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**MISTRAL**  
**KITE**

# Mistral Kite - Tethered Drone System

## OVERVIEW

Drones are finding tremendous applications in various Defense and Homeland Security applications, however, many of these applications are restricted by their flight duration. The best drones available in the market may have an operational capacity of 60 minutes in single charge. What if you need a drone solution that can hover for hours!

Introducing Mistral Kite, an advanced tethered drone system, with an unbreakable power and communication link to the Drone or UAV, over a spool of wire. Mistral Kite is an ideal solution for applications that require longer flight time - typically above 45 minutes and a limited operational area. Mistral Kite comes with a tether system that can operate at a height of up to 120m (Height between the Drone and the tethered system).

## DRONE

Mistral Kite comes with a rugged hexarotor drone featuring a high-pressure light-weight carbon fibre body of superior strength. The drone is designed to operate in a high-altitude terrain (up to 3000m above Mean Sea Level). The drone offers unmatched flight stability and supports payload of up to 3 kg.

The tethered drone has a modular architecture and can be launched from confined spaces. The drone can continuously cover surveillance of a large area. The drone features rugged and efficient quick-detach arms and undercarriage, making it convenient for storage and easy deployment. It has a take-off weight of up to 24kg at mean sea level. The drone has built in status monitoring, health checks, and fail-safe process to augment the operational capabilities.



## TETHER SYSTEM

The 120m tether system of Mistral Kite can be connected to raw power (220V/15A) or a Generator to supply continuous power to the drone and its payloads. The system includes an industrial / military grade high-power UPS, to ensure power back up in the event of an unexpected failure in primary power sources.

The Kite comes with smart power management and an automatic tether winding mechanism. The integrated global navigation satellite system (GNSS) enables the ground station to maintain the flying ceiling and position of the drone even in harsh weather conditions.

## SPECIFICATIONS

### DRONE

- ▶ **Vehicle Empty Weight** : < 20 kg
- ▶ **Maximum Payload** : 3 kg
- ▶ **Wind Resistance** : Up to 36 km/h
- ▶ **Vehicle Type** : Hexarotor
- ▶ **Dimension** : 1620mm Wheelbase
- ▶ **Ingress Protection** : Dust & Water Resistance
- ▶ **Fail Safety** : Pre-flight Checklist  
RTH on Signal Loss
- ▶ **Battery** : Li-Polymer / Tethered
- ▶ **Max Launch Altitude** : Up to 3000m AMSL

### TETHER SYSTEM

- ▶ **Tether system Chassis** : Military Grade
- ▶ **Light wire spool** : 120m
- ▶ **Power** : 3500W
- ▶ **Tether System Weight** : 30 kg
- ▶ **Tether system Size** : 50 x 40 x 35 cm
- ▶ **Cable Weight** : 1.8 kg
- ▶ **Output Voltage of Air Unit** : 12V
- ▶ **Voltage Input** : 220Vac @50Hz

### ISR CAMERA (OPTIONAL)

- ▶ Camera with 10x optical zoom\*
- ▶ Multi-axis stabilization system
- ▶ HD video transmission
- ▶ Weight: 2 kg

\*Customizable to Specific requirements

### ADVANTAGES

- ▶ Offer situational awareness through continuous surveillance
- ▶ Secured data communication through fibre optic drone tether
- ▶ Ultra-high-resolution data transfer
- ▶ Quickly establish temporary long-range communication networks for cellular, radio, and broadband internet transmissions
- ▶ Can be equipped with a variety of mission-specific payloads like infrared and high-definition video cameras for real-time streaming, radio repeaters, and environmental sensors.

### ADD-ON OPTIONS

The Mistral KITE can be further integrated with additional features such as AI-based Video Analytics (Target Detection, Identification and Tracking), and Day Night operation using an IR module. Based on the application, the system can have add-on payloads such as rugged Networking and Communication Equipment, CPE Devices and Flood Light among others.

## APPLICATION

- ▶ Constant Surveillance of a Fixed Area
- ▶ Ideal for Military ISR (Intelligence, Surveillance, and Reconnaissance)
- ▶ Aerial Search Light Platform
- ▶ Establish Communication Network in Mountainous Terrains
- ▶ Emergency / Disaster Response Management
- ▶ VIP Event / Crowd Management
- ▶ Security and Traffic Monitoring



### ABOUT MISTRAL

Mistral is a technology design and systems engineering company catering to customers in domains of Defense, Homeland Security and Product Engineering all over the world. **Mistral is a House of Special Purpose Drones.** Our Homeland Security division offers a variety of security and surveillance solutions for Command and Control, Mobile C4ISR, Drone Detection and Neutralizing, Video Analytics, Tactical Communication; designed for Special Forces, Police and Para-military for Emergency Response Management, Disaster Management and Border Surveillance.

Since 1997, Mistral has been aiding governments to upgrade and modernize Homeland Security systems with the latest technologies and equipment. Our Homeland Security solutions provide information in real-time, enabling quick decision making.



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