



National Institute of Technical Teachers Training and Research

**Institution Deemed to be University under Distinct Category, A Centrally Funded Technical Institute
Ministry of Education, Government of India, Taramani, Chennai - 600 113**



UAV FACILITIES

Micro UAV for Surveillance with an endurance of 60 mins



Configuration	Quadcopter
Endurance	60 mins
Max AUW	Less Than 2 kg
Range	3 km VLOS
Navigation	GNSS
Wind Resistance	8 m/s
Max Launch Altitude	4500 m AMSL
Max Operating Altitude	500 m 120 m AGL (As per DGCA)
Max Cruise Speed	8 m/s
Nominal Cruise Speed	6 m/s
Propulsion System	Electrical
Launch and Recovery	Vertical Take-off and Landing
Launch and Recovery Area	5 x 5 m
Operational Temperature	-10°C to +55°C
Payload	Surveillance Day Camera
Payload Stabilization and Freedom	3 Axis Gimbal Stabilization
Payload Specification	• Sensor - 1/1.7 Inch Sony CMOS • Megapixel - 8 • Video Recording - 4k • Zoom - 6x Digital • Video Streaming - 720/1080p

VTOL UAV CRUZE Trainer Drone



Configuration

Frame Material

Endurance

Range

Max AUW

Navigation

Cruising Speed

Wind Resistance

Max Launch Altitude

Max Operating Altitude

Propulsion System

Launch and Recovery

Launch and Recovery Area

Operational Temperature

Assembling Crew and Time

Payload

Payload Stabilization and Freedom

Payload Specification

Quad Plane

Composite

90 mins @ 1000m AMSL

15km

Less than 9.5kg

GNSS

17 m/s

10 m/s

4500 m AMSL

500 m AGL

Electrical

Vertical Take-off and Landing

15 x 15 m

-20°C to +55°C

Two Person Crew and Less Than 15 Minutes

Surveillance Day and Night Swappable Payload

3 Axis Gimbal Stabilization

• Day Camera

Resolution -1920 X 1080

Optical Zoom - 30x

• Night Camera

Digital Zoom-8X

Sensor Resolution 640x512

• Detection Of Humans, Vehicles Animals and Boats

Moving Target Indication

Target Tracking

720 Streaming Resolution

VTOL UAV – Tractor / Puller Configuration



Specification

Category of Unmanned Aircraft System (UAS)

Payload

Maximum Take-Off Weight (MTOW)

Endurance

Wingspan

Range

Operational Altitude

Battery type

Airframe Material

Lighting

Operating Temperature

Datalink

Ground Control System

(GCS)/Firmware

GNSS

Details

Vertical Take-off and Landing

Vehicle (VTOL) with tractor/puller configuration for Logistics Applications

2 kg

18 kg

30 mins (with payload)

2 m

1.5 km

110 m

Li-ion or Li-Po

Carbon fibre and other high quality aero grade materials

Navigation and strobe lights

-10°C and 50°C

Encrypted data link with ETA approval

Indigenously developed and tamper-proof as per DGCA

Certification compliance

Redundant

Tethered AI Enabled UAV for crowd monitoring



Configuration

Endurance

Max AUW

Navigation

Wind Resistance

Payload Specification

Hexacopter

8 Hours (Continuous)

Less than 10kg

GNSS

12 m/s

- Day Camera
 - Zoom - 30x Optical.
 - FOV-63.7 to 2.3 Deg
- Night Camera
 - Zoom - 8x Digital.
 - Focal Length - 25mm
- Detection of Humans, Vehicles Animals and Boats
- Streaming Resolution - 720/1080p
- Moving Target Indicator
- Target Tracking

Winch Mechanism

- Winch Cable - Aviation Grade Cable with Kevlar Insulation
- Winch Mechanism - Fully Automatic
- Tethering Length - 120 m
- Cable Feature
 - Power
 - Data
- Winch Features
 - Touch Interface
 - Tether Cable Length
 - Cable Length Buzzer Indication.
- Weight-Less Than 35 kg

Agri XL-10 - Small Category Type Certified Drone



Configuration

Airframe

Built Material

Endurance

Max AUV

Range

Navigation

Wind Resistance

Max Operating Altitude

Max Cruise Speed

Nominal Cruise Speed

Propulsion System

Launch And Recovery

Launch And Recovery Area

Operational Temperature

Payload Specification

Operational Efficiency

Quadcopter

Monocoque Frame (Tank Not Removable)

Fully Composite Material

16 Mins @ 1000m AMSL (Dispensing Payload)

Less Than 25 kg

1 km VLOS

GNSS

8 m/s

30 m AGL

10 m/s

5 m/s

Electrical

Vertical Take-Off and Landing

5 X 5 m

-10°C TO +55°C

Pause And Resume Mission

10L Capacity

4 Nozzles

3.5 to 5 m Spraying Width

Spraying 3 Acres with a Single Battery Charge