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PD-1
Unmanned Aerial System

PD-1 Unmanned Aerial System

Designed for areal video surveillance in real time, aerial photography and other applications. Can be operated in different weather conditions. Our UAV is equipped with encrypted digital data link which offer high level of protection against any interference by third-party. Integrated gyro-stabilized gimbal provides superior video quality and detailed view of the target, combines with a HD video downlink it allow to stream the Full HD video in real time up to 50 km.

USG-202 Gyro-stabilized gimbal

- Full HD camera with 30x optical zoom
- High quality IR camera
- 360 degree rotation
- Target and scene tracking
- Weather sealed

Ground Control Station

- 85 KM Digital Data Link
- 1000 cd/m² HD screen
- 5 hours battery endurance
- Antennas included
- Rugged case

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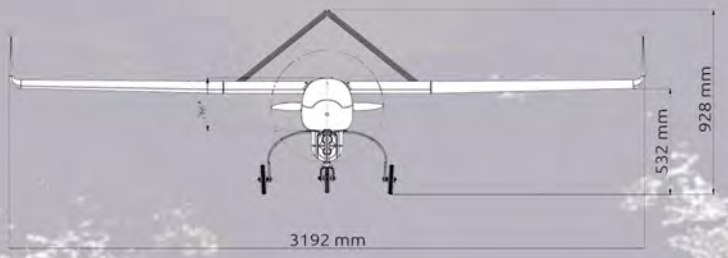
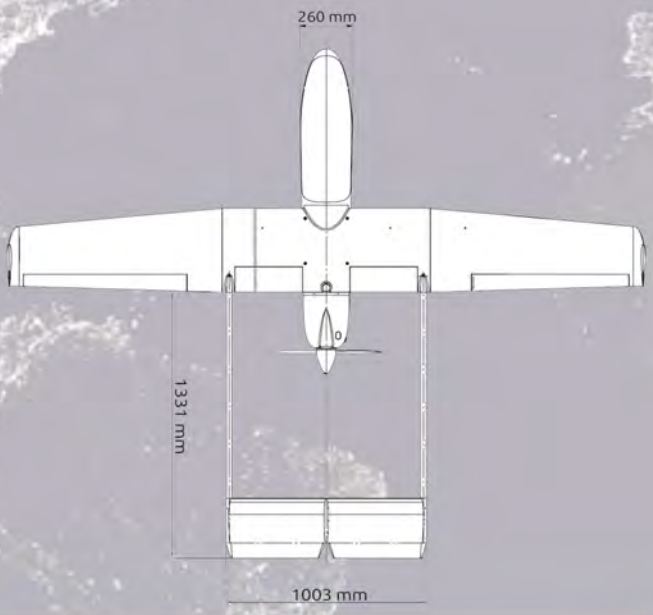
PD-1
UAV

PD-1 Unmanned Aerial Vehicle

Designed for different missions and tasks, PD-1 is a multi-purpose, highly customizable Unmanned Aerial Vehicle. It has 3.2 meter wind-span and can carry up to 8 kg payload capacity (excluding fuel). Maximum takeoff weight is 33 kg. Because of its aerodynamics PD-1 can nearly any payload without balancing it. In basic version it can stay in the air for 5+ hours. Fly time can be extended by adding Electronic Fuel Injection system.





Specifications

MTOW	33 kg
Max Payload (excl fuel)	8 kg
Wingspan	3200 mm
Length	2546 mm
Power plant	50 cc
Takeoff method	Runway/catapult
Endurance	5+ hours
Service ceiling	2000 m
Cruise speed	25 m/s
Stall speed	16 km/h
Takeoff run	80 meters (fully loaded)

Catapult launcher and parachute recovery

Optionally PD-1 UAV can be equipped with pneumatic catapult launcher and parachute recovery system. This upgrade simplifies takeoff and landing procedures.

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PD-1
UAS Payload

Advanced Aerial Surveillance System

Our surveillance system consists of USG-202 EO & IR gimbal, long-range Full HD video downlink and ground control station. It allow to stream Full HD video from PD-1 UAV to multiple ground control stations in radius of 50 km.

- Full HD day-view camera with 30x optical zoom
- High performance thermal camera
- Real-time video processing
- 50 KM Full HD encrypted video downlink
- Precision positioning

Full HD Sony EV7500 camera with 1/2.8-type Exmor™ CMOS image sensor and 30x optical zoom.

Integrated thermal camera allows to effectively detect and track targets even in low-visibility conditions.

Video processing with digital video stabilization, target tracking, scene lock.

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PD-1
UAS Payload

Aerial Photo Mapping

High resolution 50-megapixel on-board camera allows to take detailed images of the Earth surface with georeference. From the altitude of 1000 meters PD-1 UAV offers 10 cm per pixel resolution.

- 50 MP camera with 50 mm lens
- 10 cm per pixel image resolution
- Gyro-stabilized platform (optionally)
- Georeference
- Mapping software included

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PD-1 UAS
Technical specifications

PD-1 UAV Specifications

Maximum takeoff weight	31 kg
Empty weight (with undrainable fuel)	20 kg
Payload weight	4 kg
Maximum flight time	5 hours
Practical ceiling	2000 m
Speed range	70-140 km/h
Cruise speed	95 km/h
Stall speed	50 km/h
Fuel A-95	Fuel A-95 gasoline mixed with oil
Deployment time	15 min
Launch	Runway, catapult
Recovery	Runway, parachute

Dimensions

Full length	2540 mm
Height	990 mm
Chassis trac	670 mm
Cassis wheelbase	880 mm
Main wheel size	150x31 mm
Nose wheel size	127x31 mm
Wing area	1/17 m 2
Wing span	3190 mm
Mean wing chord	392 mm
Tip wing chord	300 mm
Root wing chord	420 mm
Eleron area	2x0.06 m^2
Flaps area	2x0.055 m^2
Fuselage max width	266 mm
Fuselage max height	284 mm
Full projection area of V-tail on horizontal plane	0.278 m^2
Full projection area of V-tail on vertical plane	0,123 m^2

Communications

Telemetry radio link	
Range	80 km
Encryption	Yes
Video downlink	
Range	50 km
Format	Full HD 1080p
Encryption	Yes
Navigation	GNSS, inertial navigation unit

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