

Köpari 500 ISR

DN gyro payload



Köpari 500 ISR is a Cost Efficient Intelligence, Surveillance and Reconnaissance (ISR) Unmanned System designed for tactical mobile missions, operating under extreme harsh conditions.

With its groundbreaking aeronautical project, state-of-the art avionics and sensors, Köpari is the most advanced unmanned system engineering effort in the last five years.


A system design for mobility, ruggedness, reliability and ease of operation, with minimal support.

Every component is certified following the most strict quality standards. From the TBO certified engine power plants to actuators and avionics, everything is manufactured with state of the art technology, and the most advanced materials.

Very light, easy to assemble, this UAS can be serviced and operated by just a team of two.

Rugged and reliable as ever. Proven in extreme operational environments.

Be it the Amazon Rainforest, the African Savannah or the Sahara deserts, you can rely on Aerofoundry to get the job done.



Köpari ISR comes with a
TBO HF (JP8/JP5), fuel
injected engine

Specifications

- 5.00m wingspan, modular, easy to assemble, carbon fiber airframe.
- Cruise speed of 120km/h.
- Top speed of 160km/h.
- Operational ceiling: Up to 3000m.
- Max. flight height: 5000m.
- Up to 18 hours autonomy.
- Automatic take-off and landing (using unprepared run-ways, rural roads or even compacted soil). Catapult launching optional.
- AHRS linear accelerations compensation without GPS.
- Dead-reckoning, flight and navigation without GPS.
- Onboard wind speed and direction estimation.
- HIL/SIL simulation with X-plane flight simulator.
- GoogleEarth integration.
- One or two monitor Ground Control Station or
- Rugged, water and sand tight, touchscreen laptop with swappable batteries.
- <250km, 20W, 300-900MHz (adjustable),
1.2G/2.4G/5.8GHz datalink with a high gain 1.8 -4.7meter FRP omni-antenna at the receiver end.





285 gyro-stabilized 3-axis gimbal for day and night surveillance with Laser rangefinder.

Day camera parameters

- Video camera: Sony FCB-ER8300
- Video output: FHD H.264 Ethernet
- Operational spectral range: 0,4...0,8 mkm
- Max view angle: 50°
- Rotation angle:
 - Roll 360 °+
 - Pitch 360 °+
- Resolution: 4K (3840 x 2160 QFHD)
- Heated protective glass: optional
- Optical zoom: 12x optical zoom combined with super resolution to maintain 4K resolution at up to 20x zoom
- Digital zoom: 12x (144x with optical zoom)
- Number of effective pixels: 8.93 Mega Pixels
- Focus: auto / manual
- Lens: F 3.9 mm 46.8 mm
- Environment temperature range: -40 ... +50°C
- Altitude range (m): 0 ... +8000
- Accuracy of coordinates (m): 20-30

Night camera parameters

- Thermal Imager: LWIR detector
- Video output: H.264 Ethernet
- Lens: 50 mm f/1.4
- Camera rotation angle
 - Roll 360 °+
 - Pitch 360 °+
- Spectral Band: 8-14 μ m
- Sensitivity (NETO) @f/1 0@: < 60 mK
- Operating temperatures range: -40°C...+50 °C
- Clock frequency: 10 MHz.
- Matrix resolution: 1024x768
- Accuracy of coordinates (m): 20-30

Laser rangefinder parameters

- Total measurement range: 50-5000 m
- Typical measuring range (Man size target): 0.75 m $\hat{\Lambda}$ ~ 0.75 m, 30 % Albedo, 10 km visibility \geq 2000 m
- Typical measuring range (NATO standard target): 2.3 m $\hat{\Lambda}$ ~ 2.3 m, 30 % Albedo, 10 km visibility \geq 3000m
- Typical measuring range (Extended target): 6 m $\hat{\Lambda}$ ~ 6 m, 50 % Albedo, 23 km visibility \geq 4500 m
- Measurement accuracy: \leq 0.5 m
- Measurement time (selectable): 100 ... 3 000 ms
- Measurement modes: Single measurement, continuous ranging 1 ... 25 Hz
- Range gate resolution: 1 m
- Operating temperatures range: -40°C...+85 °C



Antivibration frame

An Intelligence, Surveillance and Reconnaissance highly advanced engineering concept. Easy to deploy and operate. Easy to service and support.



Operational Services

Aerofoundry ensures continuous system availability providing tailored support and maintenance, in addition to outsourcing systems operation and logistics on behalf of the client, on limit-ed-time or long-term conditions, when required by the client.



Training

Aerofoundry provides classroom, simulation and live training to suit every operational requirement, including maintenance and logistics.

All training is computer aided in one of our training facilities, or locally when requested by the client.



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