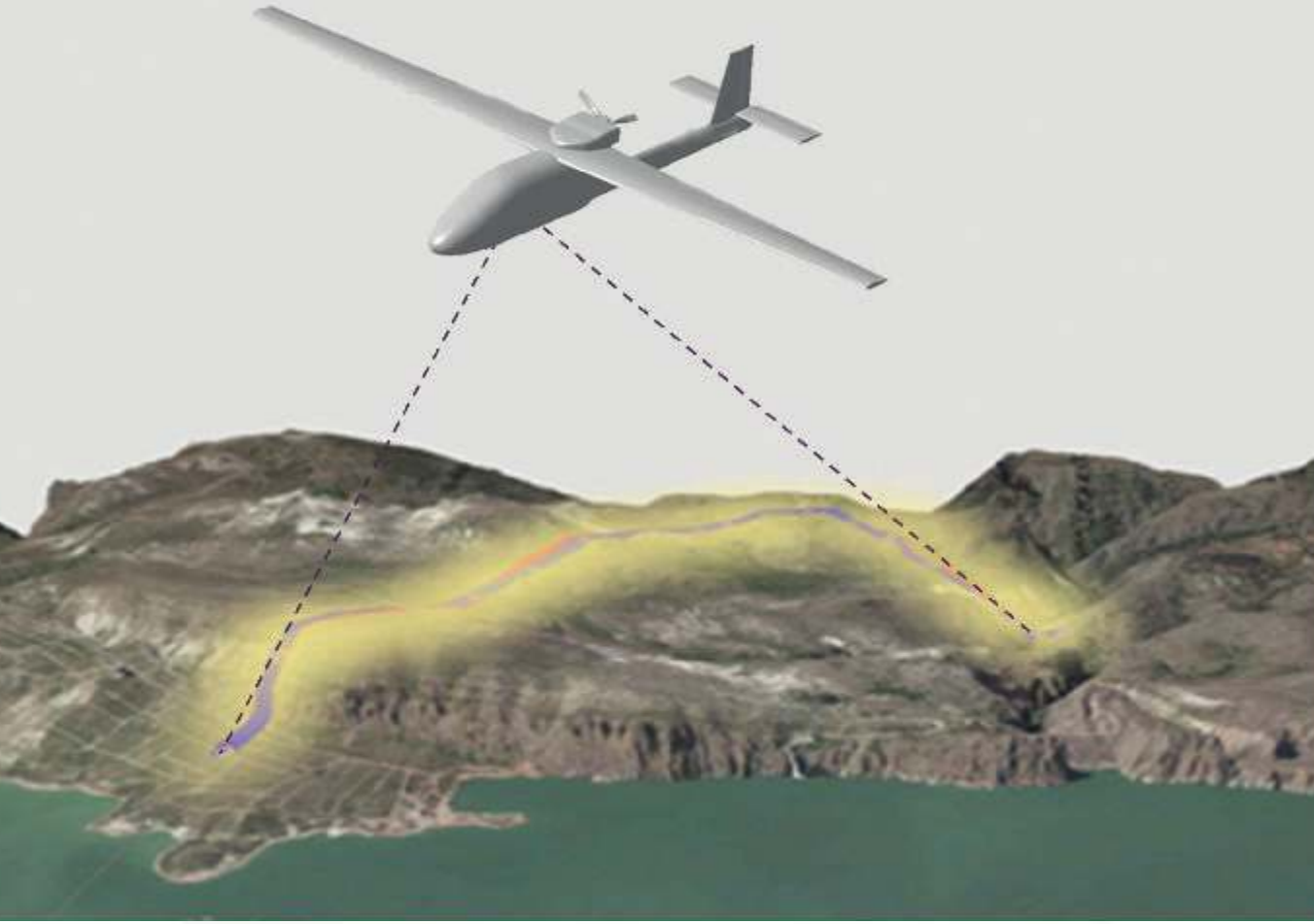


ESEN



GÖRDES

VISION BASED NAVIGATION SYSTEM

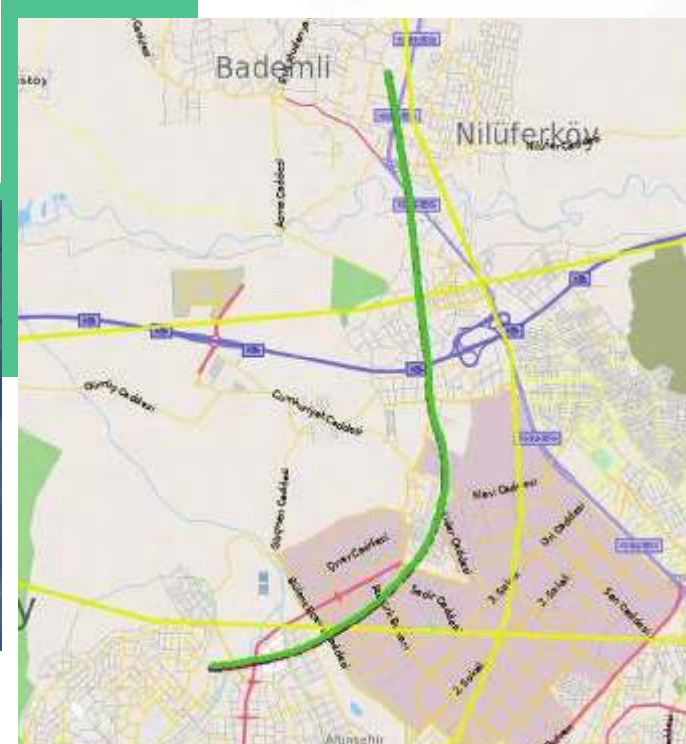
GörDES Vision Based Navigation System provides accurate real time position, velocity and attitude information for aerial vehicles flying in GNSS denied environments, via onboard imaging.

GNSS signals are subject to jamming and spoofing during operations. To mitigate this vulnerability, GörDES generates accurate navigation (position, velocity, attitude) data by matching images taken from its built-in camera and pre-processed satellite/aerial imagery information of the flight mission region. Besides, it implements an accurate visual odometer for accurate estimation of the velocity of the air platform.

GörDES ensures that the aerial platform completes its mission and returns home safely.



RURAL AREA



URBAN REGIONS

GÖRDES - S (for small UAVs)**GÖRDES - T** (for tactical UAVs)**Sensor Performance**

Sensor Output	Position, Velocity, Attitude	Position, Velocity, Attitude
Accuracy (typical mean abs. error)		
Horizontal Position	8 m (@ 1.500 ft AGL)	25 m (@ 15.000 ft AGL)
Altitude	4 m (@ 1.500 ft AGL)	6 m (@ 15.000 ft AGL)
Velocity	1 m/s (@ 1.500 ft AGL)	2 m/s (@ 15.000 ft AGL)

Mechanical

IP Rating	IP 54	IP 65
Operating Temperature	-20°C to +45°C	-30°C to +55°C
*Dimensions	140mm (H) x 120mm (L) x 90mm (W)	155mm (H) x 280mm (L) x 210mm (W)
*Weight <small>*Depends on platform integration needs and environmental conditions</small>	300-600 g	2000 - 4000 g

Electrical

Input Voltage	5 V / 12 V	28 V
Power Consumption	< 20 Watt (continuous)	< 40 Watt (continuous)

Interface

Interface	UART
Protocol	UBX or NMEA (latitude, longitude, altitude, velocity, groundspeed, roll, pitch, yaw)
Output Frequency	1-10 Hz
Built-in Self-test	Yes

Software Suite

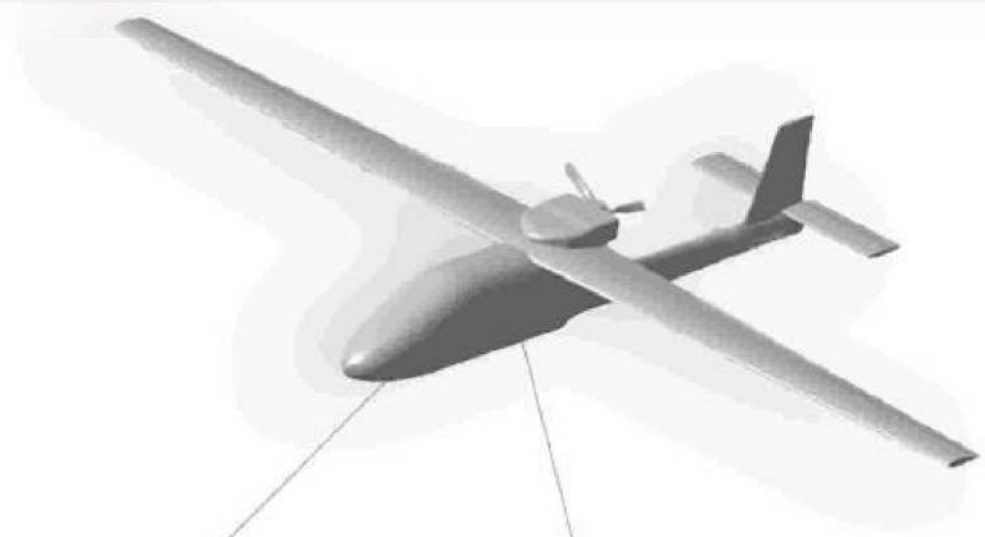
GÖRDES Airborne SW

Mission Planning SW

Maintenance SW

Applicable Platforms

Multi-rotor Drones, Fixed Wing/Rotary Wing UAVs, VTOLs, Manned Platforms



GÖRDES