



Efinix[®] Supplier Quality Manual

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Introduction

This Efinix Supplier Quality Manual is intended to provide our valued suppliers with an understanding of our commitment to quality, and our expectations with respect to the products and services we receive. At Efinix, we aim to drive the future of edge computing with our FPGA silicon platforms. To this end, we strive to deliver a range of best in industry products and services.

This document covers all aspects of supplier and sub-tier supplier activities that influence the quality of products and services delivered to us. It is crucial for our suppliers and sub-tier suppliers fully understand and implement these guidelines in their processes to ensure a reliable supply chain, ultimately contributing to the safety and performance of the final product.

Quality Policy

Efinix's quality policy hinges upon three key objectives:

- Consistently meeting our customers' and interested parties' expectations for services quality and performances;
- Timely delivery of services to meet our customers' requirements;
- Continual improvement of our processes and the quality management system (QMS).

Our suppliers play a critical role in ensuring that we only deliver products of the highest quality, reliability, and safety. As such, our suppliers make a positive contribution toward our collectively shared goal of enhancing customer satisfaction, thus driving the success of our businesses. To this end, Efinix values and recognizes your quality initiatives, continuous support, and partnership in achieving excellence together.

General Requirements

All suppliers are expected to comply with Efinix's policies in regard to quality, standards, specifications, and other requirements. Moreover, Efinix expects its suppliers to strive for continual improvement to ensure the delivery of quality products and services. Additionally, Efinix expects all suppliers and sub-tier suppliers to operate with a zero-defect mindset. To this end, suppliers are required to:

- Review and understand all engineering documents, specifications, and requirements provided by Efinix.
- Understand the design, performance, reliability, and capability requirements for components, as well as process controls.
- Comply with any and all legal and/or regulatory requirements.
- Implement a change control system and continuous improvement program that contributes to their QMS with respect to the requirements of ISO 9001:2015 and/or IATF 16949:2016.
- Establish performances measures for key performance indicators (KPIs), risk assessments, root cause analysis, and to implement corrective and preventive measures where necessary.

Suppliers are also required to inform Efinix in the event of any potential or confirmed non-conformance with the aforementioned expectations and that have the potential to impact the fit, form, function, or other conformity requirements of the product. Such non-conformance must be communicated by the supplier within one working day, with steps

taken to ensure that all Efinix requirements are followed throughout the supply chain process. Any deviations or exceptions must be documented and are subject to approval by Efinix.

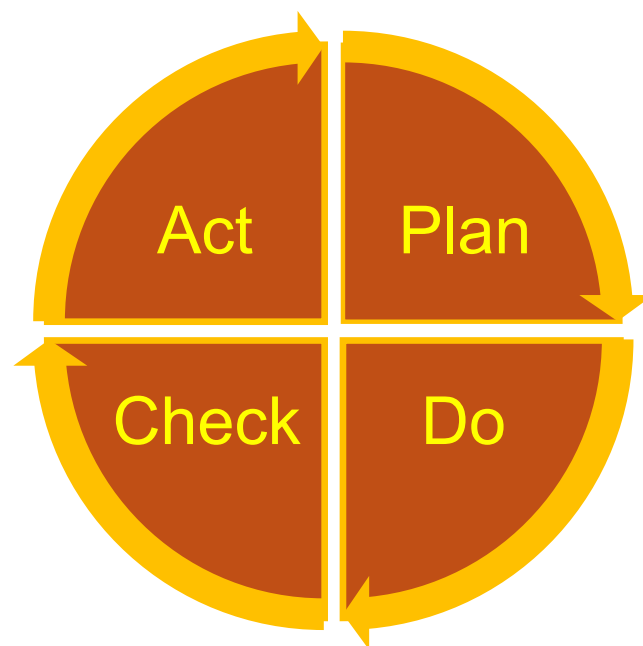
Quality Goal

Efinix expects zero defects for all products or services supplied/provided by its suppliers and/or sub-suppliers throughout the entirety of its business conduct. Suppliers will operate with a continuous improvement mindset and establish wherever initiatives or steps are deemed necessary to ensure the supply of top-tier quality products and services. Suppliers will also take responsibility for ensuring that their personnel have the appropriate knowledge, training, and tools needed to contribute toward processing Efinix products to the highest quality standards.

Quality Improvement Plan

Efinix recognizes the critical role suppliers play in the supply chain and overall product quality. To ensure continuous improvement and maintain the highest quality standards, Efinix expects its suppliers to actively participate in quality improvement initiatives. Suppliers will present a Quality Improvement Plan (QIP) upon request by Efinix. Such QIP may be requested in conjunction with an audit, business review meeting, quality performance review, etc. Suppliers will provide a monthly report in relation to the top five defects observed by Efinix with a view toward identifying any areas of improvement. The QIP should emphasize product quality, process efficiency, and overall performance to address key areas such as root cause analysis, process optimization, data-driven decision making, employee training and equipment, and supplier collaboration. The QIP will be evaluated by both the supplier and Efinix, with changes being made where necessary for continuous improvement.

Figure 1: Four-Step Plan-Do-Check-Act (PDCA) Iterative Framework for Problem-Solving and Continuous Improvement



Supplier Qualification

The gold standard for an Efnix supplier is an entity that possesses controlled documentation and an effective management system for the provision of high quality products and services conforming with Efnix's specifications and regulatory requirements. Efnix works with suppliers who are committed to continuous quality improvement with respect to the reliability, delivery, and cost of their products and services.

Quality Management System

Suppliers are required to develop, implement, and promote the continuous improvement of their QMS to successfully produce, service, and deliver products and services to Efnix. With the QMS established, suppliers are required to be certified to ISO 9001:2015 Quality Management Systems (International standard) and/or IATF 16949:2016 Quality Management Systems (International standard for automotive). Suppliers should notify Efnix of the expiry of any registration certificates and recertification when renewed within 4 weeks. New copies of these certificates must be provided to Efnix.

Supplier Audits

Efnix reserves the right to conduct an annual quality audit of the supplier. Prior to any audits or assessments, Efnix will inform the supplier of our intention to audit and formulate an agreement with respect to how and when this audit will be performed. During the course of such audits, the supplier is expected to provide Efnix with access to all supplier facilities, supply chain, staff, and documentation relevant to the audit. Suppliers may take whatever measures they deem necessary and reasonable to safeguard any proprietary material.

New Product Introduction Qualification

Efnix requires that suppliers have precise project planning and capable processes to aid in the development of New Product Introduction Qualification (NPI) projects. The supplier will possess all the equipment and tools necessary to produce the agreed upon products/services in a timely manner. Such equipment and tools must be appropriately maintained. Once a plan has been established, this approach is to be followed throughout the product lifespan unless changes have been approved by Efnix. Suppliers must show evidence of employing Advanced Product Quality Planning (APQP) processes, as outlined by the Automotive Industry Action Group (AIAG), or employ a similar product quality planning framework. All assessments, project execution, and planning by the supplier will be evaluated and approved by Efnix.

Production Part Approval Process

The Production Part Approval Process (PPAP) is a critical component of Efnix's QMS. The PPAP is a systematic approach used to ensure that our suppliers have appropriate processes in place, and are sufficiently competent to produce parts or components conforming to Efnix's expectations. The PPAP is essential for maintaining confidence in our supply chain and ensuring that the components we receive from our suppliers align with Efnix's quality requirements and specifications.

The PPAP parts submission is defaulted to Level 3 (unless specified otherwise) and must be submitted by the supplier. The submission is subject to approval by Efinix. No products should be manufactured or shipped by the supplier until approval has been given by Efinix, and Efinix will not be held responsible for any products produced or shipped in advance of this approval.

Partial approval may be granted on a case-by-case basis and where full approval might not be appropriate. In the event of such partial approval the supplier will provide products based on a waiver approved by Efinix. The non-conformity should be corrected and documented for evidence in a timely manner. Additional documentation may be requested by Efinix.

If approval is not granted, the delivery of mass production parts is not permitted. Should the supplier still wish to pursue the matter, a new PPAP submission may be required. Furthermore, the matter will need to be re-negotiated or modified until all Efinix requirements and specifications have been met.

Should a PPAP be approved by Efinix, the supplier will refrain from making any changes to either the product or production processes without the express approval of Efinix. In the event that the supplier requires some change to either the product or production process, the supplier is expected to follow the change management procedure.

All PPAP documentation and records related to the product must be retained for a minimum of 15 years per Efinix's customer requirements. Suppliers will also retain all relevant documentation as for evidentiary purposes. Each part/family product will have its own PPAP. In the event of the discontinuation of a supplier's business, the supplier must submit all requested documents and records to Efinix.

Master Sample

The supplier will submit a master sample to Efinix as specified in the PPAP Manual. The master sample will be delivered together with dimensional and performance test reports after the initial run. The master sample is to be retained by the supplier after Efinix has reviewed and approved the gold standard sample. The master sample will be marked, labelled, and referenced for all future production runs for the purposes of consistency and accuracy, and as representing a quality standard. The supplier will reference the latest revision of the PPAP Manual and consult with Efinix for any clarifications.

Dimensional Results

All dimensional data collected will be provided to Efinix with the master sample when submitted by the supplier. Variable data will be recorded in measurement terms, while attribute data will be recorded as pass/fail, go/no-go, etc. All equipment, tools, and inspection plans used for measurement must be accounted for and traced to the master sample provided to Efinix.

Performance and Reliability

Suppliers will provide test results related to the performance and reliability of the materials, products, and/or services provided to Efinix for comparison of conformity against established specifications. Efinix may occasionally request third-party testing depending upon the requirements for certain parts/products. All laboratories used for testing, inspection, and calibration must be accredited to ISO/IEC 17025 or any similar entity.

Appearance Approval Report

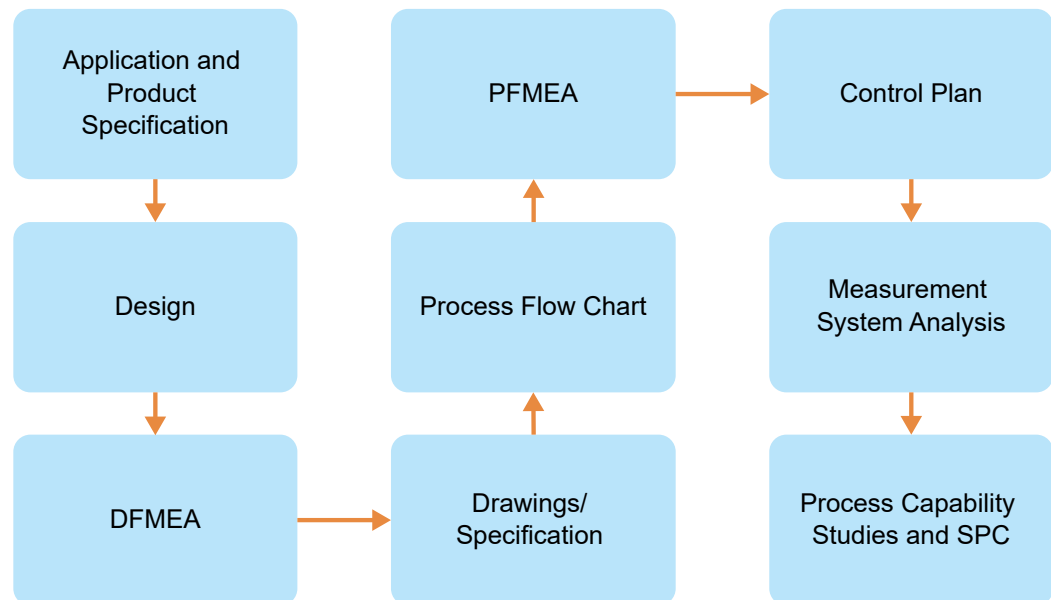
In an addition to the submitted sample part, where necessary, Efnix may request an Appearance Approval Report (AAR). An AAR represents an exterior view of a specific part/product, not usually a complete unit, and typically applies to parts with colour, grain, or surface appearance requirements. The criteria for when an AAR is required is outlined in the PPAP checklist. Whether an AAR is required will be determined between the supplier and Efnix before the signing of any agreement.

Special Characteristics

Special characteristics represent a feature of a material, process, part, assembly, or test that plays a significant role in the form, fit, function, or some other key aspect of an Efnix product. Efnix reserves the right to determine what special characteristics the supplier must control. Any special characteristics will be listed/marked/labelled in the event of any safety issues, violations, or statutory regulations. Highlighting these special characteristics also helps to avoid any major disruptions in production or the loss of primary functions for the customer. Efnix will define the terms and conditions of these special characteristics with the supplier who will implement these characteristics in their processes.

Notations about these special characteristics will be documented in Efnix engineering drawings, specifications, or the PPAP order. The supplier is expected to identify and include these special characteristics in all their process flows and controlled documentation. Suppliers must ensure that all specifications and documentation used in relation to a product are listed in the purchase order.

Figure 2: Quality Flow Chart for the Control of Special Characteristics



Note: Special Characteristics will be marked or identified wherever applicable in each process flow.

Process Capability

The supplier will initiate Statistical Process Controls (SPC) to review of their process capability and performance indicators. before production begins. Utilizing the Process Capability Index (Cpk), suppliers should determine whether their process implementation is validated, and that the performance is stable. Per Efnix's expectations, a Cpk greater than 1.67 is used as an indicator of a successful and stable process.

Acceptance Criteria for SPC:

- Index > 1.67 indicates a process that meets acceptance criteria.
- Index $1.33 - 1.67$ indicates a process that may be acceptable. The results will be reviewed by the supplier and Efnix, and subject to approval by Efnix.
- Index < 1.33 indicates a process that does not meet acceptance criteria.

For processes with one-sided specifications or an atypical distribution, the supplier and Efnix may negotiate an alternative acceptance criterion for processes.

Nevertheless, Efnix requires the Cpk acceptance criteria to be satisfied. If the criteria cannot be satisfied for whatever reason a corrective action plan and revised control plan may be instituted to mitigate the issue. This plan may include either 100% inspection or a similar approach, and will need to be retained until the Cpk criteria can be met. The supplier may propose an alternative method of evaluation for attribute data subject to the approval of Efnix.

Measurement System Analysis

Efnix and the supplier will work on an agreement to conduct a Measurement System Analysis (MSA) as required. This analysis will be guided by the Gage Repeatability and Reproducibility (Gage R&R) process, used to evaluate the accuracy and consistency of the measurement system. This study is intended to allow the supplier to evaluate any variations in the data derived by the measuring system and its quality.

Gage R&R Acceptance Criteria:

- If the % Gage R&R is $< 10\%$, the measurement system is considered adequate.
- If the % Gage R&R falls between 10% to 30% , the measurement system may be acceptable and approved by Efnix, but corrective action will be required.
- If the % Gage R&R $> 30\%$, the measurement system is deemed unacceptable.

Number of Distinct Categories (NDC) is a crucial metric in Gage R&R and can also be used as an optional study depending on Efnix's customer needs.

NDC Acceptance Criteria:

- ≥ 5 categories, indicates an acceptable measuring system.
- $2 - 4$ categories, indicates a marginally acceptable measuring system and may be approved by Efnix with corrective actions in place.
- < 2 categories, indicates an unacceptable measurement system.

All variable gages used for monitoring special characteristics will require an MSA and Gage R&R. Attribute gages for monitoring special characteristics will require applicable gage studies. All method used will be agreed upon between Efnix and the supplier.

In the event of a failed gage system, the supplier must take all necessary steps to implement corrective actions to ensure that the gage system is capable of reproducibility and repeatability before it can be used to accept or reject products/parts.

Process Flow Diagram

The supplier will have a process flow diagram (singular or part family) that clearly describes the production process steps (e.g., work operation, department, task), sequences from beginning of a process (e.g., material receipt) to end of process (e.g., packing and shipment), and must meet all Efnix specifications and requirements.

Failure Mode and Effects Analysis

The supplier will develop both a process Failure Mode and Effects Analysis (FMEA) and a design FMEA, where applicable. These FMEAs must conform with the requirements as outlined by Efnix. Alternatively, and depending upon the circumstances, a risk analysis may be required. Nevertheless, the FMEA will serve as a living document and will be revised when there are product, process, or quality changes. Both documents must be reviewed and revised when necessary to reflect the non-conforming products process.

Control Plan

The supplier is expected to create a Control Plan (CP) specific to part/product and/or family (if applicable). The control plan must detail control and inspection methods throughout the manufacturing process. This is to enforce conformity to Efnix drawings, specifications, and requirements. The control plan should be based on DFMEA and PFMEA processes to ensure accountability at each step of the process in the manufacturing line. The control plan should be identified by product part number, family, and revision level. Specific characteristics will be marked per respective reference number and detailed accordingly.

The supplier is responsible for monitoring product processing while referencing the control plan specifications established during the manufacturing process. Suppliers must inform Efnix of any changes or deviations during the observation.

The Control Plan will act as a living document as changes in product, specifications, processes, and quality issues are revised. This document will be reviewed and updated when necessary to reflect non-conforming products process

Process Audit

Efnix may request to perform a process audit at the supplier's manufacturing facility after mutual agreement. The audit will be based on quality process controls and process requirements instituted by the supplier for manufacturing parts/products or providing services for Efnix. Sub-suppliers are also subject to audit by Efnix when necessary.

Certifications, Certificates, and Code Requirements

Due to certain mandatory legal requirements, Efnix may demand that the supplier provide certain documentation, such as compliance letters, test results, part certifications, etc. Suppliers are also expected to provide material registration references in accordance with International Material Data System (IMDS) to fulfilled Efnix's customer requirements. The supplier will bear all responsibility for ensuring these requirements are met and that appropriate documentation is maintained. Evidence of compliance with these requirements

can be submitted as part of the PPAP. Suppliers will notify Efinix of any changes to these requirements per the change management strategy.

Safe Launch Plan

To implement a redundant inspection procedure and avert probable non-conformances during the start-up of production following PPAP approval, Efinix may require a safe launch plan at the supplier's site.

Non-Conformance

Suppliers will take full responsibility and institute appropriate guidelines with respect to the handling of any non-conforming products, regardless of where such non-conformance might occur during the production process. All non-conforming products should be clearly labelled and segregated from all other processes and areas. Systems must be put in place to ensure that any non-conformance products are not inadvertently used in production or shipped to Efinix or its customers. Any non-conformance must be effectively communicated to Efinix for overview and acknowledgement.

Control of Non-Conforming Product

Suppliers must store records to identify the product, delivery lot, quantity, and category of handling the non-conformance, repair, or rework. The supplier will prepare a control plan outlining relevant monitoring, inspection, and testing steps after rework to ensure compliance with all applicable requirements. Repair or rework products must be retested and audited through standard monitoring protocols. Suppliers will ensure that the repair/rework is successful by establishing a dedicated work area with only repair/rework tools, trained and qualified individuals to perform the task, and thorough traceability from beginning to end. For cases of scrap, suppliers will establish a controlled process to ensure proper disposal. Suppliers must immediately notify Efinix in the event of any issues related to non-conforming products. Efinix will evaluate the issue with evidence provided by the supplier, and any decisions regarding the disposition of products will be at the sole discretion of Efinix.

Containment Actions

When non-conforming products are found, the supplier must initiate immediate containment actions, such as segregation, quarantine, and labelling the product. Non-conforming products must not be shipped to Efinix until an investigation has been concluded and a decision has been made by Efinix. Suppliers will communicate all types of non-conformances to Efinix within one working day, and include all necessary evidence, documentation, and findings.

Corrective and Preventive Actions

Should any instances of non-conformance be found, the supplier will submit a formal written report outlining their intended corrective and preventive actions. The report will document how the corrective steps address each of the specific defects that have been identified. The format of the corrective action report will be based on the 8D philosophy. This 8D formatted report must be submitted for Efinix's review and approval:

- Containment actions within one working day

- Root cause determination within five working days
- Corrective and preventive action plan within 10 working days

The supplier will be fully responsible for taking measures to correct the non-conformance while keeping Efnix notified.

Supplier Performance Monitoring

Efnix continuously measures and monitors the performance of suppliers based on the following criteria:

- Quality performance
- Delivery performance
- On-time delivery
- Service performance
- Lead time and response

Suppliers may periodically receive a Supplier Performance Assessment Report, as appropriate. This will outline the supplier's performance, giving the supplier an opportunity to proactively address any issues or trends. For outsourced suppliers, bump and assembly yield, Cpk, and test yield reports are required monthly. In the event of poor performance, Efnix may initiate the following:

- SCAR to help drive a formal improvement plan
- Review meetings to outline a root cause analysis and improvement plan
- Quality audits

A supplier's failure to fulfil the aforementioned performance requirements may result in either a new business hold or business departure.

Supplier Development

Suppliers are expected to maintain their deliverables of quality products/services while simultaneously seeking continuous improvement in their planning, processes, and overall performance. Efnix will monitor for such continuous improvement through the supplier performance assessment and Quarterly Business Reviews (QBR), as required. Suppliers are expected to collaborate with Efnix, as needed, to work toward development actions aimed at improving supplier performance and capabilities to meet Efnix's standard.

Change Management

Suppliers will not make any sudden changes to a product or process after gaining initial product approval from Efnix. Such unanticipated changes may have unforeseen impacts on the quality, safety, reliability, appearance, service, form, fit, or function of our products. Any notification of change will be submitted to Efnix at least 6 months prior, unless otherwise specified by Efnix. Suppliers will have a documented Product/Process Change Notice (PCN), which includes the criteria or methodology used to classify any changes as major or minor. Suppliers, including sub-tier or third-party suppliers, will adhere to this requirement throughout the entirety of the supply chain. The following changes require notification to Efnix:

Product/Process Design Changes:

- Product external dimension

- Product critical material/component/material composition
- Process technology affecting critical process steps
- Process parameters
- Product marking technology

Manufacturing Location Change:

- Manufacturing site transfer (fabrication, assembly, or test site of the finished product)
- Supplier change
- Equipment relocation

Packing/Shipping Change:

- Carrier type (tray, tape and reel, tube, etc.)
- Carrier dimensions
- Label content
- Dry pack materials
- Reduction in environmental storage conditions

For any change request, suppliers will use the change request form in conformance with J-STD-046 requirements. Changes are subject to approval by Efnix. For changes initiated by Efnix, suppliers will receive an engineering change notification and will complete an internal review with feedback to Efnix within five working days.

In the event of product discontinuation, suppliers will provide notice to Efnix at minimum of 6 months in advance from notice of final orders and 12 months for notice for final shipment. The supplier will notify sub-suppliers if applicable. Where applicable, the supplier will assist all parties in locating an alternative source or select a replacement product.

Identification, Traceability, and Records

Suppliers will be responsible for setting up and maintaining controlled documentation of product traceability throughout all stages of production/services, such as receipt, production, distribution, etc. Traceability and quality records must be maintained throughout the life of the product. Product identification will be applied according to PPAP. Maintaining accurate traceability records spanning all processes is essential in the event of non-conformances, sales mismatch, product misidentification, etc. Efnix may periodically request quality information, and it is the supplier's duty to record and maintain (i.e., back-up or archive) such quality information, such as:

- Raw Materials (type, serial, batch, manufacturer)
- All resources used in production manufacturing (equipment, additional materials, calibrated tools, etc.)
- Process parameters, capability, inspection and testing results (reports for part-specific)
- Certificate of Conformance (CoC)
- Purchase order/Sales order
- Engineering information (BOM, design and configuration, specifications, drawings)
- Manufacturing information (location, shipping date, quantity, deliverables)

For items that required more thorough traceability, Efnix will work with suppliers to identify such items at the earliest possible stage before proceeding with production/services. Relevant requirements will be communicated in reference to specifications, drawings, or PPAP orders. All quality records are to be retained for each lot/batch/shipment for better tracking/support for Efnix.

All quality records, such as but not limited to, raw material certificates, supplier certificates, process flow, test results, inspection records, etc., must be retained by the supplier for a

minimum of 15 years after delivery of relevant products/services. Any exceptions will be discussed or approved by Efnix prior to implementation.

Health, Safety, and Environmental Requirements

The supplier is responsible for ensuring that products and services delivered are in conformance with all applicable requirements specified by Efnix. Suppliers are also expected to carry out manufacturing, production, or services in accordance with all relevant health, safety, and environmental regulatory requirements.

Suppliers should maintain environmental management system in accordance with ISO 14001:2015, and a health and safety management system based on ISO 45001:2018.

Property Maintenance

All tools or equipment belonging to Efnix will be clearly and visibly marked as being the property of Efnix. It is expected that suppliers will establish systems for tool record keeping, including but not limited to, lifespan, calibration, preventive maintenance, training, documentation, cleaning, inspection, etc. Suppliers will work with Efnix on tool needs or replacement upon request. Suppliers are responsible for the tools provided to them. Tool documentation will be provided to Efnix when requested.

Code of Conduct

Efnix operates in accordance with the Responsible Business Alliance (RBI) code of conduct. Efnix believes in a safe working environment with responsible and ethical practices regarding human rights and the environment. All suppliers must have a signed code of conduct letter and perform appropriate self-assessments. Efnix may request that suppliers submit copies of such documentation. During supplier qualification, a code of conduct audit may be conducted at the supplier's site or any sub-supplier's site. Such auditing may be conducted by Efnix or a third party at the supplier's expense.

Contingency Plan

Suppliers will identify and evaluate internal and external risks, prepare, implement, test, review, and document a contingency plan according to risk analysis and customer impact to ensure the non-disruption of shipment/delivery.

Supplier Liability

The terms and circumstances of the supply agreement that Efnix and the supplier engaged into govern the supplier's liability in addition to the supplier's responsibilities under this Supplier Quality Manual. For the sake of clarity, any agreed upon performance targets are limited to the supplier's overall level of product quality. As per the supply agreement,

the supplier bears responsibility for any expenses related to non-conformities resulting in substandard quality.

Definitions

Table 1: Definition of Key Terms Used in This Document

Term	Definition
8D	An 8 discipline of problem solving using a structured approach to solve difficult, recurring or critical problems.
Assessment	A structured evaluation process of analysing and collecting data to determine the compliance of an organization to a standard.
Audit	An official inspection of an organization's process or quality system to ensure compliance to requirements.
Code of Conduct	A set of rules outlining the norms, rules and responsibilities or proper practices of an individual party or an organization.
Control Plan	A document that describes the actions required at each phase of a process to assure the process outputs will conform to pre-determined requirements.
Corrective and Preventive Actions (CAPA)	A quality management strategy that aims to identify, document, and solve problems that affect the quality of products or services.
Defective Parts Per Million (DPPM)	A measure of quality performance to quantify the number of defect or faults per million parts or opportunities. $DefectivePartsperMillion = \frac{DefectiveParts}{No.ofOpportunities \times No.ofParts} \times 1,000,000$
Failure Mode and Effects Analysis	A process analysis tool that identifies all possible failures in a design, manufacturing, assembly process, product or service.
Gage Repeatability and Reproducibility (Gage R&R)	A methodology used to evaluate the variation in the measurement data due to the measurement system.
IATF 16949	A quality management standard for the automotive industry based on ISO 9001.
Measurement System Analysis	A statistical study that evaluates the variation and reliability of a measurement process.
Non-conformance	A failure to meet specified standards or expectations.
On Time Delivery	Purchase order items that are delivered on time to the required date and quantity.
Part Submission Warrant (PSW)	A summary document that covers all elements of the Production Part Approval Process.
Parts Per Million (PPM)	A rating of product quality dependent on quality of non-conforming parts discovered by incoming inspection, Efinix production, or customer location.
Performance Index (Ppk)	A performance index that is used to see if a current process is delivering acceptable results.
Process Capability	A statistical measure or a quantifiable comparison of the output of a process to the specification limits.
Process Capability Index (Cpk)	A statistical measure that quantifies the ability of a process to meet specifications.
Process Change Notification (PCN)	A formal, written communication that details modifications or updates to a product, process, or system.

Term	Definition
Process Flow	A series of steps planned and taken to achieve the end objective in a manufacturing or production organization.
Production Part Approval Process (PPAP) order	A standardized process used in the automotive industry to establish confidence in suppliers and their manufacturing processes. See Production Part Approval Process (PPAP) Order on page 16.
Products	A finished, semi-finished, parts, goods, components, materials and/or services delivered to Efinix.
Quality Management System	A formalized system that documents processes, procedures, and responsibilities for achieving quality policies and objectives.
Quarterly Business Review (QBR)	A once per quarter meeting with the supplier to assess the overall products and services delivered to Efinix.
Special Characteristics	A characteristic that can infringe on safety or regulatory compliance or customer satisfaction, or a characteristic that can cause rework or scrap and is time sensitive to variation that is difficult to control within the process.
Statistical Process Control (SPC)	A statistical method of quality control that uses data to measure, monitor and correct variations in a process.

Production Part Approval Process (PPAP) Order

Table 2: Overview of Production Part Approval Process (PPAP) Order

S = The organization will submit to the customer and retain a copy of records or documentation items at appropriate locations.

R = The organization will retain at appropriate locations and make available to the customer upon request

* = The organization will retain at appropriate locations and submit to the customer upon request

#	Requirements	Level 1	Level 2	Level 3	Level 4	Level 5
1	Design record	R	S	S	*	R
	For Efinix proprietary component/details	R	R	R	*	R
	For Efinix other components/details	R	S	S	*	R
2	Engineering change documents, if any	R	S	S	*	R
3	Engineering approval from Efinix (required)	R	R	S	*	R
4	Design FMEA	R	R	S	*	R
5	Process flow diagrams	R	R	S	*	R
6	Process FMEA	R	R	S	*	R
7	Control plan	R	R	S	*	R
8	Measurement system analysis (MSA)	R	R	S	*	R
9	Dimensional results	R	S	S	*	R

#	Requirements	Level 1	Level 2	Level 3	Level 4	Level 5
10	Material, performance, and reliability test results	R	S	S	*	R
11	Process capability studies	R	R	S	*	R
12	Qualified laboratory documentation	R	S	S	*	R
13	Appearance approval report (AAR)	S	S	S	*	R
14	Sample products	R	S	S	*	R
15	Master sample	R	R	R	*	R
16	Checking aids	R	R	R	*	R
17	Records of compliance with customer specific requirements	R	R	S	*	R
18	Part submission warrant	S	S	S	S	R
19	Bulk material checklist	S	S	S	S	R

References

- AIAG Advanced Product Quality Planning Manual
- AIAG Control Plan Manual
- AIAG Measurement Systems Analysis Manual
- AIAG Statistical Process Control Manual
- AIAG & VDA FMEA Handbook
- AIAG Part Production Approval Process Manual
- J-STD-046: Customer Notification of Product/Process changes by solid-state suppliers
- J-STD-048: Notification Standard of Product Discontinuance
- RBA Code of Conduct 8.0

Forms

The following forms are referenced in this manual and are applicable to all new or existing suppliers. These forms are used to streamline communication between Efinix and the supplier as part of the business relationship.

- Efinix Part Submission Warrant Form
- Efinix New Supplier Selection Form
- Efinix Supplier Performance Assessment

Revision History

Date	Version	Description
July 2024	1.0	Initial release.