

IPC-1791B

2021 - August

Trusted Electronic Designer, Manufacturer and Assembler Requirements

*Supersedes IPC-1791A
January 2020*

An international standard developed by IPC



BUILD ELECTRONICS BETTER

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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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Table of Contents

<p>1 SCOPE1</p> <p>1.1 Purpose and Background 1</p> <p>1.1.1 Source Technology and Capability 1</p> <p>1.1.2 Interpretation of Requirements for the Purposes of this Standard 1</p> <p>1.1.3 Benefits of Using Organizations Certified to this Standard 1</p> <p>1.1.4 Additional Detail 1</p> <p>1.2 Classification 2</p> <p>1.3 Definition of Requirements 2</p> <p>1.4 Certification 2</p> <p>1.4.1 Type 1 – Printed Board Design Organizations ... 2</p> <p>1.4.2 Type 2 – Printed Board Fabrication Organizations 2</p> <p>1.4.3 Type 3 – Printed Board Assembly Organizations 2</p> <p>1.4.4 Type 4 – Cable and Wire Harness Assembly Organizations 2</p> <p>1.4.5 Length of Certification 2</p> <p>1.4.6 Ownership Changes 2</p> <p>1.4.7 Management Changes 2</p> <p>1.5 Abbreviations and Acronyms 2</p> <p>1.6 Terms and Definitions 3</p> <p>1.6.1 Chain of Custody (ChoC) 3</p> <p>1.6.2 Commercial and Government Entity (CAGE) Code 3</p> <p>1.6.3 Confidentiality 3</p> <p>1.6.4 Controlled Technical Information 3</p> <p>1.6.5 Controlled Unclassified Information (CUI) 3</p> <p>1.6.6 Covered Contractor Information System 3</p> <p>1.6.7 Covered Defense Information 3</p> <p>1.6.8 Cyber Incident 3</p> <p>1.6.9 Deemed Export 3</p> <p>1.6.10 Department of Defense (DoD) Prime Contractor 3</p> <p>1.6.11 Department of State Proforma for Permanent Export (DSP-5) 3</p> <p>1.6.12 Export Administration Regulations (EAR) 3</p> <p>1.6.13 Federal Bureau of Investigation (FBI) Channeler 3</p> <p>1.6.14 Foreign Person 3</p>	<p>1.6.15 Information Technology (IT) 4</p> <p>1.6.16 International Traffic in Arms Regulations (ITAR) Registered 4</p> <p>1.6.17 Organization 4</p> <p>1.6.18 Personnel 4</p> <p>1.6.19 Policy 4</p> <p>1.6.20 Printed Board Assembler 4</p> <p>1.6.21 Printed Board and Assembly Design 4</p> <p>1.6.22 Printed Board and Assembly Design Organization 4</p> <p>1.6.23 Printed Board Trusted Assembler 4</p> <p>1.6.24 Printed Board Trusted Design Organization 4</p> <p>1.6.25 Printed Board Trusted Fabricator 4</p> <p>1.6.26 Procedure 4</p> <p>1.6.27 Product-Specific Special Case 4</p> <p>1.6.28 Quality 4</p> <p>1.6.29 Security 4</p> <p>1.6.30 Supply Chain Risk Management (SCRM) 4</p> <p>1.6.31 Trust 4</p> <p>1.6.32 Trusted Source or Trusted Supplier 5</p> <p>1.6.33 Trusted Cable and Wire Harness Assembler 5</p> <p>2 APPLICABLE DOCUMENTS5</p> <p>2.1 IPC 5</p> <p>2.2 Joint Standards 5</p> <p>2.3 Center for Development of Security Excellence .. 5</p> <p>2.4 National Institute of Standards and Technology (NIST) 5</p> <p>2.5 SAE International 5</p> <p>2.6 U.S. Department of Defense (DoD) 6</p> <p>2.6.1 Directives and Instructions 6</p> <p>2.6.2 Specifications 6</p> <p>2.7 U.S. House of Representatives Office of the Law Revision Council 6</p> <p>2.8 U.S. Office of the Federal Register - Code of Federal Regulations (CFR) 6</p> <p>2.9 U.S. Office of the Federal Registrar – Defense Acquisition Regulation Supplement (DFARS) 6</p> <p>3 REQUIREMENTS 6</p> <p>3.1 Quality Requirements 6</p>
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3.1.1 Type 1 – Printed Board Design Organization 6

3.1.2 Type 2 – Printed Board
Fabrication Organization 6

3.1.3 Type 3 – Printed Board
Assembly Organization 7

3.1.4 Type 4 – Cable and Wire Harness
Assembly Organization 7

3.2 Supply Chain Risk Management
(SCRM) Policy 7

3.2.1 Supplier Assessment 7

3.2.2 Outsource Process Suppliers 7

3.2.3 Commercial and Government Entity (CAGE)
Code/NATO Commercial and Government
Entity (NCAGE) 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 9

3.3.4 Physical Protection 9

3.4 Chain of Custody (ChoC) for Type 1, 2, 3
and 4 Organizations 10

3.4.1 Traceability Records 10

3.4.2 Serialization and Identification 11

3.4.3 Sample Materials 11

3.4.4 Destruction of Scrap (In-Process or Finished
Design Data, Layers and Panels, Subassemblies
and Assemblies) 11

3.4.5 Repeat Orders 11

3.4.6 Shipping 11

3.4.7 Training 11

3.5 Additional Chain of Custody (ChoC)
Requirements for Type 1 Organizations 11

4 EXPORT CONTROL COMPLIANCE 12

4.1 Compliance with Export Control Laws 12

4.2 Export 12

4.3 Empowered Official 12

4.4 Export-Controlled Data on Portable
Electronic Devices 12

**5 NIST SP 800-171 and CYBERSECURITY
MATURITY MODEL CERTIFICATION
(CMMC) EXPLANATION 13**

5.1 Compliance with NIST SP 800-171
Cybersecurity Regulations 13

5.1.1 NIST SP 800-171 Scope 13

5.1.2 Application of NIST SP 800-171
Requirements 13

5.1.3 Families of Security Requirements 13

5.1.4 Cyber Incident Reporting 13

5.2 Cybersecurity Maturity Model
Certification (CMMC) Framework 13

5.2.1 CUI Definition 13

5.2.2 CMMC Requirements/Practices 13

5.2.3 CMMC Certification 13

5.2.4 CMMC Implementation 13

**6 REQUIREMENTS FOR TRUST CERTIFICATION OF
NON-U.S. ELECTRONIC DESIGN, FABRICATION
AND ASSEMBLY ORGANIZATIONS 14**

6.1 Certification 14

6.1.1 Non-U.S. Organizations 14

6.1.2 Length of Certification 14

6.1.3 Ownership or Management Change
Notification 14

6.1.4 Certification Duration 14

6.2 Security Requirements 14

6.2.1 Responsible Security Officer and Team 14

6.2.2 Personnel Security Requirements 14

6.2.3 Publication Approval 15

6.2.4 Physical Protection 15

APPENDIX A Defense Background 17

APPENDIX B Index of Acronyms and Abbreviations . . 18

Figures

Figure 3-1 Printed Board Design Schema 12

Tables

Table 3-1 Supply Chain Risk Management (SCRM)
Policy and/or Procedure Guidelines 8

Table 3-2 Supplier Assessment
Procedure Requirements 8

Table 5-1 NIST SP 800-171 Security
Requirement Families 12

Trusted Electronic Designer, Fabricator and Assembler Requirements

1 SCOPE

This standard provides minimum requirements, policies and procedures for printed board design, fabrication, assembly, and cable and wire harness 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, assembly, and cable and wire harness assembly organizations requires a sponsor and to meet the requirements in Section 6, in lieu of section 3.3 and Section 4.

Cybersecurity Maturity Model Certification (CMMC) is scheduled to be fully implemented by the end of Fiscal Year 2025. The rollout starts gradually, accelerating in Fiscal Year 2023. During this period there will be instances in which a U.S. Department of Defense (DoD) supplier may not be required to meet CMMC but may be required to meet NIST SP 800-171 compliance. Therefore, this revision of IPC-1791 contains reference to CMMC, and Section 5 provides clarification on the relationship between CMMC and NIST SP 800-171.

Demonstration of the ability to meet and maintain the requirements of this standard as trusted design, fabrication, assembly, or cable and wire harness assembly organizations 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 product and process integrity assurance by printed board designers, fabricators, assemblers, and cable and wire harness 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 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, assembly, and cable and wire harness 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-2200 series, IPC-6010 series, IPC-A-600, IPC-A-610, MIL-PRF-31032, AS9100, National Aerospace and Defense Contractors Accreditation Program Nadcap) **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, printed board assemblers, and cable and wire harness assemblers that are 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.