

Counterfeit Prevention, Detection and Avoidance Standards Gap Analysis for Hardware Products

Standard	Scope	DoD Adopted	USER					Product Traceability	Risk Mitigation	Procurement	Verification Practices	Containment / Detection	Reporting	Obsolescence Management	Comments
			SI	OEM	CD	OC	M								
International Organization for Standardization (ISO) ...															
ISO 9001 Quality Management Systems - Requirements	Parts, Materials, Assemblies and Equipment	17-Apr-01	X	X	X	X									
ISO/IEC 20243:2015 - Information Technology — Open Trusted Technology Provider™ Standard (OTTPS) — Mitigating maliciously tainted and counterfeit products	COTS ICT Products		X	X										Includes very high level, nonspecific "counterfeit mitigation" practices.	
SAE International ...															
AS9100 Quality Systems – Aerospace – Model for Quality Assurance in Design, Development, Production, Installation and Servicing	Parts, Materials, Assemblies and Equipment	1-Mar-02	X	X	X	X	X	X	X	X	X	X	X	Revision D incorporates includes a section on "Prevention of Counterfeit Parts"	
AS9120 Quality Management Systems – Aerospace Requirements for Stockist Distributors	Parts, Materials and Assemblies				X									General requirement to "prevent the purchase of counterfeit/suspect unapproved products." No criteria.	
AS9003 Inspection and Test Quality System	Electronic Parts		X	X	X	X								Does not cover counterfeit prevention, detection and avoidance elements	
AS5553 Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition	Electronic Parts	22-Aug-09	X	X			X	X	X	X	X	X	X	Released April 2009 Revised January 2013 Comprehensive coverage for all elements	
AS6174 Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel	Parts and Materials	17-Jun-13	X	X			X	X	X	X	X	X	X	Released May 2012; Revised July 2014	
AS6174/1 Compliance Verification Matrix (VM) Slash Sheet for AS6174A, Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel	Parts and Materials	1-Apr-17	X	X			X	X	X	X	X	X	X	Created to assist users in assessing compliance to AS6174	
AS6496 - Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition - Authorized/Franchised Distribution	Electronic Parts	29-Mar-17			X		X	X		X	X			Released August 2014.	
AS6081 Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Distributors	Electronic Parts	10-Jun-13			X		X	X	X	X	X			Released November 2012	
ARP6178 Fraudulent/Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors	Electronic Parts				X		X	X	X	X	X			Released December 2011	

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AS6462 AS5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition Verification Criteria	Electronic Parts	27-May-14	X	X					X	X	X	X	X	X	X	Released November 2012	
AS6886, Counterfeit Materiel; Assuring Acquisition and Use of Authentic and Conforming Refrigerant	Refrigerant	15-Sep-15	X	X					X		X	X		X		Released June 2015	
AS6301 AS6081, Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Distributors Verification Criteria	Electronic Parts		X	X	X				X		X	X	X	X		Released January 2014	
AS6171 Test Methods Standard; Counterfeit Electronic Parts	Electronic Parts	28-Mar-17	X	X	X						X					Released October 2016	
ARP6328 Guideline for Development of Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition Systems	Electronic Parts		X	X					X	X	X	X	X	X	X	Released September 2016; Derived from the appendices found within AS5553A	
<i>Proposed</i> AS6174/2 Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel – Fasteners Slash Sheet	Fasteners		X	X					X	X	X	X	X	X		Work In Progress	
<i>Proposed</i> AS6174/3 Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel – Bearings Slash Sheet	Bearings		X	X					X	X	X	X	X	X		Work In Progress	
<i>Proposed</i> AS6810 Requirements for Accreditation Bodies when Accrediting Test Laboratories Performing Detection of Suspect/Counterfeit EEE Parts in Accordance with AS6171 General Requirements and the Associated Test Methods	Electronic Parts		X	X	X						X					Work In Progress	
<i>Proposed</i> AIR6860 Use of AS5553 for Implementation of Defense Federal Acquisition Regulation Supplement 252-246-7007	Electronic Parts		X	X					X	X	X	X	X	X	X	Work In Progress	
<i>Proposed</i> AIR6273 Terms and Definitions - Fraudulent/Counterfeit Electronic Parts	Electronic Parts		X	X	X	X										Work In Progress	
SAE (formerley TechAmerica, GEIA, EIA, etc)																	
SAE-TB-0003 Counterfeit Parts & Materials Risk Mitigation	Parts and materials		X	X					X	X	X	X	X	X		Released February 2009. High level guidance	

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EIA-4899 Standard for Preparing an Electronic Components Management Plan	Electronic Parts		X	X									X		
EIA-933 Standard for Preparing a COTS Assembly Management Plan	Assemblies		X	X				X	X				X	Rev A requires a "Counterfeit Electronic Parts Control Plan" for flight critical assemblies	
ANSI STD-0016 Standard for Preparing a DMSMS Management Plan	Parts, Materials and Assemblies												X	Replaces EIA-GEB1	
Federal Aviation Administration (FAA) ...															
FAA AC 00-56 Voluntary Industry Distributor Accreditation Program	Parts, Materials and Assemblies				X									Includes a very general requirement for... "A process or procedure for training purchasing and receiving personnel about the identification of counterfeit parts and suspected unapproved parts."	
Aerospace Corp ...															
AEROSPACE TOR-2014-02200 Counterfeit Parts Prevention Strategies Guide	Electronic Parts		X	X			X	X	X	X	X	X	X	Released June 2014 Comprehensive coverage for all elements	
JEDEC ...															
JESD31 General Requirements for Distributors of Commercial and Military Semiconductor Devices	Semiconductor Components	22-Aug-11			X		X							Traceability and C of C requirements for military semiconductor devices only.	
JESD243 Counterfeit Electronic Parts: Non-Proliferation for Manufacturers	Semiconductor Components					X	X	X	X	X				Released March 2016	
US Department of Defense ...															
MIL-STD-3018 Department of Defense Standard Practice, Parts Management	Electronic, electrical, and mechanical parts		X	X			X	X	X	X	X	X	X	"B.5.2 Counterfeit parts. The parts management plan shall address the detection, mitigation, and disposition of counterfeit parts"	
MIL-STD-11991A Department of Defense Standard Practice, General Standard for Parts, Materials, and Processes			X	X			X	X	X	X	X	X	X	"Reinstated after 26 AUGUST 2015..." See Appendix C "Prohibited PM&P"	
Semiconductor Equipment and Materials International (SEMI) ...															
SEMI T20-0710 Specification for Authentication of Semiconductors and Related Products	Semiconductor Components					X	X							Defines a mechanism authenticate a product within the supply chain.	

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SEMI T20.1-1109 Specification for Object Labeling to Authenticate Semiconductors and Related Products In An Open Market	Semiconductor Components					X	X							Subordinate to SEMI T20-0710	
SEMI T20.2-1109 Guide for Qualifications of Authentication Service Bodies for Detecting and Preventing Counterfeiting Of Semiconductors and Related Products	Semiconductor Components					X	X							Subordinate to SEMI T20-0710	
Electronic Components, Assemblies and Materials Association (ECA) ...															
EIA/ECA-CB21 Counterfeit Passive Components	Passive Components		X	X						X	X			High level guidance	
International Electrotechnical Commission (IEC) ...															
IECQ 03-7- IEC Quality Assessment System for Electronic Components (IECQ System) – Rules of Procedure – Part 7: IECQ Counterfeit Avoidance Programme (IECQ AP-CAP) – Programme Requirements	Electronic Parts		X	X			X	X	X	X	X	X		High level guidance referring to other standards for implementation.	
IEC TS 62668-1:2014 Process management for avionics - Counterfeit prevention - Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic components	Electronic Parts		X	X			X	X	X	X	X	X		High level guidance referring to other standards for implementation.	
IEC TS 62668-2:2014 Process management for avionics - Counterfeit prevention - Part 2 (purchasing components outside of franchised distribution networks)	Electronic Parts		X	X			X	X	X	X				High level guidance referring to other standards for implementation.	
Groupement des Industries Françaises Aéronautiques et Spatiales (GIFAS) ...															
GIFAS/5052/2008 Guide for managing electronic component sourcing through non-franchised distributors. Preventing fraud and counterfeiting.	Electronic Parts		X	X			X	X	X	X				High level guidance. Per 4.12.13.2, to be adopted and modified to be published as IEC/TS 62668-2	
IPC—Association Connecting Electronics Industries ...															
Proposed IPC-1782 Standard for Traceability of Critical Items Based on Risk	"... materials, parts, assemblies, processes, measurements and associated uncertainties."			X			X							Applies to all critical parts, components, and items used in the manufacture of printed wiring assemblies, as well as mechanical assemblies.	

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UK Ministry of Defence																	
Def Stand 05-135: Avoidance of Counterfeit Materiel	Materiel		X	X					X	X	X	X	X	X		Released June 2014. High level guidance	
NATO Standards																	
STANREC 4791 - Avoidance of Counterfeit Materiel in the Defence Supply Chain	Electronic Parts		X	X					X	X	X	X	X	X	X	Released Aug 2016. High level guidance referring to other standards for implementation.	
Independent Distributors of Electronics Association (IDEA) ...																	
IDEA-STD-1010 Acceptability of Electronic Components Distributed in the Open Market	Electronic Parts				X						X					Includes inspection techniques for counterfeit detection.	
Components Technology Institute, Inc ...																	
CCAP-101 Counterfeit Components Avoidance Program, Certification For	Electronic Parts				X			X		X	X						

LEGEND:

User (For use by):

- System Integrators (SI)
- Original Equipment Manufacturers (OEM)
- Component Distributors (CD)
- Original Component Manufacturers (OCM)

Counterfeit Prevention, Detection and Avoidance Elements:

- *Product Traceability*: methods to retain traceability of products from the original manufacturer to the end user.
- *Risk Mitigation*: approaches to assess and mitigate end use application risks of procuring parts from riskier sources.
- *Procurement Practices*: procurement practices developed specifically to prevent the acquisition of counterfeit parts
- *Verification / Detection*: methods applied specifically to detect counterfeits
- *Containment / Disposition*: containment and disposition guidance for use when counterfeits are discovered
- *Reporting*: reporting guidance so that both industry and US Government organizations can determine whether or not they are similarly affected
- *Component Obsolescence Management*: includes guidance to address component obsolescence and, therefore, reduce the likelihood of having to acquire parts through riskier suppliers