



BSI Standards Publication

Process management for avionics — Counterfeit prevention

Part 2: Managing electronic components
from non-franchised sources

National foreword

This Published Document is the UK implementation of IEC/TS 62668-2:2014.

The UK participation in its preparation was entrusted to Technical Committee GEL/107, Process management for avionics.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014.
Published by BSI Standards Limited 2014

ISBN 978 0 580 83110 2
ICS 03.100.50; 31.020; 49.060

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 1 July 2014.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------



TECHNICAL SPECIFICATION



**Process management for avionics – Counterfeit prevention –
Part 2: Managing electronic components from non-franchised sources**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

W

ICS 03.100.50; 31.020; 49.060

ISBN 978-2-8322-1680-4

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD 4

1 Scope 6

2 Normative references 6

3 Terms, definitions and abbreviations 6

 3.1 Terms and definitions 6

 3.2 Abbreviations 11

4 Technical requirement 11

 4.1 General 11

 4.2 Overview 12

 4.3 Risks associated with purchasing from non-franchised distributors 13

 4.3.1 General 13

 4.3.2 Risk origin 13

 4.3.3 Quality risks 13

 4.3.4 Industrial risks 14

 4.3.5 Reliability risks 14

 4.3.6 Financial risks 14

 4.3.7 Legal risk 15

 4.4 Reasons to initialize the derogation process 15

 4.4.1 General 15

 4.4.2 Obsolescence notice failure 15

 4.4.3 Allocation 15

 4.4.4 Insufficient end-of-life inventory 15

 4.4.5 Late orders 15

 4.4.6 Minimum order quantity 15

 4.4.7 Technical requirement 16

 4.5 Derogation process 16

 4.5.1 Notification to the OEM 16

 4.5.2 Analysis of alternative solutions 18

 4.5.3 List of approved non-franchised distributors 19

 4.5.4 Non-franchised distributor consultation 19

 4.5.5 Risk analysis 20

 4.5.6 Non-franchised distributor order authorization 23

 4.5.7 Order processing 23

 4.5.8 Incoming processing 23

 4.5.9 Records 27

 4.5.10 Processing during storage and manufacturing 27

Annex A (informative) Flowchart of IEC TS 62668-1 requirements 28

Annex B (informative) Example of detailed tests list, linked with procurement risks levels 30

Annex C (informative) iNEMI counterfeit calculator tools 35

Bibliography 36

Figure 1 – Suspect components perimeter 12

Figure 2 – Derogation process when supplying from non-franchised distribution 17

Figure 3 – Potential avionics supply chain scenarios 18

Table 1 – Typical procurement risk scenarios and guidance for procurement risk assessment 20

Table 2 – Typical testing 25

Table B.1 – Example of detailed revalidation testing of suspect stock 30

Currently in preview, click buy full vers.

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PROCESS MANAGEMENT FOR AVIONICS –
COUNTERFEIT PREVENTION –**

**Part 2: Managing electronic components
from non-franchised sources**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical specification when:

- 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 62668-2, which is a technical specification, has been prepared by IEC technical committee 107: Process management for avionics.

IEC/TS 62668-2 adapts and modifies the GIFAS 5052/2008 document that has served as a basis for the elaboration of this technical specification.

This technical specification is to be used in conjunction with IEC/TS 62239-1 and IEC/TS 62688-1.

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

Enquiry draft	Report on voting
107/228/DTS	107/236/RVC

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.

PROCESS MANAGEMENT FOR AVIONICS – COUNTERFEIT PREVENTION –

Part 2: Managing electronic components from non-franchised sources

1 Scope

The avionics industry has a responsibility to ensure that all flight equipment produced has a predicted product life which correlates to the predicted repair and service life to ensure the public is not endangered. Typically an OEM calculates a mean time between failure (MTBF) and possibly a mean time to failure (MTTF) prediction. These calculations assume all components are new, or considered as “unused”, at the point of introduction into flight use and that no useful component life and/or any “unsafe” component conditions have been used.

This part of IEC 62668, which is a technical specification, defines requirements for avoiding the use of counterfeit, recycled and fraudulent components when these components are purchased outside of franchised distributor networks for use in the aerospace, defence and high performance (ADHP) industries. This practice is used, as derogation, only when there are no reasonable or practical alternatives.

Although developed for the ADHP industry, this document may be used 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 62239-1, *Process management for avionics – Management plan – Part 1: Preparation and maintenance of an electronic components management plan*

IEC TS 62668-1:2014, *Process management for avionics – Counterfeit prevention – Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic components*

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*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

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