General

Suppliers are responsible for compliance to all stated Quality Clauses and all Atrenne Computing Solutions purchase order terms and conditions. Suppliers must be willing to identify and manage their entire supply chain. It is the supplier's responsibility to ensure that subcontractors used in their entire manufacturing process meet Atrenne's requirements. The supplier is responsible to flow said quality clauses down as applicable to their suppliers. PO specific quality clauses may also be noted on the purchase order. In case of any conflict with this document and any other requirements, the order of precedence is as follows:

1. Atrenne Computing Solutions Purchase Order and Terms and Conditions document

2. Drawings, Specifications, and or Electronic Files

3. This document.

Definitions: Commercial off the shelf items ( COTS ): A part or material that conforms to an established industry or national authority published specification, having all characteristics identified by text description, National/Military Standard drawing or catalog item.

**ITAR** – Documentation and/or data associated with this order contains information which falls under the purview of the International Traffic in Arms Regulations (ITAR), 22 CFR 120-130, and is export controlled. It shall not be transferred to foreign nationals in the U.S. or abroad, without specific approval of an export control official, and/or unless an export license/license exemption is obtained/available from the United States Department of State. Violations of these regulations are punishable by fine imprisonment, or both.

**Priority DX-A1 -** Priority DX-XX; This is a rated order certified for national defense use. You are required to follow all the provisions of Defense Priorities and Allocations System regulation (15CFR 350).

**Priority DO-XX -** Priority DO-XX; This is a rated order certified for national defense use. You are required to follow all the provisions of the Defense Priorities and Allocations system regulation (15 CFR 350).

**PCN –** Prime Contract Number. Reference to Government prime contract origin for priority code flow down.

Element A: ***Approved Suppliers and Facility Access***

**A1. Facility Access** – the supplier shall provide, if required, a US Government, Foreign Government, Commercial Customer, Atrenne Quality Assurance staff member appropriate for the specific contract and customer, access to any of the subcontractor's facilities where any work is being performed. The Atrenne QA representative shall be afforded unrestricted opportunity to audit, evaluate and verify subcontractor's compliance with the

Quality System procedures and to validate product conformance with regards to specifications and requirements. The subcontractor shall make available for reasonable use by the Atrenne QA staff member the equipment necessary for validation purposes. The subcontractor shall make personnel available for the operation of said equipment if so required.

Element B: ***Quality System***

.**B1. AS9100 Quality System Compliance** - Supplier quality system compliance and certification to AS9100 Revision B or later is required.

Element C: ***Nonconforming Material***

**C1. Nonconforming Materials** –Atrenne Computing Solutions retains all MRB Authority. Material which fails to meet the requirements and/or specifications of applicable drawings referenced on the Purchase Order shall not be shipped without prior written approval of Atrenne Computing Solutions Use-As-IS and Repair dispositions on subject deliverable nonconforming material must be approved by Atrenne Computing Solutions. A copy of the approval shall be enclosed with each shipment made against the Purchase Order.

**C2. Supplier Reporting** – The Supplier shall provide for timely reporting of nonconformities that may affect already delivered product. Notification shall include clear description of the discrepancy, identification of the

suspect parts/components (this identification is to include manufacturing dates, serial numbers of applicable, quantity, any and all related pertinent information) and material affected by the deficiency, delivery dates, and any information to the root cause and corrective actions initiated by said supplier to address the defective condition described and to prevent the reoccurrence of the nonconforming condition.

Element D: ***Purchase Order Change Control***

**D1. PO Change Request** - Changes to the Purchase Order that effect the requirements defined in said Purchase Order shall be formally communicated from the supplier to Atrenne via a Purchase Order Change Request, and in turn from Atrenne to the Supplier via a Purchase Order Change.

Element E: ***Source Inspection***

**E1. Atrenne Source Inspection** – Atrenne Source Inspection is required on this purchase order prior to shipment of product from your plant. Atrenne shall be notified a minimum of one week in advance of the time of parts and/or materials is ready for inspection and/or test. In addition to material and/or part submittal, supplier shall submit all supporting documentation (i.e. inspection reports, dimensional data, material certification and test data) to the source inspector.

**E1-b. Atrenne Source Inspection (Test Verification**) An Atrenne source inspector shall witness functional testing of a representative sample article of the lot submitted for source inspection in order to confirm that Atrenne specified performance requirements are met.

**E2. Customer Source Inspection** – Customer Source Inspection is required on this purchase order prior to shipment from your plant. Customer shall be notified minimum of one week in advance of the time of parts and/or materials are ready for inspection and/or test.

**E3. Government Source Inspection** – Government Source Inspection is required prior to shipment of any item on this purchase order. Upon receipt of this purchase order, promptly furnish a copy of this purchase order to the Government Representative that normally services your facility and arrange source inspection. Contact the Atrenne Buyer immediately if you cannot locate a government representative.

Element F: ***Certification***

**F1. Certification of Calibration** – For instruments, gages and measuring standards, electronic or mechanical, new, repaired, reconditioned, or re-calibrated by outside suppliers, a Certificate of Conformance to ANSI/ASQ Z540.1 or ISO 10012, as well as reference traceable standard utilized, is required.

**F2. Certification of Chemical/Physical Test** – Supplier shall furnish actual results of chemical/physical tests conducted on material submitted. Test reports shall identify applicable material specification and tests conducted and shall include test results and material lot control number.

**F3. Certification Manufacturing Date** – A certification is required for the shelf life of age/environmental sensitive materials, which states the date of manufacture, the shelf life and date of expiration. The certification must include the Purchase Order number, part or specification number, lot or batch number of the material and the quantity shipped. It also must be signed by an authorized agent of the company along with the agent's title. Materials ordered to a prime contractor specification must meet the requirements of

that specification. Distributors may not ship materials with less than 80% of the required shelf life remaining unless specifically authorized by Atrenne Computing Solutions.

**F4. Certification of Special Processes** – A certification is required with a statement certifying conformance to each special process (i.e. welding, plating, painting, soldering, heat treating, chemical films, anodizing, etc.) performed on the materials to the specifications (s) listed on the Purchase Order and/or Customer's Drawing. The signature of an authorized agent of the company performing each special process including the agent's title must appear on the certification. It must also include the Purchase Order number, part number and revision level, serial numbers (if applicable), lot number (if applicable) and quantity shipped.

**F5. Supplier Identification** – Subtier supplier are required to disclose the source of parts if the parts should become the subject of a legal or counterfeit issue.

**F6. Counterfeit Parts Prevention -**Seller represents and warrants that only new and authentic materials are used in products to be delivered, and that work delivered contains no counterfeit parts. No other material or part, other than a new and authentic part is to be used, unless approved in advance in writing.

Element G: ***Records and/or Reports***

**G1. Test Reports** – Items on this Purchase Order require electrical, mechanical, environmental, functional, or other tests in accordance with Atrenne's Customer and/or Government specifications. Suppliers shall furnish test reports containing as a minimum Atrenne's Purchase Order Number, Item Number, Item Name, Revision Level, Number of Units Tested, Serial Numbers of Units Tested (if applicable), Test Parameters and Test Results.

**G2. PCB Cross-Section Coupon** – With each delivery of boards or flex circuits except Type 1 (single sided) and Type 2 (double sided) the supplier shall include the cross-section used for product acceptance and coupon strips representing each panel for which product is delivered. Supplier will conform to all military and industry specifications referenced on the PO documents associated with this procurement. The following IPC cross-sections for each panel will consist of (as a Minimum):

A. "A and B" cross-sections from opposite corners of the panel that have not been solder floated (as received).
B. The following cross-sections are required in the "X" and "Y" direction from opposite corners of the panel:
   - "A" cross-sections that have been solder-floated. (Note: This is only required if the hole size is larger than the hole on the "B" micro-section. The larger hole will be used to detect post separation)
   - "B" cross-sections that have been solder-floated.

   If the supplier uses the A/B cross-sections then the following are required:

C. "A/B" cross-sections from opposite corners of the panel that have not been solder-floated (as received)
D. "A/B" cross-sections from opposite corners of the panel (one in the "X" and one in t "Y" direction) that have been solder floated.
E. Coupon strips representing the cross-section in paragraphs a, b, c or d above.
F. If the board contains blind or buried vias, one set of cross-sections representing these features must be submitted.
G. Any special coupon strips (impedance, peel strength, wire bond, etc.) that are specified on the master drawing. The coupon strips and cross-sections listed above will not be returned to the supplier. The supplier shall retain other acceptance cross-sections and additional coupon strips that are a part of the fabrication panel.

**G3. PCB Coupon Pre-Approval** - When requested or required per Atrenne-CS customer PO that PCB cross-section coupons/data are to be provided to Atrenne-CS for pre-approval by their customers.

Element H: ***Special Handling and Packaging***

**H1. ESD** – Electrostatic Discharge (ESD) handling and package control is required by the specification or drawing on this Purchase Order. The supplier shall have procedures for protection of ESD sensitive devices during all phases of handling, packaging, storage and testing. The supplier's ESD program shall be in accordance with MIL-STD-1686, MIL-HDBK-263, ANSI/ESD-20-20, or Atrenne's Customer approved equivalent. ESD label shall be affixed to each ESD sensitive package or container.

**H2. Electrical & Electronic Components** – Lot Date Code – Electrical and electronic components that have manufacturer lot date code identification shall be packaged to provide segregation of manufacturers and lot date code by quantity to assure traceability can be maintained.

**H3. Hazardous Material** – For any hazardous material, a material safety date sheet (MSDS) will be required.

Element J: ***Inspection and Test***

**J1. First Article Inspection** – When this clause is cited on the purchase order the supplier is required to complete a first article inspection and provide all results to Atrenne at the time of shipment, for all AS9100 Purchase Orders the FAI Documentation shall be in compliance with current revision of AS9102:

a. The first article unit shall be from the initial lot, batch, run or the first 10 units produced from production tooling for this purchase order.

b. Atrenne reserves the right to witness the first article inspection at the supplier's facility.

c. The first article inspection shall consist of all records and inspection/test data related to build history, failures, repairs, acceptance test results, and other pertinent configuration documentation.

d. A 100% dimensional, electrical and visual criteria layout (as applicable) on a single first piece shall also be completed.

e. This Qnote does not apply to commercial off the shelf (COTS) items.

**J2. First Piece Inspection** – When this clause is cited on a Purchase Order, the supplier shall provide first piece dimensional inspection data. The first piece shall be from the initial lot, batch, or run. 100% of the dimensions shall be measured as part of the first piece inspection. Data sheet shall depict dimension, tolerance, and actual measurement, and be traceable to Atrenne's Customer Drawing Part number and revision. First piece inspection data shall be sent to Atrenne with initial purchase order unless otherwise stipulated on said purchase order. Any revision changes to a drawing that affect any dimensions shall necessitate additional first piece inspection data for an open purchase order. This Qnote does not apply to Commercial Off the Shelf (COTS) items.

**J3. Critical/Key Dimensional Inspection** – When this clause is cited on a Purchase Order, or manufacturing documentation the supplier shall provide critical/key dimension inspection results with each shipment. Critical/Key dimensions shall either be identified on the drawing, or as part of the purchase order notes. Data shall be supplied on 100% of the identified dimensions, to a 1% AQL of the production lot.

**J4. Inspection and Test Plan** – When this clause is cited on the purchase order, the supplier shall submit an inspection and test plan to Atrenne. **Changes are not allowed to the inspection and test plan without written approval from Atrenne.** The inspection and test plan should include the following:

a. A flow chart or procedure shall include a brief word description of the type of operation, inspection or test performed at the steps provided in the chart.

b. An identification of the applicable test procedure numbers, process specifications, or other documents utilized in the performance of operations listed.

Element K: ***Material Lot Control/Traceability***

**K1. Material Lot Control** - Material on this Purchase Order requires material lot control and traceability. Manufacturing lots shall be traceable and identified to manufacturing documents. Lot date codes, manufacturing lot numbers, or unique job numbers are acceptable means of identification and must be referenced on certification of compliance and traceable to the supplier's manufacturing documents. Lot date codes shall not exceed three years from date of manufacture. As applicable, for assemblies and subassemblies, lot date codes shall not exceed three years from date of assembly.

**K2. Approved Source** – Supplier shall only procure materials from an OEM or franchised distributor. Materials shall not be procured from brokers.

Element L: ***Change Control***

**L1. Change Control** – No change in specification, materials or manufacturing process that may affect fit, form and function is allowed to items on this purchase order without written authorization from Atrenne Computing Solutions

**L2. Cert Dip Braze Cleanliness** – Aluminum dip brazed items shall be tested by the supplier IAW AWS3.7/C3.7M <5ppm sodium. Supplier shall state compliance with this requirement on C of C document(s). Record of sodium test results shall be included with each shipment.

**L3. Microsection Coupons** – Supplier shall forward PCB coupons IAW IPC6012 for analysis.

**L5. Prohibition of Pure Tin** – Pure Tin (Sn) alloy (greater than 97% Tin is prohibited). Tin alloy less than or equal to 97% and Lead (Pb)greater than or equal to 3% is acceptable. The use of pure unalloyed tin is prohibited as a surface finish for hardware, including the surface finish on components or parts used inside a hermetic cavity or encapsulated within an assembly. (For example, terminations on chip capacitors in hybrids shall not consist of pure tin; the potted portion of leads on devices that are encapsulated shall not be plated with pure tin)..

**L6. Mercury Control –** All products and material are to be in compliance with all Federal, States, Local and international laws and requirements for the content of Mercury levels.

**L7. DFARS for Specialty Metals –** Domestic Specialty Metals, require that any specialty metals incorporated in articles delivered to the DOD be melted in the United States or its outlying areas.

**L8. No Brokers - ONLY Procure from OEM** – Only OEM material can be use and all broker material is prohibited.

Element M: ***Approved Sources***

**M1. Special Processes Approved Sources** – Some special processes such as heat treatment, plating, etc. must be performed by an Atrenne approved processor, NADCAP approved processor, or processor approved by Atrenne's Customer.

Element N: ***FOD***

**N1. FOD Awareness** – Supplier shall maintain a Foreign Object Elimination (FOE) program to ensure process specifications and operations minimize the creation of foreign object damage (FOD) and establish control of FOD through the detection and removal of foreign material, prior to product operation, that could damage the product. The program shall be designed to ensure that FOE policies, work instructions, and procedures are established and implemented. The program also shall ensure that affected employees are trained in FOE policies and procedures and that product is manufactured in an environment free of foreign objects

**N2. FOD Critical Product** – Supplier shall maintain strict control of FOD throughout the manufacture of Atrenne products. This program shall include accountability for all tools and inventory control of all MSP (miscellaneous small parts) including fasteners. The product shall be manufactured in a segregated “FOD Critical” area. Access to the controlled area shall be limited to personnel trained in FOD Critical practices.