IPC-1791

Trusted Electronic Designer, Fabricator and Assembler Requirements

Developed by the Trusted Supplier Task Group (2-19b) of the Electronic Product Data Description Committee (2-10) of IPC

Supersedes:
IPC-1071B - April 2016
IPC-1071A - August 2014
IPC-1071 - December 2010
IPC-1072-AM1 - March 2017
IPC-1072 - December 2015

Users of this publication are encouraged to participate in the development of future revisions.

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# Table of Contents

## 1 Scope

1.1 Background ................................................. 1
1.1.1 Source Technology and Capability ................. 1
1.1.2 Interpretation of “Shall” ............................... 1
1.1.3 Interpretation of Requirements for the Purposes of this Standard ....................... 1
1.1.4 Benefits of Using Organizations Certified to this Standard ................................. 1
1.1.5 Additional Detail .......................................... 1
1.2 Certification Types ......................................... 1
1.2.1 Type 1 – Printed Board Design Organizations ... 2
1.2.2 Type 2 – Printed Board Fabrication Organizations ............................................... 2
1.2.3 Type 3 – Printed Board Assembly Organizations ................................................. 2
1.3 Terms and Definitions ....................................... 2
1.3.1 Chain of Custody (ChoC) ............................... 2
1.3.2 Confidentiality ............................................. 2
1.3.3 Commercial and Government Entity (CAGE) Code ............................................. 2
1.3.4 Controlled Technical Information ..................... 2
1.3.5 Controlled Unclassified Information (CUI) .......................... 2
1.3.6 Covered Contractor Information System .......... 2
1.3.7 Covered Defense Information ........................... 2
1.3.8 Cyber Incident .............................................. 2
1.3.9 Department of Defense (DoD) Prime Contractor ................................................. 2
1.3.10 Department of State Proforma for Permanent Export (DSP-5) ............................... 2
1.3.11 Deemed Export ............................................ 2
1.3.12 Export Administration Regulations (EAR) .... 2
1.3.13 Federal Bureau of Investigation (FBI) Channeler .............................................. 3
1.3.14 Foreign Person ............................................. 3
1.3.15 Information Technology (IT) .......................... 3
1.3.16 International Traffic in Arms Regulations (ITAR) Registered ................................ 3
1.3.17 Organization ................................................. 3
1.3.18 Policy ....................................................... 3
1.3.19 Printed Board Assembler ............................... 3
1.3.20 Printed Board and Assembly Design Organization .............................................. 3
1.3.21 Printed Board and Assembly Design Organization ............................................... 3
1.3.22 Printed Board Trusted Assembler ....................... 3
1.3.23 Printed Board Trusted Design Organization .... 3
1.3.24 Printed Board Trusted Fabricator ....................... 3
1.3.25 Procedure .................................................. 3
1.3.26 Product-Specific Special Case ......................... 4
1.3.27 Quality ..................................................... 4
1.3.28 Security ..................................................... 4
1.3.29 Supply Chain Risk Management (SCRM) ....... 4
1.3.30 Trust ....................................................... 4
1.3.31 Trusted Source or Trusted Supplier ................. 4

## 2 Applicable Documents

2.1 IPC .......................................................... 4
2.2 Joint Standards ............................................... 4
2.3 Center for Development of Security Excellence ......................................................... 4
2.4 National Institute of Standards and Technology (NIST) ........................................ 4
2.5 SAE International ............................................ 5
2.6 U.S. Department of Defense (DoD) .......................... 5
2.6.1 Directives and Instructions ................................ 5
2.6.2 Specifications .............................................. 5
2.7 U.S. House of Representatives Office of the Law Revision Council ................................ 5

## 3 Requirements

3.1 Quality Requirements ........................................ 5
3.1.1 Type 1 – Printed Board Design Organization .... 5
3.1.2 Type 2 – Printed Board Fabrication Organization ............................................... 5
3.1.3 Type 3 – Printed Board Assembly Organization ................................................. 6
3.2 Supply Chain Risk Management (SCRM) Policy ......................................................... 6
3.2.1 Commercial and Government Entity (CAGE) Code ............................................. 7
3.3 Security ....................................................... 7
3.3.1 Responsible Security Officer and Team ......... 7
3.3.2 Personnel Security Requirements ..................... 7
3.3.3 Publication Approval ....................................... 8
3.3.4 Physical Protection ........................................ 8
3.4 Chain of Custody (ChoC) for Type 1, 2 and 3 Organizations .......................................... 9
3.4.1 Traceability Records ....................................... 9
3.4.2 Serialization and Identification ......................... 9
3.4.3 Sample Materials .......................................... 9
Trusted Electronic Designer, Fabricator and Assembler Requirements

1 SCOPE
This standard provides minimum requirements, policies and procedures for printed board design, fabrication and assembly organizations and/or companies to become trusted sources for markets requiring high levels of confidence in the integrity of delivered products. These trusted sources shall ensure quality, supply chain risk management (SCRM), security and chain of custody (ChoC).

Demonstration of the ability to meet and maintain the requirements of this standard as trusted design, fabrication or assembly organization benefits customers that provide end-products for markets desiring a high level of integrity assurance (e.g., commercial, industrial, military, aerospace, automotive and medical).

In the context of this standard, the terms trust and trusted are used to reflect a commitment to delivered product and process integrity assurance by printed board designers, fabricators and assemblers. The user should not confuse this certification with defense-microelectronics-specific “Trusted Supplier” accreditation administered by the Defense Microelectronics Activity (DMEA) Trusted Access Program Office. IPC-1791 certification does not include U.S. Department of Defense (DoD) facility clearance unless compelled by customer-specific requirements and pursued independent of this standard.

1.1 Background

1.1.1 Source Technology and Capability Design, fabrication and assembly organizations have different levels of capability in terms of technology, materials, product complexity, capacity and lead times. This standard assumes the customer has certified the capability of their chosen supplier.

1.1.2 Interpretation of “Shall” The imperative form of the verb “shall” is used throughout this standard whenever a requirement is intended to express a provision that is mandatory. Deviation from a “shall” requirement may be considered if sufficient data are supplied to justify the exception. To assist the reader, the word “shall” is presented in bold characters.

The words “should” and “may” are used whenever it is necessary to express nonmandatory provisions.

“Will” is used to express a declaration of purpose.

1.1.3 Interpretation of Requirements for the Purposes of this Standard This standard covers requirements for quality, SCRM, security and ChoC:

- Quality and performance requirements (e.g., IPC-2000 series, IPC-6000 series, IPC-A-600, IPC-A-610, MIL-PRF-31032, AS9100, National Aerospace and Defense Contractors Accreditation Program (Nadcap), etc.) shall be as defined in this standard for the type of organization.
- Requirements for SCRM shall be as defined in this standard for the type of organization.
- Security requirements shall be the same for all types of organizations.
- The requirements for ChoC shall be the same for all types of organizations.

1.1.4 Benefits of Using Organizations Certified to this Standard By using designers, printed board fabricators and printed board assemblers that have been certified to this standard, customers will be assured that their supplier(s):

- Maintains a quality system
- Maintains a SCRM system to ensure any threats related to disruption in supply are understood and managed
- Manages a security system to protect products and services from unauthorized access, particularly in support of export control
- Provides an ensured ChoC system for electronic and physical materials

1.1.5 Additional Detail See Appendix A for additional explanatory material.

1.2 Certification Types To ensure cost-effective use of trusted suppliers, this standard provides three types of certification (see 1.2.1 through 1.2.3). Certification types are based on the function of the organization.