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COMPANY BRIEF

Zilog Inc. was founded in 1974 by Federico Faggin, the inventor of the world's first microprocessor. Zilog builds semiconductor products that enable design engineers to break through the barriers to creativity and innovation in embedded design. Zilog is the inventor of the award-winning Z80 and Z8 microchip architectures that have been embedded in over a billion end-use devices worldwide such as consumer appliances, vending machines, telecommunications controllers, home automation systems, spacecraft instrumentation, industrial automation systems, and thousands of other products.

Zilog is a global supplier of innovative embedded control solutions. Zilog's products are focused primarily in the micro-logic device segment. Micro-logic devices are processor-based semiconductors that include microprocessors, microcontrollers and digital signal processors that process information, output data or control signals according to programmed instructions and various external inputs. Zilog designs, subcontracts manufacturing and markets both general-purpose and application specific standard products (ASSPs). ASSPs are tailored for a specific application but are not proprietary to a single customer, while general-purpose products are neither application nor customer specific.

Zilog is an IXYS company, now part of Littelfuse, subsidiary with headquarters in Chicago, Illinois. It has a satellite facility in Meridian, Idaho (referred to as MER). It has a subcontractor management, warehouse, and global support facility in Manila, Philippines referred to as Zilog Electronics Philippines, Inc. (ZEPI). It has more than 10 active distributor locations worldwide.

The company employs a fabless model, with world-wide foundry partners selected and qualified to complement its current and future designs. Assembly test and shipment operations are performed at subcontractors located within the Asia Pacific Region. A small percentage are shipped from ZEPI warehouse.

Zilog Electronics Philippines, Inc. (ZEPI) is Zilog's subcontractor management and global shared services facility. Subcontractor management includes assembly, test and warehousing at qualified subcontractors. The semiconductor wafers come from Zilog foundry partners, assembled, tested and shipped to customers and authorized distribution centers throughout the world by the subcontractors. A small percentage is shipped from ZEPI warehouse. ZEPI directly controls the planning of subcontractor manufacturing, test and shipment. Global shared services in support of subcontractor management include customer service, human resources, quality control, information technology and technical support. Customer service assistance are being handled by highly capable and efficient sales offices found in various locations in US, Europe, and Asia


Among the product portfolio of Zilog include Plastic Dual-In-Line Package (PDIP), Plastic Leaded Chip Carrier (PLCC), Plastic Quad Flat Pack (QFP), Low Profile Quad Flat Pack (LQFP), Low Profile Ball Grid Array (LBGA), Small Outline Integrated Circuit (SOIC), Shrink Small Outline Package (SSOP), Quad Flat No Lead (QFN), and development tools.

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Zilog Electronics Philippines, Inc. (ZEPI) is subcontractor for IXYS now part of Littelfuse; for stacking assembly, helical spring assembly and laser scribing of DCB (Direct Copper Bonding) and shipment of these products.

It also warehouses and ships IXYS Finished Goods products from local and foreign subcontractors. Zilog Electronics Philippines, Inc. (ZEPI) manages IXYS local subcontractors and suppliers.

Zilog has been in operation since 1978. It is located in Taguig, Metro Manila and has a present workforce of more than 80 employees.

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TITLE: QUALITY MANUAL

RATIONALE:

The Quality Manual shall establish a quality management system for Zilog Electronics Philippines, Inc. that would ensure that products conform to customer and applicable statutory and regulatory requirements and international standards, including continual improvement that would enhance customer satisfaction. The quality management system shall be compliant to ISO9001:2015. The application of the quality system is also aimed at making important contribution to managing costs and risks, meeting quality objectives, driving organizational growth, and enhancing stakeholders’ satisfaction. It shall provide a comprehensive overview of the business processes at Zilog Electronics Philippines and interactions at various remote locations and departmental levels.

This Quality Manual is the top level document of ZEPI’s Quality Management System in the hierarchy of Zilog specifications consisting of:

Policy Statement (POLs) – documents that outline direction to be taken by the corporation and its various divisions and departments.

- Policy Statement (POLs) – documents that outline direction to be taken by the corporation and its various divisions and departments.
- Procedural Specifications (SOPs) – Documents that support corporate policy by defining the methods to be used at the divisional or departmental levels.
- Detail Specifications – Specifications (PSIs, assembly diagrams, 82C/MKT drawings) that provide the specific directions and criteria needed to accomplish particular tasks.

Together, these define the Zilog Quality Management System. The Quality Manual is reviewed, revised and approved at least annually or as needed. The Quality Control department is responsible for establishing, maintaining and implementing the Quality Manual. Personnel authorized to initiate changes to the Quality Manual are the QC Manager, the Internal Auditor, and the Document Control Officer with approval of the General Manager.

The responsibility of implementing and continuously improving the quality management system into the ZEPI organizational structure lies with the General Manager and the management staff.

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1 SCOPE:

The Quality Manual applies to Zilog Electronics Philippines, Inc.

2 APPLICABLE DOCUMENTS:

(The issues of the following documents in effect on the date of use form part of this manual to the extent specified herein.)

International Standards ISO9001:2015

JEDEC Std.

EIA Std.

All applicable POL, SOP, PSI, diagrams, and drawings

All applicable customer specifications

3 TERMS AND DEFINITIONS:

8-D - Refers to 8-discipline approach in writing corrective action report on a problem or major issues.

Competence – Demonstrated ability to apply knowledge and skills.

Customer Oriented Processes (COP) – Internal/external interface between an organization and a customer

CFA – Customer Failure Analysis

Documented Information – All documentations, quality manual, and documented procedures

External Provider – an organization or person that provides products and services.

Interested Parties – a stakeholder, person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity. Relevant interested parties are those that provide significant risk to organizational sustainability if their needs and expectations are not met.

Opportunities – a set of circumstances that makes it possible to do something.

Outsourced Process – a process that the organization needs for its quality management system, and chooses to be performed by a qualified subcontractor.

PDCA – Plan –Do- Control/Check - Act

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PESTLE – Political, Economic, Social, Technology, Legal, and Environmental issues

QMS- Quality Management System

Quality Plan – A document specifying the processes of the QMS (including the product realization processes), and the resources to be applied to a specific product, project or contract.

Risk – Effect of uncertainty; often expressed in terms of a combination of the consequences of an event and the associated likelihood of occurrence.

Risk Analysis – Process to comprehend the nature of risk and to determine the level of risk (levels of severity and likelihood).

Risk Evaluation – Process of comparing the results of risk analysis with risk criteria to determine whether the risk and/or its magnitude is acceptable or tolerable.

Risk Identification – Process of finding, recognizing, and describing risk, involves the identification of risk resources, events and their potential consequences

Warehousing – Die Bank, Work-in-Process Materials (WIP), Finished Goods, pack and dropship.

ZEPI- Zilog Electronics Philippines, Inc.

ZiDOC – The electronic documentation management system in use at Zilog, Inc., at all of its locations.

4 CONTEXT OF THE ORGANIZATION:

4.1 Understanding the Organization and its context

ZEPI shall determine external and internal issues that can have an effect in developing and achieving its strategic direction and that affect its ability to achieve the intended result of its quality management system. It is also known as business environment / organizational environment. Issues can include positive and negative factors or conditions for considerations.

ZEPI shall monitor and review information about these external and internal issues. Reference SOP2271, ZEPI Risk Management and Risk Register, ZAZ18-0060.

4.2 Understanding the needs and expectations of interested parties

Due to their effect or potential effect on ZEPI’s organization’s ability to consistently provide products and services that meet customer and applicable statutory and regulatory

requirements, ZEPI has determined the interested parties and their needs that are relevant to the quality management system. These are:

Interested Parties	Needs of Interested Parties
Customers	Quality and delivery performance of products and services
Employees	Job security, recognition, and rewards, training
Owners/Shareholders	Profitability and growth
Suppliers	Beneficial Relationship, Forecast
Legal	Compliance (Reports, Permits)

The organization shall monitor and review information about these interested parties and their relevant requirements.

4.3 Determining the scope of the quality management systems

ZEPI has determined the boundaries and the applicability of the quality management system.

ZEPI is committed to applying all applicable requirements of the ISO9001:2015 International Standard to the intent and scope of the quality management system.

ZEPI has considered the external and internal issues per paragraph 4.1, requirements of relevant interested parties per paragraph 4.2, and the products and services in determining the following scope of the organization:

- All activities related to subcontractor management,
- Warehousing and shipment of semiconductor products
- Stacking assembly
- Helical spring assembly
- DCB Laser Scribe
- Warehousing and shipment of Zilog, IXYS and S3 products

ZEPI shall apply the requirements of ISO 9001:2015 International Standard except for design and development. Zilog Electronics Philippines, Inc. does not perform any design function nor does it have design engineering within its organization to design Zilog products.

4.4 Quality management system and its processes

4.4.1 ZEPI Quality Management System

Zilog Electronic Philippines, Inc. has established, documented, implemented and maintained a quality management system that is compliant to the requirements of ISO 9001:2015. It continuously strives to improve its effectiveness by complying with the

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standard, utilizing quality tools (benchmarking, Awards and Awareness, and Supplier Management), stakeholders' commitment, and customer feedback. Continual improvement increases the effectiveness and efficiency of the organization to support its quality policy and quality objectives that would enhance customer and stakeholders' satisfaction.

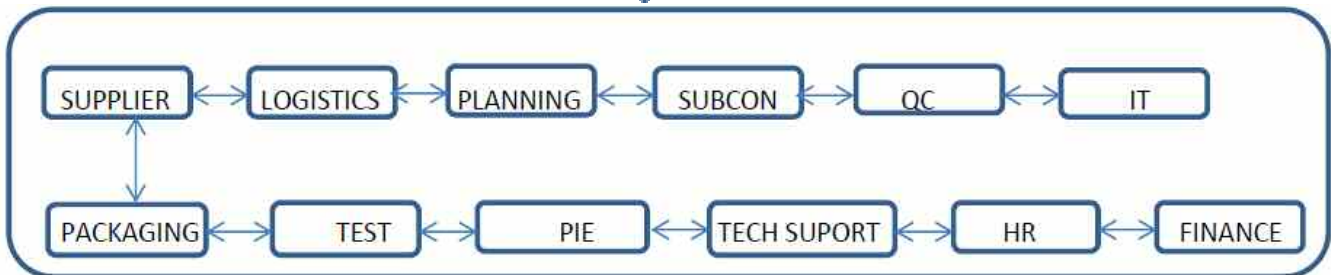
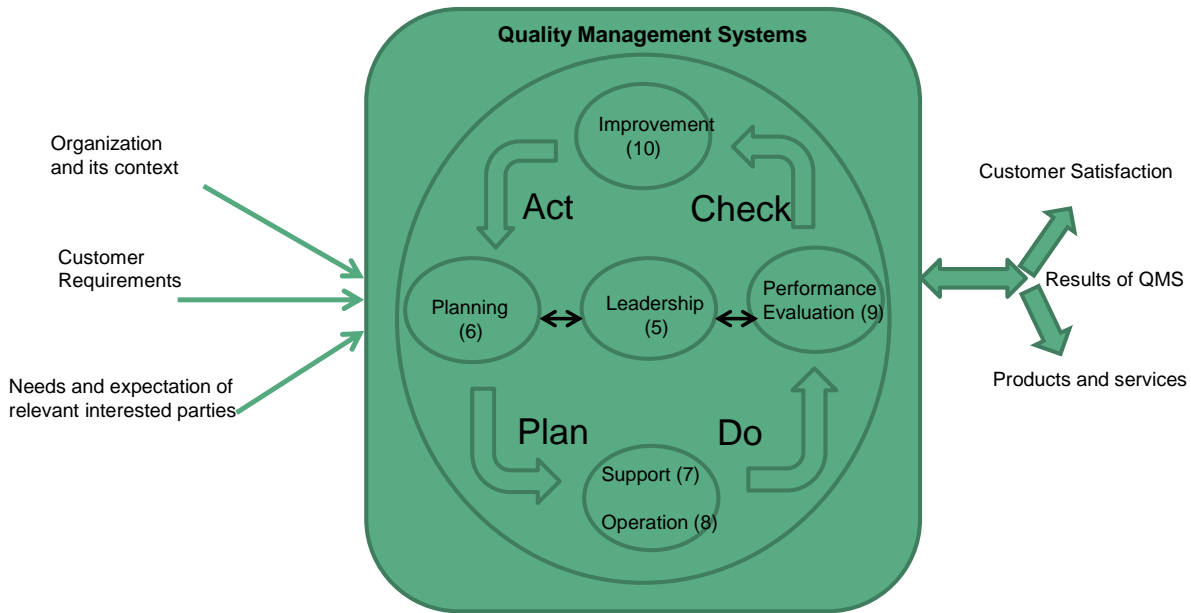
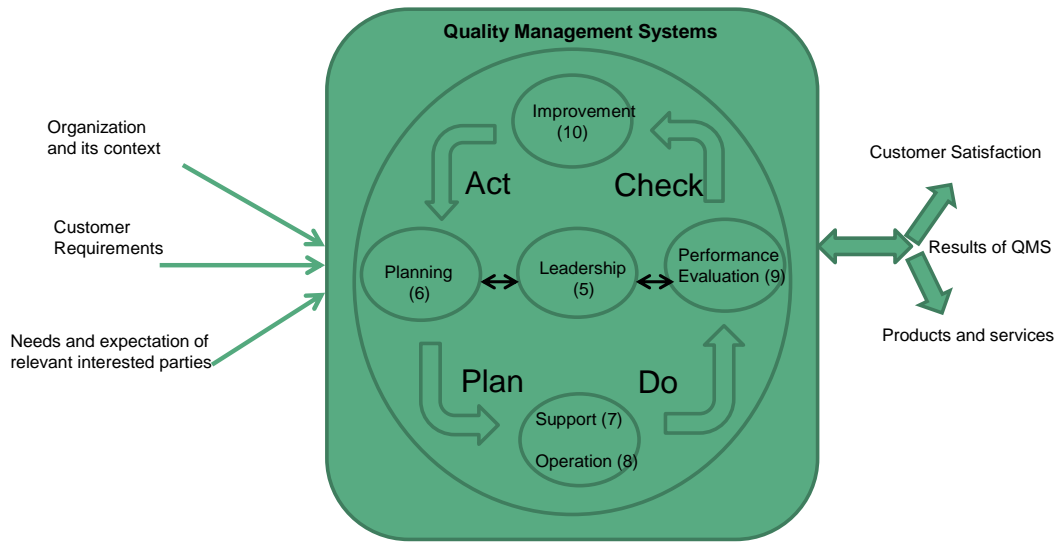
The quality management system of ZEPI is based on customer focus, leadership, involvement of people, process-based approach, system approach to management, continual improvement, data driven approach to decision-making and mutually beneficial supplier relationships. The application of the quality system is not only aimed to provide direct benefits but also make an important contribution to managing costs and risks.

ZEPI shall determine the processes needed for the quality management system and their application throughout the organization and shall:

- a. determine the inputs required and the outputs expected from these processes;
- b. determine the sequence and interaction of these processes;
- c. determine and apply the criteria and methods (including monitoring, measurements, and related performance indicators) needed to ensure the effective operation and control of these processes;
- d. determine the resources needed for these processes and ensure their availability;
- e. assign responsibilities and authorities for these purposes;
- f. address the risks and opportunities as determined in accordance with the requirements of 6.1;
- g. evaluate these processes and implement any changes needed to ensure that these processes achieve their intended results;
- h. improve the processes and the quality management system.

ZEPI shall maintain documented information to support the operation of its processes and retain documented information to have confidence that the processes are being carried out as planned.

The process-based Quality management system including defined COPs (SOP2108, ZEPI Customer Oriented Processes) is based on the PDCA model.



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5 LEADERSHIP:

5.1 Leadership and commitment

5.1.1 General

The management of Zilog Electronics Philippines, Inc. is committed to implementing the quality management system and continually improving its effectiveness to the satisfaction of customers, stakeholders, and other interested parties.

Top management shall demonstrate leadership and commitment with respect to the quality management system by:

- a. taking accountability for the effectiveness of quality management system;
- b. ensuring that the quality policy and quality objectives are established for the quality management system and are compatible with the context and strategic direction of the organization;
- c. ensuring the integration of quality management system requirements into the organization's business processes;
- d. promoting the use of the process approach and risk-based thinking;
- e. ensuring that the resources needed for the quality management system are available;
- f. communicating the importance of effective quality management and of conforming to the quality management system requirements;
- g. ensuring that quality management system achieves its intended results;
- h. supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

5.1.2 Customer Focus

Customer support and satisfaction is a major focus at ZEPI and the whole Zilog organization as evidenced in the Zilog quality policy. Customer and applicable statutory and regulatory requirements are determined, understood and consistently met; risk and opportunities are determined, and addressed to maintain focus in enhancing customer satisfaction.

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5.2 Quality Policy

5.2.1 Establishing Quality Policy



QUALITY POLICY

Delight our Customers by...

- Doing the job right the first time
- Making and meeting commitments
- Excelling through planning and teamwork
- Driving continual improvement with Best Known Methods
- Respecting team members and making Zilog a great place to work

5.2.2 Communicating the quality policy

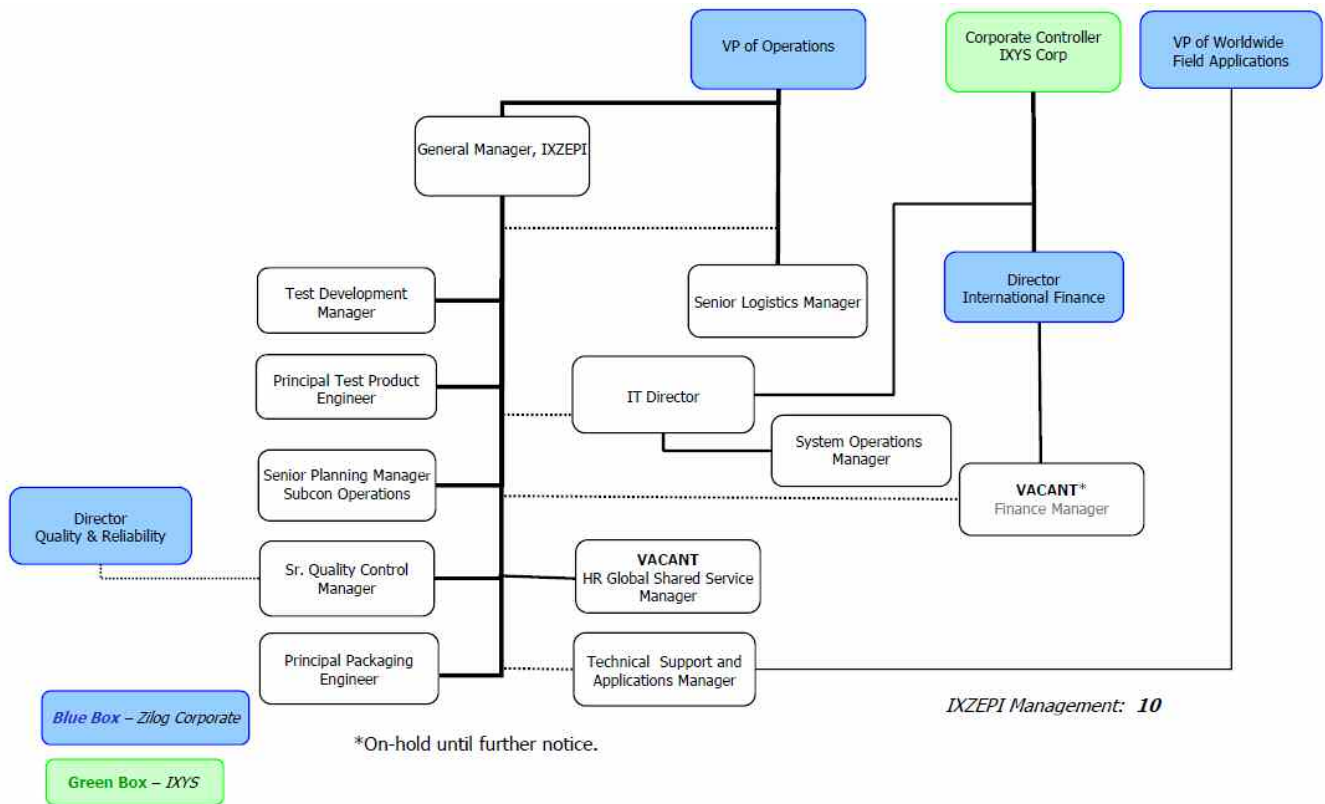
ZEPI is committed to this policy and ensure that this is communicated, understood and applied at all levels of the organization

5.3 Organizational roles and responsibilities

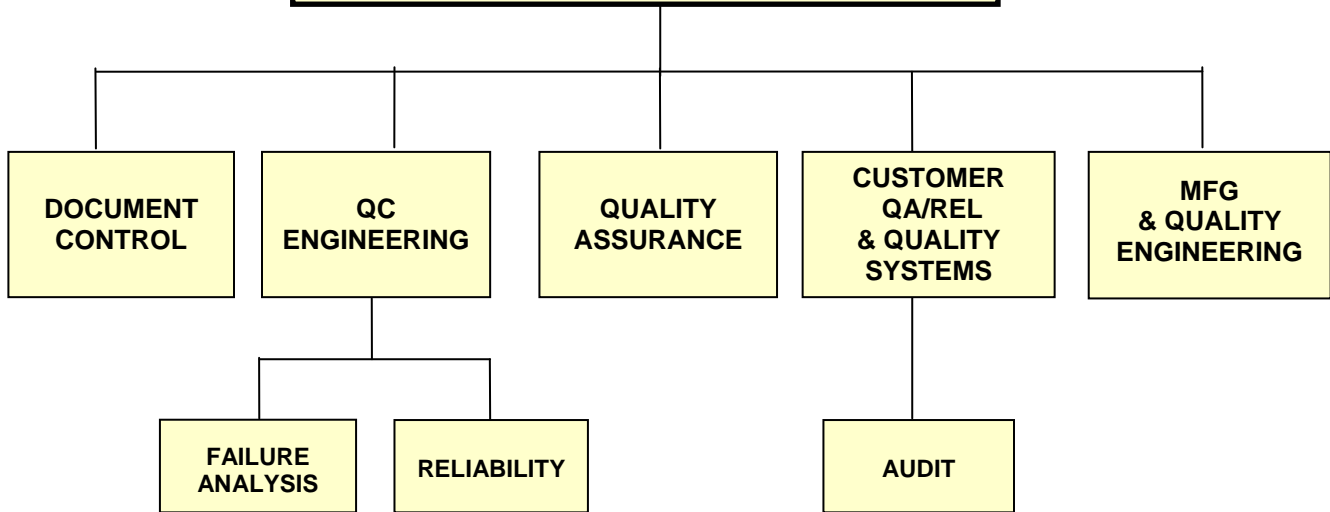
The responsibilities of each role are defined on individual job descriptions, SOP2065-Form2, Job Description. The Quality Manager is designated by the General Manager as Management Representative and has defined authority and responsibility for ensuring compliance to the ISO9001:2015 standard. They shall be responsible in establishing, implementing, maintaining, and ensuring that the quality system is functioning in accordance with customer requirements and the standards. They shall be responsible in the reporting of the performance of the quality management system to top management for

review and as a basis for continual improvement. They shall be responsible also for promoting awareness of customer requirements throughout the organization.

ORGANIZATIONAL CHART



QUALITY CONTROL



DC

- ZiDOC (EDMS) Admin and maintenance
- ZiDOC Extrasite Admin and maintenance
- Receipt and control of change notices, test media, DC reports, waivers, quality reports
- Deadfile maintenance
- ROM admin
- Oracle item master maintenance
- Plate 2 creation
- IXYS Support

FA

- Low yield lots at subcontractor electrical test; QA rejects
- Customer failure analysis
- Subcontractor wafer yield analysis
- IXYS Support

REL

- Product, process, subcon qualification (STWR/STR)
- Reliability monitors
- Subcon re-qualification
- FIT monitor
- IXYS Support

QA

- Incoming and Outgoing quality controls, packaged units and indirect raw materials
- FG and Die Bank monitoring
- Monitoring of subcontractor quality indices
- Die banking
- IXYS Support

AUDIT

- Maintenance of Quality System (ISO9001: 2015)
- Subcon audit
- IXYS Support

CUST QA/REL

- Automotive customer requirements and issues
- Customer surveys/inquiries
- Quality reports
- RoHS/ /REACH compliance/EICC CMRT
- IXYS Support

MANUFACTURING & QUALITY ENGINEERING

- On site subcon support (manufacturing and quality)
- Yield and quality monitoring
- Spot audits
- IXYS support

TEST PRODUCT ENGINEERING

- Development of multisite testing
- Test time improvement
- Process optimization
- Yield enhancement
- Electrical failure analysis
- Program revision and evaluation
- Subcon qual/support
- Reduction in LRR/PPM
- Tester and product qual
- Competitive analysis
- CFA, STWR and engineering eval
- UTB set-up/correlation and documentation
- Meridian Product Engineering Support
- Test Program conversion
- Xtools Test Support
- Test Equipment Maintenance
- Rom Web Administration
- IXYS Support
- DCB Laser Scribe and FVI Operation

TEST DEVELOPMENT ENGINEERING

- Test program development
- Test program conversion
- Software Utilities development
- Test Hardware prototype development
- Device characterization
- Systems administration of Engineering computers
- Competitive Analysis
- IXYS Support

LOGISTICS

FG/ SHIPPING

- Handles warehousing, packing, labeling and dispatching of cargo
- Provides headcount support for tools activity
- Ensures availability of packaging supplies for shipment
- Handles physical receiving of DSR/RMA and CFA and data entry in Oracle
- Provide documents for data entry of lots received from subcon, customers and test
- Disposal of scraps and physical inventory
- Physical count
- IXYS and S3 Product Support

PURCHASING

- Handles generation or PR/PO
- Handles negotiation on terms & conditions of purchase
- Works with vendor on delivery & other issues
- Handles vendor set-up in Oracle
- IXYS , S3 &, RP Support

TRAFFIC

- Handles PEZA and Customs Registration & Licensing requirement for both EEE and ELSE
- Handles PEZA LOI and LOE, LOA & Sub-LOA for International and local shipment
- Handles Logistics Shipment Customer Master set-up in Oracle
- Handles Logistics Shipment Routing according to carrier weight break
- Handles ship confirmation in Oracle to generate Customs Invoice and Packing List
- Handles shipment documentation requirements for imports and exports as well as government compliance as IOR & EOR
- Conducts market survey for logistic provider service
- Handles drop shipment documentation in compliance with origin and destination Customs requirement
- Handles corporate compliance as IOR, EOR, HS Tariff Classification, ECCN Classification, NAFTA & GSP Form A requirement, BIS reports & Audit
- Monitors arrival of cargo and confirms delivery from receiving party

CUSTOMER PLANNING

- Schedules order based on WIP availability
- Monitors accuracy of shipment dates reflected in the system
- Ensures die availability, assembly and test delivery, and shipment to meet commit dates
- Coordinates with CSR's, logistics, planning and subcon to meet commit
- Answers delivery, leadtime and product availability inquiries from CSR's and supply chain organization
- Propose required starts for foundry, submits rom pull to foundry
- IXYS, S3 & RP Product Support
- IXYS

CUSTOMER SERVICE

- On time order entry for non-EDI orders, CFA, DSR and RMA, cancellations and mask orders in Oracle
- Order maintenance (change in CRD in compliance to T's and C's) and order cancel responsibility(e.g. booked against business rules)
- Maintain order management for sample ordered through web and Oracle
- Keeps hardcopy confirming in ZiDOC and initiates Customer Master Transmittal form
- Handles customer inquiries e.g. leadtime and product availability via email
- Acts as conduit between customers, operations, finance, logistics and planning e.g. customer notifications, compliance request
- IXYS, S3 & RP Support

PLANNING

PRODUCT, PROBE AND TEST PLANNING

- Plans, schedules, and monitors loading and completion of all products.
- Meets all shipment requirements based on backlog.
- Supports delivery performance to OSD, CRD, and CSD.
- Generates Build Plan and separate plans for Wafer Receipt, Probe, Mounts, and Final Test.
- Conducts Probe and Final test capacity review and coordinates requirement for additional capacity to ensure all demand will be supported.
- Conducts wafer flash analysis.
- Monitors and coordinates units for reprocessing.
- Conducts review and publishes updates on revenue status.
- Conducts validation/review on all Fab, Probe, Final test, and backend billings.
- Proposes standard wafer per hour for Probe and units per hour for Final Test.
- Reviews subcontractors cost related to Probe and Final Test.
- Reviews/submits AR financial justification.
- Allocates space for additional equipment and personnel and recommends office layout.
- IXYS Support

INVENTORY AND DATA CONTROL

- Directs all activities of OSFM.
- Coordinates and reconciles results of quarterly and year-end inventory count.
- Ensures accuracy and integrity of OSFM/Oracle WIP and inventory.
- Monitors ISR, DMF, MRB for timely OSFM/Oracle data entry.
- Updates obsolete and inactive parts for ZUS review and approval to scrap.
- Assists in preparing Finance inventory forecast, review and analysis.
- Reviews non-moving materials and recommends quarterly scrap list.
- Assists in identifying usable and non-usable inventory.
- Provides test scenarios and testing of OSFM new features and upgrade.
- Generates BOM and Routing files for OSFM upload.
- Interface between end user and IT for each respective OSFM modules.
- IXYS Support

SUBCON OPERATIONS

- Manage the business relationships with our Assembly and Test partners.
- Establish and maintain programs for monitoring and improving Subcon performance on key indices supporting Zilog's business to include:
 - Capacity
 - Pricing
 - Delivery, cycle time, yield, customer service, quality
- Load the subcons to support dynamic business demands and advise ZEPI Planning organization regarding delivery dates of specific lot numbers of specific products.
- Evaluate subcon capacity vs demand and identify alternative suppliers to support upcoming volume demand and cost targets.
- SAG reports and analysis: Actual vs Plan and Forecast (assembly and die sales).
- IXYS Support

PLANT AND INDUSTRIAL ENGINEERING

- Operation and tending of facilities equipment
 - Compressed dry air system
 - Air conditioning system
 - Vacuum system
 - Fire alarm system
 - Air Ventilation/Exhaust System
- Monitoring of environment temperature and relative humidity
- Monitoring and recording of daily electricity consumption
- Repair, maintenance and calibration of facilities equipment, some QC, and Warehouse tools and equipment
- Support on ISO activities and EMS programs/activities
- Work Order Request processing
- Coordination of overall Safety Programs/Activities
- Pollution Control
- Implementation of approved office and equipment layout
- Perform preventive maintenance of facilities equipment and checking/encoding on PMS
- Conduct monthly checking of water potability test (Drinking Water)
- Coordination and monitoring of construction activities and other outside services
- Coordination and renewal of Government permits (Electrical, Mechanical, Safety, etc.)
- Operation of Stack Assembly Line

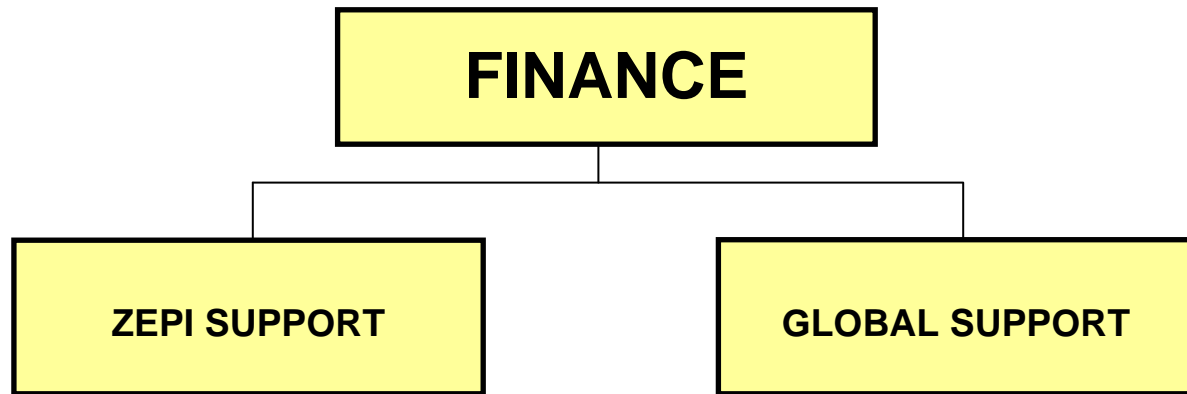
HUMAN RESOURCES

ZEPI Support

- Headcount Planning and Monitoring
- Recruitment & Selection
- Onboarding and New Hire Integration
- Employee Training & Organizational Development
- Compensation & Benefits Administration
- Performance Administration
- Employee Relations & Services
- Audit Compliance
- Policy Implementation
- Corporate External Relations

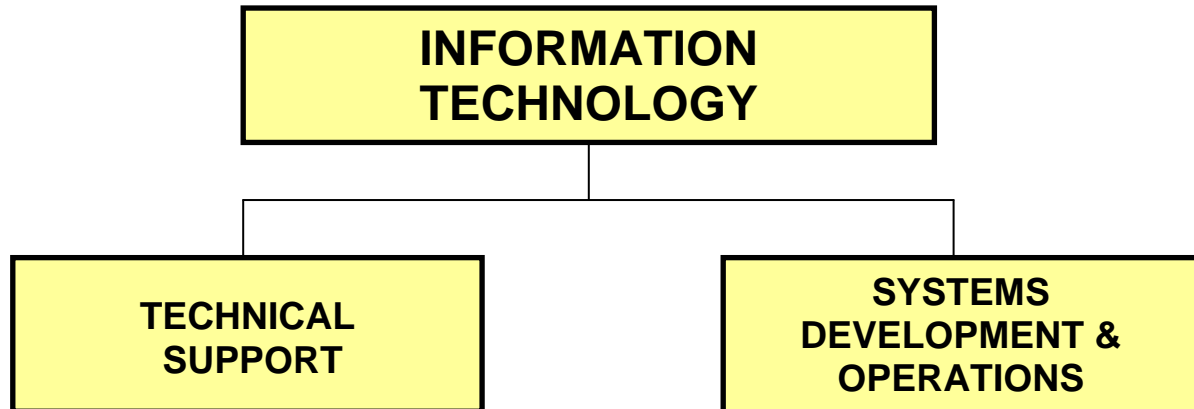
Global Shared Services Support

- Compensation & Benefits Administration
- HR Surveys
- Policy Review & Strategy Formulation
- Contract Administration
- HR Process Improvement



- Budget, forecast and controls
- Fixed Asset management
- Financial accounting, reporting & analysis
- Treasury & payroll
- Accounts payable
- Interco accounting
- Government reporting
- SOX compliance documentations
- Sub-con reports
- Taxation
- Retirement plan
- Financial audit

- Bookkeeping for Zilog & IXYS Int'l locations
- FOSS and FIBU AP support to IXYS Germany
- Hyperion MSRP reports update, reconciliation and analysis for Zilog I IXYS Asia and US locations
- Worldwide FA management
- Property Taxes and Insurance
- Financial accounting, reporting & analysis - Zilog & IXYS Asia and US locations
- Worldwide Inventory. management
- Accounts payable – Zilog US, Cayman, IXYS BV, and IXYS RP
- Interco accounting for Zilog & IXYS Int'l and US locations
- SOX compliance audits
- Distribution support
- Oracle Reports generation
- Revenue Accounting
- Accounts Receivables Accounting for Zilog, IXYS Asia and US locations
- Cash forecast and funding for Zilog Asia locations
- Support on financial and taxation audits for Zilog and IXYS Asia and US locations
- Administration/assistance on local requirements



- Data communication
- Technical support
- Data back-up maintenance
- Software installation & upgrade
- Systems administration
- Network administration
- User planning and support
- SOX Compliance for Gen Computer Control
- Outsourcing Management

- Electronic data processing
- Applications support
- Systems analysis and design
- Database modeling
- Program development
- Package software customization
- Package software deployment
- Compliance with SOX Change Request
- SOX Compliance for Application Control
- Outsourcing Management
- IXYS Support

PACKAGING ENGINEERING

- Responsible for Worldwide Packaging Engineering
 - Alternative packaging solutions
 - New technology updates
- Engineering support to subcontractors.
- Coordinate with subcons for assembly yield and improvement projects.
- Coordinate with subcons on package, technology and material qualifications.
- Provide Documentations: Engineering drawings (assembly diagrams, packaging and MKT drawings), and assembly specifications
- Identify and qualify subcontractors to support additional package and technology requirements
- Support Tools overall coordination
- IXYS Support

TECHNICAL SUPPORT

- Communication and resolution of customer technical issues
- Competitive Benchmarking
- Reference designs, system level characterization and debug
- Develops application notes
- Attends trade show and “works” the booth
- Conduct technical training

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6 PLANNING:

6.1 Actions to address risks and opportunities

6.1.1 When planning for the quality management system, the organization shall consider the issues referred to in 4.1 and the requirements referred to in 4.2 and determine the risks and opportunities to:

- a) give assurance that the quality management system can achieve its intended results;
- b) enhance desirable effects;
- c) prevent, or reduce , undesired effects;
- d) achieve improvement.

6.1.2 ZEPI shall plan:

- a) actions to address these risks and opportunities;
- b) and how to integrate and implement the actions into its quality management system processes (4.4) and evaluate the effectiveness of these actions.

6.2 Quality Objectives and planning to achieve them

6.2.1 The management of Zilog Electronics Phils., Inc. defines the quality objectives and measurements that support the quality policy, taking into account applicable requirements. The objectives are measurable, updated as appropriate, and are regularly reviewed during quarterly management review or Assembly Test/Operations review.

The quality objectives are communicated by the responsible department manager and/or the Quality Management Representative to the organization for their support in achieving them. Various objectives consistent with, and in support of, the quality objectives at different levels of the organization are also set and reviewed during the performance review.

ZEPI shall maintain documented information on the quality objectives.

6.2.2 ZEPI, when planning how to achieve the quality objectives, shall determine

- a) what will be done;
- b) what resources will be required;
- c) who will be responsible
- d) when will it be completed;
- e) how the results will be evaluated.

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6.3 Planning of Changes

When there is a need for change to the quality management system, it shall be carried out in a strategic manner, considering the following:

- a. the purpose of the change and the potential consequences;
- b. the integrity of quality management system;
- c. the availability of resources;
- d. the allocation or re-allocation of responsibilities and authorities.

7 SUPPORT:

7.1 Resources

7.1.1 General

Requirements are identified to ensure adequate resources are provided in the establishment, implementation, maintenance and continual improvement of the quality management system.

7.1.2 People

Resources are selected on the basis of appropriate education, skills, and experience as indicated on SOP1963, ZEPI- Hiring Standards, and competence enhanced thru continuous training.

7.1.3 Infrastructure

The infrastructure needed includes the building, workspace and utilities; equipment, both hardware and software; and support services like information and communication technology and transport facilities.

7.1.4 Environment for the operation process

ZEPI's concern for the environment is embodied in its compliance to the ISO 14001 standard

Guidelines and procedures to ensure and maintain a controlled work environment (temperature, humidity, electrostatic discharge) and facilities necessary to product requirements are contained in [SOP1566](#), ZEPI - Environmental Requirements and [SOP1604](#), ZEPI - Electrostatic Discharge Control.

The organization also considers social and psychological in combination with physical factors for a suitable environment.

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7.1.5 Monitoring and measuring resources

7.1.5.1 General

All inspection, measuring and test equipment (including test software) used to demonstrate the conformance of product to the specified requirements, is controlled, maintained, and calibrated or verified, or both.

ZEPI shall retain appropriate documented information as evidence of the capability of the monitoring and measurement resources.

7.1.5.2 Measurement Traceability

All aspects of calibration (authorities and responsibilities, traceability to standards, calibration documents, procedures, calibration environment, calibration reports, labeling, calibration intervals, procedures for equipment out of calibration, handling and storage, etc) are performed per [SOP1561](#), ZEPI-Equipment PM/Calibration Program, [SOP1611](#), ZEPI – Test Equipment Calibration/Verification Listing, and [SOP1612](#), ZEPI – Calibration Procedure.

A calibration seal sticker is affixed to measuring/test equipment and standards where appropriate to safeguard calibration from tampering.

A certificate of calibration is required for measuring and test equipment that are calibrated outside through other institutions, traceable to National Bureau of Standards or equivalent,.

ZEPI shall determine if the validity of previous measurement results has been adversely affected when measuring equipment is found to be unfit for its intended purpose, and shall take appropriate action as necessary.

7.1.6 Organizational Knowledge

All employees undergo orientation by Human Resources on all matters related to the company policies.

Direct employees are trained and qualified for the operation or process they are assigned to achieve conformity of products.

Resources are selected on the basis of appropriate education, skills, and experience as indicated on SOP1993, ZEPI – Hiring Standards, and competence enhanced through continuous training.

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Training is provided to improve competence. When addressing changing needs and trends, the organization shall consider its current knowledge and determine how to acquire or access any additional knowledge and required updates.

7.2 Competence

Training is provided to improve competence and is evaluated for effectiveness on the next competency review. Personnel competence is measured and reviewed through Management By Objectives (MBO). The MBO is used to measure performance against a set of objectives and define continuous improvement and developmental plans for employees.

Training records are kept filed per prescribed retention period.

7.3 Awareness

Part of training is personnel awareness on the quality policy, relevant quality objectives, and their contribution to quality management system. This includes the benefits of improved performance and the implications of not conforming with the quality management system requirements.

7.4 Communication

Internal and external communications relevant to the quality management system and quality objectives are done thru meetings, bulletin board postings, emails and quality audit.

7.5 Documented information

7.5.1 General

The quality management system documents include but are not limited to: the documented quality policy, quality objectives, quality manual (QCC1479), Policy Statement (POL), Procedural specifications (SOP, Standard Operating Procedure), detailed specifications (Mechanical/Marketing drawing, assembly diagram, PSI) and quality records defined in SOP0914, Controlled Documents Information Retention Schedule. The document control system is designed to insure the information required to manage the subcontractors, warehouse and global support functions are controlled and easily accessible to the user in a clear and concise manner.

The document control system uses an Electronic Document Management System (EDMS) known as ZiDOC for identifying any approved document, current revision number, description, and other information field collected on each controlled document.

Subcontractors are provided access to applicable documents through the Zilog EXTRASITE or through document control distribution, if no access has been granted.

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The Quality Manual defines the scope of the quality management system and provides a comprehensive overview of the business processes at Zilog Electronics Philippines, Inc. and interactions at various departmental levels and remote locations. It describes in short or gives reference to system related to product and process development, manufacturing, testing, delivery and subcontracting. It provides references to documented procedures established for the quality management system.

7.5.2 Creating and updating

This procedure is aimed at ensuring that the relevant information and requirements to probe, manufacture, and shipment of products are available at point of use, are current in revision, and are legible and readily identifiable. Obsolete documents are identified to prevent its unintended use.

Documents of external origin such as standards and customer specifications are subject to control according to established Document Control procedure.

A timely review of customer specifications and changes related to assembly, test, and shipment shall be done and shall not exceed two working weeks (automotive customers) or three working weeks (non-automotive customers). The procedure is outlined in [SOP2118](#), ZEPI – Customer Specification Review, Approval and Implementation Procedure. Changes shall be documented to specifications by the concerned department, distributed, and implemented as applicable. Implementation of applicable change takes effect on the change notification release date. Documents like control plan and FMEA shall also be updated where applicable.

7.5.3 Control of documented information

7.5.3.1 Records shall remain legible, readily identifiable and retrievable. Concerned departments shall store, file and maintain their respective quality records in locations where they are protected against deterioration, damages, or losses. They shall keep an index of records on file and initiate appropriate disposition as necessary according to archival and dead file procedure.

Dead file procedure reference is [SOP1689](#), ZEPI - Dead file Procedure. Records retention is referenced in [SOP0914](#), CORP - Controlled Documents Information Retention Schedule. Regulatory requirements are complied with in personnel and finance records. Specific customer retention schedule that exceeds Zilog’s standards shall be documented in [SOP0914](#). Records shall also include customer specified records.

7.5.3.2 [SOP2113](#), CORP - Document Management defines the guidelines and procedures for the initiation, approval, receipt, distribution, and changes of documents and specifications.

8 OPERATION:

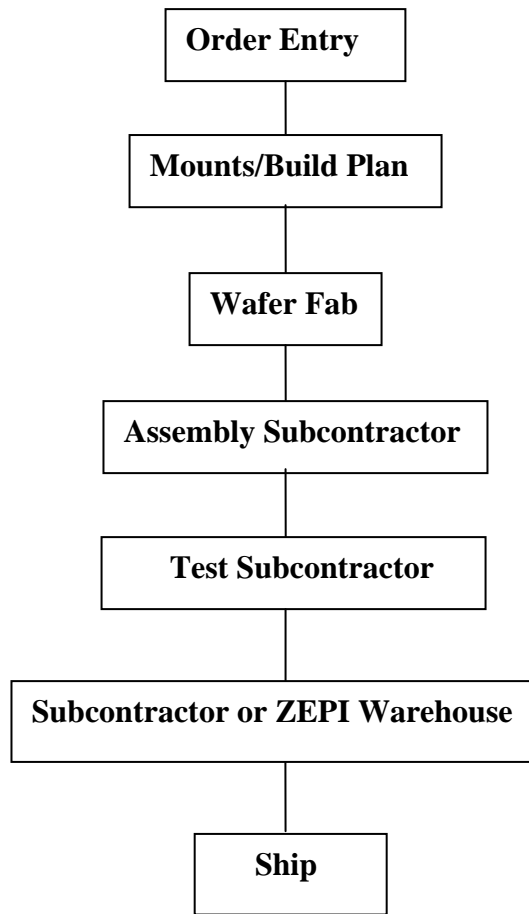
8.1 Operational planning and control

8.1.1 For Zilog Products

	Responsibility	Reference Specs
Contract Review including review of customer requirements and contract negotiation. Other requirements that may arise from time to time are communicated to customer service through email and telecom.	Customer service and Customer planning	SOP1004 , CORP – Order Management and Customer Service Functions
Generate and review of build plan to determine requirements in terms of subcontractor capacity, and in some cases, program availability for engineering and /or customer samples.	Planning and Subcon Operations	SOP1822 , ZEPI – Build / Wafer Plan Report Generation
Execute the build plan.	Assembly & Test Subcontractor	All applicable ZEPI & subcontractor specs & test programs, PSI, ADs, drawings and Subcon Rating guide
Monitor subcon WIP assembly and Test schedule.	Planning and Subcon Operations	SOP1822 , ZEPI – Build/Wafer Plan Report Generation
Measure assembly and test performance	Subcontractor	QBR
Monitor subcon assembly and Test Packaging Performance	QC, Test, Customer Service, Subcontractor	ZAZ05-0002 /MBO/QBR
Monitor shipment schedule.	Customer Planning and Logistics	SOP1822 , ZEPI – Build/Wafer Plan Report Generation

Note: ZEPI's role in product realization starts with order entry.

General Process Flow of Product Realization



Note: Refer to [SOP1594](#), ZEPI - Subcon Assembly, Test and Warehousing Guidelines.

8.1.2 For Stacking Assembly

	Responsibility	Reference Specs
Review 6 months rolling forecast from IXYS UK or work order list from JDE	Planning	SOP2242
ZEPI to compute for materials, capacity and headcount	Planning	SOP2242
ZEPI to review PO and Work Order from IXYS UK	Operations /Planning Stores	SOP2228 , SOP2242
Stores issues raw materials needed for the work order	Stores	SOP1598
Execute the Work Order	Operations	BOM, SOP2240 , SOP2228 SOP2232 , SOP2233
Monitor WIP	Operations	SOP2240 , SOP2228 SOP2232 , SOP2233
Monitor Stacking Assembly Performance	Operations ,QC	SOP2025 , SOP2243 SOP2231 , SOP2242
Monitor shipment	Operations	SOP2234

8.1.3 For Helical Spring Assembly

	Responsibility	Reference Specs
Received Purchase Order (PO) from IXYS UK	Planning	SOP1004
Received raw materials from IXYS UK	Logistics/QC	SOP2025
Helical Spring Assembly	Operations	SOP2260
Monitor WIP Assembly	Planning / Operations	SOP2260
Measures assembly and yield performance	Planning, QC Operations	ATO
Monitor shipment	Planning	SOP1670/SOP1680 Invoice

8.1.4 For DCB Laser

	Responsibility	Reference Specs
Review IXYS' 3 months of rolling forecast or PO for capacity allocation at subcon DCB etch, plating and ZEPI laser scribe.	QC/Planning	SOP1594

	Responsibility	Reference Specs
Subcon DCB etch or subcon DCB etch and nickel plate	Subcon	Subcon specs
ZEPI DCB laser scribe or laser scribe and singulate	Operations	SOP2244 , SOP2238
ZEPI ships	Operations	SOP2245
Monitor WIP and shipment	Operations / Planning	SOP1594
Measures subcon and laser scribe performance	TPE	ATO

8.2 Requirements for products and services

8.2.1 Customer communication

Customers are encouraged to view product information available at the world-wide web at www.zilog.com.

Inquiries, contracts or order handling including changes, obtaining customer feedback related to products and services, including customer complaints establishing specific requirements for contingency actions are communicated through email, telephone, letter, Oracle, or EDI systems.

8.2.2 Determining the requirements for products and services

Customer requirements, including requirements for delivery and post-delivery activities, requirements not stated by the customer but necessary for specified or intended use, statutory and regulatory requirements and additional requirements are determined during the contract review. Agreements and contracts with the customer including specifications and agreements that differ from standard are recorded in the customer service customer order file and customer master file. These activities are coordinated and reviewed by Customer Service and Customer Planning.

Post-delivery activities include any after-sales product service provided as part of the customer contract or purchase order.

In the case of IXYS products, requirements are determined from IXYS specs and/or drawings.

8.2.3 Review of the requirements for products and services

8.2.3.1 Product requirements that differ from the standard are defined and documented in the Customer Service order file and the customer master file and into the Product Specification Index or the PSI. In cases of contract or order requirements differing from those previously expressed, Sales or the

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appropriate Zilog departments are notified and the differences resolved before the order could be processed.

The ability to meet requirements are reviewed and ensured during the Product Specification Index review/approval.

8.2.3.2 Records of the results of the review and actions arising from the review related to the customer order are documented in the customer order file and the customer master file. Results of the review and actions arising from the review of the Product Specification Index are traceable in its workflow.

If the customer does not provide a documented statement of requirements, Zilog standard requirements shall apply and a Sales Acknowledgement is sent by Customer Service to the customer upon order approval.

ZEPI shall retain documented information on the results of the review or any new requirement for the products and services.

8.2.4 Changes to requirements of products and services

In the event of changes to product requirement and awareness of relevant personnel to the changes, SOP2118, ZEPI - Customer Specification Review, Approval and Implementation Procedure and SOP1630, ZEPI - Specification Implementation and Audit Procedure apply.

8.3 Design and Development of product and services

ZEPI does not perform any design and development functions nor does it have design engineering in its organization to design Zilog products.

8.4 Control of externally provided processes, products and services

8.4.1 General

ZEPI has established procedures and guidelines for material procurement, calibration service, and supplier control that ensure all materials used conform to specification and supplied by qualified and approved supplier. These are contained in the following specifications:

[SOP1601](#): ZEPI - Incoming Quality Control Procedure

[AVL0004](#): ZEPI - Subcontractors Qualified Services AVL

[SOP1600](#): ZEPI - Purchasing Procedure

[SOP1549](#): ZEPI - Control Procedure for Non-Conforming Materials

[SOP1554](#): ZEPI - Subcontract Test Facility Qualification and Disqualification

[SOP1575](#): ZEPI - Vendor Control Procedure

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SOP1551: ZEPI - Subcontract Assembly Qualification and Disqualification

As part of supplier management, ZEPI requires our wafer fab, assembly, test and dropshipment subcontractors to be certified to ISO9001:2015 and encourages other suppliers to implement the same.

8.4.2 Type and extent of control

ZEPI shall ensure that externally provided processes, products and services do not adversely affect the organization's ability to consistently deliver conforming products and services to its customers. For suppliers of direct materials SOP1575, ZEPI-Vendor Control Procedure applies. For assembly and test subcontractors, SOP1554, ZEPI- Subcontract Test Facility Qualification and Disqualification, SOP1551, ZEPI-Subcontract Assembly Qualification and Disqualification, SOP1650, ZEPI-Incoming/Outgoing Inspection of Subcontracted Products, and SOP1552, ZEPI-Subcon Audit Rating Procedure applies.

Performance of suppliers is regularly monitored through the use of indicators. Among the indicators are quality, cycle time, cost, delivery, and customer service. Subcontractors are rated based on delivery, customer service, and quality, which include customer complaints, yield, cycle time, and loading performance.

8.4.3 Information for external providers

The purchasing procedure in SOP1600 describes all relevant information and documents to complete a purchase requisition from its initiation to review and approval. Information shall include a description of the product to be purchased, specifications, drawings, relevant technical data including quality requirements, where applicable.

8.5 Production and service provision

8.5.1 Control of production and service provision

The chain of processes that produce tested good units starts with silicon wafers, probe, assembly, and test. Wafer fabrication, assembly, and test are subcontracted. Control of production at the wafer foundries and subcontractors are validated during the initial qualification review, regularly scheduled audits, and their certification to quality systems.

Each product shall conform to the marketing outline and the Customer Procurement Schedule. Each subcontractor process has corresponding procedural specifications that include work instructions, criteria for workmanship, manner of monitoring, inspection or test and safety precautions, where applicable. Actions are implemented

to prevent human error. Inspection and test equipment (including test software) used to demonstrate the conformance of product to the specified requirements, are controlled, maintained and calibrated.

In the event of a change in process, introduction of a new process, new equipment and new materials, the subcontractor notifies Zilog for approval prior to implementation.

Product shipment ensures quality products are served and delivered to the customer on time. Post-delivery activities like the engineering support of the customer application are the responsibility of the Zilog worldwide sales group. Reliability and re-qualification is the responsibility of Quality Assurance.

The same controls and service provisions shall apply to in-house production at the stack assembly and DCB laser.

8.5.2 Identification and traceability

Throughout the product realization at the subcontractor and in-house production, the bill of materials and the product status are traceable through lot card or traveler. The lot card or traveler contains lot information such as product description, lot number, quantity, material lot number, operator, equipment, and information needed for each processing station.

Carriers at assembly and test like trays and boxes respectively are traceable to the lot based on the tray code and labels.

ZEPI shall retain documented information necessary to enable traceability.

8.5.3 Property belonging to customers or external providers

Zilog shall exercise care to protect and safeguard IXYS' consigned equipment and shall maintain them per standard equipment preventive maintenance. Consigned equipment shall be identified in the PMS (Preventive Maintenance System) and on the individual equipment PM/calibration records. In case of lost, damage or unsuitability for use, Zilog shall notify IXYS and maintain records.

8.5.4 Preservation

Preservation of the product during subcontractor or in-house processing, warehousing and delivery to the customer includes identification, handling, packaging, storage and protection in order to maintain conformity to requirements.

Lot identification prior to topmark is through the lot card or traveler. Once topmarked, the date/BB code will trace the lot.

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Handling includes ESD control. This is observed at any station like grounding of work areas and storage racks/cabinets, wearing of ground strap or heel strap, and finger cots.

All work-in-process and finished products are handled properly and appropriately such as the use of wafer cassettes/conductive trays, production trays, antistatic tubes, tape and reel, and the use of pick-up tool on QFP and LQFP devices.

Raw materials are kept in their original packing conditions when received. Finished products are sealed/packed appropriately in static shielding bag, moisture barrier bag or PE plastic and placed into appropriate shipping box with silica gel and humidity indicator card or as required by the customer. Packaging boxes have corresponding bar code label which contains package information such as: delivery number, Product Specification Index (PSI), and quantity.

The condition of product in stock is monitored and assessed as part of the preservation. The monitors include wafers at Die Bank and Finished Goods.

Wafer monitor is based on [SOP1959](#), ZEPI - Wafer Incoming and Outgoing Inspection Procedure and FG monitor in [SOP1670](#), ZEPI - Finished Goods and Warehousing Procedure. Visual wafer and FG monitor at the subcontractor will be verified during a facility audit.

Additional specifications that cover preservation of product include the following:

- [SOP1618](#), ZEPI - Pack
- [SOP1670](#), ZEPI - Finished Goods and Warehousing Procedure
- [SOP1566](#), ZEPI - Environmental Requirements

A FIFO (First-In-First-Out) system is utilized to optimize inventory turns over time and assure stock rotation. Obsolete products are handled per SOP2105, CORP - Document Control Plate 1/2 Processing Procedure; and SOP1549, ZEPI-Control Procedure for Non-conforming Materials.

8.5.5 Post-delivery activities

Post-delivery activities include actions under warranty provisions of the Standard Terms and Conditions of Sale, SOP1701.

8.5.6 Control of changes

ZEPI shall review and control changes for production and service provision, to the extent necessary to ensure continuing conformity with requirements.

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ZEPI shall retain documented information describing the results of the review of changes, the person(s) authorizing the change, and any necessary actions arising from the review.

8.6 Release of products and services

Products are released after completing the required process and after complying with the requirements at each appropriate stage of the process flow. The final release to the customer proceeds only after the requirements have been satisfactorily completed. The lot cards or lot travelers that showed evidence of conformity with the acceptance criteria and traceability to the person authorizing the release are retained based on the retention policy.

8.7 Control of non-conforming outputs

8.7.1 Non-conforming materials include discrepant incoming materials, low yield lots at test subcontractors, lots for scrap and lots failing reliability monitors. Procedures and guidelines for non-conforming materials are defined in SOP1549, ZEPI - Control Procedure for Non-conforming Materials.

Non-conforming products are dispositioned through the issuance of an MRB (Material Review Board). Products are identified through QC stamp or MRB number. Lots that need to be held are quarantined. A Materials Review Board (MRB) has the responsibility to review and the authority to disposition non-conforming materials. Quality Control audit has the responsibility to audit that dispositions in the MRB are implemented.

When a non-conforming product is detected after delivery, the Materials Review Board provides disposition and action(s) to take. The customer is informed immediately.

8.7.2 ZEPI shall retain documented information like MRB, 8D and CFA reports.

9 PERFORMANCE EVALUATION:

9.1 Monitoring, measurement, analysis and evaluation

9.1.1 General

ZEPI values the management of information and data for performance measurement in support of its quality management system. It monitors subcontractor indices related to yield, delivery, quality, cost; reliability, results of audits, customer rating and actions to address risks and opportunities.

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Stack assembly, DCB laser, Helical Spring assembly:

A regular monitoring and measurement of the performance of each process is done by responsible department and reported during the quarterly Assembly and Test Operations Review (ATO). Performance measures include yield and cycle time.

Foundry subcontractors:

[SOP0830](#), CORP- Management of Wafer Foundry defines the qualification, monitoring and management of foundry subcontractors. This function is the responsibility of Meridian.

Assembly subcontractors:

A regular monitoring and measurement of ZEPI's subcontractors' performance is done by Planning and results are reported during the quarterly Assembly and Test Operations Review (ATO). A quarterly business report is forwarded to major subcontractors. The report consists of the subcontractor performance in terms of quality, yield, cycle time, highlights and issues. When issues occur, they are communicated and corrective actions are requested through telecom and/or emails.

Probe and Test Subcontractors:

Probe or final test yield is one of the factors that determine the quality and reliability of the product. Variability in materials and testers affect the final test yield and subsequently outgoing and PPM measurements. Probe and test yields are monitored daily by Test Product Engineering through the test subcontractor WIP report. Lots below device target yield and lots which require failure analysis are communicated and discussed with subcontractor by telecom or by email.

Other Measurements:

[ZAZ05-0002](#) defines the other measurements of the Quality Management System monitored by ZEPI and the results of subcontractor facility audits.

Wafer Quality

Subcontractors monitor incoming visual lot rejection and PPM for the purpose of providing information on the quality of foundry wafers.

Subcon Quality

Subcon product quality is monitored and measured per [SOP1650](#), ZEPI – Incoming/Outgoing Inspection of Subcontracted Products and [SOP1554](#), ZEPI – Subcontract Test Facility Qualification and Disqualification.

Product quality at the subcontractors' Finished Goods is visually monitored during the facility audit.

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Stack Assembly, DCB laser, Helical Spring assembly:

Product quality is monitored and measured in terms of incoming and outgoing PPM.

Monitoring, measurement, analysis and evaluation are performed on a regular basis and reported during the Quality Management Review.

ZEPI shall retain documented information as evidence of the results.

9.1.2 Customer Satisfaction

Customer satisfaction is monitored and measured through a rating provided by the customer.

9.1.3 Analysis and evaluation

The methods for monitoring, measuring, analysis, and evaluation needed to ensure valid results include;

- a) conformity of products and services;
- b) degree of customer satisfaction;
- c) performance and effectiveness of quality management system;
- d) if planning has been implemented effectively;
- e) effectiveness of actions addressing risks and opportunities;
- f) performance of external providers;
- g) the need for improvements of the quality management system.

Methods to analyze data can include statistical techniques.

9.2 Internal audit

A Quality Control Auditor ensures compliance to the International Standards of ISO 9001:2015 and effective implementation of the requirements of the established quality management system, including maintenance of the system. Complementing the routine internal audit conducted by Quality Control are the random audits by a self-auditor from each department. This provides effective support in the maintenance of the quality management system.

An annual audit plan guides the conduct of the audit. The plan takes into consideration the status and importance of the areas to be audited, changes affecting the organization and the results of previous audit.

The audit plan covers the quality management system, subcontractors, and product audits. Product audit is a visual inspection of wafers at die bank and products at Finished Goods.

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9.3 Management Review

9.3.1 General

Top Management of ZEPI includes the General Manager, directors and managers, who regularly review the quality management system for continuing suitability, adequacy, effectiveness and alignment with the strategic direction of the organization.

9.3.2 Management review inputs

Management review is carried out through the issuance of a quarterly Quality Management System Report. Results are discussed during the quarterly review with top management and/or senior staff in attendance. The management review inputs are:

- a) status of actions from previous management reviews
- b) changes in external and internal issues that are relevant to the quality management system
- c) information on the performance and effectiveness of quality management system, including trends in:
 - 1. customer satisfaction and feedback from relevant interested parties;
 - 2. the extent to which quality objectives have been met;
 - 3. process performance and conformity of products and services
 - 4. nonconformities and corrective actions;
 - 5. monitoring and measurement results;
 - 6. audit results;
 - 7. the performance of external providers;
- d) adequacy of resources;
- e) the effectiveness of action taken to address risks and opportunities
- f) opportunities and improvement

9.3.3 Management review outputs

The outputs of management review shall include decisions and actions related to:

- a) opportunities for improvement
- b) any need for changes to the quality management system
- c) resource needs

ZEPI will retain documented information as the results of management review.

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10 IMPROVEMENT:

10.1 General

ZEPI shall determine and select opportunities for improvement and implement necessary actions to meet customer requirements and enhance customer satisfaction.

These shall include

- a) improving products and services to meet requirements as well as to address future needs and expectations
- b) correcting, preventing or reducing undesired effects;
- c) improving the performance and effectiveness of quality management system

Improvement can include correction, corrective action, continual improvement, breakthrough change, innovation, and reorganization.

10.2 Nonconformity and corrective action

10.2.1 When a nonconformity occurs, including any arising from complaints, ZEPI shall:

- a) react to the non-conformity and , as applicable:
 - 1. take action to control and correct it;
 - 2. manage the consequences
- b) evaluate the need for action to eliminate the cause(s) of the non-conformity, in order that it does not recur or occur elsewhere , by;
 - 1. reviewing and analyzing the nonconformity
 - 2. determining the causes of the non-conformity
 - 3. determining if similar non-conformities exist, or could potentially occur
- c) implement any action needed
- d) review the effectiveness of any corrective action taken;
- e) update risks and opportunities determined during planning, if necessary.
- f) make changes to the quality management system, if necessary.

[SOP1700](#), SOP1692 and SOP1548 address the corrective action procedures in ZEPI

Corrective actions shall be appropriate to the effects of the non-conformities encountered.

10.2.2 ZEPI shall retain documented information as evidence of the nature of the non-conformities and any subsequent actions taken and the results of corrective action.

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10.3 Continual improvement

ZEPI is committed to creating a culture where people actively seek to continually improve the suitability, capability and effectiveness of the quality management system.

ZEPI shall consider the results of analysis and evaluation and outputs from management review to determine if there are needs or opportunities that shall be addressed as part of continual improvement.

CHANGE HISTORY

REV	DATE	WORKFLOW NAME	DESCRIPTION	Originator/ Contributor
67	<u>2017</u> 11-2	ZEPI_Quality _ Control_4	Changed 6.4.1, 7.1.1.1, 7.1.1.2, 8.3.3, 9.2.4, and functional charts for Quality Control, Logistics and Finance. Reason: Annual review/update.	A. Sioson
68	<u>2018</u> 06-04	ZEPI_Quality _ Control_4	Complete rewrite to conform with ISO9001:2015.	M. Fonte A. Sioson
69	10-31	ZEPI_Quality _ Control_4	Change ISO9001:2018 to ISO9001:2015 on page 13.	A. Sioson