IPC-1791A

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

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

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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).

Trusted source certification of non-U.S. printed board design, fabrication and assembly organizations requires a sponsor and are required to meet the requirements in Appendix D, in lieu of section 3.3 and Appendix B.

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 Purpose and 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 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.

1.1.3 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

1.1.4 Additional Detail See Appendix A for additional explanatory material.

1.2 Classification IPC standards recognize that electrical and electronic assemblies are subject to classifications by intended end-item use. Three general end-product classes have been established to reflect differences in manufacturability, complexity, functional performance requirements, and verification (inspection/test) frequency. It should be recognized that there may be overlaps of equipment between classes.