

Fiber Optic Drones

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Fiber Optic Drones Latest News

Recently, it was observed that Hezbollah is using Fiber Optic Drones against Israel.

About Fiber Optic Drones

- Fiber optic drones are **specialized unmanned aerial vehicles** (UAVs) that integrate **fiber optic technology**.

Working of Fiber Optic Drones

- Fiber optic drones operate by using **optical fiber cables** instead of traditional wireless systems.
- These are operated while **connected to the ground** through a **fiber optic tether**.
- Unlike regular drones that rely on radio frequencies for communication and batteries for power, **these drones receive both data connectivity** and often **electrical power** through the **tether**.
- **Applications:** Military and Drone Warfare, Telecommunications and Infrastructure Maintenance, Emergency and Disaster Response

Advantages of Fiber Optic Drones

- **Real-time Data:** It operates at **near-zero latency transmission**, ideal for surveillance, targeting and network maintenance.
- **Improved Coverage:** These can be operated in **GPS-denied, RF-jammed environments** like electronic warfare zones.
- **High Security:** These drones carry optical fiber cables, ensuring the transmission of large data volumes with **minimal signal interference**.
- **Reliable Transmission:** These drones provide **high-speed, reliable data transmission** over vast distances.

Source: **IE**

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