Classification of UAV

Based on size

Very small UAVs

The very small UAV class applies to UAVs with dimensions ranging from the size of a large insect to 30-50 cm long. The insect-like UAVs, with flapping or rotary wings, are a popular micro design. They are extremely small in size, are very lightweight, and can be used for spying and biological warfare. Larger ones utilize conventional aircraft configuration. The choice between flapping or rotary wings is a matter of desired maneuverability.

Black hornet

Black Hornet® 4 PRS	
Rotor diameter	190 mm (7.5 in)
Total length	255 mm (10 in)
Weight	~70 grams (2.5 oz)
Signature	
Visual detection	Best in class, details upon request
Audio	Best in class, details upon request
Electromagnetic Signature	Best in class, details upon request
Payload	
Electro optical main camera	12 MP, excellent in low light
Electro optical navigation camera	3 x low resolution camera for indoor navigation and collision avoidance
Night Imager	650 x 512, high sensitivity TI camera
LED	Illuminating white LED
Performance	
Endurance	More than 30 minutes
Max. speed	10 m/sec ground speed (~33 ft/sec)

DJI mavic mini

Takeoff Weight [1]	249 g
Dimensions	Folded: 140×81×57 mm (L×W×H) Unfolded: 159×202×55 mm (L×W×H) Unfolded (with propellers): 245×289×55 mm (L×W×H)
Diagonal Distance	213 mm
Max Ascent Speed	4 m/s (S Mode) 2 m/s (P Mode) 1.5 m/s (C Mode)
Max Descent Speed	3 m/s (S Mode) 1.8 m/s (P Mode) 1 m/s (C Mode)
Max Speed (near sea level, no wind)	13 m/s (S Mode) 8 m/s (P Mode) 4 m/s (C Mode)
Maximum Takeoff Altitude	3000 m
Max Flight Time	30 minutes (measured while flying at 14 kph in windless conditions)

Small UAVs

The Small UAV class (which also called sometimes mini-UAV) applies to UAVs that have at least one dimension greater than 50 cm and no larger than 2 meters. Many of the designs in this category are based on the fixed-wing model, and most are hand-launched by throwing them in the air.

Examples

RQ Raven

SPECIFICATIONS

PAYLOADS	Dual Forward and Side-Look EO Camera Nose, Electronic Pan-tilt-zoom with Stabilization, Forward and Side-Look IR Camera Nose (6.5 oz payloads)
RANGE	10 km
ENDURANCE	60–90 min
SPEED	32–81 km/h, 17–44 knots
OPERATING ALTITUDE (TYP.)	100–500 ft (30-152 m) AGL, 14,000 ft MSL max launch altitude
WING SPAN	4.5 ft (1.4 m)
LENGTH	3.0 ft (0.9 m)
WEIGHT	4.2 lbs (1.9 kg)
GCS	Common GCS with Puma, Wasp and Shrike
LAUNCH METHOD	Hand-Launched
RECOVERY METHOD	Deep Stall Landing

Bayraktar Mini

Technical Features

Com. Range	15 km
Cruise Speed	30 kn
Operational Altitude	3000 ft
Endurance	60-80 min.
Wing Span	2 m
Length	1,2 m
Takeoff	Hand Launch
Landing	Parachute / Belly Landing
Work Temp. Range	20℃ , +55℃
Power	Battery
Motor	Electric Motor
Payload	2 Axis Day / Termal Camera
Data Links	Frequency Hopping Spread Spectrum Digital