

Through this document you can find different terms related to Remote Piloted Aircraft Systems and Aviation terms used throughout AEROCEPTOR:

## Glossary of Terms

Term	Definition
Airborne Based Detect and Avoid	This terminology is used when a RPAS carries a device able to help the remote pilot to perform its sense and avoid duty <sup>1</sup> .
Aircraft	Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface. <ul style="list-style-type: none"> <li>• A RPAS, as a whole (RPAS or UA, RPS and C2 link), is an aircraft<sup>2</sup>.</li> <li>• The RPAS or UA is only the flight segment of the UAS.</li> <li>• The RPAS would be the only component to get a certificate of airworthiness.</li> </ul>
Air Traffic Controller (ATCO)	The person or persons in charge of providing the services comprised within the air traffic control unit as part of the air traffic services unit.
Air Traffic Services Unit	A generic term meaning variously, air traffic control unit (area control centre, approach control unit or aerodrome control tower), flight information centre (a unit established to provide flight information service and alerting service) or air traffic services reporting office (a unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure).
Beyond Line of Sight	An operation in which the remote crew does not maintain direct visual/radio contact with the aircraft to manage its flight and meet separation and collision avoidance responsibilities but uses a satellite, antennae or other aircraft (incl. other RPAS) as relay.
Civil aircraft	An aircraft is considered as a civil aircraft if: <ul style="list-style-type: none"> <li>• The aircraft is used for "commercial purposes"</li> <li>• Or the aircraft is used to carry a person other than a crew member or a "qualified non-crew member"</li> <li>• Or the aircraft is not used exclusively for the government.</li> </ul>
Commercial Passenger Aircraft	Aircraft which civil operations comprise those involving operating aircraft for hire to transport passengers <sup>3</sup> . General aviation aircraft can be commercial passenger aircraft but the opposite is not true. Opposite to the general aviation aircraft, in the context of AEROCEPTOR, commercial passenger aircraft are assumed to be sharing the same airspace as RPAS in controlled airspace.
Command and control link	The data link between the remotely-piloted aircraft and the remote pilot station for the purposes of managing the flight <sup>4</sup> .

1 There is no currently available technology for such a function. MIDCAS project, among others, is working in Europe to achieve such a goal.

2 These statements are in line with EASA current policy. However, ICAO annex2 tends to consider three separate components.

3 [http://en.wikipedia.org/wiki/Commercial\\_aviation](http://en.wikipedia.org/wiki/Commercial_aviation)

4 This definition is broad as the C2 link is made of two segments for BLOS operation, a link between the aircraft and a satellite and a link between the satellite and the remote pilot station.

Term	Definition
Controlled Airspace	Airspace type of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification. The current controlled airspace characteristics are defined by ICAO. Classes A, B, C, D, E have been set up in which various types of ATC services are provided to airspace users according to their flight regime.
Detect and avoid	The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action to comply with the applicable rules of flight.
Flight crew member	A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.
General Air Traffic	All movements of civil aircraft, as well as all movements of State aircraft (including military, customs and police aircraft) when these movements are carried out in conformity with the procedures of the ICAO.
General Aviation Aircraft	Aircraft which civil operations comprise other than scheduled air services and non-scheduled air transport operations for remuneration or hire <sup>5</sup> . General aviation aircraft in the context of AEROCEPTOR are assumed to be sharing the same airspace as RPAS in non-controlled airspace.
Lost link	The loss of command and control link contact with the remotely-piloted aircraft such that the remote pilot can no longer manage the aircraft's flight <sup>6</sup> .
Ground Based Detect and Avoid	This terminology is used when a RPAS employs ground based devices able to help the remote pilot to perform its sense and avoid duty.
Operational Air Traffic	All flights, which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities.
Operational control	The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of safety of the aircraft and the regularity and efficiency of the flight.
Operator	A person, organization or enterprise engaged in or offering to engage in an aircraft operation.
Payload	Typically it is the part of a vehicle's load from which revenue is derived; passengers and cargo. In a RPA, it stands for the equipment performing the mission: i.e. on-board cameras or radars for surveillance, communications transponders for relays, etc.
Pilot (to)	To manipulate the flight controls of an aircraft during flight time.
Pilot-in-command	The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight. The RPAS pilot-in-command sits in the RPS and can at any time pilot the RPA.

<sup>5</sup> [http://en.wikipedia.org/wiki/General\\_aviation](http://en.wikipedia.org/wiki/General_aviation)

<sup>6</sup> In the current ATM environment, the loss of radio link between ATC and the pilot is considered. It has to be underlined that the UAS C2 loss corresponds to a situation where the pilot would lose its capability to manipulate the flight control – it has no equivalent in conventional manned aircraft.

Term	Definition
Point of Interest	Land or maritime vehicle which during the commitment of an illegal activity or after tries to escape from the law enforcement officers. The main purpose of AEROCEPTOR is to detain it. It is normally known as “non-cooperative vehicle”
Public aircraft	For Europe, see “state aircraft”.
Radio line-of-sight	A direct electronic point-to-point contact between a transmitter and a receiver.
Remote crew member	A licensed crew member charged with duties essential to the operation of a remotely-piloted aircraft, during flight time.
Remote pilot <sup>7</sup>	The person who manipulates the flight controls of a remotely-piloted aircraft during flight time.
Remote pilot station	The station at which the remote pilot manages the flight of an unmanned aircraft.
Remotely-piloted	Control of an aircraft from a pilot station which is not on board the aircraft.
Remotely-piloted aircraft	An aircraft where the flying pilot is not on board the aircraft. This is a subcategory of unmanned aircraft. Unmanned aircraft (UA) can be either Remotely-piloted aircraft (RPA) or “autonomous” aircraft.
Remotely-piloted aircraft system	A set of configurable elements consisting of a remotely-piloted aircraft, 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. RPAS are a subset of UAS in which the pilot is permanently able to take over the control of the RPA or UA.
RPA observer	A remote crew member who, by visual observation of the remotely-piloted aircraft, assists the remote pilot in the safe conduct of the flight.
See and avoid	See “detect and avoid”.
Segregated airspace	Airspace of specified dimensions allocated for exclusive use to a specific user(s).
Sense and avoid	See “detect and avoid”.
State aircraft	Aircraft used in military, customs and police services – see also Public aircraft <sup>8</sup> .
Third Party Vehicle	Land, air or maritime vehicle which is in the vicinity of the location where the RPA and the point of interests are and that does not participate in the mission.

<sup>7</sup> pilot-in-command, remote pilot and flying pilot are used for UAS. As for manned aircraft we can have two qualified “remote pilots” in a RPS but only one is the PIC.

<sup>8</sup> FAA says ‘public’; Art. 3 Chicago Convention speaks about ‘State Aircraft’, but they are the same. However neither ICAO nor EASA have exactly defined which one are the State aircraft.

According to the definition, an aircraft is a state aircraft if it performs a state operation

The regulation (ED) n° 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC does not apply to these aircraft.

Both Art. 3 of Chicago Convention and Art. 1 of EASA BR, require ‘due regard’. SES requires also that state aircraft flying GAT, follow the civil ATM rules (e.g. detect and avoid) but it is their choice to fly GAT or OAT; and even when flying GAT, State aircraft are not obliged by international or community law to have a civil airworthiness certificate, or pilots holding civil licences.

Term	Definition
Uncontrolled Airspace	Airspace where an Air Traffic Control (ATC) service is not deemed necessary or cannot be provided for practical reasons. In that case, the separation task relies solely on the pilot. ATC does not exercise any executive authority in uncontrolled airspace, but may provide basic information services to aircraft in radio contact. The current uncontrolled airspace characteristics are defined by ICAO. Two classes have been set up (F and G).
Unmanned aircraft	An aircraft which is intended to operate with no pilot on board.
Unmanned aerial system	An aircraft and its associated elements which are operated with no pilot on board <sup>9</sup> . UAS is an umbrella term, it includes RPAS.
Visual line-of-sight operation	An operation in which the remote crew maintains direct visual contact with the aircraft to manage its flight and meet separation and collision avoidance responsibilities.

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<sup>9</sup> The US military authorities use the acronym UAS for "unmanned aerial system". The two interpretations of "UAS" are a distinction without a practical difference. "Unmanned Aerial Systems" is believed to be used as a counterpart to "unmanned naval systems" and "unmanned ground systems," which similarly do not refer to the vehicles or ships themselves, but the medium in which they operate.