



BSI Standards Publication

UAS traffic management (UTM)

Part 12: Requirements for UTM service providers

National foreword

This British Standard is the UK implementation of [ISO 23629-12:2022](#).

The UK participation in its preparation was entrusted to Technical Committee ACE/20/4, UAS - Traffic Management.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Partie 12: Exigences pour les fournisseurs de services UTM



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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 (UAS)*.

A list of all published or planned parts in the ISO 23629 series can be found on the ISO website.

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

0.1 Background

The functional structure of the UAS traffic management (UTM) services, including respective role of possible services, is standardized in ISO/DIS 23629-5[1].

Conversely, this document focuses on the responsibilities of the UTM service providers (UTM SPs) for the safety, security and compliance monitoring of the provided services, as well as protection of related data and information. A UTM SP contributes to the safety, security and compliance of operations of unmanned aircraft systems (UAS), supporting the fulfilment of the responsibilities of the UAS operator. Operational procedures and requirements for the UAS operator are specified in [ISO 21384-3](#)[2].

Although UTM services are established considering the needs of UAS operators, these services also support operations of properly equipped manned air traffic in the respective designated operational coverage (DOC).

One organization may provide several UTM services; and each may have a specific DOC. The DOC may be established by the regulatory authorities, depending on applicable legislation.

0.2 Purpose of the UTM SP integrated management system

The adoption of a management system according to [ISO 9001](#)[3] by the UTM SP can enable an organization to provide high quality services. This document provides more specific guidance for safe, secure and efficient air traffic management and air navigation services within the respective DOC.

The purpose of the organisation of the UTM SP is to provide a framework for ensuring safety and security controlling related risks and opportunities. The aim and intended outcomes of the UTM services are to prevent aviation accidents and incidents through the provision of UTM digital information planned in a safe, secure and efficient way conforming to planned ISO 23629-3, while also ensuring sufficient quality and protection of data and information; consequently, it is extremely important for the organization of the UTM SP to identify hazards and minimize safety, security and privacy risks by taking effective prescriptive, reactive, proactive, predictive and inter-organizational measures.

Integration of several functions in the organisation enables reducing the required resources otherwise necessary to implement separate quality, compliance monitoring, safety, security and privacy systems.

An efficient organisation can also assist an UTM SP to fulfil applicable regulatory requirements.

Demonstration of successful implementation of this document can be used by an organization to:

- assure continuous improvement of its safety, security and privacy performance;
- give assurance to UAS operators and other affected stakeholders that an effective organisation is in place;
- give evidence to insurance companies;
- provide an acceptable means of compliance (AMC) with regulatory requirements, when accepted by the competent authority.

Adoption of this document by an UTM SP, however, will not in itself guarantee prevention of aviation accidents and incidents, in which performance of the UTM services may be one of the causal factors.

The level of detail, the complexity, the extent of documented information and the resources needed to ensure the success of an UTM SP organisation depends on several factors, such as:

- the organization's context (e.g. number of staff, size, geographical scope, culture, legal and regulatory requirements);
- the scope of the provided UTM services;

- the nature, safety criticality and scope of the provided UTM services and the related safety, security and privacy risks.

0.3 Content of this document

This document contains requirements that can be used by an organization to provide safe, secure and efficient UTM services.

This document includes requirements on qualifications and training of personnel, UTM service provision, maintenance and competence of maintenance staff as well as occurrence reporting, safety, security and privacy.

Technical requirements for verification, and validation, of UTM constituents, systems and services (transaction time, availability, continuity, integrity, security, etc.) to comply with safety, security and quality requirements for UTM services are specified in planned ISO 23629-2 or any suitable standard published by an authoritative standard development organisation (SDO).

This document does not include requirements specific to other topics, such as those for quality, occupational health and safety (OH&S), social responsibility, environmental or financial management or use of the electro-magnetic spectrum, though its elements can be aligned or integrated in the organisation of the UTM SP.

An organization that wishes to demonstrate conformity to this document can do so by:

- making a self-determination and self-declaration;
- seeking confirmation of its conformity by parties having an interest in the organization, such as UAS operators using the services provided by the UTM SP;
- seeking confirmation of its self-declaration by an independent, accredited and competent third-party external to the organization; or
- seeking certification of its organisation by an aviation authority, when required by applicable regulations.

NOTE The International Accreditation Forum (IAF) is the world association of conformity assessment accreditation bodies and other bodies interested in conformity assessment in the fields of management systems, products, services, personnel and other similar programmes of conformity assessment. Its primary function is to develop a single worldwide program of conformity assessment which reduces risk for business and its customers by assuring them that accredited certificates can be relied upon. Accreditation assures users of the competence and impartiality of the body accredited. These bodies are referred under different terms in different states, like, e.g. “designees”, “notified bodies”, “qualified entities” or else.

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UAS traffic management (UTM) —

Part 12:

Requirements for UTM service providers

1 Scope

This document includes compliance monitoring, safety, security, privacy and other organisational requirements for providers in the context of UAS traffic management services.

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 21384-4](#), *Unmanned aircraft systems — Part 4: Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in [ISO 21384-4](#) and the following 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>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

constituent

tangible objects such as hardware and intangible objects such as software upon which the provision of *UTM services* (3.9) depends

Note 1 to entry: The definition is adapted from Reference [4].

3.2

designated operational coverage

DOC

geographic volume of airspace within which an *UTM service* (3.9) is available in compliance with designation by competent authorities if applicable, with sufficient performance including availability, continuity, integrity and timeliness and, if applicable, with sufficient radio signal quality and protection from other users of the electromagnetic spectrum

Note 1 to entry: The definition is adapted from Reference [5].

3.3

in-time system-wide safety assurance

ISSA

safety net utilising system-wide information to provide alerting and to trigger mitigation strategies in time to address emerging risks

Note 1 to entry: It is part of proactive safety management.