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ISO 16126

**Space systems — Survivability of
unmanned spacecraft against space
debris and meteoroid impacts
for the purpose of space debris
mitigation**

**Second edition
2024-12**



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This document was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

This second edition cancels and replaces the first edition (ISO 16126:2014), which has been technically revised.

The main changes are as follows:

- the provision of new impact risk analysis requirements and procedures aimed specifically at satisfying the high-level impact risk requirements defined in the top-level International Standard on space debris mitigation, ISO 24113;
- the provision of new informative annexes to assist in the implementation of the impact risk analysis procedures.

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.

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The purpose of this document is to help satisfy two of the high-level requirements defined in the top-level International Standard on space debris mitigation, ISO 24113. Specifically, this document aims to maximise the survival of critical equipment required to perform post-mission disposal of an unmanned spacecraft, and to limit the possibility of an impact-induced break-up of the spacecraft. The analysis procedures in this document are consistent with those defined in References [1] and [2].

In principle, this document can also be used to assess the impact survivability of an unmanned spacecraft in support of other mission objectives. However, careful adaptation of the document can be necessary if put to such use.

This document is part of a set of International Standards that collectively aim to reduce the growth of space debris by ensuring that spacecraft are designed, operated, and disposed of in a manner that prevents them from generating space debris throughout their orbital lifetime. All of the primary space debris mitigation requirements are contained in ISO 24113. The remaining International Standards, of which this is one, provide supporting methods and procedures to enable compliance with the primary requirements.