



Summit Interconnect – Toronto

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QP051 – Summit Supplier Quality Assurance Requirements

REVISIONS

| Date | Revision # | Author | Comments |
|-------------|------------|--------|---------------|
| 27-Dec-2023 | A | ANg | New Procedure |
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APPROVALS

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SUMMIT SUPPLIER QUALITY ASSURANCE REQUIREMENTS

PURPOSE:

The purpose of this document is to establish quality requirements for procurement and to define supplier responsibilities for ensuring that purchased items and processes conform to Summit Interconnect, drawings, specifications, and purchase order requirements. These requirements shall apply to each purchase order issued by Summit Interconnect - Toronto.

As a Supplier for Summit Interconnect – Toronto, you acknowledge and agree to adhere to Summit Interconnect – Toronto’s Quality requirements applicable to the product(s) and/or service(s) provided under the contract. These quality requirements do not replace or override the Terms & Conditions; rather, they supplement and coexist with the Terms & Conditions specified in the Purchase Order.

It is the responsibility of the supplier to ensure the completeness and accuracy of the information you provide to the best of your knowledge. Please retain this document for your records and ensure all affected personnel within your organization are made aware of this document.

Should you have any questions concerning these requirements, you are asked to contact your procurement representative for clarification or assistance.

1. QUALITY MANAGEMENT SYSTEM REQUIREMENTS

- The Supplier shall establish a quality system that complies with the requirements of AS9100, ISO 9001 or equivalent quality management system. This quality system shall be to the extent necessary and appropriate for the products being provided.
- The Suppliers quality system may be subject to audit by Summit Interconnect - Toronto Inc. representative for evidence of compliance. The Supplier shall promptly notify Summit Interconnect of the loss of any third-party certifications.

2. RIGHT OF ACCESS

- The Supplier and/or supplier’s sub-tier where applicable agree to allow access to their premises to enable Summit Interconnect - Toronto, the end user (Customer), Government and/or regulatory authority access, to enable Summit Interconnect - Toronto, to conduct quality audits or surveillance of the product, processes, and records to verify compliance with the purchase order requirements.
- A minimum notice of three days will be given prior to access. The supplier agrees to provide suitable accommodations and facilities with internet access at no increase in price, fees, cost to Summit Interconnect - Toronto, the end user (Customer), Government and/or regulatory authority. The Supplier shall provide the necessary facilities, equipment, and personnel as necessary for the task.
- Customer representatives may perform evaluations, surveillance and audits at buildings or premises where the customer’s work is being performed. This right of access may extend to all sub suppliers in the supply chain such as agents, distributors, item manufacturers and assembly and test facilities. The right of access includes the right to review items and services, documents, records, and procedures pertaining to the customer’s work.

3. CERTIFICATE OF CONFORMANCE

- The Supplier shall furnish a Sellers/Manufacturer’s **Certificate of Conformance (C of C)** with each shipment of product, and if applicable, in addition, a Certificate of Conformance traceable to where the raw materials or original manufacturer material originates from.
- Items delivered from a distributor must be accompanied by a statement, executed by an authorized representative, that the items furnished are part of the shipment covered by the manufacturer’s documentation. Applicable test and inspection records shall be maintained and made available to Summit Interconnect upon request.
- The C of C shall contain as a minimum, attest that the materials, parts, and/or processes supplied are in accordance with the requirements, specifications and line number stated on the purchase order. Should any materials, parts containing a serial number, lot # or batch number, they shall be listed in the CofC as well. The certificate shall be signed and dated by a quality representative or officer of the certifying company that the deliverable product complies with the stated requirements.
- Summit Interconnect may refuse to accept items if Supplier fails to submit certifications, documentation, test data or reports specified by the Procurement Document, Drawing or Specification.

SUMMIT SUPPLIER QUALITY ASSURANCE REQUIREMENTS**4. NOTICE OF CHANGE**

- The Supplier is responsible for notifying Summit Interconnect - Toronto Inc. of changes to product or process that may affect product quality and/or compliance to specified requirements. This includes significant changes made to the Supplier's inspection system or manufacturing facility. Significant changes are defined as a change in quality leadership, moving the Supplier's manufacturing facility, moving work from one Supplier own facility to another, offloading work outside of the Supplier's facility or damage to the Suppliers manufacturing facility.

5. FOREIGN OBJECTS

- The Supplier shall use industry standard, commercially reasonable efforts to prevent and/or remove Foreign Objects that might be considered a potential source of Foreign Object Damage (FOD) from all parts prior to shipment. Potential FOD includes but is not limited to burrs, chips, dirt, corrosion, and contamination resulting from manufacturing, assembly, processing, cleaning, storage, and subsequent packaging materials.
- The Supplier shall have an effective FOD prevention program. The National Aerospace Standard 412 or AS9146 is to be used as a guideline to develop and maintain the FOD program. FOD prevention procedures are subject to review and audit by Summit Interconnect or Summit Interconnects' customers.

6. CONFIGURATION MANAGEMENT

- The Supplier shall maintain a configuration management process to control products, process and related documentation. This management process must include, as appropriate, identifying, documenting and verifying the functional and physical characteristics of the product; maintaining records of its configuration; and controlling changes to the product and its documentation.

7. MEASURING AND TEST EQUIPMENT

- The supplier shall be responsible for validating the accuracy and stability of tools, gauges, and test to ANSI/NCSL Z540.3 or national or international equivalent, which are used to demonstrate that items conform. Documented schedules shall be maintained to provide for periodic calibration traceable to international or national standards bodies such as the National Institute of Standards & Technology (NIST). Objective evidence of calibration shall be recorded and made available for Summit Interconnect to review upon request.
- Periodic calibration of measuring and test equipment is required and shall be performed prior to use for acceptance of any hardware. Measuring and test equipment records and labels shall indicate the date of the last calibration and when the next calibration is due.

8. DISCREPANT MATERIAL

- Decision to accept discrepancies (variances from Summit Interconnect drawings, specifications, or procurement documents) detected at Supplier's facilities, must be made by Summit Interconnect unless otherwise specified by the Procurement Document. Shipment of discrepant items must be authorized by Summit Interconnect in writing. Supplier shall provide for control, segregation and identification of discrepant material detected at Supplier's facilities. Upon receipt of discrepant materials, Summit Interconnect shall notify Supplier of acceptance or rejection of these materials, if Summit Interconnect rejects discrepant material, Summit Interconnect may require Supplier to replace or rework any discrepant materials in accordance with the contract requirements on an expedited basis. If the scheduled requirements do not permit the return of the material to the Supplier's facility, the Supplier agrees to perform rework at the Summit Interconnect facility or reimburse Summit Interconnect for all costs incurred by Summit Interconnect in performing this rework.

9. RAW MATERIALS

- Raw materials must be of North American origin or originated from a "qualifying country" as established throughout the aerospace community or ITAR Compliance country. Specifically, "Specialty Metals" and/or items containing specialty metals must be obtained from qualifying country sources as outlined by the Defense Federal Acquisition Regulation Supplement (DFARS) 252.225-7014 (Preference for Domestic Specialty Metals, current version) The "qualifying countries" are listed in subsection 225.872-1 of the DFARS.
- All items fabricated under this purchase order shall be traceable to raw materials used. All traceability and inspection records must be identifiable upon request or audit by Summit Interconnect or Summit's customer.
 - A. Raw materials used shall be identified by lot number as well as material type, specification, heat number, etc., and shall be identifiable with lot of raw material used.

SUMMIT SUPPLIER QUALITY ASSURANCE REQUIREMENTS

- B. All material fabricated by the seller in one lot shall be identifiable to that lot when supplied to Summit Interconnect. When the seller is combining material fabricated in two or more different lots to fulfill purchase order requirements, these materials shall be segregated and identifiable to the lot in which it was fabricated.

10. RAW MATERIAL CERTIFICATION

- Each shipment of metallic or nonmetallic raw material must be accompanied by the manufacturer's mill inspection/test report. The information must be legible and include the following:
- Name & location of raw material manufacturer or mill
- Material identification by specification number and material condition
- Manufacturer or mill lot traceability identification.
- Actual chemical & physical test results as specified in the applicable material specifications.
- Authorized signature of the manufacturer's quality representative as evidence that the information contained therein complies with the material requirements.

11. HARDWARE AND CATALOG ITEMS

- Distributors of these items must include a C of C with each shipment indicating the part number, manufacturer's name, and lot traceability information as a minimum. The raw material information associated with the manufacture of these items must also be included (as defined by clause 10 above).

12. DISTRIBUTION

- If product is provided by a Distributor, a distributor certificate of conformance showing traceability to the manufacturer certificate of conformance, as well as providing a copy of the manufacturer's certificate of conformance is required. Complete product traceability must be provided.

13. COUNTERFEIT PARTS PREVENTION

- The Supplier shall establish and maintain a Counterfeit parts/Material Prevention and Control Plan as defined in AS5553 and/or AS6174 to ensure that Counterfeit parts is not delivered to Summit Interconnect - Toronto Inc. The purpose of Seller's plan shall be to develop a robust process to prevent the delivery of counterfeit commodities and control commodities identified as counterfeit.
- The Supplier shall not deliver to Summit Interconnect any work, components or material purchased either directly or indirectly through 3rd party distributors, brokers, and independent distributors as defined in AS5553 and AS6174 without prior written approval from Summit Interconnect. In such cases, the Supplier must submit the following:
 - Results of authentication test and analysis conducted in accordance with AS5553 and/or AS6174.
 - Traceability with identification, date code/lot code
 - Identification of traceability to the original source of manufacture
 - Risk mitigation test plan to screen parts for counterfeit sources.
- The Supplier shall immediately notify Summit Interconnect with the pertinent information if they become aware or suspect that items delivered in accordance with the Summit purchase order are or contain suspect or confirmed counterfeit items. When requested by Summit Interconnect, the Supplier shall provide OCM/OEM documentation that authenticates traceability of the affected items to the applicable OCM/OEM.

14. SHELF LIFE

- The Supplier shall identify those items that have a specific limited shelf or storage life requirement. The product manufacture date, lot number and expiry date are to be clearly marked on the item(s) or packaging. **Material must be within Seventy-five percent (75%) or more of the material shelf life at time of receipt at Summit Interconnect unless otherwise specified.**

15. SUPPLIER FLOW DOWN REQUIREMENTS

- Summit Interconnect - Toronto requires its Suppliers to flow down Summit Interconnect - Toronto's requirements if a Supplier chooses to purchase material or services from a Sub-Tier Supplier. Supplier's Sub-Tier must hold OEM approval with approval(s) in good standing at the time of use.

SUMMIT SUPPLIER QUALITY ASSURANCE REQUIREMENTS**16. CONTROL OF INSPECTION, MEASURING AND TEST EQUIPMENT**

- Where applicable, the supplier shall maintain control of monitoring and measuring devices by utilizing a calibration system that complies with the requirements of ISO 10012-1, Mil-Std-44662, ANSI/NCSL Z540-1 or equivalent. Calibration must be traceable to the **National Institute of Standards and Technology (NIST)** or equivalent agency. If an outside supplier is used for testing or calibration, the supplier should be able to demonstrate technical competence to a laboratory standard; ISO17025 or calibration standard.

17. PACKAGING AND MARKING

- Unless otherwise specified on the drawing, purchase order packaging will be in accordance with the best commercial practices available. The package must be capable of protecting the quality of the product and prevent deterioration and damage, including Moisture Barrier packaging, where applicable.

18. CONTROL OF NONCONFORMING PRODUCT AND CORRECTIVE ACTION.

- The Supplier is responsible for identifying, controlling, immediate notification to Summit Interconnect - Toronto and reporting all nonconforming items that arise during the processing of Summit Interconnect - Toronto supplied products. Appropriate corrective action is to be taken to prevent recurrence of the reported nonconformity. If the actions prove to be inadequate or incomplete, Summit Interconnect - Toronto may request further investigation to ensure the root cause is addressed and eliminated.

19. NONCONFORMING AFTER SHIPMENT

- The Supplier shall promptly notify Summit Interconnect - Toronto when a nonconforming product has been shipped. The notification shall include part numbers, design activity, traceability (lot, serial, and manufacturing numbers), ship dates, quantities, and a description of the nonconformance. This applies to any nonconformances that departs from drawing, specifications, aftermarket maintenance technical data or purchase order requirements.
- The supplier shall promptly perform internal RCCA to assure full containment is in effect and document all nonconformances causes and actions to prevent recurrence. Records of these actions shall be retained and be available for Summit Interconnect - Toronto for review on request.

20. CONFLICT MINERALS

- The Supplier shall comply with Section 1502 of Dodd-Frank and its implementing regulations. Supplier shall commit to have in place a supply chain policy that makes a reasonable inquiry into the country of origin of Conflict Minerals incorporated into products provided to Summit Interconnect, and to report those findings to Summit Interconnect.

21. ETHICS & ETHICAL BEHAVIOR

- The Supplier shall comply with the Aerospace Industries Association of America (AIA) and AeroSpace and Defense Industries Association of Europe (ASD) "Global Principles of Ethics in the Aerospace & Defense Industry, "available for review here:
 - http://asd-europe.org/sites/default/files/atoms/files/Ethics_Global_Principles.pdf
- In performing its obligations under the contract, the seller shall conduct its business in an ethical manner and hold its workforce, employees, contractors, and agents accountable for ethical behavior. The buyer reserves the right to request training documentation from the Seller to verify that ethical behavior expectations are being communicated to Seller's workforce, employees, and agents.

22. PRODUCT PRESERVATION

- Product is to be packaged and preserved/protected in such a manner as necessary to ensure product quality and integrity is maintained upon shipment and delivery to Summit Interconnect - Toronto Inc., its subcontractors and/or Customers. Special or specific packaging requirements will be indicated on the Purchase order as appropriate.

23. GENERAL VISION REQUIREMENTS

- Individuals who inspect materials for final inspection must have the following eye examination.
- Color vision Eye Examination every 12 months
- Near-Vision Eye Examination every 12 months

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- Color vision Eye exam methods include Pseudo chromatic plates, Dvorine, Ishihara, Richmond, Farnsworth lantern, Keystone Orthoscope, Titmus Vision tester, Titmus II Vision Tester, Titmus 2 Vision Tester.
- Near-Vision Eye exam methods include 'E' eye examination chart or international equivalent, Snellen 14/18 or better, 20/25 or better, Jaeger type 1, Ortho-rated 8 or equivalent method.
- 1. A medical professional must perform the eye examination (eye clinic, occupational health clinic, onsite health clinic or medial department). Any individual who fails the eye exam, may not approve final acceptance of Summit Interconnect - Toronto products.

24. RECORDS RETENTION

- The Supplier shall retain on file (electronic or hard copy) all traceability, quality test records (including special process and personnel qualification records) associated with product provided on all purchase orders, for a minimum period of Seven (7) years, unless otherwise stated on the purchase order.
- If the supplier should decide to hold records less than the prescribe length, then the supplier shall contact Summit Interconnect - Toronto for provisions of transferring these records to Summit Interconnect - Toronto.

25. ACCESS TO RECORDS.

- Summit Interconnect - Toronto reserves the right to access records at the Suppliers facility or sub-tier suppliers' facility involved in the manufacture of Summit Interconnect - Toronto product(s).
- The Supplier shall make the records available within 48 hours, or 2 business days, of the request for access. Records must be stored in an area which meets all local Fire and Life Safety Codes that prevents loss, damage, or deterioration. All data stored by electronic means shall be secure with back-up procedures and audited to verify the integrity of the data.

26. MATERIAL FURNISHED BY SUMMIT INTERCONNECT - TORONTO

- Items manufactured under this purchase agreement shall be fabricated from materials furnished by Summit Interconnect - Toronto. The seller shall not substitute or or dispose of, Summit Interconnect - Toronto-furnished material except as instructed in writing by the Summit Interconnect - Toronto Purchasing department.
- Unused material, properly identified, shall be returned with the last shipment of fabricated parts. The seller shall submit a certificate with each shipment of parts that reads substantially as follows: "(Seller Company Name) certifies that all materials used in the completion of Summit Interconnect - Toronto Purchase Order Number _____ were supplied by Summit Interconnect - Toronto, and no unauthorized substitution or disposal was accomplished" The seller shall provide a copy of the Summit Interconnect - Toronto shipping memo provided with the materials and a copy of the certificate.

27. SOURCE INSPECTION

- Summit Interconnect – Toronto reserves the right to perform in-process inspection, in-process surveillance and/or audits at any time during the life of the PO.
- Items may be inspected by Summit Interconnect / Customer during manufacture and/or prior to shipments as specified by the Procurement Document. The Supplier shall furnish, at no cost, acceptable facilities, and equipment to the Summit Interconnect / Customer representative for his inspection. Supplier shall notify Summit Interconnect not less than three (3) days in advance that the items are ready for Summit Interconnect / Customer inspection. After Summit Interconnect / Customer inspection, any rework or retest of the items, including any unscheduled entry, such as removal of a panel, cover or enclosure will void the inspection. In case of any nonscheduled entry, rework, or retest, Summit Interconnect shall be notified for a decision as to the need for a repeat inspection.

28. SERIALIZATION

- Each item furnished on this purchase order or contract will be identified with a nonrecurring serial number.

29. SPECIAL PROCESS CERTIFICATE

- The Seller shall provide a copy of a certificate for each special process used in the production of parts under the terms of agreement. Certificate must have Summit Interconnect - Toronto part number and revision.

SUMMIT SUPPLIER QUALITY ASSURANCE REQUIREMENTS**30. BARE PRINTED CIRCUIT BOARDS**

- The supplier shall manufacture Bare Printed Circuit Boards in accordance to the IPC Quality Standard. This quality standard shall meet IPC 6012 Class III or better unless it is stated otherwise in the Purchase Order.

31. INSPECTION SYSTEM REQUIREMENTS AND RECORDS

- The supplier shall maintain an inspection system which will assure compliance with the procurement document and all applicable specifications. The supplier shall maintain all inspection records and test results on items delivered to Summit Interconnect for a minimum of 7 years unless advised otherwise. These records shall identify discrepancies and shall be made available for Summit Interconnect review.

32. ELECTROSTATIC DISCHARGE PROTECTION

- The Supplier shall establish and maintain a written ESD control program for fabrication, handling, and packaging. The program shall comply with the requirements of the most current version of Mil-Std-1686 or ANSI/ESD S20.20.
- ESDS components and assemblies shall be packaged and transported in electrostatic shielding containers. All ESDS containers or cushioning materials must have the mechanical characteristic to properly protect the part against damage.
- All ESDS packaging containers must have an ESDS caution label affixed to the outer surface. Summit Interconnect may refuse to accept items received which are improperly package or protected. Summit Interconnect reserves the right to verify continuing compliance with the requirements for ESD protection.

33. FIRST PIECE APPROVAL

- When specified on the Procurement Document, First Piece approval is required. Following inspection and testing, written approval, or rejection of the first piece will be furnished by Summit Interconnect. When approval is received, Supplier is authorized to proceed with the production of the balance of the order.

34. HAZARDOUS MATERIAL

- When applicable, supplier shall package and label material in accordance with OSHA guidelines for Hazardous Material and supply current MSDS sheets.
- Seller shall include manufacturer's product safety information with each shipment. This information shall contain applicable product handling precautions and procedures, disposal information, and emergency procedures for contact or contamination. Reference: OSHA Title 8, CCR5194 (g),(e).

35. TEST DATA

- When Summit Interconnect requires test data to be recorded and delivered during the performance of acceptance testing. A copy of the recorded data, showing evidence of Supplier's inspection and verification of conformance, shall accompany shipment of items. As a minimum, data shall be identified with:
 - Purchase Order Number
 - Part Number
 - Type of test performed.
 - Lot numbers, serial numbers, or date codes of items listed.
 - Total quantity tested, quantity accepted, and quantity rejected.
 - Any codes, keys, or other information necessary to interpret Supplier's data.

36. FAILURE REVIEW AND CORRECTIVE ACTION

- When requested by Summit Interconnect via the issuance of a Corrective Action Request (CAR), the Supplier shall conduct investigation to determine Root Cause associated with the non-compliant condition or failure trend identified in Corrective Action Request. Positive Corrective Actions shall be implemented to ensure that the Root Cause conditions are eliminated.
- The Supplier shall provide a written response to Summit Interconnect's issued Corrective Action Request within (30) days and, when requested, provide status reports every (7) days until the root cause has been identified and associated corrective actions have been implemented to Summit Interconnect's satisfaction.
- Summit Interconnect reserves the right to conduct on-site visits to review manufacturing, inspection, and test processing associated with the failure or defect trend. This right also extends to accompanying Summit Interconnect's Customer.