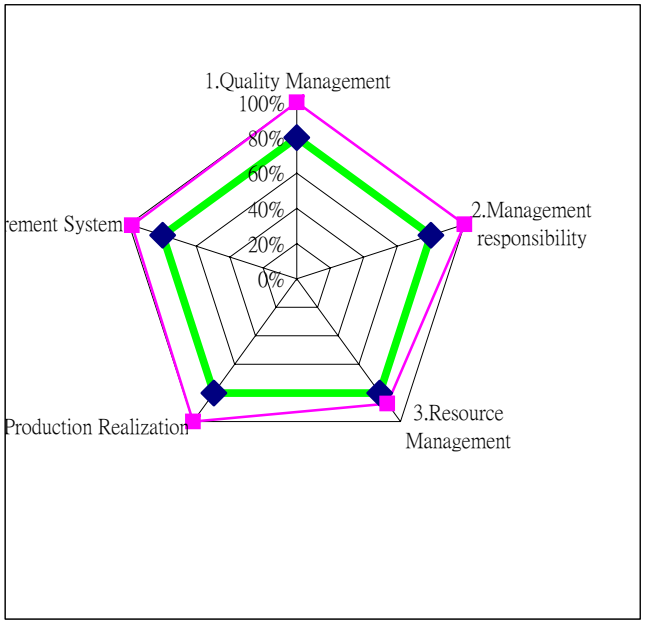
Supplier Quality System Audit Report

Supplier name 供應商	Total Technology Corp	Audit Dept. 稽核部門	SQA	Audit Date 稽核日期	2008/2/18
Supplier window 對應窗口	George	Audit by 稽核員	May Chuang	Audit results 稽核結果	Approval

一. 評價結果統計表 Audit Results

Supplier Level: 供應商分級 — Non-critical products

Items	Total	Actual	Score
1.Quality Management	37	37	100
2.Management responsibility	32	32	100
3.Resource Management	8	7	87.5
4.Production Realization	98	98	100
5.Measurement System	63	62	98.41
		Results	97.18



Approved(>80) Unapproved(<60) Conditional approval (60-80)

Supplier Quality System Audit Report

Supplier name 供應商	Total Technology Corp	Audit Dept. 稽核部門	SQA	Audit Date 稽核日期	2008/2/18
Supplier window 對應窗口	George	Audit by 稽核員	May Chuang	Audit results 稽核結果	Approval

二. Action Items

Audit Items (稽核項目)	Defects Symptom (不良缺失)	Action Plan (矯正措施)- suggestion	PIC (擔當者)	Due date (完成日)	Comment (備註)

Norm number

三. Exclusive Summary

TTL really running very strong organization and management in their factory. But there are too many manual workes in their facilities
also less effective flow in their production line. Because they only focus on special and customize products
So usually small quantities but special length cabel or special connectors. At 2008 their rejected rate was 0, also TTL promised

Process improvement suggestion be wroted on QPA report

1. 品質管理系統 Quality Management system

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
1-1. 一般要求 General requirements	1.Are quantifiable and measurable quality objectives, including those to meet requirements for product, established at relevant functions and levels within the organization?	1	1	
	2.Does supplier ensure the availability of resources and infromation necessary to support the operation and monitoring of these processes,	1	1	
	3.Does supplier monitor, measure and analysis these process and implement actions necessary to achieve planned results and continual improvement of these process?	1	1	
	4.Where an organization chooses to outsource with requirements? The organization shall ensure control over such process. Control of such outsourced process should be identified within the quality management system	1	1	
	5. Doess above quality management system included the processes for management activities , provision of resources, product realization and measurement.	1	1	
	1.Has the supplier defined and documented its corporate quality policy?	1	1	
	2.Does the quality management system documentation include a quality manual?	1	1	
	3.Have the procedures and work instructions been consistently and effectively implemented?	1	1	
	4.Does the supplier have established and documented procedures for	1	1	
	(a) a Quality Manual?	1	1	
	(b) Procedures to support Quality System defined in Quality Manual ?	1	1	
	(c) Design documents and technical spec./ drawings?	1	1	
	(d) Process control documents?	1	1	
	(e) Work instructions?	1	1	
	(f) Audit documents?	1	1	
	5.Does the document control procedure ensure that relevant versions of applicable documents are available at points of use?	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
1-2. 文件化要求 Documentation requirement	6.Does the procedure ensure that documents remain legible, readily identifiable?	1	1	
	7.Does the procedure ensure that documents of external origin are identified and the distribution controlled?	1	1	
	8.Does the procedure ensure that all obsolete documents are promptly removed from all points of issue or use?	1	1	
	9.Does the procedure ensure suitable identification of obsolete documents if they are retained for any purpose ?	1	1	
	10.If paperless documents used, does the system ensure that their version, identification, storage and distribution are well controlled?	1	1	
	11.Are quality documents reviewed and approved for adequacy by authorized personnel prior to issue?	1	1	
	12.Is there a procedure to govern engineering changes?	1	1	
	13.Are engineering changes reviewed and approved by authorized personnel prior to implementation?	1	1	
	14.Are the engineering change notifications distributed to all affected functional areas once approved?	1	1	
	15.Is there a system to ensure engineering change notifications are being implemented?	1	1	
	16.Is there a system to ensure engineering change is implemented only after needed training/ tools & equipment provided and W/I updated?	1	1	
	17.Is there a system to verify and feedback the effectiveness of engineering changes?	1	1	
	18.Is cycle time and process defined for red line document (e.g. handwriting document) control?	1	1	
	19.Are there documented procedures for control of quality records?	1	1	
	20.Are all quality records identified, indexed, filed, collected, stored, maintained, and disposed after stated period?	1	1	
	21.Are quality records maintained to demonstrate achievement of the required quality and to demonstrate effective operation of the Quality System?	1	1	

1. 品質管理系統 Quality Management system

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
	22.Are pertinent sub-contractor records included in the supplier quality records?	1	1	
	23.Are quality records maintained in such a way that they are remain legible, readily identifiable and retrievable?	1	1	
	24.Are quality records stored in such a way that deterioration is minimized and loss is prevented?	1	1	
	25.Have retention times of quality records been established and recorded?	1	1	
	26.Where agreed contractually, are quality records made available for evaluation by customers?	1	1	
	Total	37	37	

2. 管理責任 Management Responsibility

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
2-1. 管理者承諾	1.Are quantifiable and measurable quality objectives, including those to meet requirements for product, established at relevant functions and levels within the organization?	1	1	
	2.Does supplier ensure the availability of resources and infromation necessary to support the operation and monitoring of these processes,	1	1	
	3.Does supplier monitor, measure and analysis these process and implement actions necessary to achieve planned results and continual improvement of these process?	1	1	
	4.Where an organization chooses to outsource with requirements? The organization shall ensure control over such process. Control of such outsourced process should be identified within the quality management system	1	1	
	5. Doess above quality management system included the processes for management activities , provision of resources, product realization and measurement.	1	1	
2-2. 顧客導向 Customer Focus	1.Does supplier ensure that customer requirements are determined and are met with the aims of enhancing customer satisfaction?	1	1	
	2.Does supplier ensure that delivery on time rate are determined and make a improvement plan for met 100% on time delivery rate?	1	1	
				For Media
				For DSP
				For Control room
				For Medical
2-3. 規劃 Planning	1.Does supplier ensure that quality objectives or goal?	1	1	
	2.Does supplier ensure that the planning of the quality management system is carried out in order to meet the customer requirement (QC plan ro PMP)?	1	1	
	3.Does supplier maintence and integrity of the quality system when changes to the quality management system are happenning?	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
	4.Does the quality management system be planned and implemented when changes are happenning?	1	1	
2-4 責任, 職權與溝通 Responsibility, authority and communication	1.Has the supplier defined the responsibility, authority and interrelation of all personnel who manage, perform and verify work that affects the quality of products, materials or services? (i.e. procedures, organization charts, quality	1	1	
	2.Has the supplier provided adequate resources for in-house verification activities such as inspection, testing, monitoring and review of processes and products?	1	1	
	3.Has the supplier appointed a management representative who has responsibility and authority for ensuring that a quality management system has been implemented and maintained?	1	1	
	4.Has the management representative tracked and drove the improvement on quality management system performance with record/report.	1	1	
	5.Has the improvement effectiveness verified (record/evidence required)?	1	1	
2-5 管理審查 Management Review	1.Does the supplier conduct management reviews of the suitability and effectiveness of the quality management system at appropriate intervals? (i.e. does the quality system meet customer requirements?)	1	1	
	2.Does the management reviews include verification of the following input:	1	1	
	(a) Achievement of quality objectives	1	1	
	(b) Results of the audits	1	1	
	(c) Customer feedback	1	1	
	(d) Process performance and product conformity	1	1	
	(e) Status of preventive and corrective actions	1	1	
	(f) Follow-up actions from previous management reviews	1	1	
	(g) Changes that could affect the quality management system, and	1	1	
	(h) Recommendations for improvement	1	1	
	3.Does the output of management reviews include any decisions and actions related to:	1	1	
	(a) Improvement of the effectiveness of the quality management system and its process?	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
	(b) Improvement of product related to customer requirements, and	1	1	
	(c) Resource needs	1	1	
	4.Are implementation of action items from management review tracked?	1	1	
	5.Are records maintained of these management reviews?	1	1	
	Total	32	32	

3. Resource Management

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
3-1. Provision of resources	1.Is there a system to determine and provide the resources needed to implement and maintain the quality management system and continually improve its effectiveness and enhance customer satisfaction by meeting customer requirements?	2	1	Very good organization and opertor management but too many manual jobs
3-2. Human Resources	1. Is there a system that identifies training requirements for all personnel affecting the quality of the product?	1	1	
	2. Does a system exist for determining which personnel are qualified for a job function?	1	1	
	3. Is there a system to disqualify and re-qualify personnel in a job function?	1	1	
	4. Are accurate training records maintained?	1	1	
3-3. Insfrastructure	1.Is there a organization to determine and provide the infrastructure needed to achieve conformity included below items: a.)Building, workspace and associated utilities b.)Process equipment(Both hardware and software) c.)supporting services(such as transport or communication)	2	2	
	Total	8	7	
	Score	88		

4. Production realization

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
4-1 Planning od product realization	1.Is there a system to determine and provide the resources needed to implement and maintain the quality management system and continually improve its effectiveness and enhance customer satisfaction by meeting customer requirements?	1	1	
4-2 customer-related process	1.Are there established procedures for contract review? (i.e. product specifications and quality requirements)	1	1	
	2.Are such procedures reviewed to ensure that:	1	1	
	(a) Contract requirements are adequately defined and documented.	1	1	
	(b) Contract requirements that differ from those in tender are resolved.	1	1	
	(c) The supplier has the capability to meet the contractual requirements.	1	1	
	3.Are there established procedures for new product introduction/transfer? (e.g., established work instructions, documentation checklist, equipment checklist, conduct pilot run, pre-production, first article review, etc.)	1	1	
4-3 Design and Development	1.Are there procedures to control, review, verify, and validate the design of the product to ensure it is meeting all requirements?	1	~~1~~	
	2.Are there plans that identify the responsibility for each design and development activity?	1	1	
	3.Are the plans updated as the design evolves?	1	1	
	4.Are obsolete design documents removed from the application area?	1	1	
	5.Are the design and verification activities planned and assigned to qualified design personnel?	1	1	
	6.Does Project Manager have adequate management skills where we could see from the project schedule is on track with the planned milestones (e.g., EVT, DVT, PVT, MP)?	1	1	
	7.Are organizational and technical interfaces between different groups identified, documented, transmitted and reviewed regularly?	1	1	
	8.Are design input requirements relating to the product identified, records maintained and reviewed for adequacy?	1	1	
	9.Is there a procedure for resolving incomplete or conflicting requirements with those responsible for drawing up the requirements?	1	1	
	10.Are design outputs documented and expressed in terms of requirements, calculations and analyses?	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
	11.Has the supplier established Phase Review Process to verify the design effectiveness throughout the entire development cycle till mass production?	1	1	
	12.Are there quantifiable measurements defined for phase exit/entry criteria?	1	1	
	13.Have the above criteria been verified and confirmed with documented data/report with adequate results?	1	1	
	14.Has the design verification been planned, established, documented and assigned to competent verification personnel?	1	1	
	15.Does the supplier own enough test equipment/tools and procedures for design verification to ensure the design output meet the design input?	1	~~1~~	
	16.Are there procedures for the identification, documentation, review and approval of all changes and modifications?	1	1	
	17.Is there a requirement to verify the product meets design specifications prior to mass production? (e.g., design review/verification)	1	1	
	18.Are the records for design control, review, verification, and validation properly documented and maintained?	1	~~1~~	
	19.Does DFX (e.g., DFM, DFQ, DFT, …, etc.) review included the inputs from related departments/parties?	1	1	
	1.Does the supplier have procedures to ensure that purchased product conforms to specified requirements?	1	1	
	2.Are subcontractors selected on the basis of their ability to meet subcontract requirements, including quality requirements?	1	1	
	3.Is subcontractor qualification done by quality system audit and process quality analysis?	1	1	
	4.Are there a procedure and checklist for quality system audit and process quality analysis which are in compliance with Dell standard?	1	1	
	5.Is the subcontractor appraised periodically by the criteria of cost, quality, technology and service?	1	1	
	6.Are up-to-date records kept of acceptable/approved subcontractors?	1	1	
	7.Are the records for subcontractor approval properly maintained and kept according to the defined retention period?	1	1	
	8.Does the supplier have requirement for subcontractor qualification candidate?	1	1	
	9.Is the personnel with adequate product knowledge and skill sets to conduct subcontractor qualification?	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
4-4 Purchasing	10.Does the supplier review and approve purchasing documents for adequacy of specified requirements prior to release?	1	1	
	11.Does the supplier ensure that the subcontractors' quality system controls are effective, which includes CLCA for any out of goal situation?	1	1	
	12.Does the supplier ensure that the subcontractors' process controls are under SPC?	1	1	
	13.Is the customer allowed to verify at source, or upon receipt, that purchased product conformed to specified requirements?	1	1	
	14.Is there a procedure for part approval? (i.e. tooling qualification, part qualification, etc.)	1	1	
	15.Are part qualification reports conducted in a production environment to ensure requirements are met prior to mass production?	1	1	
	16.Does the part approval include verification of:	1	1	
	(a) Process control parameters/documents (GR&R, PFMEA, process management plan, production flow chart, drawings, etc.)?	1	1	
	(b) Condition and settings of manufacturing equipment and tooling?	1	1	
	(c) Critical parameters/dimensions? (including capability index Cpk)	1	1	
	(d) Traceability of cavity #, tooling #, and manufacturing site?	1	1	
	(e) Inspection/test yield?	1	1	
	17.Does the supplier have approval sheet to the subcontractor, also applied for incoming inspection of parts purchased for the final product?	1	1	
	1.Does the supplier have effective traceability control on key components ? (in compliance with Product ID and Traceability)	1	1	
	2.Does the supplier have effective RMA control with subcontractors?	1	1	
	3.Are there procedures defining product identification requirements for all products?	1	1	
	4.Are in-stock and in-process materials properly identified and controlled?	1	1	
	5.Is there an on line WIP tracking system existed? (Shop floor control information system or Bar code system)	1	1	

4. Production realization

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
4-5 Production and service provision	(a) Is it real time controlled for Shop Floor Information Control System?	1	1	
	(b) Can all materials in warehouse be traceable (including FIFO materials)?	1	1	
	(c) Can all WIP and finished goods link to customer EDI system?	1	1	
	6.Is there evidence to demonstrate effective traceability achieved?	1	1	
	(a) Is there an evidence that key components from subcontractor can be traceable (datecode, lot number, ... etc.)?	1	1	
	(b) WIP and finished goods in factory?	1	1	
	(c) Traceable to shipping destination ?	1	1	
	7.Where traceability is a specified requirement, do individual products or batches have a unique identification?	1	1	
	8.Are the required contents of both Product ID and supplier in process identity label (Bar code label or S/N label) crossed linked?	1	1	
	9.Are assemblies properly marked and tracked through the assembly process to ensure no steps in the process flow are missed?	1	1	
	10.Are there procedures for handling, storing, packaging and delivery of product and materials?	1	1	
	11.Does the procedure define the proper vehicles and tools for transporting and handling product/ materials?	1	1	
	12.Are those vehicles and tools regularly maintained to be under good condition?	1	1	
	13.Are the material control records maintained per the procedures defined?	1	1	
	14.Does the supplier provide methods and means of handling that prevent damage or deterioration?	1	1	
	15.Are all ESD-sensitive materials stored in anti-static containers?	1	1	
	16.Are flammable, corrosive, and toxic materials properly stored and segregated?	1	1	
	17.Are necessary protection means in place for flammable, corrosive and toxic materials?	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
	18.Does the supplier provide secure storage areas to prevent damage or deterioration of product, pending use or delivery?	1	1	
	19.Are defective product/ materials segregated to prevent mixing?	1	1	
	20.Are appropriate environment control (temperature and humidity…) defined and monitored in these storage areas on a regular basis?	1	1	
	21.Is shelf life control properly defined and implemented for required product and materials?	1	1	
	22.Is the condition of product in stock assessed at appropriate intervals in order to detect deterioration?	1	1	
	23.Are methods for verification and disposition of materials defined when deterioration or out of shelf life found?	1	1	
	24.Does the supplier control packing, preservation and marking processes to ensure conformance to specified requirements?	1	1	
	25.Are the materials issued according to FIFO?	1	1	
	26.Are control of recycle packing materials (e.g., carton, PE bag, plastic box, ESD containers …) properly defined and implemented?	1	1	
	1.Are there documented procedures for control of inspection, measuring, test equipment? Including:	1	1	
	(a) Equipment master list	1	1	
	(b) Calibration interval	1	1	
	(c) Calibration schedule	1	1	
	(d) Recall list	1	1	
	(e) Calibration record/report	1	1	
	2.Is the calibration conducted under the specified environment conditions?	1	1	
	3.Does the procedure define the disposition of fail-in-calibration equipment?	1	1	
4-6 Control of monitoring and	4.Is equipment verified or re-calibrated at appropriate intervals?	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
measuring devices	5.Are measuring equipment safeguarded from unauthorized adjustment or re-adjustment?	1	1	
	6.Is there an official approval control system for all equipment to determine accuracy and precision?	1	1	
	7.Are devices that are exempt from calibration clearly marked as such?	1	1	
	8.Are the reference devices (standard equipment) used for base-point calibrations (0 point, maker's scale, etc.) correctly stored, managed and calibrated to NIST standards?	1	1	
	9.Is the master standard for internal calibration has adequate capability (i.e. 10x higher resolution)	1	1	
	10.Is an appropriate method set up for storing measuring equipment, tools, and jigs?	1	1	
	11.Are measuring and test equipment re-calibrated when found not meeting the requirement?	1	1	
	12.Is there a process for disposition if product has been built/tested with equipment found to be out of calibration?	1	1	
	13.Has the personnel in charge of calibration been trained and formally certified?	1	1	
	Total	98	98	

5. Measurement, analysis and improvement

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
5-1 general	1.Are there documented procedures for defining inspection and test methods which complies with product specifications?	1	1	
5-2 monitoring and measurement	1.Does the supplier conduct internal audits at planned intervals?	1	1	
	2.Do the internal audits verify compliance with planned arrangements, ISO standards and quality management system?	1	1	
	3.Do the internal audits determine whether the quality management system is effectively implemented and maintained? (e.g., meeting the customer requirements?)	1	1	
	4.Are the internal audits planned on the basis of the status and importance of the activity, as well as the results of previous audits?	1	1	
	5.Are the audit criteria, scope, frequency and methods defined for the internal audit?	1	1	
	6.Are the selection of auditors and conduct of audits ensuring the objectivity and impartiality of the audit process? (e.g. auditors shall not audit their own work.)	1	1	
	7.Is there a procedure documented the responsibilities and requirements for planning and conducting audits, and for reporting results and maintaining records ?	1	1	
	8.Do the follow up activities include the verification of the actions taken and the reporting of verification results ?	1	1	
	9.Are the audit results analyzed for improvement from a system level?	1	1	
	10.Is there a procedure or plan to specify all critical parameters and product characteristics which need monitoring or control?	1	1	
	11.Does the supplier ensure that incoming product is not used or processed until it has been inspected and verified as conforming to specified requirements?	1	1	
	12.Does the supplier inspect, test and identify product as required by the quality plan or documented procedures?	1	1	
	13.Does the supplier utilize final inspection and testing?	1	1	
	14.Does the supplier utilize outgoing product inspection and testing such as Out of Box Audits?	1	1	
	15.Does the supplier utilize extended reliability/regulatory tests on regular basis? (e.g. Drop/vibration, EMI, reliability, safety, ….)	1	1	

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
	16.Does the inspection and test process assure outgoing products meet customer goals?	1	1	
	17.Are there procedures that address product inspection and test status?	1	1	
	18.Are there procedures and practices in place to assure product traceability through all stages of production?	1	1	
	19.Is the conformance or nonconformance of a product's inspection or test status identified? (by markings, tags, inspection records, test software, physical location, etc.)	1	1	
	20.Does the system assure only material that has passed specified inspections or tests is utilized or sold?	1	1	
	21.Are there records which give evidence that the product has passed inspection and/or test with defined acceptance criteria?	1	1	
	22.Is gage R&R performed prior to mass production or after process set-up change?	1	1	
	23.Is golden sample/template available for inspection/test?	1	1	
	24.Is golden sample/template properly identified (P/N, Rev., S/N), checked and stored?	1	1	
	25.Are the inspection/test record/report reviewed and approved by the authorized personnel for product release?	1	1	
	26.Does the supplier test coverage meets customer minimum requirement?	1	1	
	27.Are the test set-up sufficient and adequate to ensure the product quality? (e.g. hardware, equipment, software/revision, fixture, …..)	1	1	
	1.Are there documented procedures for control of nonconforming product and material?	1	1	
	(a) Does nonconforming control of product & material include identification, documentation, evaluation and segregation?	1	1	
	(b) Does nonconforming control of product & material include disposition and notification of all appropriate functions?	1	1	
	(c) Is the responsibility for review and authority for the disposition of nonconforming product defined?	1	1	

5. Measurement, analysis and improvement

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
5-3 Control of nonconforming product	2.Are nonconforming and suspect products reviewed in accordance with documented procedures ? And reworked, accepted, regraded, rejected/scraped properly in consistence with procedures ?	1	1	
	3.Is the terminology or failure codes defined and recorded for the nonconforming control?	1	1	
	4.Are repaired products re-inspected or tested according to documented procedure or quality plan?	1	1	
	5.Are the in-process and RMA repair records kept according to the defined retention period?	1	1	
	6.Is there a MRB procedure to review the disposition of nonconforming material? (e.g. "use as is", RTV, scrap, rework)	1	1	
	7.Are the criteria/guidelines for materials disposition defined?	1	1	
	8.Is the responsibility and authority to review/approve disposition of nonconforming materials defined? (e.g. MRB roster)	1	1	
5-4 Analysis of data	1.Does the supplier perform Continuous Improvement Process for nonconformity? (Data analysis, FA, C/A for worst tops and tracking)	1	1	
	2.For RMA returns or customer rejects, is failure analysis performed?	1	1	
	3.Is failure analysis performed in in-process for nonconformity?	1	1	
	4.Is there a system to feedback failure analysis and action items to relevant departments (including mfg site)?	1	1	
	1.Are the documented procedures established to define requirements for:	1	1	
	(a) Reviewing nonconformities (including customer complaints).	1	1	
	(b) Determining the causes of nonconformities.	1	1	
	(c) Evaluating the need for action to ensure that nonconformities do not recur.	1	1	
	(d) Determining and implementing action needed.	1	1	

5. Measurement, analysis and improvement

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
5-5 Improvement	(e) Records of the results of action taken.	1	1	
	(f) Reviewing corrective / preventive actions taken.	1	1	
	2.For RMA, is there a requirement to issue a Closed Loop Corrective Action (CLCA)?	1	1	
	3.For RMA returns or customer rejects, are the appropriate corrective or preventive actions developed to eliminate the cause of actual or potential nonconformance?	1	1	
	4.Is there a requirement to issue a Closed Loop Corrective Action (CLCA) for in-process nonconformity?	1	1	
	5.For MRB material, is there a requirement to issue a CLCA?	1	1	
	6.Is a corrective action request issued in the event a unit fails reliability test?	1	1	
	7.Are all corrective actions and results documented?	1	1	
	8.Does the corrective action request include root cause/containment/short term action? If defect is supplier related, is there any system to feedback to IQC for actions?	1	1	
	9.Does the corrective action request include long term/preventive action?	1	1	
	10.Is there a system to track status of corrective action requests?	1	1	
	11.Are the contents of the responses/corrective actions appropriate to prevent future occurrences?	1	1	
	12.Is the corrective action report reviewed and approved by relevant authorities?	1	1	
	13.Are corrective actions monitored for effectiveness in preventing similar nonconformance?	1	0	too many manual jobs be seen on
	14Is action taken when progress/implementation of improvement actions is not satisfactory?	1	1	
	Total	63	62	

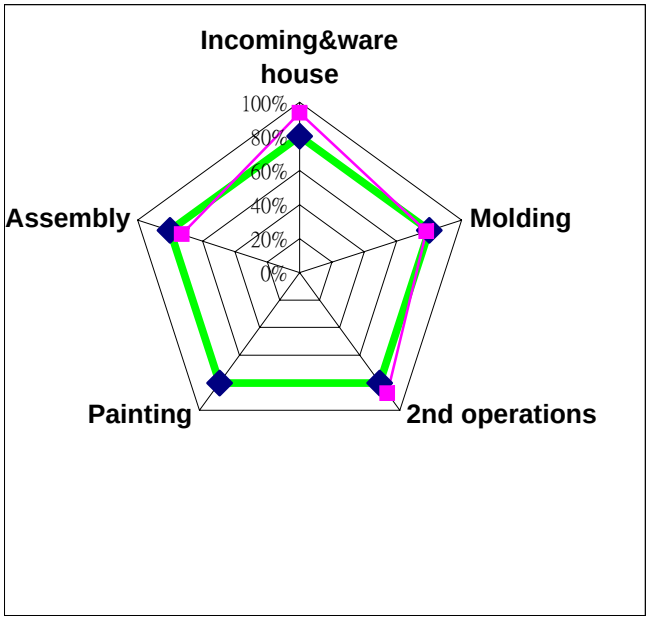
Supplier Quality Process Audit Report

Supplier name 供應商	Total Technology Corp	Audit Dept. 稽核部門	SQA	Audit Date 稽核日期	2008/2/18
Supplier window 對應窗口	George Huang	Audit by 稽核員	May Chuang	Audit results 稽核結果	Approval

一. 評價結果統計表 Audit Results

Supplier Level: 供應商分級 — Non-critical products

Items	Total	Actual	Score
1. Incoming&Warehouse	16	15	93.75
2. Molding	23	18	78.26
3. 2nd Operations	8	7	87.50
4. Painting	18	0	NA
5. Assembly	22	16	72.73
		Results	83.06



Approved(>80) Unapproved(<60) Conditional approval (60-80)

Supplier Quality Process Audit Report

Supplier name 供應商	Total Technology Corp	Audit Dept. 稽核部門	SQA	Audit Date 稽核日期	2008/2/18
Supplier window 對應窗口	George Huang	Audit by 稽核員	May Chuang	Audit results 稽核結果	Approval

二. Action Items

Audit Items (稽核項目)	Suggestion Items (建議事項)	Action Plan (矯正措施)- suggestion	PIC (擔當者)	Due date (完成日)	Comment (備註)
1.Incoming	1.Without Gr&r report				
2.Molding	1.Without compare Final run sample to first article				
	2.Not define line stop criteria				
	3.did not find DOE or 6 sigma improve tooling application on production line				
	4.Without evidence shown that production running well with improve work efficiency				
3.secondary operations	1.No melting test equipment				
4.assembly,OBA,shipping	1.without ESD protection on facility				
	2.Bar-code only apply on final package				

Norm number

三. Exclusive Summary

TTL running very good and strong organization of facility operations. But good management of operators and good efficient was different.

Because they are focus on special and customize products so they had too many version products, But their facility could be arranged more efficient, Also they did not apply any ESD protection on facility and test operators. For ESD protection on test operators needs to take action

1.Incoming & Warehouse

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
1	Does the receiving area include space for hold, reject, and sort/rework areas with clear identification?	1	1	
2	At IQC area, is its partition well defined for segregation, materials under inspection is labeled and status is tracked for timely disposition?	1	1	
3	Does the SIP include procedure, sampling plan, test method, instrument, fixture, visual-add, quality concern, etc? It is preferred to be specific on individual parts as well as the report format.	1	1	
4	Is the content of SIP from studies of engineering specification, manufacturing process and future application to determine its coverage and sampling plan?	1	1	
5	Does the inspection report include part number, date, lot number, purchase order number, total quantity, test quantity and data as well as MRB?	1	**1**	
6	control?	1	**1**	
7	Does inspection fixture conduct gauge R&R to ensure accurate result by qualified inspector?	1	**0**	did not find Gr&r report
8	Does the inspection result has proper disposition and is used for vendor management?	1	1	
9	Does the approved label show receiving date, quantity, part name, part number and inspector? It is preferred to use color label on each carton/container for control of shelf life and FIFO.	1	1	
10	Is a closed loop corrective action (SCAR) issued once materals is failed on IQC inspection?	1	1	
11	Is MRB process performed on nonconforming material if requested? A logical process flow and MRB reviewed/approved by eligible representative at management level is required.	1	1	
12	Does statistical method apply on property/process of critical parts once it was identified as mid/high risk in quality?	1	1	
13	Is process for sub-tier vendor selection & management well defined with report/rating provided to procurement for reference?	1	1	
14	In warehouse, are all materials at assigned location and well preserved for easy retrieve? Using bin card is preferred.	1	1	
15	Is inventory managed on first-in/first-out, quantity, shelf life at finished good warehouse and audited at least every six months? A computerized system is preferred.	1	1	yes, had color code
16	Is storage condition monitored on materials/finished goods that needed special care (temperature and humidity control)?	1	1	yes, Had temp. record
	Total	16	15	

BARCO

2. Molding

Supplier
continuous performance improvement

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
1	Are the areas for hold, accept, reject and scarp well defined and maintained for its needs?	1	1	
2	Does SOP include part name/number, tool, material, fixture, procedure, visual-aid, cosmetic concerns, and inspection items conducted by operator?	1	1	
3	Does work station display approved sample for each run, work instruction, process setting, visual-aid, SPC data, scrap rate and customer concerns?	1	1	
4	Does supplier conduct FAI, in-process inspection, and final inspection before parts sent to warehouse or next operation?	1	1	
5	Does FAI report contain confirmation in form, fit, function, material property and process to ensure readiness for a new production run? Is stack up test conducted on mating parts from different sets of	1	1	
6	Is final part used as end of run inspection to compare with FAI which can proactively highlight areas for tool maintenance or correction?	1	0	Only First article report
7	Is in process inspection collecting data from random samples (fresh and in carton) and check process setting?	1	1	
8	Is SPC applied on critical process parameter or selected part specification such as process control dimension to ensure a stable process?	1	1	
9	Is SPC data collected at appropriate interval with valid sample size to plot chart including nominal, tolerance, and control limits?	1	1	
10	Is custom made inspection fixture used to check dimensional data or as a go/no-go gauge for fast, efective measurement?	1	1	
11	Is SPC data timely feedback to production for monitoring and used as line stop criteria?	1	0	whthout line stop criterial
12	Is operator level's inspection report generated and defective parts are reviewed by QC for CLCA?	1	1	
13	Has optimal process setting been generated by methods like DOE and if machine is selcted based on consideration of part/tool design, part quality, quality goal, and tool life?	1	0	without DOE investigate
14	Is final inspection conducted based on sampling plan and report is used for quality improvement plan?	1	1	
15	Are robot and conveyer used to prevent mishandling and improve efficiency?	1	0	Saw tool cost improve but did not see working efficiency improvement
16	Is dryer, preferred in desicant type, monitored on its setting and SOP is posted by machine? Setting should be monitored each shift if it is not automatic.	1	1	
17	Has purge procedure been established and implemented on situations like startup or resume to prevent deterioration and contamination?	1	1	
18	Is periodical maintenance of injection molding machine performed according to manufacturer's recommendation and by certified personnel with report?	1	1	

BARCO

2. Molding

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
19	Has tool maintenance been executed according to procedure/checklist by certified personnel and report is evaluaed for next level maintenance?	1	1	
20	Does in-house tool shop has capability to assembly/disassembly tool for gereral maintenance and conduct simple correction based on recommendation from original tool maker?	1	1	
21	Has regrind process been defined and implemented to prevent contamination and over allowable mix ratio?	1	0	Did not see in prodcution line
22	Is there date code and revision control on parts for tracking?	1	1	
23	Has stop line criteria been clearly defined to prevent nonconforming parts being produced without control?	1	1	
		23	18	

BARCO

3. Scondary Operations

Supplier
continuous performance improvement

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
1	Is worker at each station trained and certified with record keeping?	1	**1**	
2	Does SOP for injection include process settingcontrol(outside and inside container) to prevent contamination/over-exposure, and cleaning process(wear gloves and use lint free rag)?	1	1	
3	Is injection conducted with automated equipment at a controlled environment ?	1	**1**	
4	Is approved first article from each run kept as reference at injection station and color and position?	1	**1**	
5	If oven is used for ink drying, does process setting and curing are checked in FAI and process?	1	**1**	
6	Does heat staking/hot stamping SOP include specification (insert type, torque, pull strength), fixture, and process setting (temperature, pressure, and time)?	1	1	
7	Does heat staking/hot stamping FAI check on material(insert), temperature of each tip, height(screw or melted plastic), and torque/pull strength?	1	0	No melting
8	Is ORT conducted on torque and pull strength by destructive test to ensure no major changes from insert, resin, or process?	1	1	

8 7

BARCO

4. Painting

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
1	Is SOP for painting including procedure, material, tool, visual aid, and process setting (program, pressure, atomization, etc)?	1	NA	
2	Is optimal process setting (Robotic/manual spraying, oven) reached by design of experiment and is implemeteded in process?	1	NA	
3	Does temperature setup in oven follow recommendation from paint supplier in order to reach fully cure and is monitored at startup and in process?	1	NA	
4	Is there a mixing/blending procedure for paint preparation in order to reach best consistency and prevent particle/lump?	1	NA	
5	Is potlife monitored on two components liquid paint to prevent premature drying?	1	NA	
6	Is robot used in painting to improve quality and yield, and the supplier has in-house programming capability?	1	NA	
7	Is static control effectively to prevent defect in painting?	1	NA	
8	Is level of clean room maintained to prevent contamination from environment based on quality plan?	1	NA	
9	Is FAI conducted and approved by quality personnel including inspection on SOP, material, equipment, operator, and process setting?	1	NA	
10	Does supplier has the capability to conduct all required tests in house based on specification and reliability tests are conducted according to quality plan?	1	NA	
11	Does paint viscosity monitored at receiving and startup for best quality and process stability?	1	NA	
12	While applying putty, touchup, or rework, does process follow SOP and part is inspected after paint/putty is cured?	1	NA	
13	Is masking by custom made fixture/insert/tape for best quality?	1	NA	
14	Is paint stored based on supplier's instruction and its shelf life is monitored?	1	NA	
15	Is precaution taken to prevent fire or explosion by mishandling of flammable materials such as paint, thinner, and cleaning agent?	1	NA	
16	Is part handled properly to prevent contamination and scratch/dent by mishandling? This includes wearing gloves, transfer, storage, packaging, etc.	1	NA	

BARCO

4. Painting

Supplier
continuous performance improvement

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
17	Is color chip stored with precaution to prevent discoloration in sample cabinet and there is inventory and shelf life control?	1	NA	
18	Is there a continuous improvement plan to eliminate root causes found for defects?	1	NA	

18 0

BARCO

5. Assembly, OBA, Shipping

Supplier
continuous performance improvement

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
1	Are workers at stations required special skills trained and certified with record keeping?	1	**1**	
2	Is ESD monitored on daily basis including personnel, materials, equipment, container, package(ESD bag) with record?	1	0	
3	Is SOP under revision control as ISO document with PCN process?	1	**1**	
4	Is assembly SOP generated for each station including procedure, part, visual aid, tool, material, process setting (torque value, temperature, etc.), operator inspected item, and quality concern?	1	1	
5	Does FAI for assembly process include form, fit and function such as stack up test with mating parts from all available tooling, and electrical property inspection?	1	1	
6	Does FAI include process confirmation on SOP, equipment, operator and process setting? Using barcode to control resources applied in process is recommended.	1	0	
7	Is first article produced under supervision of line master(or QC staff) to ensure proper assembly?	1	1	
8	Do FAI/in-process/final inspections and ORT cover items described in speccification with optimal sampling size based on risk assessment result? This implys more effort spended on high/medium	1	1	
9	Have SOP and inspection instruction been written with foolproof consideration to prevent human error occurring?	1	1	
10	Is custom made fixture/test program used on assembly to improve effectiveness and efficiency?	1	0	
11	Is 100% function test on electronic component, such as speaker and touchpad, on line after assembly?	1	1	
12	Is SPC applied to monitor process capability or quality performance to quality goal (i.e., Cpk, x-bar/R chart, p chart, etc.)?	1	1	
13	Is work load at assembly line well balanced at each station and ergonomics is considered for better efficiency?	1	0	
14	Is automation tool/equipment applied on assembly process to improve efficiency and precision?	1	0	
15	Is calibration conducted on equipment like screw driver, hand soldering machine, etc., that is used at assembly line or repair station at start up?	1	1	
16	Is gauge R&R conducted to qualify operator and gauge/fixture itself?	1	0	

5. Assembly, OBA, Shipping

Items 項目	Check - Point 稽核重點	Point 分數	Results 結果	Comment 備註
17	Is there a SOP for repair station including disposition on defective units with record keeping?	1	1	
18	Are all products checked in form, fit, and function during assembly based on quality plan with optimal inspection coverage?	1	1	
19	Is final inspection conducted by FQA include form, fit, function test and packaging according to inspection plan (AQL, CSP, etc.)?	1	1	
20	Is OBA(out of box audit)/source inspection conducted before shipping?	1	1	
21	Is dock inspection conducted to check item, quantity, packaging, and destination according to purchase order before shipment send to customer?	1	1	
22	Does the individual/bulk package, such as carton, support, packing material, etc., meet the related requirements from specification of supplier itself or customer to prevent shipping damage?	1	1	

22 16