIZED

## ReconIR-10

# Surveillance Camera



- Daylight & Night vision
- 200 m Laser night vision
- AI multi-object detection and tracking captures people and vehicle targets simultaneously
- 360° unlimited rotation.
- Laser night vision module lights up area within 200 m
- Zoom and Wide Dual-view
- **Object detection:** PERSON- 509m , VEHICLE- 932m
- **Object identification:** PERSON- 130m , VEHICLE- 186m
- **Object Verification Distance:** PERSON- 60m , VEHICLE-100m
- **Laser night vision:** WAVELENGTH- 850 nm  
ILLUMINATION DISTANCE - 200 meters  
LASER SAFETY- Class 3B (IEC 60825-1:2014)



3 AXIS GIMBAL



10x optical zoom  
4x digital zoom



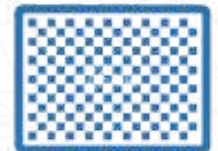
Tracking Speed  
±32 px / field

FHD 1080P

Resolution  
1920 x 1080



Tested for 500  
working hours



1/2.8" CMOS;  
Effective Pixels: 2.07M

# RELIABLE

## MAPPING CAMERA



## 3D OBLIQUE CAMERA

### Mapping Performance

Area Coverage @ 120m (overlap 80/70 )	6 sq.km
Horizontal Accuracy (x,y)	< 10 cm
Vertical Accuracy (z)	<20 cm
Map Resolution GSD @ 120m	2.5 cm/px



Light Weight



120 Mega pixles



RGB Camera



Auto Geotagging



L1 & L2  
Frequency Band PPK



APS-C (23.5X15.6mm)

# RELIABLE



# MAPPING CAMERA

## 42 MP NADIR CAMERA



### Mapping Performance

Area Coverage @ 120m (overlap 80/70 )	8 sq.km
Horizontal Accuracy (x,y)	< 10 cm
Vertical Accuracy (z)	<20 cm
Map Resolution GSD @ 120m	1.8 cm/px



Light Weight



42 Mega pixles



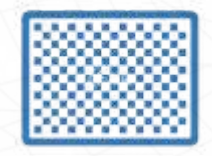
RGB Camera



Auto Geotagging



L1 & L2  
Frequency Band PPK



FULL-FRAME

# RELIABLE

# GROUND CONTROL STATION (GCS)

**"Accel UAV GCS software provides secure, AI-enhanced capabilities for safe and fully or semi-autonomous flight operations."**

- ✓ All in one platform - Survey and surveillance.
- ✓ Pre-Flight Checks.
- ✓ One tap - Auto Takeoff.
- ✓ Live video feed and telemetry data to keep you updated till mission completion and landing.
- ✓ UAV Path Planning Based on Geographic Situational Awareness.
- ✓ Fail safe features for Low battery, High winds, System malfunction and communication loss.
- ✓ Multiple Pre loaded flight plans for different types of missions (Point of interest Survey , Corridor mapping and etc).
- ✓ Encrypted data uplink and down link.
- ✓ Autonomous way point navigation.
- ✓ Ability to integrate with user-provided raster maps.





# APPLICATIONS

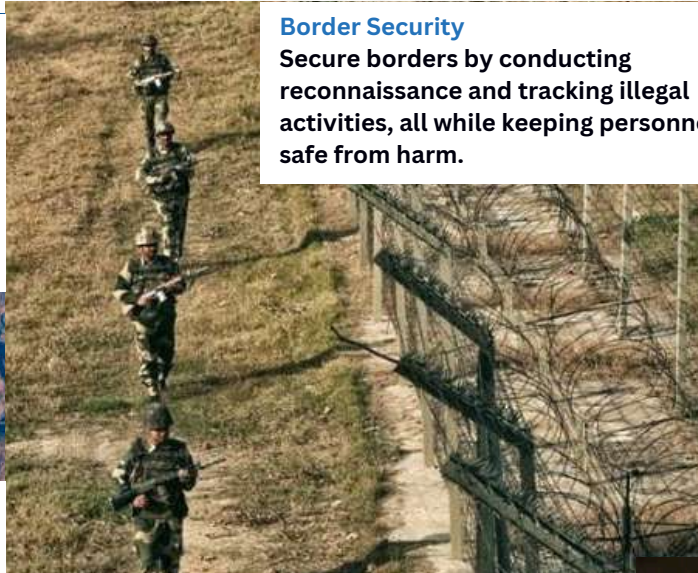
## ISR Operations

Deploy our AI-driven surveillance UAV for ISR missions to autonomously acquire targets, identify threats, and gather actionable intelligence with precision LRF and advanced AI capabilities.



## Border Security

Secure borders by conducting reconnaissance and tracking illegal activities, all while keeping personnel safe from harm.



## Forest & Wildlife

Day and night operations, perfect for wildlife and forest monitoring. Detect and count animals and trees, monitor criminal activities, and conduct forest mapping efficiently from a remote location.



## Disaster Management

Gain real-time insights for effective disaster management, enabling precise search and rescue planning and live area mapping to identify impacted regions before and after.



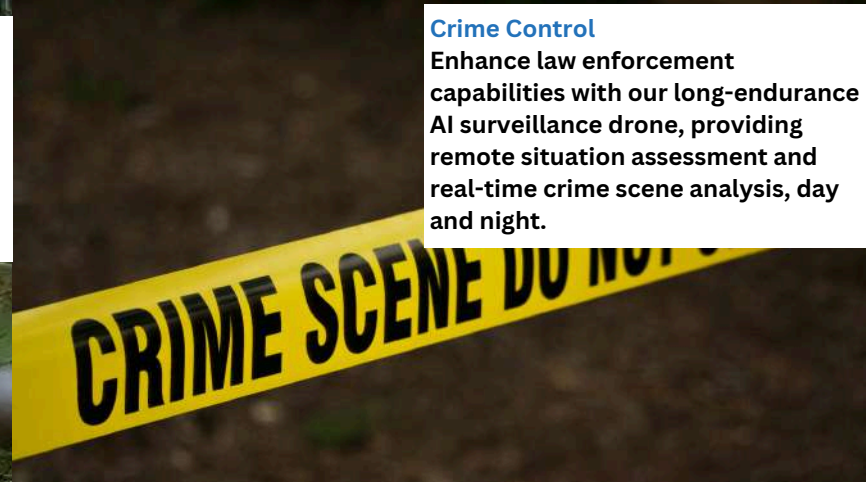
## Anti Terror

Surveillance version equipped with AI-powered auto-detection and tracking capabilities can remotely identify and mark risk-prone areas and individuals, enhancing anti-terrorism efforts by detecting threats in real-time.



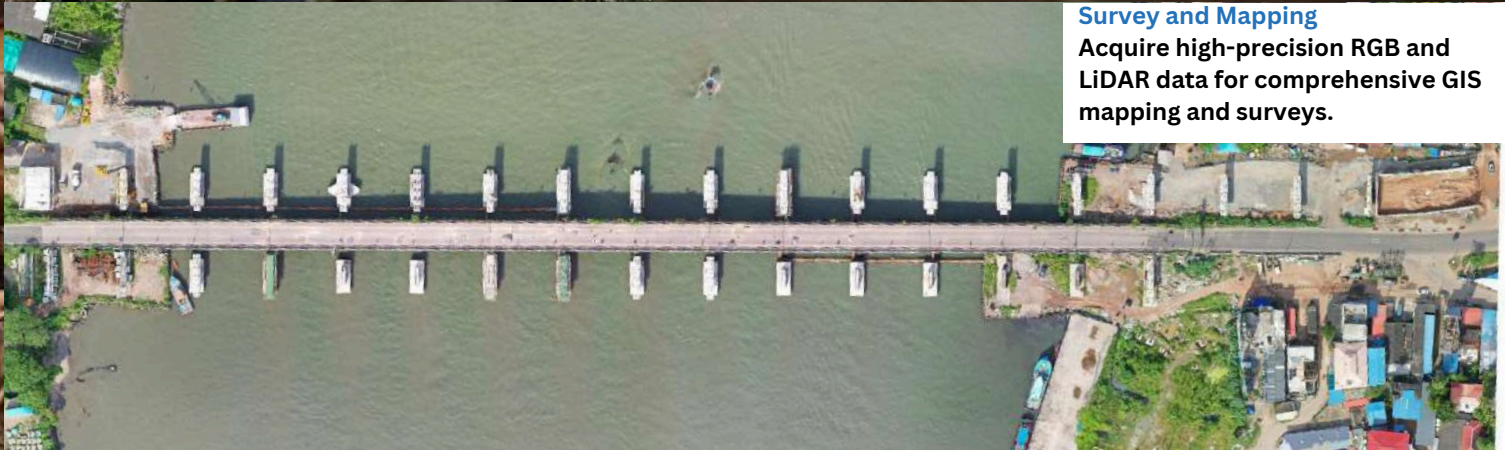
## Crime Control

Enhance law enforcement capabilities with our long-endurance AI surveillance drone, providing remote situation assessment and real-time crime scene analysis, day and night.



## Survey and Mapping

Acquire high-precision RGB and LiDAR data for comprehensive GIS mapping and surveys.





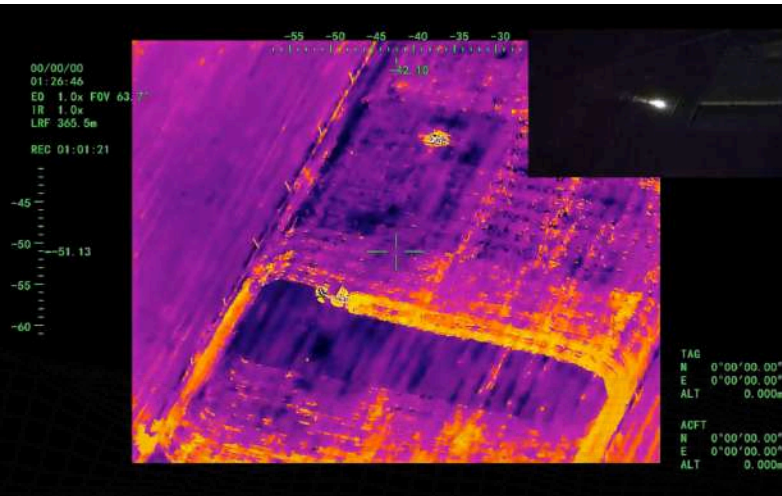
# SURVEILLANCE REAL - TIME DATA

## HIGH-PERFORMANCE



ZOOM FROM 1KM ALTITUDE

AUTO TRACKING



NIGHT VISION ENABLED  
THERMAL CAMERA

NIGHT VISION ZOOM



# MAPPING REAL - TIME DATA OUTPUT

ACCURATE

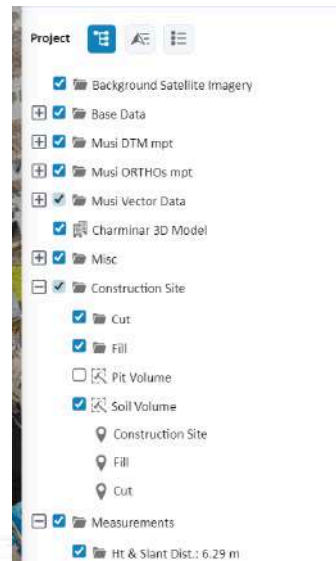


OBLIQUE IMAGE

## 3D MODEL FOR SMART CITY



ORTHOMOSAIC MAP



METRIC CALCULATIONS ON GIS DATA





Eyes on Sky

GROUND FLOOR ,PLOT NO 7A,  
PRASHANT NAGAR, IDA KUKATPALLY,  
KUKATPALLY, HYDERABAD,  
TELANGANA 500072

**RSI SOFTECH INDIA PVT LTD**  
Plot #7, Industrial Estate,  
Kukatpally, Hyderabad,  
TS, India - 500072