



# SUPPLIER QUALITY AGREEMENT



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EXTERNAL,POLICY PRO-005,SUPPLIER  
QUALITY AGREEMENT

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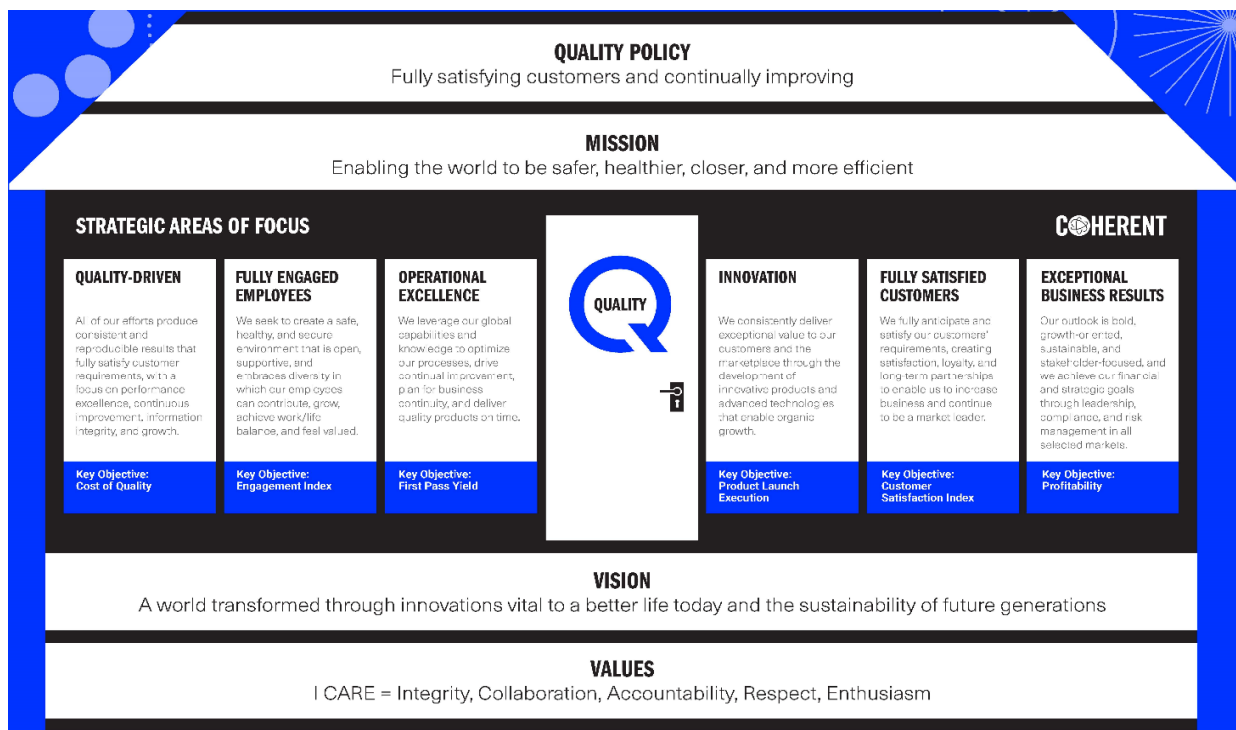
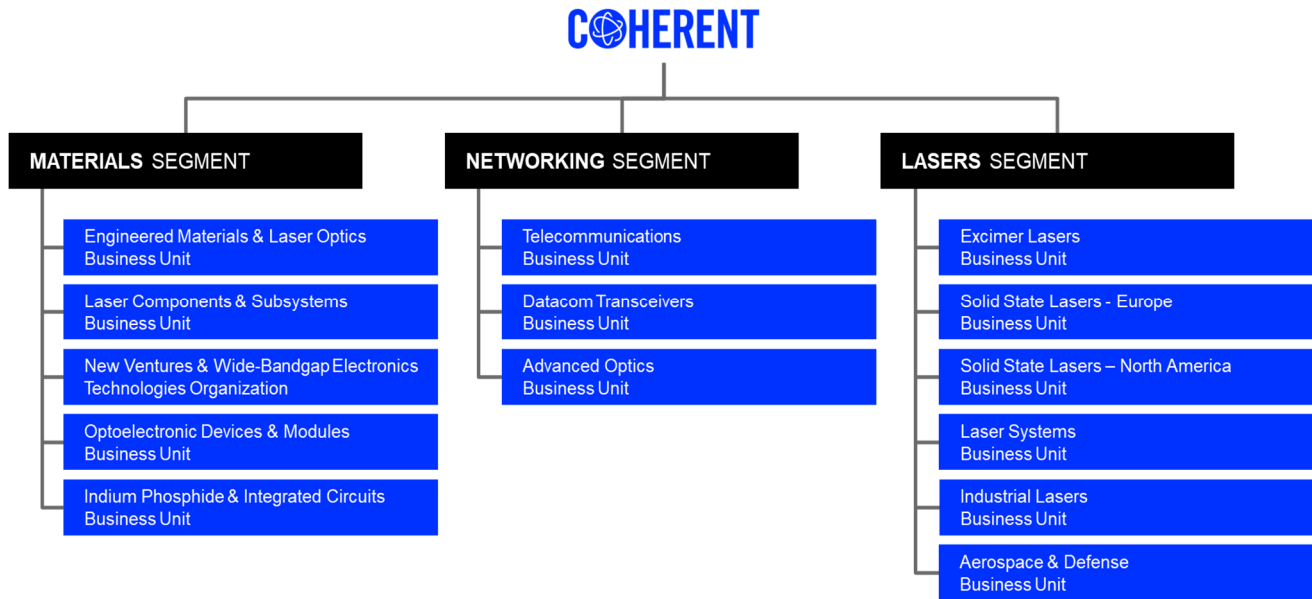
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**Corporate Overview:** Coherent Corp. (“Coherent”) empowers market innovators to define the future through breakthrough technologies, from materials to systems. We deliver innovations that resonate with our customers in diversified applications for the industrial, communications, electronics, and instrumentation markets. Headquartered in Saxonburg, Pennsylvania, Coherent has research and development, manufacturing, sales, service, and distribution facilities worldwide.

## Organizational Structure and Strategic House:



## INTRODUCTION

*Our Suppliers* Coherent recognizes the very important role our Suppliers have in the value we offer our customers. As an extension of our own operations, we rely on our Suppliers to provide material, products, and services which meet all requirements of Coherent contracts, applicable specifications, and the quality management requirements outlined herein.

*Purpose* Coherent serves diverse market sectors, such as industrial, optical communications, military, life sciences, semiconductor equipment, and consumer markets. The purpose of this manual is to inform Coherent Suppliers of the core expectations we have regarding the Suppliers' quality management systems, design requirements, and manufacturing process controls required for the purpose of doing business with Coherent. This manual describes what Coherent expects its Suppliers to do to ensure that all Coherent requirements and expectations are met.

*Scope* This manual applies to all Suppliers providing Coherent with materials, products, processing, and related services, including intra-company Suppliers and, when applicable, to sub-tier Supplier sources. The general requirements outlined herein do not supersede conflicting requirements in the Coherent contract or drawing, including applicable engineering specifications and process specifications, or applicable long-term agreement(s).

If a conflict is discovered between the contract, drawing, specification, or purchase order, the Supplier should contact the Coherent buyer immediately to resolve the conflict. Facility Maintenance, Repair, and Operations (MRO) items and general services are excluded from this process, except for the purchase order terms and conditions.

For those Suppliers working with Coherent on U.S. defense-related projects, please note that these Quality requirements apply in addition to division/location-specific Supplier Quality requirements. Please work closely with your Coherent Procurement interface to obtain any additional documentation as necessary.

*Requirements* In this manual, the terms "shall" and "must" mean that the described action is mandatory; "should" means that the described action is necessary and expected, with some flexibility allowed in the method of compliance; and "may" means that the described action is permissible or discretionary.

It is acceptable for Suppliers to engage with applicable Coherent Supplier Quality and Procurement personnel and negotiate exceptions to the Supplier Quality Manual and Agreement to reach an agreeable resolution. All negotiated exceptions to this agreement must be documented as a marked-up copy of this document signed by both parties.

*Questions* Questions concerning this manual should be directed to your respective Coherent Supplier Quality or Procurement interface.

*Download* Please visit [coherent.com/legal/](https://coherent.com/legal/) to get the latest version of this manual.

## 1. QUALITY SYSTEM REQUIREMENTS

Suppliers should maintain a Quality Management System (QMS) suitable to the products and services provided to Coherent that is certified by an accredited third-party certification body to the latest version of one or more of the following, as applicable:

- ISO 9001 - Quality Management System Requirements
- IATF 16949 - Quality Management System Requirements (Automotive)
- ISO 13485 - Quality Management System Requirements (Medical)
- AS 9100 - Quality Management System Requirements (Aerospace)
- TL 9000 - Quality Management System Requirements (Communication Tech)

In the absence of third-party certification, depending on the product, its application, value, and criticality, the Coherent Procurement and Supplier Quality representative may authorize the acceptance of other evidence of compliance. This may include second-party (Coherent) audit or first-party (self) assessment to the applicable criteria above, or to a set of alternative basic quality requirements (such as those described in a Coherent Supplier Quality Assessment checklist).

### 1.1 QUALITY MANUAL

Upon request, the Supplier shall furnish Coherent with a copy of the Supplier's Quality Management System Manual, which is to be current and approved by the Supplier's management, including or making reference to related documents. The quality management system documentation shall include Supplier's statements of a quality policy and quality objectives. Top management shall define quality objectives and measurements which should address customer expectations and be achievable within a defined period of time. The Supplier shall promptly notify Coherent of any substantive changes to the Supplier's quality management system or personnel.

## 2. SUPPLIER APPROVAL PROCESS

Coherent requires all Suppliers to be approved prior to the issuance of contracts/purchase orders. All Suppliers must be approved by Coherent regardless of approvals by customers and other entities.

### 2.1 SUPPLIER ASSESSMENT

The Supplier Approval Process may include the following:

- **Supplier Quality Assessment Tool (QAT)** - Coherent may request the Supplier to provide a copy of its quality management system certificate and/or complete a self-assessment of its business and quality management system and capabilities (i.e., quality, delivery, technology, cost, and continual improvement objectives).
- **Documentation Self Audit** - In those cases where a Supplier's quality management system has not been certified by an accredited certification body, Coherent may request a copy of the Supplier's Quality Manual and supporting procedures (and perhaps internal audit reports) to determine if the Supplier's quality management system meets Coherent requirements.
- **On-Site Assessment** - Coherent and/or its customers, due to product/process complexity or criticality, may elect to conduct on-site assessments of a Supplier's

product or process capabilities. As a result, findings may be issued. These assessments could include:

- Quality Management System (QMS) - if necessary, as a result of (or in conjunction with) product or process capability assessments, to determine whether the Supplier's quality management system meets one or more of the applicable standards, and is functioning effectively.
- Business and Manufacturing Operations -to determine whether the Supplier has the financial resources, production capacity, and other business resources needed to fulfil Coherent volume production needs and continuity of supply.
- Continual Improvement Initiative - to determine if the Supplier's culture, methods, and skills are present to actively pursue continual improvement.
- Technology Assessment - to determine whether the Supplier has the needed technical resources, including production and inspection equipment, facilities, engineering resources, Coherent-specified computer-aided design language/format, electronic commerce capability, etc.
- Sub-tier Supplier Control - to evaluate the effectiveness of the Supplier's sub-tier management processes and ensure that products or services procured from sub-tier sources and delivered to Coherent conform to an applicable Coherent requirement.

### 3. GENERAL REQUIREMENTS

The following set of general quality requirements applies to all Suppliers.

#### 3.1 COMPLIANCE TO CONTRACTUAL REQUIREMENTS

Upon accepting a Coherent contract, the Supplier is responsible for compliance to all contract (e.g., engineering drawing, specification, purchase order) requirements. All documents, drawings, and specifications, regardless of origin, are applicable to the Supplier when specified in the contract or documents referenced in the contract and are required to be used at all levels of the supply chain as applicable. Unless otherwise specified in the contract, the document revision in effect on the date of issue of the contract applies to the contract. Neither audit, surveillance, inspection, nor tests made by Coherent, representatives of Coherent, or its customer(s), at Supplier's facilities at any sub-tier facilities, or upon receipt at Coherent, relieves the Supplier of the responsibility to furnish acceptable products or services that conform to all contract requirements; nor does it preclude subsequent rejection by Coherent or its customers.

#### 3.2 COHERENT DESIGNATED SOURCES

Where specified by contract, the Supplier shall purchase products, materials or services from Coherent designated sources. However, the Supplier is responsible to ensure that items purchased from such sources meet applicable and quality requirements. If Supplier has a history of poor performance from a Coherent designated source, Supplier may appeal to Coherent with data proving such poor performance and request that consideration be given for an alternate source.



### 3.3 CONTROL OF SUB-TIER SUPPLIERS

The Supplier, as the recipient of the contract, is responsible for meeting all requirements, including work performed by the Supplier's sub-tier Supplier (also known as Sub-Suppliers or Subcontract Suppliers). When the Supplier uses sub-tier sources to perform work on products and/or services scheduled for delivery to Coherent, the Supplier shall include (flow-down) on contracts, to its sub-tier sources, all of the applicable technical and quality requirements contained in the Coherent contract, including quality system requirements, regulatory requirements, the use of Coherent designated sources, and the requirement to document and control key characteristics and/or key processes, and to furnish certifications and test reports as required. Coherent and its customers reserve the right of entry to sub-tier facilities, subject to proprietary considerations.

### 3.4 COUNTERFEIT PARTS

A "counterfeit part" is a part, component, module, or assembly whose origin, material, source of production, performance, or features are misrepresented. This term includes, but is not limited to, (a) the part was marked to disguise it or falsely represent the identity of the manufacturer, (b) the defective part and/or excess material scrapped by the original manufacturer, and (c) a part used, previously pulled, or retrieved and refurbished as "new." As used herein, "authentic" shall mean (a) genuine, (b) from the claimed legitimate source or implied by marking and product design offered, and (c) manufactured by, or under the authority and with the standards of the manufacturer who has legally applied its name and trademark for this model/version of the material. Supplier represents and warrants that only new and authentic materials are used in products delivered to Coherent and that the delivered products do not contain counterfeit parts. The Supplier must maintain a documented system (policy, procedure, or other documented approach) which provides for the prior notification and approval by Coherent before materials are purchased from sources other than original equipment manufacturers (OEMs) or original component manufacturers (OCMs). To further reduce the possibility of inadvertent use of counterfeit parts, Supplier can only buy genuine parts/components directly from OEMs or through OCMs/distribution chain. The Supplier shall provide Coherent, at the request of Coherent, OEM/OCM documentation authenticating the traceability of components to applicable OEM.

### 3.5 CONTROL AND RELEASE OF COHERENT-FURNISHED DOCUMENTS

Documents furnished by Coherent to the Supplier are furnished solely for the purpose of doing business with Coherent. Proprietary documents may be furnished to the Supplier in hard copy, electronic, or other media. The Supplier is responsible for controlling and maintaining such documents to preclude improper use, loss, damage, alteration, and/or deterioration.

Unless authorized by the Coherent in writing, the Supplier may not transmit or furnish any Coherent-furnished documents, or copies of such documents, to anyone outside the Supplier's business organization except to a sub-tier source used by the Supplier for performance of work on the Coherent contract. The Supplier shall return to Coherent, or purge electronic copies of, all proprietary documents with the last delivery of products or services on the contract. Coherent may request the Supplier to furnish objective evidence or certification that proprietary documents have been purged. The Supplier shall flow down the requirements to all sub-tier sources when such sources will be in receipt of Coherent proprietary documents during performance of work for the Supplier.

### 3.6 E-BUSINESS REQUIREMENTS

Many Coherent divisions currently use and are continually expanding the use of electronic business tools to facilitate day-to-day activities using electronic linkages between Coherent internal operations as well as with Coherent Suppliers and customers. Contracts, delivery schedules, notification of product rejections, requests for corrective action, etc. may be transmitted to Suppliers electronically, and Coherent expects that Suppliers will adopt these tools to reduce errors and improve efficiency. For a list of all business requirements and opportunities contact Coherent Procurement.

### 3.7 ELECTRONIC DOCUMENTS

The accuracy and authenticity of electronic documents and forms submitted to Coherent are of highest importance. The following rules apply and may be subject to review by Coherent at Suppliers' facilities:

- The issue of electronic documents and application of electronic signatures must be under the direct control of the individual whose name appears on the electronic document.
- The electronic signatures may only be applied at the place where the individual is located, and the individual must have direct access and responsibility for the products or services described in the electronic document.
- The application of the electronic signature certifies that the signature (individual) represents an authorized company official.

### 3.8 CONFIDENTIALITY

The Supplier shall ensure the confidentiality of Coherent contracted products and projects under development, and related product information, as well as intellectual property shared because of the working relationship.

### 3.9 BUSINESS CONTINUITY/DISASTER RECOVERY

The Supplier should have a business continuity plan which would allow for the safeguarding, storage, and recovery of engineering drawings, electronic media, and production tooling in the event of damage or loss. This plan should also contain contingency plans to satisfy Coherent requirements in the event of significant utility interruptions, labor shortages, equipment failure, single-point failure, and field returns.

### 3.10 DEDICATED TOOLING FOR COHERENT PRODUCT MANUFACTURING

In case of BTP (Build-to-Print) material where Coherent consigns dedicated tooling (or duplicated by Supplier for extra capacity), Supplier should maintain the tooling and report status based on Coherent tooling requirements in a routine manner. Supplier should work with Coherent Supplier Quality to monitor the aging of the tooling and repair/replace the tooling in time to prevent a product quality problem.

### 3.11 PRODUCT QUALIFICATION

The purpose of production part qualification and approval is to determine that all Coherent design and specification requirements are properly understood by the Supplier and that the manufacturing processes have the capability to consistently meet these requirements.

In all instances where a product is manufactured to a new design, for a new system, or for a new application, it is important that the Supplier and Coherent allocate responsibility for

assuring that all performance, endurance, maintenance, safety, and warning requirements are met. It is preferred that this allocation of responsibility be in writing.

### 3.12 FIRST ARTICLE INSPECTION

As a minimum, a First Article Inspection (FAI) is required to initially qualify a part/process for Supplier approval. Furthermore, a new FAI may be requested if there is an extended gap of time since last production. The FAI requires that all features and characteristics of the design specification and control plan be inspected and verified prior to production. Actual measured values shall be recorded, as opposed to general statements of conformance or other notations simply indicating acceptance, and include the following sections:

- Reliability test result
- CPK for CTF parameter
- Part material certificate
- Approved design for manufacturability (DFM)
- Supplier process management plan
- Green compliance survey

When submitting an FAI report, the Supplier should use the form provided by Coherent. Otherwise, an equivalent form may be used.

In addition to an FAI, Suppliers shall, as a minimum, develop a Control Plan by identifying special product and process characteristics that are key to achieving quality. The Supplier shall also include those special characteristics designated by Coherent in the drawing, specification, or contract.

## 4. PROCESS CONTROL

This section defines the basic necessities for Suppliers to control their manufacturing processes.

### 4.1 SPECIAL CHARACTERISTICS

The Supplier shall demonstrate conformity to those special characteristics designated by Coherent through means of documentation and appropriate control methods. In addition to any special characteristics identified by Coherent, the Supplier shall also review, identify, document, and control other product and process characteristics that are key to achieving quality.

### 4.2 ERROR-PROOFING

The Supplier should use error-proofing devices and techniques as a form of process control, especially for repetitive functions, difficult tasks prone to mistakes, or where the cost of error is high.

### 4.3 WORK INSTRUCTIONS

The Supplier shall prepare documented work instructions, as necessary, for all employees having responsibilities for the operation of processes that impact product quality. These instructions shall be maintained, current and accessible, for use at the workstation. Supplier should utilize visual controls (e.g., color pictures, real samples) whenever possible and appropriate.

#### 4.4 CONTROL OF MONITORING AND MEASURING DEVICES

The Supplier shall determine the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements. As a minimum, where necessary to ensure valid results, measuring equipment shall:

- be calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded;
- be identified to enable the calibration status to be determined; and
- be identified to implement GR&R (attribute GR&R or Kappa for manual inspection) as necessary.

#### 4.5 STATISTICAL PROCESS CONTROL

Where specified in the Control Plan, the Supplier is required to apply effective statistical process controls. Unless specific SPC requirements are provided by Coherent, Suppliers should consult the Statistical Process Control (SPC) manual published by AIAG for guidance, methods, examples, and related reference information.

#### 4.6 PREVENTIVE MAINTENANCE

The Supplier should identify key process equipment and provide resources for machine/equipment maintenance activities and develop an effective planned total preventive maintenance system.

#### 4.7 SOURCE INSPECTION

Supplier's products or services may be subject to source inspection by Coherent, representatives of Coherent, or applicable government or regulatory agencies. Source inspection requirement will be included on the contract and may apply at any and all operations performed by the Supplier or the Supplier's sub-tier sources, including prior to delivery of products to Coherent. The Supplier shall provide the necessary access, equipment, and resources required to effectively accomplish the source inspection.

#### 4.8 SHELF-LIFE CONTROL

With each delivery of materials or products that have a limited or specified shelf life, the Supplier shall furnish data that shows (a) the cure or manufacture date, (b) expiration date or shelf life, (c) lot or batch number, and (d) when applicable any special handling or storage requirements. Unless otherwise specified by contract, drawing, specification, or PO, for all shelf-life-limited materials or products delivered to Coherent, the remaining shelf life shall be a minimum of 50% of the total shelf life for the material.

#### 4.9 TRACEABILITY

Supplier shall ensure, document, and furnish positive traceability of each individual product as applicable to:

- Raw material lot#
- Operator of manufacturing and inspection process
- Equipment or fixture
- Rework process
- Software, program, and test spec

#### 4.10 ESD-SENSITIVE DEVICES AND ASSEMBLIES

Any components, materials, or assemblies that are susceptible to electrostatic discharge (ESD) damage must be controlled and processed at the Supplier within an acceptable ESD program consistent with ANSI/ESD S20.20 or IEC 61340-5-1. Antistatic or static-dissipative packaging material must be used for all ESD-sensitive components and assemblies. The packaging must be clearly identified as containing ESD-sensitive material.

### 5. CHANGE CONTROL

The Supplier is responsible for controlling changes and notifying Coherent of all changes to the approved part design, manufacturing process, or site. Any change to products that impacts the fit, form, or function of the product must be approved prior to implementation. Coherent sites with advanced Quality Management Systems may require Suppliers to sign a PCN agreement.

#### 5.1 DOCUMENT AND PROCESS/PRODUCT CHANGE CONTROL PROCESS

The Supplier shall have a process to ensure that relevant versions of applicable documents furnished by Coherent (as well as those specified of external origin) are available at points of use.

The Supplier is responsible for the timely review, distribution, and implementation of all Coherent engineering standards/specifications and changes in accordance with the schedule required by Coherent. Timely review should be as soon as possible and shall not exceed two working weeks. The Supplier shall maintain a record of the date on which each change is implemented in production. Implementation shall include updated documents.

#### 5.2 SUPPLIER CHANGE REQUESTS

Suppliers shall not make changes to their processes, location, equipment, material, product design, or any change which may affect product design or function without written approval from Coherent for:

- Correction of a discrepancy on a previously submitted part;
  - Product modified by an engineering change to design records, specifications, or materials; or
  - Any planned changes by the Supplier to the design, process, or manufacturing location, such as:
    - Use of other material than was used in previously approved part or product
    - Production from new, additional, replacement, or modified tools, dies, molds, patterns, etc.
    - Production following upgrade or rearrangement of existing tooling or equipment
    - Production from tooling and equipment transferred to a different plant site or from an additional plant
    - Change of sub-tier Supplier for parts, non-equivalent materials, or services (e.g. heat treating, plating, etc.)
    - Product produced after tooling has been inactive for production for 24 months or more

- Change to test/inspection method - new technique (no effect on acceptance criteria)
- For bulk materials: new source of raw material from new or existing Supplier, or change in product appearance attributes, etc.
- Use of any non-conventional manufacturing methods such as electrodischarge machining (EDM), electrochemical machining (ECM), laser or abrasive water jet metal cutting, flame spray coatings, etc.
- Before submitting to Coherent a request for a permanent change to a Supplier-controlled design, the Supplier shall review the FMEA and Control Plan, as applicable, to ensure that all process-related issues have been addressed and resolved. Coherent may require the Supplier to submit an updated FMEA and Control Plan prior to approval of such permanent changes. Coherent may also require other portions or all of the related qualification process to be repeated. In some cases, Coherent may elect to review Supplier-proposed permanent changes at the Supplier's facility.
- To request a permanent engineering change, the Supplier shall use the Part/Process Change Notification form and submit it to Coherent.
- To request a one-time or temporary deviation, the Suppliers shall submit a request to Coherent.

### 5.3 CHANGE TYPES

Coherent defines changes as follows:

Major: a change that may impact the form, fit, function, or reliability of the product.

Minor: a change that does not impact the form, fit, function, or reliability of the product, but should be disclosed to the customer to avoid unconformity of materials.

- Major changes:
  - Change in form, fit, or function
  - Change to product design, specification, or reliability
  - Change in manufacturing facilities, location, or key equipment within the plant
  - Change in subcontractor or outsource factory
  - Change to key manufacturing process or testing, including but not limited to manufacturing flow, manufacturing techniques, testing, and inspection requirements
  - Change to key production and testing equipment, tooling (including fixtures, molds, etc.)
  - Change to critical materials used to manufacture products
  - Changes to software in a delivered product or to software that plays a material role in testing the conformity of the product
  - Changes to hardware in a delivered product, e.g., using different components regardless of their compatibility; changes to the chemical or physical composition of the item
  - Change of personnel in key positions
  - Change of compliance to regulatory agencies
  - The reuse of production line after a stoppage of 12 months (or period to be specified by different BU or products)
  - Part discontinuity or end of life



- Minor changes:
  - Change to packing material and packing method
  - Change to logo, label, marking, or other document changes
  - Change to product traceability (serial # or series # naming rule)
  - Manufacturer name change

#### 5.4 MINIMUM ADVANCE DAYS

Minimum advance days are required with different change types. Unless otherwise specified by BU or site, the minimum required days in advance to implementation are as follows:

- ≥180 days in advance to product discontinuity
- ≥90 days in advance to major change
- ≥30 days in advance to minor change

### 6. CONTROL OF NONCONFORMING MATERIAL

For nonconforming products supplied to Coherent, including those that reach a Coherent customer, the Supplier must cover all costs to correct the nonconformance.

#### 6.1 SUPPLIER REQUEST FOR NONCONFORMANCE DEVIATION

- A Supplier shall not knowingly ship product that deviates from the drawing, specification limits, or design intent without prior written authorization from Coherent Supplier Quality. If such a condition exists, the Supplier may petition Coherent Supplier Quality, in writing, to allow shipment of the product under a written nonconformance deviation.
- If requested by Coherent Supplier Quality, the Supplier must send samples of such nonconforming items to Coherent for evaluation. The cost of shipping, inspection, and testing to determine the potential acceptability of such product will be charged to the Supplier.
- Coherent approval of a deviation is specific to the products for which it has been submitted and approved and shall not be construed as a permanent engineering change. The Supplier must begin work immediately on corrective action. In all cases, the Supplier shall fully contain all product suspected of being nonconforming. In addition, nonconforming product may be returned to the Supplier at Supplier expense, or the Supplier may be required to sort any suspect product already shipped to Coherent sites or be charged back for the cost of sorting by Coherent. Any parts shipped to Coherent that have been approved for deviation shall be clearly identified as such externally on the box, container, or other packaging, and shipping documentation inside each box shall contain a copy of the Coherent-approved deviation document.

#### 6.2 CONTROL OF REWORKED PRODUCT

- “Rework” in Supplier process is defined as additional operations that are not part of the basic production process flow that will bring the product into full compliance with applicable drawings and specifications. Instructions for rework, including re-inspection requirements, shall be accessible to and utilized by the Supplier’s appropriate personnel. All rework shall be documented and accepted by Coherent Supplier Quality. On the other hand, “repair” is defined as using alternative manufacturing techniques,

methods, materials, or processes that may not bring the product into full compliance with applicable drawings and specifications. RMA repairs are not allowed without written approval from Coherent.

- For Coherent parts returned to Suppliers for rework, the instructions for rework, including rework flow, method, and inspection requirements, should be approved by Coherent Supplier Quality before performing rework. Supplier should keep traceability data for the reworked parts. The reworked parts and packing should be clearly labeled in order for Coherent to identify them from normal parts.

### **6.3 RETURN MATERIAL AUTHORIZATION (RMA)**

- Suppliers are expected to provide a Return Material Authorization (RMA) within a maximum of 3 working days after notification of rejected material at Coherent.

## **7. PACKING, LABELING, DELIVERY, AND RECORD RETENTION**

Preservation, packaging, labeling, and shipping methods must comply with common industry practices and Coherent requirements specified on the contract.

### **7.1 PRESERVATION**

In order to detect deterioration, the condition of product in stock should be assessed at appropriate planned intervals. The Supplier should use an inventory management system to optimize inventory turns over time and should assure stock rotation, such as First In First Out (FIFO).

### **7.2 PACKAGING**

The Supplier must adequately plan for packaging design and process surveillance to prevent product contamination, deterioration, or loss and to eliminate shipping damage. Suppliers should provide expendable packaging or returnable containers, where appropriate, that provide for sufficient density and protection from any likely damage that may occur. Expendable materials and packaging must meet local and national standards for safe disposal and/or recycling. Antistatic liquid is not allowed to be used for the package material.

### **7.3 CERTIFICATE OF CONFORMANCE**

When required, shipments to Coherent must be accompanied by a Certificate of Conformance (CoC) that contains the part number, date code and/or serialization, shipment quantity, shipment date, packing slip number, and a statement of conformance to the purchase order requirements. When required, raw material should be accompanied by a Certificate of Analysis (CoA). The Supplier is fully responsible to flow down these requirements, as necessary, to sub-tier Suppliers and to maintain records of such sub-tier Supplier material certifications.

### **7.4 LABELING**

Labeling and bar code requirements may vary among Coherent divisions. Coherent will provide the Supplier with the necessary specifications.

### **7.5 DELIVERY**

The Supplier should systematically inform Coherent of any delay in delivering product and provide a new dispatch date. Supplier must work with Coherent to provide best delivery possible if delayed. The Supplier is responsible for additional transport costs due to delays.



## 7.6 RECORD RETENTION

The Supplier shall retain quality records for a time period specified by the Coherent contract or related reference documents. Upon request, the Supplier shall be capable of retrieving and delivering required records to Coherent within 48 hours from the time of the request by Coherent. Supplier should provide/upload outgoing data to Coherent before shipment when Coherent requires it.

## 8. CONTINUAL IMPROVEMENT

Suppliers should define a process for continual improvement. A copy of the Supplier's continual improvement program shall be furnished to Coherent upon request.

### 8.1 PROBLEM-SOLVING PROCESS

Suppliers should use a closed-loop corrective action process whenever a problem is encountered internally or upon notification from Coherent.

### 8.2 SUPPLIER CORRECTIVE ACTION REPORT/8D

Coherent may issue a request for a Supplier Corrective Action Report (SCAR) to the Supplier when nonconforming material, components, or assemblies are found. When a formal reply is requested (whether hard copy or electronic media), the Supplier should use the 8D Problem-Solving Report template provided by Coherent, or other convenient media of equivalent content.

When documenting the root cause, the Supplier shall consider the underlying reasons:

- Establish team and distribution list
- Identify the problem
- Determine interim containment actions
- Analyze the cause
- Generate potential solution
- Select/plan/implement the corrective action solutions
- Evaluate results/verify effectiveness
- Standardize and recycle

Unless otherwise requested by Coherent when notified, the Supplier shall respond to a request for corrective action as follows:

Required Action	Timeline (From initial notification by Coherent)
The Supplier shall promptly acknowledge receipt of notification and communicate to Coherent the immediate containment actions to be taken.	<i>Within 24 hours</i>
The Supplier shall provide an update of the containment plan to Coherent during the interim period. This update must include: <ul style="list-style-type: none"> <li>Confirmation that the Supplier has identified all suspect products in process, in stock, in transit, and potentially at any Coherent site by lot number, Coherent contract number, and quantity.</li> <li>Additional specific containment actions needed to be taken by the Supplier and/or Coherent.</li> </ul>	<i>Within 72 hours</i>
The Supplier must submit a completed Supplier Corrective Action Report (SCAR) indicating the permanent actions taken, or to be taken, to prevent recurrence of the same problem, to prevent the occurrence of similar problems, and the applicable effective dates.	<i>Within 10 business days*</i>

\*If the Supplier needs a sample for FA to compile the 8D Problem-Solving Report, the clock starts from the day Supplier receives the FA sample.

Statements from the Supplier indicating that the corrective action is to alert or retrain the operator, and/or increase inspection, alone, are NOT acceptable corrective actions. These kinds of actions would be considered insufficient and do not address the real underlying root cause(s) of why the Supplier's policy, instructions, process, procedure, and/or system allowed the problem to develop and occur, and not be detected by quality controls.

Supplier shall monitor the implementation and verify the effectiveness of permanent actions. Coherent encourages Suppliers to collect and review data on at least 25 lots.

### 8.3 LESSONS LEARNED FROM QUALITY ISSUES

Suppliers shall update FMEA and document the lessons learned in an appropriate system that is accessible by production. Coherent requests Suppliers to train the lessons learned to production people and encourage Suppliers to distribute the lessons learned to relevant parties like sub-tier Suppliers, subcontractors, and other departments.

### 8.4 CONTINUAL IMPROVEMENT PROGRAM

Suppliers shall have programs to effectively manage continuous improvement, including:

- Continuous improvement scope and objectives (target setting),
- Continuous improvement organization and structure,
- Identification of improvement opportunities,
- Follow-up of punctual and continuous improvement actions,
- Definition of metrics,

- Identification and records of lessons learned
- Preventive action plans based on observed risks

## 9. SUPPLIER PERFORMANCE

Coherent conducts Supplier performance reviews (SPRs) with contract manufacturers (CMs) and critical Suppliers on a quarterly or annual basis.

A scorecard is applied to measure and evaluate these Suppliers' performance from a Technology, Quality, Responsiveness, Delivery, Cost and Environmental, Social, and Governance perspective. If performance deficiencies are identified, a meeting with the Supplier's management is necessary to elevate and drive Supplier corrective action and improvement plans.

Supplier Status based upon scorecard results:

Result	Grade	Relationship
90 to 100 Points	A	Premium Supplier
80 to 89 Points	B	Preferred Supplier
70 to 79 Points	C	Accepted Supplier
60 to 69 Points	D	Developing Supplier
<60	E	Unaccepted Supplier

Business reward associated with Supplier scorecard result:

Level Strategy	A	B	C	D	E
Allocation % Limit	80%	70%	50%	10%	0%
NPI RFQ	Yes	When Needed	When Needed	Exceptions Only	No
Strategic Partnership	Yes	Possible	No	No	No
SPR Frequency	Biennially	Annually	Annually	When Needed	When Needed

### 9.1 PERFORMANCE MEASURES

- **TECHNOLOGY**
  - **Roadmap** - Supplier is expected to develop leading-edge technology and share the technology roadmap with Coherent. Supplier's technology roadmap is expected to conform to Coherent's future design requests, the technology is advanced, and the new technologies are mostly Supplier's own initiatives.

- **Capability** - Supplier is expected to try their best to support our high-end product even it could be a challenge to Supplier's current technology and process capability. Innovation and resource investment are encouraged to improve the product technology and quality with the goal of meeting Coherent's requirements. This is to measure whether the Supplier is willing to and capable of supporting Coherent's high-technology products.
- **Continuous Improvement/Degradation** - This section is used to award or deduct additional points from Suppliers that have shown significant improvement or degradation.

## • QUALITY

- **Incoming Lot Acceptance Rate (LAR)** - Defined as the percentage of total number of conforming lots received over the total number of lots received during the same period.  
$$LAR = \text{Pass Lots} / \text{Received Lots} * 100\%$$
- **Nonconforming Part per Million (PPM)** - Defined as the quantity of Supplier-caused nonconforming parts per one million parts received.  
$$\text{Part Per Million} = \text{Number of Nonconforming Parts} / \text{Number of Parts Received} * 10^6$$
- **Critical Incident** – Any critical Supplier-caused escalation including critical field failure, large batch/lot-related issue, mixing of materials, repeat issue, critical line down, product or personnel safety event, or failure to notify Coherent of a fit, form, or function change.

## • RESPONSIVENESS

- **Commercial and Purchasing** - Supplier is expected to provide a rapid response to our commercial and purchasing inquiries, including RFQs, contracts, purchase orders and RMA requests.
- **Technical & Quality** - Supplier is expected to provide a rapid response to quality and technical requirements including Supplier Surveys, Discrepant Material Reports, First Articles, Supplier Corrective Actions, Failure Analysis requests, and Design for Manufacturability.

## • DELIVERY

- **Non Vendor-Managed Inventory (VMI) On-Time Delivery (OTD)** - Percentage of materials received on time against the Suppliers' commit date (5 working days early and 0 days late).  
$$OTD = (\text{Quantity received on time in month} / \text{Quantity received in month}) * 100\%$$
- **VMI** - Coherent expects to set a material inventory buffer with Supplier to be able to catch the upside demand. Suppliers that have VMI agreements with Coherent will accrue points for this section. The weight of this section will be calculated by VMI ratio, which is input by Procurement.

- **Flexibility** - A rating measuring how flexible the Supplier is on meeting the changing business needs, such as allowing customer adjustments to placed orders.
- **Lead Time** - Suppliers are awarded points based on their ability to meet metrics that fall into this general classification. It is critical to Coherent that Suppliers minimize lead times through supply chain optimization activities.
- **COST**

At Coherent's discretion, Coherent may determine that actions are necessary to address the Supplier's cost of materials or services.

  - **Pricing** - Supplier rates in terms of pricing performance in the Suppliers of similar commodities. The target for Supplier is to be the price leader.
  - **Cost/Price Reductions** - Coherent expects Suppliers to be proactive in price reductions and expects that they will contribute through their own initiative toward the reduction of product and process costs (supply chain costs). Efforts put forth to reduce Coherent's costs on new products through DFM and other means prior to production launch should also be considered.
- **ENVIRONMENTAL, SOCIAL, & GOVERNANCE (ESG) PERFORMANCE**

In addition to the product or services that Coherent receives, the manner in which the Supplier conducts its operations is also important to us. Coherent will issue goals and targets for various ESG metrics, to be published separately. Suppliers are expected to report on their ESG performance to Coherent as reasonably requested in a format of our choosing, and to continuously improve their performance to meet or exceed the targets over time.

  - **Environmental** - The Supplier takes action to minimize natural resource use and impacts to the environment, including but not limited to reduction of energy use, CO2 emissions, water use, hazardous and non-hazardous solid waste, and other gaseous emissions and effluents.
  - **Social** - The Supplier will comply with all laws, regulations, and applicable industry standards with regard to social stewardship issues, including but not limited to human rights, minimum age and minimum wage requirements, working hour limitations, freedom of association, non-discrimination, and fair treatment of all employees.
  - **Governance** - The Supplier will operate with high standards of governance overseeing their operations and conduct, in a manner free of corruption, bribery, and conflicts of interest.



**EXCEPTIONS TO SQA AND APPROVAL**

List in this section any exceptions that are requested by the Supplier and mutually agreed to by Coherent Corp. Both parties must sign this below as applicable.


**ACKNOWLEDGED AND AGREED:**

**SUPPLIER COMPANY NAME:** \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**COHERENT CORP.**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

***Submit signed forms to Coherent Procurement or Supplier Quality point of contact.***