



> SensoDrone

Sensorial reconnaissance and data acquisition using low cost drone and mobile technology.

The SensoDrone is a drone sensor prototype designed to intelligently seek out, acquire, and deliver high-level sensory data in situations where manned inspection is risky or even impossible, and/or traditional monitoring technology too costly to apply.

The SensoDrone is based on open-source Arduino flight control technology coupled with the Android mobile platform and Microsoft cloud solution (Exaqt software platform). Because the system is autonomous, it is easy to use without extensive training.

Possible applications

- > Environmental monitoring (air quality, emissions, etc.)
- > Contaminated areas (radioactive levels, gas leakages, etc.)
- > Various mapping tasks (mobile network signal strength, emission spreads, weather data, noise patterns, etc.)
- > Inspection (quality control and documentation purposes)

Sensors and flight data

- > Temperature, Humidity, Pressure
- > MQ gas sensors:
CH₄, LPG, NH₃, CO, CO₂, NO_x
- > Particle counter
- > Geiger Müller – radiation counter
- > Latitude, longitude, altitude, heading, ground speed
- > GSM signal strength

Onboard features

- > Flight control system: APM 1 with IMU shield or APM 2.5. External GPS 10Hz, 66ch
- > Sonar and optical flow sensor
- > Video recorded full HD
- > Video live SD w. OSD (mavlink), 5.8 GHz
- > Mavlink telemetry 2.4 GHz or 433 MHz
- > RC control 2.4 GHz, 8ch
- > Datalogging UMTS, EDGE, GPRS

Specifications

- > Weight: 2.6 kg (5.1 Ah, 14.8 V), max. payload 3.2 kg
- > Diameter: 60 cm (excl. props)
- > Cruise speed: 50 km/h
- > Max. flight time: 25 min (10.2 Ah, 14.8 V)
- > Power consumption: < 300 W (at 50 % power), < 600 W (at 100 % power)

