

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

Standard	Scope	DoD Adopted	USER				Product Traceability	Risk Mitigation	Procurement Practices	Verification / Detection	Containment / Disposition	Reporting	Obsolescence Management	Comments
			SI	OEM	CD	OCM								
<b>International Organization for Standardization (ISO) ...</b>														
ISO 9001 Quality Management Systems - Requirements	Parts, Materials, Assemblies and Equipment	17-Apr-01	X	X	X	X								Does not cover counterfeit prevention, detection and avoidance elements
<b>SAE International ...</b>														
SAE 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								Does not cover counterfeit prevention, detection and avoidance elements
SAE AS9120 Quality Management Systems – Aerospace Requirements for Stockist Distributors	Parts, Materials and Assemblies				X			X						General requirement to "prevent the purchase of counterfeit/suspect unapproved products." No criteria.
SAE AS9003 Inspection and Test Quality System	Electronic Components		X	X	X	X								Does not cover counterfeit prevention, detection and avoidance elements
SAE AS5553 Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition	Electronic Components	31-Aug-09	X	X			X	X	X	X	X	X	X	Released April 2009 Revised January 2013 Comprehensive coverage for all elements
SAE AS6174 Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel	Parts and materials	17-Jun-13	X	X			X	X	X	X	X	X		Released May 2012
SAE AS6081 Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Distributors	Electronic Components	10-Jun-13			X		X		X	X	X	X		Released November 2012
ARP6178 Fraudulent/Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors	Electronic Components				X		X		X	X	X	X		Released December 2011
AS6462 AS5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition Verification Criteria	Electronic Components		X	X			X	X	X	X	X	X	X	Released November 2012
<i>Proposed</i> AS6301 AS6081, Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Distributors Verification Criteria	Electronic Components		X	X	X		X		X	X	X	X		Work In Progress
<i>Proposed</i> AS6171 Test Methods Standard; Counterfeit Electronic Parts	Electronic Components		X	X	X				X					Work In Progress

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<i>Proposed</i> AS6496 Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Authorized/Franchised Distribution	Electronic Components				X		X							Work In Progress
<i>Proposed</i> AIR6273 Terms and Definitions - Fraudulent/Counterfeit Electronic Parts	Electronic Components		X	X	X	X								Work In Progress
<b>TechAmerica ...</b>														
TechAmerica-TB-0003 Counterfeit Parts & Materials Risk Mitigation	Parts and materials		X	X			X	X	X	X	X	X		Released February 2009. High level guidance
EIA-4899 Standard for Preparing an Electronic Components Management Plan	Electronic Components		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
TechAmerica/ANSI STD-0016 Standard for Preparing a DMSMS Management Plan	Parts, Materials and Assemblies												X	Replaces EIA-GEB1
<b>Federal Aviation Administration (FAA) ...</b>														
FAA AC 00-56 Voluntary Industry Distributor Accreditation Program	Parts, Materials and Assemblies					X								Does not cover counterfeit prevention, detection and avoidance elements other than 'Product Traceability'
<b>JEDEC ...</b>														
JESD31 General Requirements for Distributors of Commercial and Military Semiconductor Devices	Semiconductor Components	7-Sep-11			X		X							Traceability and C of C requirements for military semiconductor devices only.
<b>Semiconductor Equipment and Materials International (SEMI) ...</b>														
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.
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

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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
<b>Electronic Components, Assemblies and Materials Association (ECA) ...</b>																
EIA/ECA-CB21 Counterfeit Passive Components	Passive Components		X	X								X	X			High level guidance
<b>International Electrotechnical Commission (IEC) ...</b>																
IEC/TS 62668-1 Process management for avionics - Counterfeit prevention - Part 1: Avoiding the use of counterfeit, fraudulent and recycled electronic components	Electronic Components		X	X	X	X	X	X	X	X	X	X	X			Released May 2012. High level guidance referring to other standards for implementation.
Proposed IEC/TS 62668-2 Process management for avionics - Counterfeit prevention - Part 2 (purchasing components outside of franchised distribution networks)	Electronic Components		X	X			X	X	X	X						Work In Progress. Per 4.12.13.2, GIFAS/5052/2008 to be adopted and modified to be published as IEC/TS 62668-2
<b>Groupement des Industries Françaises Aéronautiques et Spatiales (GIFAS) ...</b>																
GIFAS/5052/2008 Guide for managing electronic component sourcing through non-franchised distributors. Preventing fraud and counterfeiting.	Electronic Components		X	X			X	X	X	X						Released October 2008. High level guidance
<b>Independent Distributors of Electronics Association (IDEA) ...</b>																
IDEA-STD-1010 Acceptability of Electronic Components Distributed in the Open Market	Electronic Components				X						X					Includes inspection techniques for counterfeit detection.
<b>Components Technology Institute, Inc ...</b>																
CCAP-101 Counterfeit Components Avoidance Program, Certification For	Electronic Components				X		X	X	X							

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**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

**These projects seem to have disappeared....**

IPC ...	Scope	DoD Adopted	SI	OEM	CD	OCM	Product Traceability	Risk Mitigation	Procurement Practices	Verification / Detection	Containment / Disposition	Reporting	Obsolescence Management	Comments
IPC-175X (proposed) Requirements for Best Practices Procurement Procedures (Counterfeit Avoidance)	Parts and Materials			X				X						Standard development in process.