AQ.LI.100-04e

INDUSTRIAL QUALITY REQUIREMENTS APPLICABLE TO INDUSTRIAL SUPPLIERS

This document aims at defining KONTRON MODULAR COMPUTERS SAS's (hereafter called "CLIENT" or "CUSTOMER") industrial quality requirements applicable to any industrial supplier (hereafter called "SUPPLIER").

The SUPPLIER and the CLIENT may also be referred to as the PARTY or PARTIES

Where necessary this document is completed by requirements relating to the implementation of specific procedures to a given technology.

It shall apply to Purchase Orders *and contracts* awarded by KONTRON MODULAR COMPUTERS SAS and which refer to the present document.

The Supplier MUST prove his compliance and/or his implementation plan of the requirements of this document.

Document status	***Approved***	***Date 07/2022 By Didier Abbal and Eric Botey***

DOCUMENT MANAGEMENT

Revisions			
Date	**REV**	**Author**	**Amendments**
13 March 2015	1	Lorène DECUGIS	Creation of the document in English version from AQ.LI.100-02f
18 November 2019	2	Audrey Perez	Special process clarification, complete review
November 8th 2021	3	Audrey Fleurat	Chapters added 5.5 -> 5.9 Complete review of this QAA
July 2022	4	Audrey Fleurat	Addition of staff awareness aspects Chapter 2.2 General Modification of the instruction reference of acceptance criteria

CONTENTS

1. Object

This reciprocal Quality agreement must guarantee Quality at source and cooperation by the organizations or groups of the CLIENT and SUPPLIER in all matters concerning Quality. It MUST reconcile the expectations of both parties by guaranteeing the transparency of operations, results and communication. The CLIENT and SUPPLIER are committed to continuous improvement, a zero-defect strategy and support provision.
The joint objective is to avoid any Quality-based penalty imposed by customers of the CLIENT while supplying compliant Products and keeping costs as low as possible.

2. Applicability and Order Contract

While this document is not an appendix to any "Subcontracting and Services Contract", it MUST be considered as a standalone document and applies to all subcontracting operations outside the CLIENT's organization or group. Any valid "Subcontracting and Services Contract" WILL prevail over any contrary clauses in this QAA document. Likewise, the Product specifications WILL prevail if this QAA document deviates from the Product requirements.
Product-specific additions MAY be made to the QAA document by the CLIENT to specify certain defined rules and adapt the document to requirements associated with the Products or processes.
This Agreement applies to all Products and services supplied to the CLIENT by the SUPPLIER throughout the validity period of this agreement. The SUPPLIER guarantees that all Products manufactured or sold to the CLIENT comply with the Specifications, the requirements of the CLIENT and industry Standards. The SUPPLIER MUST verify that it has received all necessary and sufficient information to manufacture ~~of~~ the Product or service requested and that such information is correct, or if not, the SUPPLIER MUST inform the CLIENT so that it may be corrected.
From the Effective Date (compliance matrix validation date) this document will replace all prior bilateral agreements and contracts on the same subject made by the CLIENT and / or the SUPPLIER.

2.1 Trading relationship – third parties

In case third parties take over certain business transactions of BUYER and / or SUPPLIER this agreement includes expressively the duties of the 3rd party. The responsibility of the transferred activities remains at CLIENT and / or SUPPLIER.
The SUPPLIER MUST prepare and maintain risk management and security plans both for its own activities and supplies and for subcontracted services.

2.2 General provisions

The Supplier confirms that persons working to execute the Order from its organization **and from its own suppliers** are aware of the Quality Management systems (QMS) as well as their impact on the QMS as:
- Quality policy
- Applicable quality objectives
- Their contribution to the QMS, product or service conformity, and product safety
- Implications of not conforming with the QMS' requirements
- Relevant changes to documented information
- The importance of ethical behavior

It is the Supplier's responsibility to request the additional information that it believes to be necessary for the execution of the Order.

All communications, announcements, notifications, notices, agreements, acknowledgements or

approval actions have to be made in be in writing only and recorded by the SUPPLIER and the CLIENT. They should ensure that the information or documents have both reached the addressee and arrived within the expected period.
All communication and delivery of documents have to be made in English language. All contractual documents or appendices or associated documents therefore should or may be in English language too.

The SUPPLIER states that it fully understands English language and agrees to receive official documents or communications citing the parties in English, or written entirely in English.

3. Definitions

(Note: a detailed list of the acronyms used in this document is in Appendix I)

3.1 Terms

- The word MUST, SHALL or HAS, in the text implies obligation and requirement. No departure from such obligation / requirement may be made without a formal agreement between the Parties.
- The word SHOULD in the text indicates a recommendation or advice concerning an action such as a request. In the absence of contrary indication, the Parties agree to follow such recommendation or advice.
- The word WILL in the text indicates an intention deriving from an obligation.
- The word MAY in the text indicates a possibility. It does not imply an obligation.

3.2 Day

All references to "days" SHALL, unless otherwise specified herein, mean "calendar day" unless otherwise provided.

3.3 Products

Product or Products means the deliverable defined by the Specifications and ordered against a PO.

3.4 Dead On Arrival (DOA) Products

- On receipt by the CLIENT, any Product which does not comply with the Product requirements and Specifications specified by the CLIENT and agreed by the SUPPLIER.
- Any Product with a latent defect (broken, cracked, uncrimped, etc.) which appears within 45 days of its delivery to the CLIENT (or within any other period agreed by the SUPPLIER and CLIENT).

3.5 Non-compliance/ Epidemic failure

Epidemic Failure is defined by a common non-compliance mechanism and the non-compliance rates below, and may be linked to design and / or manufacture.
Any occurrence of a potential accident risk which may cause damage including personal injury (or death), fire, explosion, toxic emissions or other similar dangers is considered as an Epidemic Failure. Epidemic non-compliance rates are monitored for all deliveries from the SUPPLIER to the CLIENT after series production starts. The measurement reference date MUST be the Product manufacture date (Product date code). The condition for epidemic non-compliance is fulfilled when any Product presents a non-compliance rate exceeding the following thresholds:

a) 1% DOA or a total of 5 units with the same defect (the higher of the two)

b) 5% in the first 4 months of operation
c) 3% in the first year of operation
d) 2% per year until the end of the guarantee.

The "Epidemic Failure period" is identified by the first appearance of the non-compliance mechanism which can be confirmed from production records, and is at least associated with the manufacturing date of the last lot delivered. This definition does not imply liability on the part of the SUPPLIER, which must be identified by root cause analysis, it just defines the conditions for the whole life of the Product whenever a Failure is considered as epidemic.

3.6 Acceptable Quality Limit (AQL)

The Acceptable Quality Limit (AQL) is defined as the largest quantity of Non-Conforming Products in a certain quantity of samples for which a lot is acceptable. The standard AQL 0.4 L II sampling plan MUST be used pursuant to the ISO2859 standard (optionally ANSI z1,4 AQL 1.0 C=0) if no other agreement has been signed for given Products. The SUPPLIER's sampling plan may be an alternative if it covers an identical sample quantity and has the same acceptance criteria. In such event, the sampling plan MUST be added as a supplement to this document (see Appendix II: Sampling Plan).

3.7 Quality targets per Product

Quality targets may be set by the CLIENT's organization as an addition to this Agreement for specific Products made by the SUPPLIER on request by the CLIENT.

3.8 Out of Box Audit (OBA)

Out of Box Audits MUST be done by the SUPPLIER on the basis of the sampling plan preferably approved by the Parties in accordance with the arrival audit standard used by the CLIENT to ensure that the delivered lot is within the AQL parameters (see paragraph 3.5).

3.9 Returned Material Authorization (RMA)

RMA is a procedure for returning defective Products to the SUPPLIER for repair; the defective Product MUST only be returned with the valid RMA number (RMA#) issued by the SUPPLIER.

3.10 Guarantee

The standard guarantee period is 36 months from the date of receipt of the goods in the CLIENT's premises.
If shipment is made by the SUPPLIER directly to the CLIENT's customer, the SUPPLIER MUST inform the CLIENT of the shipping date.

3.11 First Pass Yield (FPY)

The First Pass Yield (FPY) is calculated according to the final dimensional and/or functional audit of manufactured Products. The FPY is the percentage of Products successfully passing the final dimensional and/or functional audit and post-repair Products passing those audits at the first time. Further Yield or testing figures may be requested by supplementary documents for subsequent process steps to provide insight to process quality.

3.12 Product Quality Standards

The Product Quality Standards MUST be an integral part of the Product Specifications sent by the CLIENT to the SUPPLIER.
After approval by the SUPPLIER, these standards apply to all chapters of this document.

However, for all the points defined by this document, the standards relating to:
• Requirements for Electronic or Mechanical Assemblies
• Retouching of Electronic or Mechanical Assemblies

• Acceptability of Electronic or Mechanical Assemblies

MUST apply. These standards are listed in Appendix III and apply to all chapters of this document. Other standards remain potentially applicable to CLIENT Products.
Given the markets targeted by the CLIENT, the standards potentially applicable to CLIENT Products are too numerous to be listed in this document.
The CLIENT MUST include in its manufacturing or Specifications files the specific standards applicable on manufacture of the Product or on provision of services by the SUPPLIER to the CLIENT. The SUPPLIER MUST know and understand the terms and requirements of the standard stated in the manufacturing file or Specifications. If any standard is unknown to it, the SUPPLIER MUST obtain it before making its offer. On receipt of the SUPPLIER's quotation, the CLIENT MUST understand that the offer of services or manufacture will be done in compliance with the standards stated in the manufacturing file and / or the Specifications upon which the SUPPLIER based its quotation. By accepting the CLIENT's order, the SUPPLIER agrees to fulfil the services and / or manufacture in compliance with all standards applicable to the Product or services requested.
The SUPPLIER MUST PERFORM all checks necessary to guarantee compliance with the specified requirements. All Supplies will undergo a final audit as defined in the manufacturing file or Specifications (audit methods, resources, sampling rules and acceptance criteria), and the results will be recorded.

If all or part of the services are subcontracted or co-contracted, the SUPPLIER MUST set out all requirements and standards to which they are subject and stating the level of risk; it may not in any circumstances authorize any exception without the written consent of the CLIENT. If any problem arise, the SUPPLIER will be exclusively liable to the CLIENT or its customers

3.13 New Product Introduction (NPI) and Special Process

The SUPPLIER MUST enable the introduction to manufacture of new Products as the opportunity arises and without problems and based on an approved RAMP-UP phase. The Parties agree to form an NPI team comprising one or more representatives of each Party who have approved professional and technical skills.
The SUPPLIER MUST apply all resources necessary to provide support to the CLIENT's organization during the Product introduction. The CLIENT MUST therefore involve the SUPPLIER as early as possible in the development phase to enable the SUPPLIER to provide dedicated DFM reports (Design For Manufacturing) and DFT reports (Design For Testing) if necessary to guarantee the smooth introduction of Products launched by the CLIENT.
During this new Product introduction phase, the SUPPLIER MUST identify and provide the CLIENT with the list of Special Processes implemented and any document proving their mastery, their regular requalification and the regular training and requalification of operatives during their implementation. A Special Process means an operation whose compliance cannot immediately or economically be audited. **The following list of processes is to be considered at least as a special process: paintwork, surface treatment, gluing, varnishing, torquing, sheathing, crimping, soldering. The SUPPLIER MUST also present the list of special processes implemented by its own suppliers. The SUPPLIER MUST be able to demonstrate to the CLIENT that all Special Processes used on the Products are fully controlled by its organization and/or its own suppliers.**

Parties MUST agree together, at a First Article Inspection (FAI), the end of the NPI process and the launch of series production Products.
During this FAI review, in addition to the inspection of 100% of the ribs of a representative article of the serial production, it will be verified in particular that the SUPPLIER has an industrial file established during the NPI phase. The Parties will agree concerning the documents on that industrial file and could comprise (as an example and not limited to):
• A Definition File (or technical specification) validated by the CLIENT.
• The list of qualified sources (manufacturers) of Materials.
• The list of means and their piloting software.
• The list of requirements for the implementation of the processes.

• The Manufacturing and Control Record, established in accordance with the requirements of the Definition File or Technical Specification and including:
  • The Manufacturing and Control synoptic representing the steps of the process of manufacturing, assembly and control of the Supply.
  • The supply chain mimic describing the flow of information (information system, supply plan ...) and the physical flow.
  • The ranges specifying the operating procedure and the manufacturing and control instructions using the necessary tools and ingredients and describing the special precautions specific to the Product, to be respected throughout the production cycle.
  • Controls applicable to Materials.
  • The final control procedure including the sampling rules, the methods, the means used, the acceptance criteria and the documents recording the inspection results.
• The maintenance record of the industrial resources.
• The industrial risk analysis (AMDEC ...) specific to the Supply.
• The acceptance procedure which defines the necessary and sufficient conditions of acceptance.
• Identification of key features and their measurement of capability.
• The design briefs of the means of production and control that he has developed including Specifications and procedures for implementing test programs as well as acceptance procedures and acceptance reports.
• A validation file for all means (developed or provided) to ensure compliance of these means.
• The table of skills required of the operators.
• The interfaces, cables, software, programs and source files are part of the specific tools, as well as the associated documentation (definition files, maintenance files).

The serial production will be cut into two phases, P1 and P2 (initiated by the end of the NPI process).
Parties MUST agree on the transition from P1 to P2.
The Parties MUST agree together on the nature of the production controls, as well as the associated sampling rates, to be implemented in each of the two phases, except for the production phase P1, for the duration of which a sampling rate 100% for each of the controls approved by both parties MUST be applied.

3.14 Configuration management

The SUPPLIER has a configuration management system describing the items managed in configuration management and the principles adopted for their development.

The SUPPLIER will take account of the documents required for fulfilling the order using the latest issues provided by the CLIENT.

The SUPPLIER will inform the CLIENT if there is any change in the configuration management documents. Any development affecting the interchangeability and maintenance of the Supply requires the prior written agreement of the CLIENT before being applied. For this purpose, the SUPPLIER will provide the CLIENT with a study proving "non-regression" (maintenance of performances attained prior to introduction of the development).

The SUPPLIER will deal with the following in configuration management:

- All data provided by the CLIENT (Definition files, Industrial Specifications, contractual data etc.)
- The different items associated with manufacture and audit of the Supply
- Proof and authentification reports.
- Documents to be delivered or delivered to the CLIENT.

4. Certification and Standards

The SUPPLIER MUST manage and maintain a Quality Management System which at least complies with the following standards:

- ISO 9001: Quality Management System – Requirements

- ISO 14001: Environmental Management System

If the SUPPLIER is not certified for these standards or if the above standards are not applied, it MUST prove that its own Quality System is equivalent.

The SUPPLIER is obliged to provide the CLIENT with details of:

- The organisation it has arranged for Quality, orders and maintenance
- Methods for guaranteeing maintenance of skills and the qualifications of its personnel

The CLIENT MUST be immediately informed of any change in or expiry of Certification.
The SUPPLIER therefore undertakes to include in every delivery a certificate of compliance in accordance with the EN ISO CEI 17050-1 and 17050-2 standard or equivalent.
As the CLIENT is certified ISO/TS22163 (IRIS Certification: International Railway Industry Standard) and EN9100, the SUPPLIER MUST at least fulfill the requirements of that standard passed down from the CLIENT.

5. Supplier, Materials and Process Management

If necessary, the SUPPLIER MUST source, assess and choose its own suppliers in compliance with a documented procedure.
The SUPPLIER MUST impose all the requirements expressed herein on its own suppliers which participate in making the CLIENT's Products.
The SUPPLIER MUST regularly monitor the performance of its own suppliers (SUPPLIER's AVL) using Key Performance Indicators (KPI) enabling verification of their ability to:

- Deliver equipment, raw materials, components, electronic sub-assemblies (Backplanes, chassis power supply, etc.) and all types of equipment.
- Provide sheet metal, machining, stamping and surface treatment services (painting, anodizing or other), wiring and any other service necessary for manufacturing the CLIENT's Products in compliance with the standards relating to those Products and with their Specifications.

The SUPPLIER MUST identify and provide the CLIENT with a list of the special processes used and any document proving their mastery, regular requalification and the regular training and requalification of operatives using them. Special Process means an operation whose compliance cannot immediately or economically be audited. The SUPPLIER MUST also present the list of Special Processes implemented by its own suppliers and the proofs of control.
The Quality of items not listed in the SUPPLIER's AVL (provided by or purchased from the CLIENT) MUST be granted by the CLIENT. The SUPPLIER MUST advise the CLIENT of any Quality problem in these items. The SUPPLIER s obliged to supervise incoming quality and to take appropriate action to
ensure constant supply quality avoiding any harm to BUYER or BUYER's customers.
The SUPPLIER MUST
hold records to prove its efforts taken for improvement and supply chain control..
When appropriate, the SUPPLIER MUST apply a Second Source policy. Any amendment to the AVL MUST be approved by the CLIENT. The SUPPLIER MUST provide a list of all its suppliers not included in its AVL before starting series production.

5.1 Use of Original Parts and compliant raw materials

The SUPPLIER is obliged only to use only original parts or raw materials in accordance with the CLIENT's AVL, and from suppliers licenced by the manufacturers of original parts The SUPPLIER MUST grant, via the appropriate procedures, that only compliant raw materials (type, composition, alloys, etc.), and new material – not refurbished – is used throughout the period of operations.
The original manufacturer's body markings, labels and date codes must be legible and must not be damaged in any way. In the case of raw materials (metals, alloys, etc.), the SUPPLIER MUST be able, via the appropriate procedure(s), to grant the origin and Quality of the raw materials supplied (material notices and certificates, trial reports for such certificates). This data MUST be accessible to the CLIENT.
Even if there is a temporary shortage of materials, the SUPPLIER undertakes only to obtain

supplies from qualified suppliers listed in the AVL of the SUPPLIER and/or CLIENT and not to use temporary vendors, such as brokers or others.

Any deviation from this procedure MUST be communicated to the CLIENT Quality Manager according to the process defined below:

- A request for derogation of supply is to be sent to the quality department of the CLIENT (in which appears the reference of the component, the quantity, the name of the broker, the Product concerned, the numbers of OFs if they are already known) in order to obtain the CUSTOMER's agreement before the order is placed at the Broker.
  After analyzing this request for exemption, if the CUSTOMER gives a favorable opinion, it is a prior agreement subject to the test results (in particular specified in the "comments" section of the waiver request).

- On receipt of the components, the SUPPLIER performs the appropriate controls and tests (packaging, RX, wettability, marking, weldability ...) and sends the CLIENT the results associated with a derogation request (including the component reference, the name of the broker, the product concerned and indicating the OFs numbers, the quantity of cards, the serial numbers of the cards, if known, and the initial supply derogation request) for use on one or more OFs.

- If some of the components remain in stock, the reference of the supply derogation request allows the SUPPLIER to identify that lot broker. In case of use on other OFs, a derogation request MUST be sent to the CLIENT before each use.

The SUPPLIER’s liability is at least but not limited to 5 times the Product price if a counterfeit part and/or non-compliant raw materials are used for its manufacture, multiplied by the quantity of Products delivered to the client.

It is understood that the CUSTOMER agrees that the SUPPLIER's liability may be limited to the value of the delivered item multiplied by the number of Products delivered. If the damage suffered by the CUSTOMER should exceed this value, after negotiation between the Parties, the SUPPLIER will use his liability insurance.
The CLIENT MUST have the right to require the SUPPLIER to pay as described above even if the SUPPLIER is able to repair the counterfeit assembly. If the CLIENT is obliged to deal with claims from its customers concerning the counterfeit parts, the SUPPLIER MUST assume all or some of the liability for such claims according to its degree of involvement in the prejudice concerned.
More detailed rules may be drafted and detailed in a separate document entitled "Original Parts Agreement".

5.2 Materials

The Materials of the SUPPLIER or its suppliers will comply on delivery with the following requirements:

- A certificate of conformity complying with the EN ISO CEI 17050-1 and 17050-2 standard.
- No more than three different date codes for each order item and one date code per packaging unit (strip, tray, roll, etc.).
- Age conditions:
  - ✓ Standard material (semiconductor technology): < 5 years.
  - ✓ Material with limited storage life: date code or manufacture date < 1 year (e.g., chemical capacitors, rotating machines, bearings, batteries, etc.).
  - ✓ Material with a limited lifespan: in the absence of provisions stated on order, the residual lifespan on delivery is greater than or equal to 50% of the overall lifespan of the Material.

5.3 SUPPLIER Arrival Audit

The SUPPLIER is responsible for adapting the Materials Arrival Audit according to requirements specific to the Products and Materials.
The audit of incoming goods must secure supply of good quality components.
All components which have or have had Quality problems MUST be systematically identified and tested.
Repeated non-compliance on delivery by a supplier MUST entail freezing of future purchases from that supplier. In such event, the CLIENT MUST be informed.
Audit on Arrival at the SUPPLIER MUST include obtaining, checking and preservation of Certificates and Notices of conformity for components, bare printed circuit boards, raw materials received (Material Origin Certificates), and reports of trials/tests/analyses associated with such certificates.
Measurements or analyses of Materials are done by sampling to verify the reports of trials/tests/analyses associated with the Certificates.

The SUPPLIER MUST ensure that its dealers and distributors provide it with the original manufacturer's declaration of conformity for the items supplied (or that they refer to the declaration in their own statement, which will not release them from producing the declaration if required for probative purposes). The SUPPLIER MUST ensure that its dealers and distributors provide it with the original manufacturer's documentation including appropriate means for identifying the items supplied and establishing the link between such items and the documentation provided.
The SUPPLIER MUST undertake to keep the said documents indefinitely and to give them to the CLIENT if the parties' trading relationship ends.

5.4 Environmentally-friendly Materials and Processes

The SUPPLIER MUST use environmentally-friendly materials and processes to make the Products and provide services, and ensure that this rule applies to the services/deliveries of its subcontractors.
The SUPPLIER MUST ensure that the Products it supplies and packaging material it uses comply with environmental rules and laws (such as ISO 14001, WEEE, RoHS, REACH and others), and in particular with EUROPEAN laws and regulations on dangerous and prohibited products. This obligation implies adequate waste management.
On request by the CLIENT, the SUPPLIER MUST provide the Certificates of Conformity with laws and regulations concerning the Products. An environmental certificate of conformity MUST be provided by the CLIENT for Articles not listed in the SUPPLIER AVL (i.e. for suppliers and materials chosen and/or supplied by the CLIENT).
The SUPPLIER grants that the Products comply with Directives 2011/65/EU and 2015/863/EU on permitted maximum concentration values of such substances.
The SUPPLIER undertakes actively to monitor the regulations under environmental laws to which its services or those of its suppliers or subcontractors may be subject. The SUPPLIER MUST immediately inform the Client of any change in environmental standards affecting the SUPPLIER's services or the CLIENT's Product.

5.4.1 Using non-RoHS elements

The CUSTOMER's Products MAY contain elements, compounds or components not compatible with the standards indicated in chapter 5.4.
If the Product nomenclature so requires, the SUPPLIER may supply components that may contain substances such as lead (Pb) or any other substances not compatible with the standard or directives listed in chapter 5.4.
The method of assembling, or welding,the components, painting or doing a surface treatment on the Product may use compounds such as lead (Pb) or any other substances not compatible with the standard or directives listed in chapter 5.4 if the Product Specifications requires them.
Product containing components that are prohibited in RoHS Specifications or that have been manufactured or repaired using methods that use RoHS prohibited compounds will be referred to as Non-RoHS Products.

5.4.2 Manufacture and Repair of RoHS and Non-RoHS Products

The CLIENT's product line consists of RoHS and non-RoHS Products. SUPPLIER MUST do every effort to separate non-RoHS productions or repairs from Products or repairs of Products that must comply with the environmental standards and regulations listed in chapter 5.4.
The SUPPLIER MUST ensure that its personnel are qualified and competent to differentiate between the two types of production and repairs and that no accidental contamination can occur. Upon request from the CUSTOMER, the SUPPLIER MUST prove that no element prohibited by the environmental standards and rules mentioned in chapter 5.3 is in the CLIENT's Product if the Product Specifications prohibit their presence.

5.5 Foreign Object Debris /Damage (FOD) Prevention Program

Supplier shall maintain a FOD prevention program to ensure products or deliverables are manufactured in accordance with drawings or specifications and free from foreign object damage or debris. National Aerospace Standard NAS-412 shall be used as a guideline to comply with this requirement. The supplier shall inspect deliverables for foreign objects/debris and shall certify that such items are free from any foreign materials that could result in FOD. The sellers FOD Control Program shall be documented and effective. This requirement shall be flown down to sub-tier suppliers wherever applicable to prevent entry of FOD into the deliverable product

5.6 ESD Control Program

When items delivered under the P.O. are Electrostatic Discharge Sensitive (ESDS), the Supplier shall have an ESD control program in place which prevents ESD damage during all phases of fabrication, testing, handling, storage, and packaging for delivery. Nonmanufacturing Distributors shall handle, store, package and identify such items under an ESD control program which ensures continuation of the manufacturer's ESD control program. Shipping containers shall have prominent marking/identification which identifies contents as ESD sensitive

5.7 Embargo, Forced and Child labor employment

A. Embargo: The SUPPLIER must comply with international laws or embargoes that restrict or prohibit the import, export, or domestic trading in goods, technologies or services, the handling of certain products, as well as capital and payment transactions.

B. Human and labor rights requirements

The SUPPLIER and its own suppliers working on Client's Products SHALL respect a Code of Conduct spelled out principles of the International Labor Organization (ILO) conventions and United Nations Universal Declaration of Human Rights.
They should have zero tolerance against:
- Child labor as prohibited by international standards and relevant national laws and regulations.
- Forced labor, modern slavery or human trafficking,
- any kind of discrimination or harassment against the employees

5.8 Environment

The SUPPLIER SHOULD pursue sustainability and environmental protection initiatives, including reduction of waste, emissions and energy use, utilization of renewable energy and water conservation.

5.9 Conflict Minerals

Supplier agrees to comply with all US Laws and CLIENT's policy relevant to usage, restrictions of conflict materials sourced from the Democratic Republic of the Congo (DRC) or adjoining countries.

6. Audit in the SUPPLIER's premises

The CLIENT, or a third party appointed by the CLIENT, MAY carry out qualification or supervisory audits to analyse proof of due compliance with requirements specified herein and/or approve a process and the quality of a Product, in the SUPPLIER's premises or those of any of its suppliers.

Such audits may be held at any time during normal working hours, after at least two (2) weeks' notice from the CLIENT save in exceptional situations when the parties agree that the audit may be held with shorter notice.

The Parties MUST agree the time, place and procedure for Audits.

To guarantee audit effectiveness, the CLIENT should provide the SUPPLIER in advance with an audit check-list or printout of processes it wishes to audit.

The SUPPLIER MUST:

• Guarantee the CLIENT access to its facilities and MUST make qualified personnel available throughout the audit period.

• Assist the CLIENT in spot checks of records and samples.

• Ensure the availability and accessibility of all documents proving mastery and regular requalification of special processes.

• Ensure that all operating methods and documents proving command, verification, maintenance and training and regular requalification of personnel involved in special processes are available and accessible. A Special Process means an operation whose compliance may not immediately or economically be audited. The following list of processes is to be considered at least as a special process: paintwork, surface treatment, gluing, varnishing, torquing, sheathing, crimping, soldering. The SUPPLIER must also present the list of special processes implemented by its own suppliers. The SUPPLIER must be able to demonstrate their control to the CLIENT.

• Be able to produce its risk management and security plans both for its own activities and supplies and for subcontracted services.

Each audit is recorded in an Audit report by the Audit Team leader and in which all conclusions, improvement action, action managers and action closure dates MUST be stated.

The SUPPLIER undertakes to carry out all action deriving from the audit and approved by both Parties.

The SUPPLIER undertakes to provide the CLIENT on request with the results of audits it carries out on suppliers contracted to make the CLIENT's Products. The SUPPLIER undertakes to keep the results of its audits for 3 years after ceasing to work with the CLIENT.

7. Information obligations

7.1 Quality Alerts

A Quality Alert is any fact which may affect the Quality of supplies or production and which MAY affect the Quality of the Products made as concerns operation, and the Quality of manufacturing and reliability.

All Parties agree to a bilateral duty to inform as soon as a Party has proof of a Quality Alert situation, e.g., on delivery of a non-compliant component, equipment or raw materials, detection

of non-compliant raw materials (type, composition, alloys, etc.), wrong or counterfeit components, process disparity, major quality drop in Quality data such as FPY, epidemic failures, etc.
This type of information MUST be shared as quickly as possible between the various parties affected and the process partners. The SUPPLIER MUST record all this information.
Finished Products and Work In Progress (WIP) potentially affected MUST be checked by the SUPPLIER if there is a Quality Alert.
Components, electronic sub-assemblies (e.g., chassis power supply), equipment or raw materials which do not fulfil the required Quality criteria MUST be identified and immediately withdrawn from stock.
All action decided by the SUPPLIER MUST be communicated to the CLIENT.

7.2 Process Change Notification (PCN)

Prior to any process change which MAY potentially affect the form, result and operation of the Product, the SUPPLIER MUST not only inform the CLIENT thereof in writing and obtain its written agreement, but MUST also provide the CLIENT with all information detailing the change context and reports stating that before its application, the modified process was verified and approved. Such changes may require renewal of the Product approval process.
Generally, change means:

- Changes in equipment or materials (including equipment associated with the manufacturing process).
- Modifications to the manufacturing, assembly or wiring process.
- Relocation of all or part of a production line.
- Replacement of all or part of the production equipment.
- Procedural change (soldering, machining, stamping, bending, screen printing, gluing, sheathing, surface treatment, paintwork, checks, inspections, tests, etc.).
- Outsourcing of sub-assemblies.
- Notices of obsolescence (EOL or End Of Life) or Part Number Change (PCN or Part Number Change Notification) or of raw materials from suppliers / manufacturers.

Problems or issues analysed during a New Product Introduction phase (NPI) MUST be entered in a Design For Manufacturing (DFM) report and are not subject to the PCN procedure as described above.
Parties will agree on the document to be used for the PCN communications.

7.3 Performance report (on request)

The SUPPLIER will establish and maintain a continuous improvement process based on recognised methodologies (PDCA etc.) enabling performance targets to be reached (punctuality, Quality, cycles, costs). The implemented methodologies and their effectiveness will be explained in regular meetings.
Certain key figures MAY be specified by the CLIENT which will associate them with value limits. Such values MAY be used as thresholds in process performance tests and for triggering dispatch of information notices stating that these thresholds have been reached.
The SUPPLIER MUST inform the CLIENT without delay if any approved limit is exceeded.
This procedure is linked to production and inspection tests such as the Out of Box Audit (OBA).
See paragraph 10.2 for requested records,

7.4 Use of Information and Confidentiality

The SUPPLIER MUST submit to the procedures described in this document and therefore MUST take appropriate precautions to guarantee information security and recovery.
Even if there is no valid Non-Disclosure Agreement (NDA), the SUPPLIER MUST guarantee information confidentiality and MUST NOT disclose any informationat any time provided by the CLIENT to a third party without the prior written consent of the CLIENT.
Disclosure of Product information to its subcontractors or suppliers is not included in the above

definition.

8. OBA Inspections and Tests

The objective of any shipment by the SUPPLIER is direct delivery the CLIENT's stock or direct delivery to the final customer. Therefore controls / inspections MUST be the sole responsibility of the SUPPLIER.
Controls MUST be performed according to the latest valid version of IPC-610 Class 2 or according to specific requirements approved by the Parties.

Products MUST initially be verified during the NPI process, by performing First Article Inspection (FAI) and then Industrial Control on the first Product of any new orders. Following this validation, the CLIENT delegates to the SUPPLIER verification activities in the case of direct delivery to the final CLIENT.

The SUPPLIER MUST prove (compliance declaration, acceptance report, etc.) that pre-delivery verification has been done:

- Identification, quantity, appearance, marking.
- Performance meets technical Specifications
- Technical and administrative documentation.
- Packaging appropriate for delivery method.

The final inspection by the SUPPLIER will be recorded in the results verified and approved by the qualified representative and identified in the SUPPLIER's competency matrices.

8.1 Source audit at SUPPLIER's premises and AQL

The SUPPLIER is obliged to provide the CLIENT with details of the out of box audit (OBA) resources used as the audit-at-source method for any Product made and ready to be sent to the CLIENT.
The out of box audit (OBA) MUST be done by the SUPPLIER as stated in Chapter 3.7, or on request, and MUST be based on the jointly approved sampling plan and MAY vary according to the Product.
Failure to reach the Acceptable Quality Limit (AQL) WILL directly entail notice of stoppage of deliveries to the CLIENT. The following action (e.g., inspection of 100% of Products made) must then be carried out by the SUPPLIER. The CLIENT is obliged to remove the delivery stoppage on proof of acceptable inspection results; this includes removing the prohibition on delivery to meet temporary shortages. The inspection method must take account of past Quality data, e.g., OBA, NCR or others.

8.2 Arrival Audit at CLIENT's premises and rejection of delivered lots

The CLIENT MAY itself decide to conduct spot arrival audits to check the Quality of deliveries, based on the sampling method defined in Chapter 3.5 or by following the same procedure as that used by the SUPPLIER.
The CLIENT may at its discretion decide to reject all or part of a delivered lot if the level of acceptable Quality based on the approved sampling plan has not been reached. The CLIENT WILL immediately notify the SUPPLIER of rejection of the delivered lots.
The SUPPLIER MUST compensate the CLIENT for its loss linked to the arrival audit if the expected Product Quality target has not been reached.
It is understood that the Parties MUST make every effort to ensure that the amount of compensation is the fairest. After negotiations between the Parties, the CUSTOMER will invoice the SUPPLIER for the amount thus estimated and negotiated.
A burn-in MUST be mutually approved after notification of rejection of a batch.
Debugging (sorting inoperative units / with or without latent defects / refused for insufficient Quality) MAY be used to improve Product availability if there are claims based on Quality. The cost of debugging and error correction used by the CLIENT MUST be wholly borne by the SUPPLIER.

Each Party will pay transport costs for one-way shipping. To reduce return times, the SUPPLIER MUST use the fastest transport method.
The SUPPLIER is obliged to take all necessary measures to make up for the production delay and the required Quality as quickly as possible.

9. Corrective and Preventive Actions

Claims must be managed by using an 8D methodology or other equivalent method to guarantee control of the action implemented and efficient errors correction. The SUPPLIER MUST acknowledge any corrective action request to the CLIENT within two (2) days. The SUPPLIER MUST initially provide the CLIENT with a preliminary Breakdown/Failure Analysis and an action plan. The dates for provision of problem root cause and closure of corrective and preventive action MUST be jointly approved.
A Quality communication channel, operating on a regular schedule, may be opened to enable problems to be anticipated or to discuss improvement opportunities.

9.1 Communication rules

To facilitate communication while avoiding cross talks, claims management MUST be conducted through single representatives of the Parties. Initially, or if no representative is appointed by the parties, the Quality Managers will conduct the communication process.
These two persons will steer the overall correction process assisted by their local specialists, but communication will at all times be effected under their supervision. Both representatives MUST at all times have an overview of the development and status of the problem correction which MUST be recorded in a form.

9.2 Epidemic non-compliance

9.2.1 Process

If Epidemic Non-compliance occurs, the SUPPLIER acknowledges that time is of the essence. The SUPPLIER MUST support and assist the CLIENT in identifying all possible sources and causes of the Epidemic Non-compliance. The SUPPLIER undertakes to reply within two (2) days to provide timely error correction support.
Epidemic Non-compliance MUST be cured by focusing efforts on the following priorities:

- Working with the CLIENT to identify a short-term alternative / solution to render compliant the finished Products not yet shipped by the SUPPLIER.
- Working with the CLIENT to identify corrective / preventive action. Such action WILL be implemented and production schedules MUST be established to enable the CLIENT to replace the Non-compliant units on its customer's site.
- Working with the CLIENT's Quality group promptly to respond to corrective / preventive action requests and ensure rapid implementation of such action.

9.2.2 Liability of SUPPLIER

The liability of the SUPPLIER MUST at least extend to Product lots identified as having been manufactured and tested in a mutual location during the same period of "Epidemic Non-compliance" (see Paragraph 3.4). The liability of the SUPPLIER is limited to the types of non-compliance described in Paragraph 11.1, which generally include all types of production-linked non-compliance but which exclude types of non-compliance associated with Product design which is the CLIENT's liability.
The SUPPLIER's liability expressly includes any claim or penalties of CLIENT's customers related to theEpidemic Failure situation.

9.2.3 Extended costs and repairs

The SUPPLIER MUST repair Non-compliant Products without charge in any Epidemic Non-compliance situation as described in Chapter 3.4.
The SUPPLIER MUST pay all associated costs (additional work and equipment required for repair/exchange, transport, overstocks, etc.) generated by the Epidemic Non-compliance if it is proved that the root cause of the epidemic non-compliance is linked to SUPPLIER operations, as described in the definition of non-compliance in Chapter 11.

The SUPPLIER MUST bear, within the limits set by its insurance policy, a maximum of € 10,000,000, the associated costs generated by the Epidemic non-compliance situation if it turns out that the root cause is related to the SUPPLIER's operations. After negotiations between the Parties, the CLIENT will bill the SUPPLIER for the amount so estimated and negotiated.

The SUPPLIER MUST drive failure analyses and is responsible for implementation of corrective and preventive action resulting from such analyses. The SUPPLIER MAY exceptionally involve the CLIENT if there are problems associated with component or sub-assembly suppliers chosen and imposed by the CLIENT and not listed in the CLIENT’s AVL. The SUPPLIER, as buyer, is responsible for transmitting potential claims to the suppliers.

The SUPPLIER is expected to be involved throughout the supply chain without exception, as usually specified in Production contracts.

The extended repair service does not apply to standard RMA returns.

10. Process control – Risk Management, Handling and Records

10.1. Traceability

Forward and reverse Product traceability MUST be guaranteed by the SUPPLIER.

Forward traceability enables the different parts constituting the Supply to be traced (traced part: e.g., component date code, Material Origin Certificate, etc.).

SUPPLY → CONSTITUENT → TRACED PART

Reverse traceability enables all constituents and Supplies which have used a traced part to be traced:

TRACED PART → CONSTITUENT → SUPPLY

TRACED PART means the raw materials used (Material Origin Certificate), products such as glue, paint, surface treatment products and tools and products used **in special processes.**

If the Products are non-compliant, forward and reverse traceability MUST at least include identification of non-compliant production using date codes, Material Origin Certificates and serial numbers so as to limit the amount of re-inspection or material recall.

Traceability of ***metallurgical*** raw materials MUST enable identification of master melt with or without heat treatment.

This data MUST be archived for at least 10 years after the date of the end of life of the Product or the material concerned, and this procedure MUST be adapted according to the requirements of the market segment concerned.

Traceability data records MUST enable the SUPPLIER, for any Supply for which it is liable, to produce for a homogeneous manufacturing lot:

- The Definition and Manufacture and Audit files used
- The monitoring documents tracking:
  - ✓ Identification of the applied configuration
  - ✓ The phases and/or operations done internally or outsourced
  - ✓ The certified operators carrying out the operations
  - ✓ Non-compliance and corrective action taken
  - ✓ Acceptance documentation and compliance declarations
  - ✓ Proof of qualification of the processes used
  - ✓ Deviation
  - ✓ Any missing material (not following normal manufacturing process)
  - ✓ Product or material serial number and identification
  - ✓ Identification of components, electronic sub-assemblies (backplanes, chassis power supply, etc.), raw materials (Material Origin Certificates), products (glue, paint, surface treatment products, etc.) tools and equipment used (including supplier/manufacturer references)
  - ✓ Results for the production audits done in the SUPPLIER's premises
  - ✓ The Process Configuration Information (e.g. configuration of and adjustments to machines used in the production or manufacturing lines, configuration of test software, etc.) and details of wiring and special processes used.

Marking of Supplies is the SUPPLIER's responsibility.

The SUPPLIER MUST fulfill the requirements stated in the order and its appended documents. Marking will be indelible and resistant to the trials specified in the applicable documents. If marking is wholly or partially impossible, the information will be placed on the packaging.
Any repaired or modified Supply will bear:

- The initial serial number
- The model or type reference.
- The Amendment resulting from the Supply repair or modification.

10.2. Records

The records below MUST be supplied by the SUPPLIER to the CLIENT on the latter's request and MUST be archived for at least 10 years after the end of production in an electronic format readable and usable by the CLIENT. The archiving period MUST cover at least the appropriate guarantee period.

- Quality Alerts.
- FPY
- Out of Box Audit (OBA) results
- Records of delivery delays and their root causes
- Records of Non-compliance and root causes
- Corrective and preventive action and progress plans associated with records of delivery delays and non-compliance
- Repair databases based on the Product serial number (RMA).
- Material certificates and all documents related to material traceability and mechanical trials, products, operations and special processes.

Other records may be additionally specified on request by entities of the CLIENT or its customers.

10.3. Archiving traceability records and data

The archiving period stated above MUST be observed, The SUPPLIER MUST both inform the CLIENT before the archiving period expires and provide all electronic records using a format accepted by the CLIENT.

10.4. Product Handling – Protection of Supplies

The infrastructure and procedures used by the SUPPLIER enable compliance of Supplies to be achieved and protected from all kinds of pollution (fingerprints, dust, damp, etc.)

If electronic material (components, electronic sub-assemblies (chassis power supply, etc.)) is incorporated in the SUPPLIER's Product manufacturing process, the SUPPLIER MUST ensure that the entire production process fulfills the requirements of the latest valid version of the IEC 61340 standard for Electro Static Discharges (ESD), to avoid any potential damage to the components and finished Products during handing and the assembly process. ESD-sensitive Products must be appropriately marked.

10.5 Industrial risks and accidents

The SUPPLIER will analyse all risks which might disrupt its industrial process. The analysis will cover development risks and industrial production risks specific to the Supply, Materials and processes used.
The SUPPLIER :

- Quantifies the risks.
- Identifies the root causes.
- Defines risk reduction measures.
- Quantifies residual risk.
- Checks the effectiveness of risk reduction measures
- Defines adapted monitoring tools.

For this purpose, the SUPPLIER is responsible for choosing the criticality analysis methodology: FMECA or equivalent.

The SUPPLIER will use and maintain a risk management policy consistent with identifying, analyzing, quantifying and correcting its main susceptibilities to accidental risks such as fire, explosion, water damage, natural occurrences, machine breakage and other risks of the kind usually covered by insurance against damage to property and consequential business loss occurring on its industrial site(s) or those of its key suppliers, and which might entail interruption of Product deliveries to the CLIENT.

The SUPPLIER will implement any prevention/protection training measures for reducing the likelihood of such accidents occurring and their impact on business loss.
The SUPPLIER will standardize, test and update an emergency or business resumption plan enabling it to guarantee continuity of its deliveries to the CLIENT after occurrence of a major accident.

On request, the SUPPLIER will provide the CLIENT with a list of the main identified risks and remedial action plans. The SUPPLIER will comply with and implement the recommendations of its insurers on fire prevention and protection.

CYBER SECURITY

Contractors must provide adequate security for covered contractor information systems," to include implementing the security controls of National Institute of Standards and Technology (NIST) SP 800-171, as soon as practical but no later than Dec 31, 2017. A "covered contractor information system" is defined as an unclassified system that is owned, or operated by or for, a contractor and that processes, stores, or transmits covered defense information. Please refer to DFAR 252.204-7012 Safeguarding Covered Defense Information and Cyber Incident Reporting

10.6. CLIENT Performance Indicators

The indicators specified below apply to all Products for which a Supply agreement has been signed. The target values will be specified in supplements specific to each Product.

Reliability – Delivery dates (OTD)
The indicator based on On Time Delivery (OTD) MUST enable assessment of fulfillment of the SUPPLIER's undertakings on delivery dates and the quantities delivered. It will therefore be based on variations between dates upheld and dates of all orders received by the CLIENT, and those between the promised and delivered quantities so as to assess the SUPPLIER's reliability. On receipt of the Products, the quantity shipped and the shipment date of that quantity will therefore be compared with the expected delivery date and the expected quantity of goods for that delivery.
The difference between the expected and actual delivery dates is calculated in working days, based on the days worked in the factory of the SUPPLIER which provided the services or manufactured the CLIENT's Product.
To assess delivery reliability (quantity of goods on time), each receipt of Goods is compared with the required delivery quantity. The percentage variation between the two dates is calculated and each receipt of Goods is assessed according to a scale.

Quality of deliveries (in%)
The indicator MUST provide proof of a delivery without non-compliance by the SUPPLIER. This indicator is the accumulated non-compliance rate for all Products received. It is defined in % (Products Per Thousand) and counts all returned Products in relation to the quantities received.

11. Product repairs

The CLIENT MUST be entitled to return any Non-compliant Product or material to the SUPPLIER or personally to make the Product or material compliant in its own facilities if the SUPPLIER is unable to meet the deadline required by the CLIENT's customer. Generally, it is assumed that the same Products or materials, identified by serial number, are returned to the CLIENT after repair by the SUPPLIER.
Standard exchanges may be made in certain cases as specified below, for Products or materials from a repair center, compliant Products or materials intended for exchange and which have been able to be repaired or reused in the past. Any standard exchange MUST be notified to the CLIENT, and the change of serial number MUST be stated. A standard exchange MUST always be made with a Product or materiel of the same reference (Part Number) and same configuration HARDWARE and SOFTWARE. The guarantee terms will stay the same if there is a standard exchange during the guarantee period.
The SUPPLIER MUST provide all repair report records monthly, using a digital format approved by the Parties. The structure of the repair data MUST be identical to or at least comparable with that used by the CLIENT and MUST at least include information on the serial number of the Product, (RMA) number, a description of the repair operations and the list of components changed on the Product.

11.1 Repair under Guarantee

During the approved guarantee period as described in Chapter 3.9, the SUPPLIER is liable for all defects in Products returned by the CLIENT if the reason for return is linked to one of the following:

- Component, material or equipment failure;
- Latent defects (abnormal dysfunction of the Product when used normally);
- Faulty assembly/montage/manufacture ;
- Faulty soldering,
- Faults due to incorrect handing and blemishes (the SUPPLIER MUST NOT be held liable for faults caused by the CLIENT's customer);
- Marking errors;
- Damage connected with transport (as defined in the INCOTERMS specified in the Production Contract)

The SUPPLIER MUST therefore carry out the repairs at its own expense, including parts and labour,. If the Products are irreparable, the SUPPLIER MUST repay the CLIENT all Product costs or, preferably replace the defective units.
In the event of repair or replacement, the SUPPLIER MUST provide the CLIENT with a defect report for all non-compliant Products.
Each Party MUST bear only the cost of one-way transport for any return under guarantee.

11.1.1 Multiple Returns of defective Products

Products (based on serial numbers) returned for repair three times during the guarantee period for the same fault MUST be rejected and replaced by the SUPPLIER as described above. The CLIENT MUST therefore provide the SUPPLIER with detailed information on the fault. The CLIENT MUST be informed of a standard exchange and the change of serial number MUST be mentioned. The SUPPLIER will bear all transport costs for an exchange whenever equipment return is authorized. The defective Products MUST be returned to the SUPPLIER for fault analysis even after the third return requested by the CLIENT's customer.

11.2 Repair not under Guarantee

If the guarantee period has expired, the CLIENT and SUPPLIER will agree on certain repair tariffs for each Product. The SUPPLIER MUST provide the CLIENT with a repair quotation if no prior agreement on standard prices has been made. In such case, the CLIENT MUST confirm acceptance of the quotation before returning the material under RMA.
The RMA procedure described in Chapter 11.3 is unchanged and therefore applies to the return of Products no longer under guarantee.
For any Product return outside the guarantee, the CLIENT MUST pay all transport costs (return journey for the material between it and the SUPPLIER's premises). The CLIENT MUST use INCOTERM DDP for shipment to the SUPPLIER of material not under guarantee and the SUPPLIER will ship repaired Products EXW to the CLIENT. The CLIENT is entitled to define contracts and choose its own carriers.

11.2.1Multiple returns of defective Products

A standard exchange of Products outside the guarantee MAY be made at the request and at the expense of the CLIENT.
This provision expressly excludes a standard Product exchange in the case of an Epidemic Failure when there is no feasible repair to prevent occurrence of the fault.

11.3 Repair management and treatment times

The CLIENT MUST request an RMA number (cf. Chapter 3.8) before any delivery and MUST advise the SUPPLIER of delivery. The SUPPLIER MUST provide the CLIENT with an RMA number within two (2) days of the request. The SUPPLIER MUST acknowledge receipt of any RMA dispatch within two (2) days and inform the CLIENT of any potential non-compliance of the delivered material.
For normal repair quantities, the treatment period MUST NOT exceed ten working days, the cycle commencing on receipt of the material and ending on return dispatch of the quantities concerned.
The CLIENT MUST give the SUPPLIER an agreed return date for each Product if the required return period is less than 10 days so that the SUPPLIER can schedule its capacity.
The treatment period (TAT) MAY be mutually adapted to the SUPPLIER's capacity and MUST be clearly communicated to the CLIENT before signature.
RMA material quantities must not be accumulated by the CLIENT in excess of the SUPPLIER's 10-day repair capacity. Repaired Products may be accumulated to reduce transport costs, subject to the period specified above.
The SUPPLIER MUST provide the CLIENT with an improvement plan when it expects the repair period to exceed the specified 10 working days. If the improvement plan reveals that the cycle period will exceed 20 working days, the CLIENT and SUPPLIER MUST agree to an immediate standard exchange of RMA units.

Alternatively, the CLIENT MUST have the right to carry out the repairs itself as described in Paragraph 11.4 if a standard exchange does not enable the CLIENT to fulfill its obligations to its customer. If the CLIENT decides to carry out the repairs itself, it MUST inform the SUPPLIER in advance.

11.4 Repair by the CLIENT

The CLIENT's customers may require the overall repair period to be 10 working days or less. In this particular case, if the SUPPLIER is unable to comply with the time requirements using its own resources, the CLIENT MUST have the right to carry out the repairs in its own premises even if the Products are under guarantee. The SUPPLIER MUST pay the repair costs based on the jointly-approved standard repair tariffs which must be specified in writing in an endorsement to this Quality Agreement specific to the Product.
Even if the CLIENT repairs Products made by the SUPPLIER, the SUPPLIER remains liable for all obligations related to its service, save for any finishing affected by the repair ordered or done by the CLIENT.
The SUPPLIER will place Materials at the CLIENT's disposal enabling it to effect repairs and will supply any required additional repair Materials within the agreed lead times.

11.5 NTF treatment and Prices

The SUPPLIER MUST immediately inform the CLIENT if a certain threshold of returned Products is reached; these are returns for which the SUPPLIER is unable to find any defect but exceptionally applies NTF (No Trouble Found) measures such as testing. The parties MUST jointly agree to reduce this type of consequence. The CLIENT undertakes to assess the NTF causes with the SUPPLIER and to reduce the incidence of NTF by applying an improvement plan.
If there is no major improvement within 3 months of the CLIENT being informed of the NTF, the SUPPLIER may request that the repair be done by the CLIENT, as specified below.
If the quarterly NTF rate exceeds 30% of total returns during that period, the SUPPLIER will be entitled to claim 15 Euros for each NTF Product over the 30% ceiling.

12 Forms to be used

12.1 Claim Management Form – 8D

The SUPPLIER 8D template MUST be used at all times for any claims communication.
Communication MUST at all times include information on the status of the correction process applied.
Extra information on the different phases of error correction MAY be added, e.g., to describe analysis of the root cause.

12.2 Manufacturing Order Form

The initial order to launch series production of a Product MUST be made by the CLIENT to the SUPPLIER in writing.

12.3 Notice of Product Change

The CLIENT MUST communicate Product Changes to the SUPPLIER in writing.

13 Export Control

The SUPPLIER will understand and observe regulations concerning export control and final destination (Export Control).

14 Termination of this Quality Assurance Agreement

This QQAA may be terminated or renegotiated by the CLIENT or SUPPLIER at any time after written notice provided at least 6 months before commencement of the termination process. If the existing Production Contract is cancelled, this Quality Assurance Agreement will end at the same time.
If the contract is terminated, the commitments undertaken in Chapter 15.1 MUST survive.
On termination of this QAA the SUPPLIER MUST, on written request from the CLIENT, return or destroy all written information and documents received, and any copies of information Owned by the CLIENT. The SUPPLIER MUST certify in writing that no copy of information owned by the CLIENT has been kept by the SUPPLIER.

15 Liability of SUPPLIER

In addition to the Quality procedures targets and measures approved above, the SUPPLIER is liable for all claims concerning its services which the CLIENT or its customers MAY make throughout the Product's life.
Even if all appropriate measures are taken, the SUPPLIER will remain liable for late delivery caused by its errors.
The Quality Targets and Improvement Measures agreement will not release the SUPPLIER from its obligation to indemnify the CLIENT for prejudice arising from non-compliant deliveries. This liability extends to any subsequent prejudice caused to the CLIENT's applications.
The SUPPLIER confirms that it will cover loss or damage up to 10,000,000 Euros in the event of personal injury, financial loss or infringement of ownership.
The SUPPLIER may cover such liability by insurance and MUST prove the same in writing by providing a cover certificate to the CLIENT.

15.1 Continuance of Rights and Obligations

The rights and obligations listed below will remain valid for two years after termination or the expiry dates referred to in the Chapters of this QAA:

7.4 Use of Information and Confidentiality
10.3 Archiving traceability records and data
11 Product repairs
15 Liability of SUPPLIER.

16 Autonomy of Agreement provisions

The provisions in this QAA MUST be considered as separate terms and conditions. Should one or more provisions be declared null and void or inapplicable by a competent body, the provision(s) will be deemed to have been cancelled and the remaining provisions or terms herein will retain their full force and effect insofar as they continue to reflect the intention of the Parties. In such event, the Parties will negotiate in good faith to find a mutually satisfactory replacement provision.

APPENDIX I : ACRONYMES

AVL:	Approved Vendor List.	LTB:	Last Time Buy
CAR:	Corrective Action Request	LTR:	Long Term Return rate
CR:	Cost Reduction	MFG:	Manufacturing
DOA	Dead On Arrival	MGMT:	Management
DDP	Delivery Duty Paid(Incoterms 2000)	MOQ:	Minimum Order Quantity
DDU	Delivery Duty Unpaid(Incoterms 2000)	MRP:	Master Resources Planning
DPMO:	Defect per Million Opportunities.	NA:	North America
EC:	Engineering Change	NCNR:	Non Cancelable / Non Returnable
ECO:	Engineering Change Order	NDA:	Non Disclosure Agreement
ECR:	Engineering Change Request	NPI:	New Product Introduction
EXW:	Ex – Works(Incoterms 2000)	NRE:	Non Recurrent Engineering
ERI:	Early Return Index	OBA:	Out of Box Audit
FA:	Failure Analysis	OTD:	On Time Delivery
FCA:	Free Carrier (Incoterms 2000)	PA:	Purchase Agreement
FIFO:	First In – First Out	PO:	Purchase Order
FG:	Finish Goods	PPV:	Purchase Price Variations
FGI:	Finish Goods Inventory	QBR:	Quarterly Business review
FPE:	First Piece Evaluation	RFQ:	Request For Quote
FT:	Functional Test	RMA:	Return Material Authorization
FTP:	File Transfer Protocol	RoHS:	Reduction of Hazardous Substance
IPR:	Intellectual Property Rights	VPN:	Virtual Private Network.
BUYER:	Corresponding Kontron subsidiaries	VMI :	Vendor Managed Inventory
KPI:	Key Performance Indicator	WIP:	Work In Process
NTF:	No Trouble Found	YRR:	One Year Return Rate
QAA :	This INDUSTRIAL QUALITY REQUIREMENTS APPLICABLE TO INDUSTRIAL SUPPLIERS		

APPENDIX II : SAMPLING PLAN

1. Object

This Appendix shows the sampling plan forming the basis of the AQL definition referred to in paragraph 3.5. of the Quality Assurance Agreement reference AQ.LI.100

2. AQL Sampling Plan 1.0 pursuant to ISO2859-1 standard.

Number of items in product lot	(Sample size – Ac/Rc)
1-50	All products - 0/1
50 - 150	50 - 0/1
151 - 500	50 – 1/2
501 - 1200	80 - 2/3

Ac Number of non-compliant items detected for which the lot is accepted

Rc Number of non-compliant items detected for which the lot is rejected

APPENDIX III: QUALITY REQUIREMENTS AND STANDARDS

1. Object

This appendix lists the Quality standards for the Product referred to in the Quality Assurance Agreement reference AQ.LI.100.

2. Quality Requirements and Standards for Product PCN

	Requirements / Standards/Applicable rules	Objectives	Details
PCBA Electronic Assemblies	Electronic Assembly Requirements IPC J-STD-001	IPC J-STD-001 class 2	
	Alterations / Modifications / Electronic Assembly Repairs IPC-7711/7721	IPC-7711/7721 class 2	Wiring repairs, even compliant with IPC-A-610 standards, are not allowed on rugged card (class RA et RC).
	Printed circuit board Acceptability	IPC-A-600 Class 3	
	Electronic Assembly Acceptability IPC-A-610	IPC-A-610 class 2	Wiring repairs, even compliant with IPC-A-610 standard, are not allowed on rugged card (class RA et RC).
	Boards for THALES	IS12040f	
Custom Mechanical Parts	Specific Instruction IS17037	Class B (aspect)	
Wiring	Requirements and Acceptance for Cable and Wire Harness Assemblies IPC-A-620A	IPC-A620A Class 3	Wiring services.
Manufacturing Quality	First Pass Yield (FPY) for electrical tests	>90%	Required action in event of failure: 1. Immediately inform KONTRON 2. Stop deliveries for entire lot. 3. Analyse root cause 4. Define Quality improvement targets 5. Achieve Quality improvement targets
Delivery Quality	Acceptable Quality Level (AQL) Under sampling plan: ISO 2859-1 and ISO 3951	AQL 0.4	Out of Box Audit by the SUPPLIER or arrival audit by the CLIENT
Quality on the ground	On the ground rejection rate	0.4%	Backplanes, power boards or any other type of integrated electronic part