UAS: The Global Perspective - Upcoming 20TH Edition (2025)

INCLUDE or UPDATE YOUR ENTRY **FREE-OF-CHARGE**

Complete & Return this form to pvb@pro-uas.com

Producer

Country

UAS Name / Designation

Usage *(See page 2)*	◯ Aerial Work ◯ Cargo Transport ◯ Passenger Transport ◯ Gvmt & Military
Status	◯ Conceptual ◯ In Development ◯ Experimental ◯ Prototype ◯ Market Ready / In Production ◯ Research Project ◯ Demonstrator
Airframe Type	◯ Fixed Wing *(capable of flight by using the aerodynamic lift generated by its wings)* ◯ Fixed Wing with Lift Rotors *(rotors positioned on arms, wings, tail or booms)* ◯ Lighter-than-Air *(airships, dirigibles, flying object)* ◯ No Wings / No Rotors *(e.g. fuselage or pod with integrated ducted fans or vectoring jet nozzles)* ◯ Ornithopter *(flapping wings)* ◯ Rotorcraft *(derives its source of lift from rotor blades rotating around an axis)* ◯ Transwing *(wing folds & tilts & permits in-flight transitioning)* ◯ Tilt Wing *(wing is horizontal for conventional forward flight and rotates up for VTOL)*
VTOL	Vertical take-off & landing capable ◯ Yes ◯ No
Rotorcraft Class *(See page 3 for explanation of terms & pictographs)*	◯ Bicopter ◯ Birotor Coaxial ◯ Birotor Intermeshing ◯ Gyroplane ◯ Monocopter ◯ Multicopter (>2 & <10 lift rotors) ◯ Pluricopter (10 lift rotors & more) ☐ Quantity lift rotors ☐ Quantity lift rotors ☐ Quantity puller rotors ☐ Quantity puller rotors ☐ Quantity pusher rotors ☐ Quantity pusher rotors ◯ Tandem Ducted Rotors ◯ Tandem Rotor ◯ Tailsitter
	Tether: ☐ Standard ☐ Optional
Propulsion	◯ Electric ◯ Hybrid ◯ Jet / Turbine ◯ Piston ◯ Other
Fuel / Energy	◯ Avgas ◯ Battery ◯ Fuel Cell ◯ Gasoline ◯ Heavy Fuel ◯ Nitrogen ◯ Solar Panel ◯ 2-Stroke ◯ 4-Stroke ◯ Other Note: Heavy Fuel = Diesel, Jet Fuel (*Jet A1, JP5, JP8*), Kerosene
Command & Control	◯ Manual ◯ Programmed / Automatic ☐ SatCom enabled Note: In view of regulatory considerations, "Programmed / Automatic" includes autonomous.
Control Range	◯ <0,2 km ◯ 2 km ◯ 25 km ◯ 50 km ◯ 75 km ◯ 150 km ◯ >150 km
Flight Endurance	☐ minutes ☐ km **Note**: *Please fill in both boxes*
Max. Cruise Speed	☐ km/h
Max.Take-Off Weight	☐ kg
Principal Mission Payload	◯ Imaging ◯ Sensing & Measurement ◯ Other (*Non-military*) *(See page 4 for explanation of terms & examples)* ◯ Other (*Military*)
Payload Capacity	☐ kg Total weight of the payload [(*Imaging, Sensing & Measuremernt, Other*), *cargo, pilot, passengers & luggage*], that can be accommodated.
	Principal payload is aircraft specific & factory-integrated ◯ Yes ◯ No
	☐ Quantity of passengers that can be transported (*in addition to pilot*)

Submission Date

Submitter ◯ Mr ◯ Ms First Name Family Name

Email Tel.

Comment

UAS USAGE

Aerial Work

Commercial & Non-Commercial

(Including Corporate Operations: Operations conducted by a corporate entity for its own purposes)

An aircraft operation in which an aircraft is used for specialized (flight) services such as agriculture, construction, photography, surveying, observation & patrol, search & rescue, aerial advertisement, etc. (Chicago Convention, Annex 6 Part 1, Chapter 1.H9)

Flight Training / Instruction

(Commercial & Corporate operations)

- **Duo** *(student instruction by licensed pilot)*
- **Solo** *(unaided student flight)*
- **Check** *(qualification verification of pilot license holder)*

Other Miscellaneous

(Commercial & Corporate operations)

- **Test / Experimental**
- **Ferry / Positioning**
- **Demonstration**
- **Air Show / Race**

Cargo Transport

Commercial & Non-Commercial (incl. Corporate)

Scheduled & Non-scheduled

- **Internal Loads** *(inside the airframe)*
- **External Loads** *(outside the airframe)*

Passenger Transport

Commercial & Non-Commercial (incl. Corporate)

Scheduled & Non-scheduled

Governmental & Military Flight Operations

Governmental Flight Operations

Security-related

- **Border Guards**
- **Coast Guard**
- **Customs**
- **Police** *(municipal, national, federal)*

Safety-related

- **Civil Protection**
- **Fire-fighters**
- **Gvmt executive agency**

Military Flight Operations

- **Air Force**
- **Army**
- **Gendarmerie**
- **Navy**

Regional & International Organisations

European Commission Agencies, e.g.:
- **Border & Coast Guard Agency (FRONTEX)**
- **European Maritime Safety Agency (EMSA)**

International Criminal Court (ICC)
Interpol
United Nations (UN) Agencies

UAS & RPAS - Definitions

The following terms & explanations, indicated in ICAO Circular 326, are used in this document.

Unmanned aircraft system (UAS) is an aircraft and its associated elements which is operated with no pilot on board.

Unmanned aircraft (UA) is any aircraft intended to be flown without a pilot on board. They can be remotely and fully controlled from another place (ground, another aircraft, space) or pre-programmed to conduct its flight without intervention (automatic).

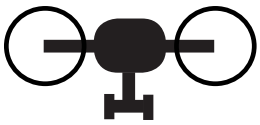
Remotely-piloted aircraft system (RPAS) is a set of configurable elements consisting of a remotely piloted aircraft (RPA), its associated remote pilot station(s), the required command and control links and any other system elements as may be required at any point during flight operation (e.g. launch & recovery systems). (Note: RPAS is a subcategory of UAS).

Remotely piloted aircraft (RPA) is an aircraft where the flying pilot is not on board the aircraft. A RPA is piloted from a Remote Pilot Station and is expected to be integrated into the air traffic management system equally as manned aircraft, [and] real-time piloting control is provided by a licensed Remote Pilot.

Note: *The abbreviations UAS, RPAS, UA and RPA are invariable (singular & plural are identical).*

VTOL-Capable UAS - Rotorcraft Classes

Bicopter



Fuselage or pod with 2 arms, each equipped with 1 rotor - No tail rotor.

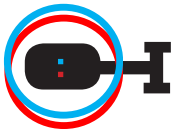
Coaxial Motor / Rotor Configuration

A set of 2 motors & 2 rotors on the same axis with the rotors rotating in opposite directions.

Birotor Coaxial

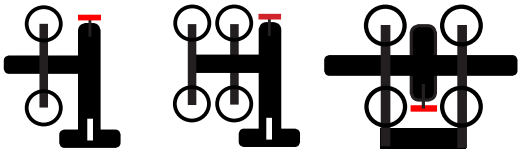
Fuselage or pod with 2 super-imposed coaxial rotors - No tail rotor.

Birotor Intermeshing



Fuselage or pod with 2 rotors side-by-side - No tail rotor.

Fixed Wing Rotary

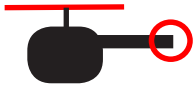


Fixed wing aircraft (puller or pusher configuration) with lift rotors (non-coaxial or coaxial) (tilting or non-tilting) positioned on wings, tail or wing booms, or in fuselage & tail.

Gyroplane

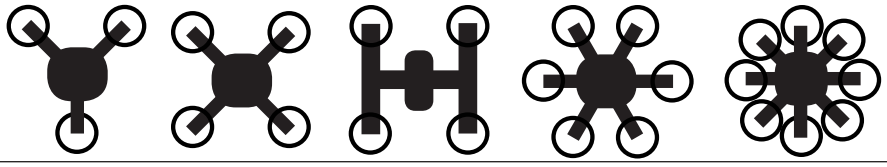
Fuselage or pod with unpowered lift rotor and forward propulsion rotor on aft of fuselage, on side arms or on (stub) wings - No tail rotor.

Monocopter



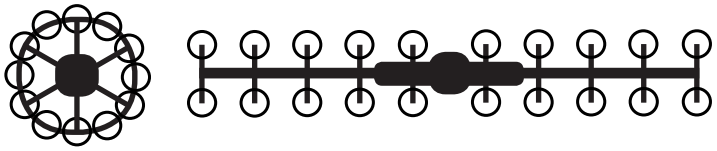
Fuselage or pod with one powered lift & one powered tail rotor. May have forward propulsion rotors on side arms or (stub) wings.

Multicopter



Pod with >2 & <10 lift rotors (non-coaxial or coaxial) positioned on arms or rotor booms.

Pluricopter



Pod with 10 or more lift rotors (non-coaxial or coaxial) positioned on wing booms, tail booms, arms, rotor booms or supports.

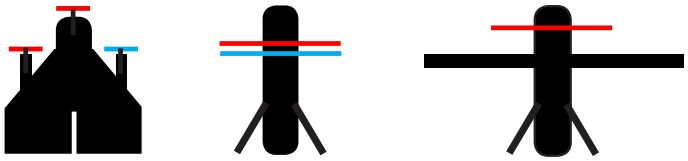
Tandem Ducted Rotor

Fuselage or pod with 2 integrated ducted rotors (non-coaxial or coaxial). May have 1 or more forward propulsion rotor. No tail rotor.

Tandem Rotor

A type of VTOL aircraft with 2 main rotor systems. The rear rotor is usually mounted in a higher position than the front rotor, in order to avoid the blades from colliding. No tail rotor.

Tailsitter



A type of VTOL aircraft that takes off and lands on its tail, and, after take-off, tilts horizontally for forward flight.

UAS Payloads

Payloads are elements installed on an unmanned aircraft (UA) and are **not necessary for flight**, but are carried for the purpose of achieving specific mission objectives.

3 Payload categories:
- **Imaging**
- **Sensing & Measurement**
- **Other**: - **Non-military**
  - **Military**

Imaging Payloads

Elements on an unmanned aircraft (UA) that permit the capture of imagery *(possibly with simultaneous tracking)* and the recording or transmission of such data. Imaging payloads (gimballed & non-gimballed) include, amongst others:

Corona Effect Imager
Digital Photo Camera
Digital Video Camera
Electric-Optical (EO)
Film Camera
Flash LiDAR
Forward-looking infra-red (FLIR)
Hyperspectral
Infrared (IR)
Light Detection and Ranging (LiDAR)
Laser Scanner
Light Intensification
Line Scanner
Multi-Layer Laser
Multispectral - Optical
Multispectral - Thermal
Near Infra-red
Radar
Radar - Ground Penetrating
Radar - Maritime
Solid State Photon Counter
Synthetic Aperture Radar (SAR)

Sensing & Measurement Payloads

Elements on an unmanned aircraft (UA) that permit the capture of non-imagery data and the recording or transmission of such data. They include, amongst others:

Aerial pollution measurement device
Anemometer
Atmospheric measurement device
Atmospheric pollutant detector
Bathymetric measurement device
Camera mounts & gimbals
Data recorder
Electricmagnetic measurement device
Emergency beacon detector
Frequency measurement device
Gas (*leak*) detector
Geomagnetic measurement device
Gimbal mount
Hydrographic measurement device
Interferometry
Laser pointer / range finder
Location (*static & moving*) definition:
- Flora & Fauna
- Object
- Person
- Phenomena

Measurement probe / feeler
Metal detector
Meteorological measurement device
Microwave radiometer
Mineral detector
Moving target indicator
Odour detector
Particle measurement device
Phenomena analysis
Radiation meter
Spectrometer
Radio frequency spectrum analyser
Ultrasonic analysis device
Ultraviolet sensor

Other Payloads

Elements on a unmanned aircraft (UA) that permit to achieve specific non-imagery and non-sensing mission objectives. They are split into 2 categories and include:

Non-Military

Airborne data recorder
Cable (lead) stringing grip
Cargo (net) sling & hook
Cargo storage container / rack *(internal & external)*
Communication relay *(incl. antennae)*
Dispensing system *(solids)*:
- Bulk *(e.g. fertilizer, granulates, larvae capsules, pollination agents, seeds)*
- Other *(e.g. seedlings)*

Fire extinguishing system *(incl. discharge spout)*
Flame thrower *(hornet & wasp nest eradication)*
Forestry trimming and/or harvesting tool
High pressure liquid dispenser *(roof / wall cleaning)*
Hoisting & lowering winch *(cargo)*
Life buoy carriage & delivery device
Lighting *(floodlight, spotlight, strobe)*
Loudspeaker / megaphone
Manipulating / robotic arm
Payload-imposed antennae
Perching grip (*on high power transmission cable*)
Publicity banners *(UAS-towed)* & tow hook
Publicity / announcement screen
Tagg fixation system *(e.g. bird disruptor on power cable)*
Spraying system *(liquids for various purposes: pesticides, fertilizer, insecticides, cleaning / painting of structures)*
Suction extractor *(hornet & wasp nest control)*
Water bombing system *(large volume liquid release)*
Water sampling device

Military

Airborne data recorder
Artillery / gunshot detector & localiser
Cargo (*net*) sling & hook
Communications intelligence (COMINT)
Communication relay
Electronic intelligence (ELINT)
Electronic warfare (EW)
Intelligence, Surveillance, Reconnaissance (ISR) (*see "Imaging Payloads"*)
Laser designator
Lethal *(airframe with integrated warhead)*
Mine detector
Missiles & rockets *(incl. carriage / launch pylons)*
Nuclear, radiological, biological & chemical (NRBC) detector
Ordnance delivery *(e.g. bombs, grenades, mortars)*
Pod *(wing / fuselage-mounted - various purposes)*
Signal intelligence (SIGINT)
Target search & acquisition (TA)
UA neutralisation / interception system *(net launcher & net)*
Weapon *(lethal, non-lethal)* & mount