



'PATANG'

Long Endurance Unmanned Aerial Vehicle

Dynamatic is India's leading private sector enterprise engaged in the development of exacting Airframe Structures and Precision Aerospace components.

Dynamatic Technologies has the largest infrastructure for aeronautic manufacturing in the Indian Private Sector and is India's only global Tier-1 supplier to Airbus, Boeing and Bell Helicopter on a single source basis.

DYNAMATIC: A PARTNER OF CHOICE

Dynamatic Technologies designs and builds highly engineered products for Automotive, Aeronautic, Hydraulic and Security applications and enjoys a leadership position as the partner of choice to the Ministry of Defence and other leading defence agencies in India.

Dynamatic Technologies possesses over two decades of experience in the defense business and has received numerous awards from the Ministry of Defence, Government of India, for its work in supporting indigenous defence technology and manufacture.



PATANG

Dynamatic 'PATANG' is a result of continuous R&D and user trials and a gap analysis of the Technology available and the actual user requirement.

Patang is a light-weight, easily deployable vertical take off and landing Unmanned Aerial Vehicle, capable of being launched from an area of 25 m² or less, with no need of preparation of surfaces.

Rapid deployment and quick turnaround, ruggedness and reliability, long endurance and mission time, negligible audio signature, no need of launching aids and complete autonomy makes Patang an ideal platform for a number of applications including

Law and Order

- Surveillance and Reconnaissance
- Event Monitoring & VIP security
- Crime or accident investigation
- Intelligence & evidence gathering
- Search and Rescue
- Traffic & Crowd monitoring
- Tactical operation
- Emergency & Disaster response

Industrial and Infrastructure

- Asset Monitoring
- Precision Agriculture
- Oil and Gas Pipeline Monitoring
- Gas leak detection
- Aerial Mapping
- Wildlife Monitoring and Anti Poaching
- Forest Fire and Forest Conservation
- Construction site planning & monitoring



DYNAMATIC HOMELAND SECURITY™

Patang Technical Specifications

SPECIFICATIONS	DESCRIPTIONS
Size	0.8 m x 0.8 m
All Up Weight	<3.0 kg
Set Up Time	<10 minutes
Turnaround Time	<10 minutes
Power Plant	Electric Brushless Motor
Cruise Speed	Up to 25 kmp or more
Max Launch Altitude	Up to 2000 m ASL or more
Operating Altitude	Up to 600 m AGL
Launch & Landing	Autonomous
Video & Telemetry Range	5 km (LOS) or more
Operating Wind Conditions	20 kph or more
Construction	Composite material construction for light weight and ruggedness
Endurance	40 minutes

Acoustic & Thermal Signature

Patang is powered with brushless DC motor and has a very low acoustic signature while cruising at an altitude of 300m AGL, its aural signature is less than 40 dB.

Patang designed using advanced ProE and AnSys software and optimisation technique, has light weight composite material. It is extremely rugged and can handle up to 500 landings or more without significant damage to structure. That paint used reduces 'Patang' thermal signature and makes it completely undetectable and suitable for stealth missions.

Since there are no heat sources, Patang has negligible thermal signature.

Electro Optic and Thermal Payloads

Patang is a highly stabilised multi-rotor platform capable of carrying payloads up to 300 grams. Dynamatic provides a number of Electro-Optic and IR / Thermal sensor payload options suitable to the mission requirement. These payloads are modular and swappable in design, easily replaceable for quick turn around, each optimized for different light conditions of the mission.

The payload can be controlled from the ground control station through a customised joystick with built-in Pan Tilt, Zoom, Static & Dynamic Target lock control. Patang has option of 2 axis or 3 axis high accuracy gimbal stabilised payloads designed indiginously by Dynamatic. The gimbal stabilisation coupled with our own DyNav control algorithm provides real time high quality video critical for the mission requirement.



2 Axis Gimbal Payload

Payload Options

SENSOR	SPECIFICATION	MISSION
Electro Optic Payload	2 MP Resolution, 10x Optical zoom, 12x digital zoom, 360° pan, 90° pitch control	Suitable for day mission and low light mission
Electro Optic Payload	752x582 resolution, 10x optical zoom, 360° pan, 90° pitch control	Suitable for day mission
Thermal Payload	640x512 resolution, 4x digital zoom, 360° pan, 90° pitch control	Suitable for night mission
Thermal Payload	384x288 resolution, 4x digital zoom, 360° pan, 90° pitch control	Suitable for night mission

GCS

PATANG GCS is composed of a rugged laptop, Communication Box, Joystick for payload control and RC Box (optional). The Rugged Toughbook is the heart of the GCS and includes the DyNav software for UAV Control Navigation and payload function control. DyNav has the capability to integrate geo-referenced maps of the commonly used digital map formats (gif, tiff etc). It supports the Google Maps and automatically download maps of specified GPS coordinates.



Ruggedised MIL Grade GCS



Ruggedised MIL Grade GCS (Optional)

GCS Specification

- MIL Standard 810G certified (6' drop rating)
- MIL Standard 461F certified
- IP65 certified sealed all-weather design
- Operating temperature of -29°C to +60°C
- Keyboard input and touch sensor
- **CPU:** Intel Core i5-3320M vPro Processor 2.6GHz with Turbo Boost up to 3.2GHz
- **Storage:** 500GB HDD
- **Display:** 10.1" XGA Sunlight viewable LED 1024x768 with Touch screen
- **Audio:** Intelligent front facing speaker, Keyboard Volume controls
- **Battery Operation:** upto 8 hours or more
- **Charging Time:** 3.5 Hours
- **Interface:** External Video (VGA X1), Headphone/ Speakers, Microphone/Line-In, IEEE1394a, 10/100/1000 Ethernet

Safety Features

The system is equipped with

- Return Home on Low Battery
- Return Home on Link Loss/ Option to continue the mission
- Hover Mode on GPS Loss
- Redundant GPS
- Night beacon



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