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PEGASUS

Medium range UAS

The Pegasus is a multi-functional intelligence and reconnaissance UAV system with operational radius of 200km and more, which can be used for intelligence, surveillance and reconnaissance missions, striking ground targets, target laser designation, artillery fire adjustment, damage effect assessment, etc. With 2 precision guided missiles, it can perform air-to-ground accurate striking on the ground targets.

Guidance in fully autonomous way (points tracking, holding, camera guidance etc.). It has the altitude, velocity, course controlled by autopilot, as well as the emergency and return home mode.



PERFORMANCES

• Engine:	two cylinder two stroke boxer
• Power:	38 KW (52 BHP)
• Propeller:	wooden two blades, pusher
• Wing span:	7,025 m
• Length:	5,395 m
• Max. payload weight:	50 kg
• Max. takeoff weight:	265 kg
• Max. speed:	160 - 180 km/h+
• Cruising speed:	130 -150 km/h
• Operational altitude:	2000 -3000 m
• Service ceiling:	5000 m (4000 m wit missiles)
• Flight duration:	6 h+ strike mission, 8 h+ surveillance mission
• Operational radius:	200 km+
• Takeoff/landing	autonomous, prepared runway
• Reconnaissance and surveillance:	Day and night reconnaissance and Surveillance

- Target acquisition and designation: Target location accuracy ≤10m continuous designation
- Times: 60s
- Artillery fire adjustment: Yes
- Damage effect assessment: Yes
- Strike function: Yes
- Operating temperature: -30°C to +50°C
- Environment humidity: 85%
- Payload sensors: thermal infrared imager, electro-optical camera, laser range finder and laser designator
- Thermal infrared imager: cooled, resolution 640x512
- Electro-optical camera: color day, full HD 1920×1080 laser range finder
- Measurement distance: 300 to 12000 m
- Laser designation range: 9 km
- Mission planning based on digital maps:Yes
- Simulation training: Yes
- Intelligence processing: Yes
- Autonomous flight control & mission programming: Yes
- Remote manual flight & sensor control: Yes
- Real-time data link & Image data processing: Yes
- Ammunition: INS/GPS and semi-active laser homing rocket (able to launch in LOBL mode without GPS signal)
- Ammunition weight: < 25 kg (2 pcs with rails)
- Range: up to 5 km

Basic operational set: UAV with payload (3 pieces), ground control station (1 piece), retranslation ground station (1 piece), remote video terminal (1 piece), container for UAV transport and storage (3 piece) and logistic support.

Basic operational set can be extended with: ammunitions with rails, off-road trucks for system transport, stationary center for intelligence analyze and data distribution, crypto solution, etc.

The Pegasus UAV system is a tactical-range multi-purpose UAV system, which carries different mission payloads to carry out different tactical applications. The typical combat modes mainly include intelligence, surveillance and reconnaissance (ISR), integrated surveillance and combat, and information support etc.

Intelligence, surveillance and reconnaissance (ISR) operation mode

The UAV system is deployed to a predetermined area according to the command decision. The UAV can mount Day and Night Photoelectric Reconnaissance Payload according to the mission requirements, and implement all-day video image reconnaissance, target detection, tracking and identification. According to the specific way of performing the task, the UAV telemetry and image information can be obtained through the relay station forwarding or the ground station receiving directly. At the same time, the UAV can download the reconnaissance videos image data and intelligence products to the single receiving station in real time.

The integrated detection and attack combat mode

The UAV system is deployed to a predetermined area according to the command. The UAV is loaded with reconnaissance and weapon payloads to take off at the same time, and conducts intelligence, reconnaissance and surveillance of the theater; after the suspicious target is found, the target positioning solution will be performed and obtain the target positioning results with a better accuracy than 10m; target positioning results bond the attack ammunition, and laser irradiate the target to be hit; launch aviation-guided rocket to accurately strike the target; during the target strike, the drone monitors the target in real time, evaluates the damage effect, and determines whether to proceed Hits.

Information support combat mode

The UAV system can be combined with ground combat units, fire strike, command and control equipment, communications and other situational awareness equipment to complete reconnaissance, control, strike and damage assessment, that is, a new type of combat that integrates “reconnaissance, control, attack, and evaluation” Forces and deterrents cooperate with each other to complete joint air strike operations, sea operations, ground operations, and special operations.

As an information support equipment, the UAV system provides accurate target position and characteristic information, battlefield situation maps, digital topographic maps, target indication information about the entire combat system; it monitors the battlefield situation in real time, and evaluates the damage effect on a timely manner to determine whether provide intelligence and information support for the second strike.

System unique features

- Retranslation ground station - for reliable communication in hilly terrain. Simply put retranslation ground station on top of hill, make connection with ground control station using microwave radio link and connection with UAV using L band radio link. Choosing appropriate hill there is possible to have reliable communication at long distances.
- Built in power generator inside ground control station and retranslation ground station with UPS function
- Excellent integration possibility – built in communication equipment allows data exchange and voice communication in ground to ground as well as in ground to air mode
- Light and easy to transport system with features and characteristic of much more complex and bigger system.