



PRAATHAMTM

Powerful | Precise | Productive

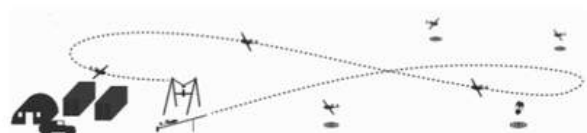
About us

Karman Drones is driven by a profound belief in the transformative power of unmanned aerial technology. We design, develop, and manufacture UAVs for various applications.

We understand the immense potential that drones hold for revolutionizing various sectors, and we are committed to pushing the boundaries of what is possible.

Vision: Our Vision is to create the most captivating modern-day drones with enhanced dependability, top-notch performance, and the ability to operate in any weather conditions globally.

Mission: Improving human existence with limitless unmanned aerial technology





Up to 50 minutes

True Endurance[™]



<2.5 kg

Max take-off weight



5 km

Operational Range

Pratham[™], means The First! And this is exactly what this category drone is - the first of its kind in its segment to offer advanced surveillance payloads including EO-IR dual sensor camera covering day and night surveillance, RGB day camera, which excels at capturing daytime footage and images for comprehensive coverage, a mapping payload that enables precision mapping and surveying.

With its combination of advanced surveillance technology and mapping capabilities, Pratham[™] becomes the best-in-class drone solution for a wide range of applications, from security and surveillance to mapping and surveying.



Drone-based LiDAR technology

Pratham comes with built-in state-of-the-art LIDAR technology, designed to work in all conditions, with a maximum range of 12 m.

Terrain Following

Armed with the latest geographical terrain data, you can optimize your missions by flying at a constant height above the terrain, ensuring you'll never run into it.



Obstacle Avoidance

5 LIDAR sensors. 5 directions.
Complete spatial awareness to prevent collision with obstacles or other aerial vehicles.



Modular Design

Pratham comes with advance modular design for quick and easy assembly with cross component compatibility for swappable payload

Composite Material

Pratham is made up of advance composite materials for rugged structure to improve the UAV's life



Highly portable

Crafted for convenience, its compact structure allows users to effortlessly carry it in the side bag provided

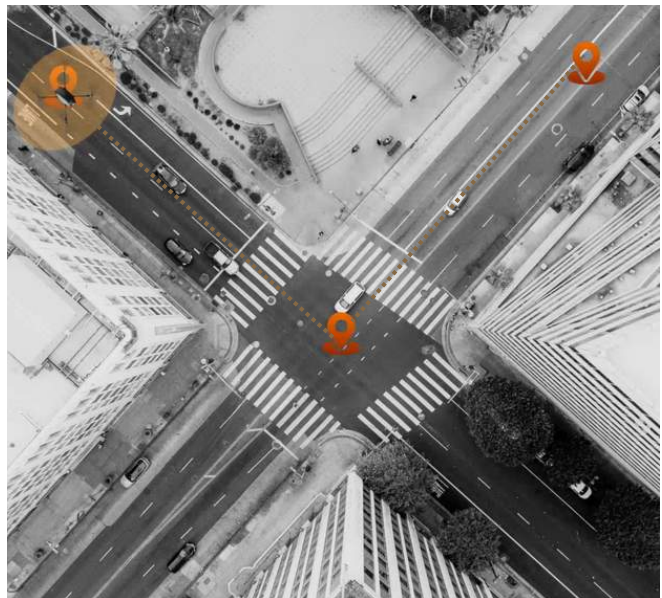


Waypoint navigation

It allows the pilot to pre-program a flight path for Pratham to follow with specific coordinates or points of interest.

Return to home

It allows Pratham to automatically fly back to its takeoff location or designated home point helping in signal loss, low battery and pilot control loss scenarios.



Push, Plug & Perform

This allows the user to quickly deploy the Pratham to its mission to get maximum awareness.

EO-IR Dual vision Payload

Visible Camera Resolution: 1920 X 1080 P
Thermal resolution: 640 X 480P
Visible Camera Zoom: 40X
Control Range (PTZ): -45°C to +135°C(Tilt), -180°C to +180°C (Pan)



RGB Day Payload

Visible Camera Resolution :
1080p @ 60fps
Visible Camera Zoom : 10X
(Optical)
Control range (PTZ): -90°to +90°
(Tilt), -150°to +150°(Pan), -45°to +45°(Roll)

Mapping Payload

Camera effective
megapixel:24.3MP
Sensor type: CMOS
Uncompressed format: RAW,
RAW+JPEG
Hot shoe for PPK: Yes
Camera weight: 105 g





EO-IR Dual Vision Payload

This dual electro-optical/infrared (EO/IR) stabilized camera is designed for long-range observation applications weighing just 115 grams.

It features an X40 zoom (X20 optical + X2 digital) and a field of view (FOV) of 60° wide, 3° narrow, and 1.5° deep allowing it to identify and track objects at long distances.

Equipped with a stabilized gimbal system that cancels out platform vibrations, ensuring smooth and clear video footage. It also provides operators with the ability to see in both visible and infrared light. With low latency video streaming, it enables operators to view real-time video footage over long distances

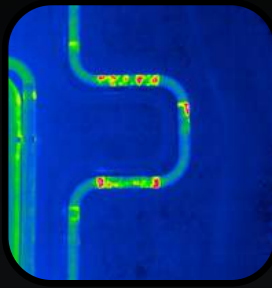
Applications



Law enforcement and public safety by monitoring high-crime areas



Search and Rescue your missions with nighttime operations to complete search and rescue missions.



Power Line and Pipeline Monitoring by identifying hotspots, detecting leaks, and assessing structural integrity, and enhancing the efficiency of maintenance operations.



Wildlife conservation efforts by monitoring animal populations, tracking migration patterns, and identifying potential threats such as poaching.



Environmental monitoring by Forest fire management with help of IR capabilities assisting in early detection of forest fires by identifying temperature anomalies and smoke even in challenging visibility conditions.



Disaster response aftermath of natural disasters provides comprehensive assessments of affected areas aiding emergency responders in planning.



Critical Infrastructure Protection by monitoring critical infrastructure such as airports, power plants, and government facilities.



RGB Day payload

This is a lightweight and compact 3-axis gimbal with a 10x optical zoom camera designed for daytime surveillance, inspection, and search and rescue applications.

10x optical zoom allows users to capture close-up images of objects at long distances, even in low-light conditions.

Third, the 3-axis gimbal stabilizes the camera against platform vibrations, ensuring smooth and clear video footage.

Designed with versatility in mind, its lightweight and compact form makes it effortlessly deployable in various scenarios, providing professionals with a reliable tool for a range of applications.

Applications



Law enforcement and public safety by monitoring high-crime areas



Search and Rescue your missions with daytime operations to complete search and rescue missions.



Real-time monitoring and surveillance of large areas, enhancing security measures for critical infrastructure, public events, or private properties during daylight hours.



Facilitate the inspection of infrastructure such as bridges, power lines, pipelines, and buildings.



Monitor ecosystems, wildlife, and natural habitats to aid conservation efforts by helping in biodiversity, identifying environmental threats, and supporting wildlife conservation initiatives.



Disaster response aftermath of natural disasters provides comprehensive assessments of affected areas aiding emergency responders in planning.



Critical Infrastructure Protection by monitoring critical infrastructure such as airports, power plants, and government facilities.

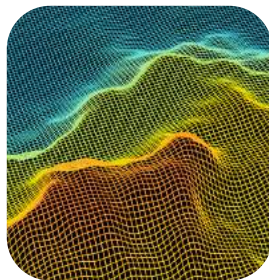


Mapping Payload

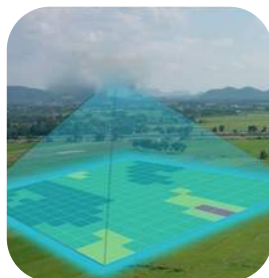
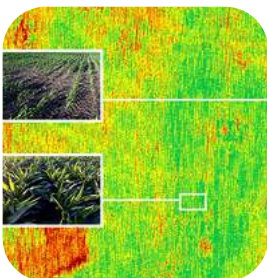
This mapping payload includes a camera, a gimbal, and a GNSS receiver. The camera is responsible for capturing high-resolution images of the ground. The gimbal stabilizes the camera against platform vibrations, ensuring smooth and clear images. The GNSS receiver provides accurate positioning data for each image, which is used to create accurate and up-to-date maps and surveys.

It is used by a variety of professionals, including surveyors, engineers, and construction managers. They are also used by government agencies and research organizations.

Applications



Topographic Mapping by conducting high-resolution topographic maps for urban planning, land development, and infrastructure projects



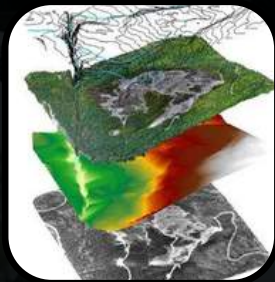
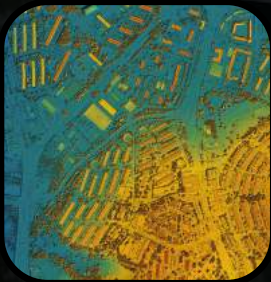
Precision Agriculture by optimizing agricultural practices by utilizing UAVs for crop monitoring, soil analysis, and precision farming.



Forestry Management by aidin in forestry management assessing forest health, monitor tree density, and identify potential threats such as pests or disease



Mining and quarrying by enhancing efficiency and safety in the mining industry providing detailed information on terrain, mineral deposits, and changes in landscape, facilitating better resource management.



Surveying and Geospatial Analysis by conducting detailed land surveys and geospatial analysis by imagery and data collected to contribute in accurate cadastral surveys, and GIS applications.



Archaeological documentation by assisting archaeologists in documenting and preserving cultural heritage sites.



Wildlife Conservation by mapping and monitoring habitats, track animal populations, and assess the impact of environmental changes



Accomplish your missions with ease

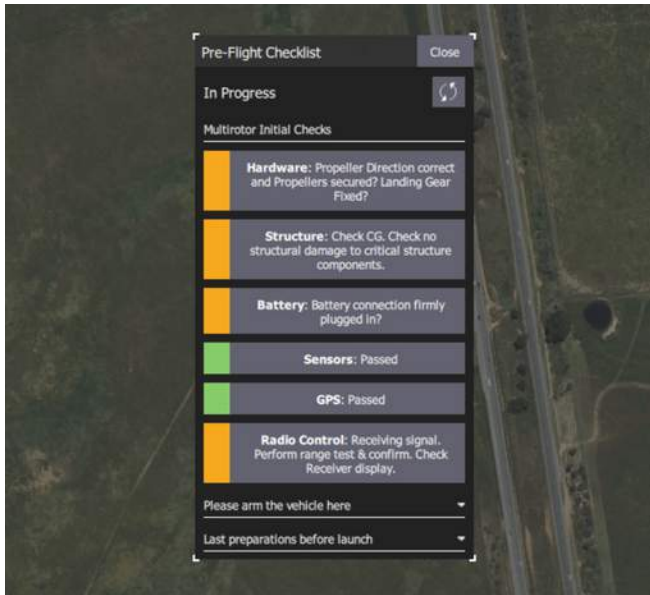
KARMAN GCS

Prepare
Plan
Perform



With Karman Drones' GCS, you have complete control over your drone, allowing you to create flight plans, execute them with accuracy, and monitor your drone's performance in real-time. Whether you're in need of aerial surveys, surveillance, or any other drone-related tasks, the GCS provides a user-friendly interface that simplifies the entire process.

The planning UI is designed to be beginner-friendly, while at the same time allowing space for experts to fine-tune the tiny details in their missions. It's the essential tool for unlocking the full potential of your drone operations, making them more efficient, safe, and effective.

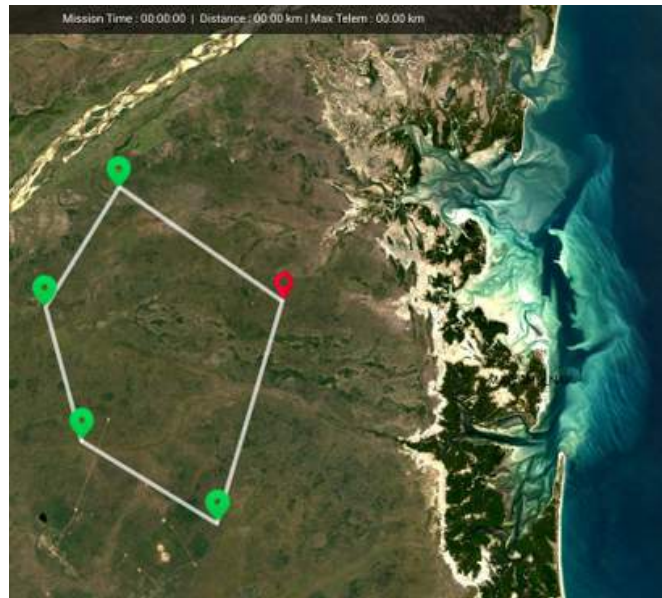


Pre-flight check

It features an advanced Pre-Flight Check, meticulously evaluating crucial parameters before takeoff.

Plan missions with ease

Armed with the latest geographical terrain data, you can optimize your missions by flying at a constant height above the terrain, ensuring you'll never run into it.



Absolute Safety

Implemented with failsafe to safeguard your UAVs during emergencies like low battery or RC link loss. Effortlessly establish geofences to prohibit your UAVs from entering restricted zones.

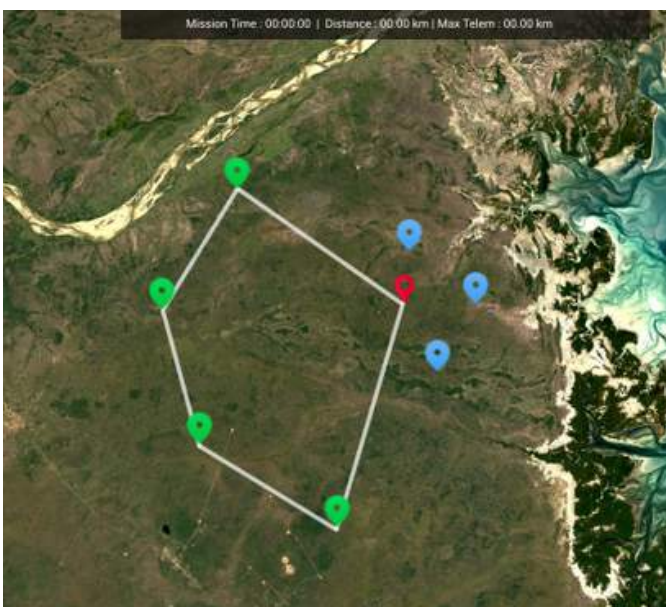


Structure scans

Structure scans allow you to assess the condition of any structure, plan maintenance and much more which can be fine-tuned for any structure.

Survey scans

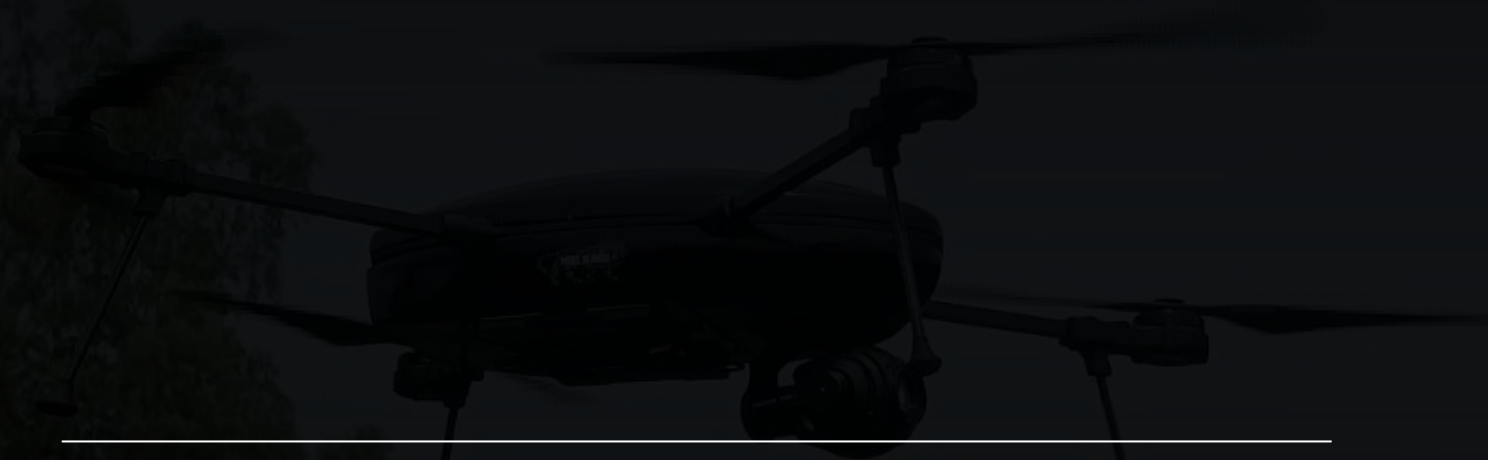
Utilize survey scans to thoroughly examine an area of choice. Choose from pre-defined patterns or create your own with our tracing tool.



Failsafe feature

It protects UAVs in the event of an emergency such as battery low, RC link loss. Easily create geofences to prevent your UAVs from flying into restricted areas

Technical data



True Endurance™	Up to 50 minutes
Max take-off weight	<2.5 kg
Max payload weight	<400 g
Max take-off weight altitude (AMSL)	3500 m
Max flight altitude	120 m
Dimensions (without propellers)	50 X 50 X 25 cm
Dimensions (with propellers)	92 X 92 X 25 cm
Optimal cruise speed	6-8 m/s
Max cruise speed	10 m/s
Operating temperature range	-20°C to +60°C
Command and control range	5 km
Live Video Transmission	5 km
Wind resistance	10 m/s
Ascend speed	2 m/s
Descend speed	1 m/s
Deployment time	<10 minutes

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