Process management for avionics – Counterfeit prevention – Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic components

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PROCESS MANAGEMENT FOR AVIONICS – COUNTERFEIT PREVENTION –

Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic components

FOREWORD

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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC/TS 62668-1, which is a technical specification, has been prepared by IEC technical committee 107: Process management for avionics.
This second edition cancels and replaces the first edition, published in 2012. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Update of “fraudulent component” definition, addition of “recycled component” and “suspect component” definitions, and updates of the concerned clauses accordingly.

b) Addition of counterfeit awareness training as a requirement.

c) Revision to update all references and web links in the annexes.

The text of this technical specification is based on the following documents:

<table>
<thead>
<tr>
<th>Enquiry draft</th>
<th>Report on voting</th>
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<tbody>
<tr>
<td>107/226/DTS</td>
<td>107/235/RVC</td>
</tr>
</tbody>
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Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 62668 series, published under the general title Process management for avionics – Counterfeit prevention, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- transformed into an international standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.
1 Scope

This part of IEC 62668, which is a Technical Specification, defines requirements for avoiding the use of counterfeit, recycled and fraudulent components used in the aerospace, defence and high performance (ADHP) industries. It also defines requirements for ADHP industries to maintain their intellectual property (IP) for all of their products and services. The risks associated with purchasing components outside of franchised distributor networks are considered in IEC/TS 62668-2. Although developed for the avionics industry, this specification may be applied by other high performance and high reliability industries at their discretion.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.


IEC/TS 62668-2, Process management for avionics – Counterfeit prevention – Part 2: Managing electronic components from non-franchised sources

ISO 9001, Quality management systems – Requirements

AS/EN/JISQ 9100, Quality Management Systems – Requirements for Aviation, Space and Defense Organizations


AS/EN/JISQ 9120, Quality Management Systems – Requirements for Aviation, Space and Defense Distributors

GEIA-STD-0016, Standard for Preparing a DMSMS Management Plan

IDEA-STD-1010B, Acceptability of electronic components distributed in the open market

SAE AS5553A Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition

SAE AS6081 Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation and Disposition – Distributors Verification Criteria
3 Terms, definitions and abbreviations

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

3.1.1 aftermarket source
reseller which may or may not be under contract with the original component manufacturer (OCM), or is sometimes a component "re-manufacturer", under contract with the OCM.

Note 1 to entry: The reseller accumulates inventories of encapsulated or non-encapsulated (wafer) components whose end of life date has been published by the OCM. These components are then resold at a profit to fill a need within the market for components that have become obsolete.

3.1.2 broker
individual or corporate organization that serves as an intermediary between buyer and seller.

Note 1 to entry: In the electronic component sector a broker specifically seeks to supply obsolete or hard to find components in order to turn a profit. To do so it may accumulate an inventory of components considered to be of strategic value or may rely on inventories accumulated by others. The broker operates within a worldwide component exchange network.

3.1.3 COTS
commercial off-the-shelf products one or more pieces, mechanical or electrical, developed for multiple commercial consumers, whose design and/or configuration is controlled by the supplier's specification or industry standard.

Note 1 to entry: They can include electronic components, subassemblies, or top level assemblies. COTS subassemblies include circuit card assemblies, power supplies, hard drives, and memory modules. Top-level COTS assemblies include a fully integrated rack of equipment such as raid arrays, file servers to individual switches, routers, personal computers, or similar equipment.

3.1.4 counterfeit, verb
action of simulating, reproducing or modifying a material good or its packaging without authorization.

Note 1 to entry: It is the practice of producing products which are imitations or are fake goods or services. This activity infringes the intellectual property rights of the original manufacturer and is an illegal act. Counterfeiting generally relates to willful trademark infringement.

3.1.5 counterfeit component
material good imitating or copying an authentic material good which may be covered by the protection of one or more registered or confidential intellectual property rights.

Note 1 to entry: A counterfeit component is one whose identity or pedigree has been altered or misrepresented by its supplier. Identity = original manufacturer, part number, date code, lot number, testing, inspection, documentation or warranty etc. Pedigree = origin, ownership history, storage, handling, physical condition, previous use etc.

1 Although published this is being revised for material component only.