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Unmanned aircraft systems —

Part 2: UAS components

Aéronefs sans pilote —

Partie 2: Composants des UAS

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 16, *Unmanned aircraft systems*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The use of unmanned aircraft systems (UAS) or drones, for commercial and recreational purposes has grown in popularity over the last several years. There are many application markets growing rapidly, such as motion pictures and film, security, inspections as well as many uses by organizations to increase public safety. It has been a challenge for operators to use these aircraft due to the lack of regulation and lack of common manufacturing methods a regulator would recognize as safe.

The purpose of this document is to shape a general architecture for the quality and safety of the manufacture of UAS. By addressing the UAS components separately, the document enables manufacturers to focus on the applicable design requirements in order to better promote international trade and basis for future development while enhancing the safety of UAS operations.

Unmanned aircraft systems —

Part 2:
UAS components

1 Scope

This document specifies requirements for ensuring the quality and safety of the design and manufacture of unmanned aircraft systems (UAS) that include unmanned aircraft (UA), remote pilot stations (RPS), datalinks, payloads, and associated support equipment.

This document includes information regarding the unmanned aircraft, any associated remote pilot station (RPS)(s), the command and control links (C2 Link), any other required data links (e.g. payload, traffic management information, vehicle identification) and any other system elements as can be required. This document does not cover passenger carrying UAS or technical requirements for the design and manufacturing for UAS components.

This document does not include equipment considerations unique to compliance with UA traffic management systems.

The document is applicable to the reasonable expected use of a UAS.

This document is applicable:

a) to UAS designed for use where a State aviation authority has determined a Certificate of Airworthiness (C of A) is not required;

b) where a C of A is required, to complement technical standards published by the aviation authority for the purposes of building the certification basis; or

c) as an alternative means of compliance if acceptable to the aviation authority.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6858, *Aircraft — Ground support electrical supplies — General requirements*

IEC 62133 (all parts), *Secondary cells and batteries containing alkaline or other non-acid electrolytes — Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications*

IEC 62368-1, *Audio/video, information and communication technology equipment — Part 1: Safety requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp