P1

Quality Management System

6025 Schumacher Park Dr.
West Chester, OH 45069

And

353 Science Dr.
Moorpark, CA 93021

April 2, 2025

Revision 5.10

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1 Scope

This document describes the ISO9001:2015 based Quality Management System in place at Quasonix, operating from two locations. The Galactic Headquarters is located at 6025 Schumacher Drive, West Chester, OH and a separate Antenna Division is located at 353 Science Drive, Moorpark, CA. Both facilities operate under this single QMS. The company designs and manufactures radio telemetry products for the commercial and government sectors.

The company does not claim any exclusions from the standard.

2 Quality Management System Structure

2.1 The World in Which We Work

2.1.1 Context and Interested Parties

The company provides telemetry products to commercial and government entities for the purpose of sending and receiving telemetry data on a wide variety of platforms (aircraft, spacecraft, etc.) These entities include **large and small government prime contractors**, both **domestic and foreign**, as well as **government defense programs, military bases and test ranges**. The marketplace is dependent on the regulations and technical standards of the **military authorities, both in the US and overseas**.

Accordingly, the company maintains contact with **individual customers** as well as groups such as the **Range Commanders Council** that set the regulations. Information from overseas is obtained through **sales representatives** who monitor conditions within their designated area. The company technical and management personnel also use **contacts** and research to understand the competitive environment and to identify shifts in the way customers are using the product or in the systems that the products become part of. This feedback is used as an input to decision making for new products and features as well as strategic alliances and mergers.

Obviously, the company is also highly dependent on reliable performance from a number of **key suppliers** for metal components, circuit cards and other items. In particular, a number of **subcontractors** are used to provide certain services throughout the company. Providing high quality products also requires a highly skilled and dedicated group of **employees** to accomplish the mission. In order to carry out its mission, the company also relies on several outside entities that serve as suppliers but also have oversight responsibilities. These include the **registrar** who provides ISO9001 certification services and **industrial trade groups** which set the requirements for soldering skills to which all of our solderers are certified.

2.1.2 Merged Systems

In the fall of 2019, the company made a decision to merge the quality systems of the West Chester and Moorpark offices into a single system. The management approach was already very similar, so minimal change was required at the top level. Metrics were being collected and reviewed for key processes, internal audits were being conducted in the same way, the Corrective Action process was identical at the two sites, etc.

There were, however, notable differences between some other processes at the two sites. After a detailed review and significant discussions, it was decided that some processes would be merged to create a single company-wide process and others would remain separate. Factors that led to maintaining separate processes included significant legacy documentation including customer visibility, physical separation that was congruent with the process differences, and a low risk of cross-over between the separate processes. For reference, Appendix C summarizes how the documents for the two systems were merged.

2.2 System Foundation

Quasonix has established a quality policy that includes objectives and a commitment to quality. The policy is accessible to all Quasonix employees and contractors electronically and copies are posted in various work areas. Quasonix management ensures that all responsibilities and authorities for personnel are defined and communicated within the organization. This includes ensuring that work is performed with quality in mind.

Supporting procedures and forms/records have been established to support the overall quality policy and objectives. Management and senior staff review the results of the system periodically and adjust processes and resources in an effort to continually improve customer satisfaction. Risk-based thinking, embedded throughout the system, enables the organization to determine the factors that could cause its processes and the quality management system to deviate from the planned results and take steps to reduce or eliminate that risk.

2.3 Quality Policy Statement and Objectives

Quasonix Quality Policy is to be the leader in providing **high quality**, **cutting-edge** telemetry solutions and to provide its customers with ever improving levels of **satisfaction**. Quasonix is committed to anticipating and meeting the requirements of our customers and the ISO9001:2015 standard and continuously improving the quality of the products we build.

This policy is accomplished by meeting the following objectives:

- Provide Unequaled Performance and Features to our Customers
- Provide our Customers with High Quality Products
- Provide our Customers with ever increasing levels of Satisfaction

Terrance J. Hill
President

2.4 Management Representative

To ensure that the functions of the quality system are maintained reliably, the company has identified the President as the Management Representative. The Management Representative is the final authority on all processes and procedures within the QMS and approves all changes. The Management Representative…

- Ensures that all processes are maintained and functioning well
- Reports to staff on the performance of processes and the overall QMS
- Is responsible for ensuring that customer requirements are understood throughout the organization
- Is responsible for ensuring that opportunities and risks to the company quality objectives are identified and addressed
- Is responsible for ensuring that opportunities to improve the effectiveness of the QMS are identified and addressed
- Is responsible for ensuring that the integrity of the QMS is maintained when changes are made
- Is responsible for ensuring that the QMS is applied consistently and appropriately throughout both locations of the company, including when work is shared between locations.

Specific duties and tasks may be delegated as appropriate.

2.5 Quality Processes and Interaction

Quality system processes are illustrated in Figure 1 below. These processes are documented in procedures either directly within this document or separately as listed in Appendix B. The details of the inputs, function, and outputs of each process are defined within the respective procedure. All quality system procedures and forms are controlled by the Management Representative and may only be changed by the Management Representative or his/her designee. Each standalone procedure includes its own revision history.

The Quasonix Quality Management System and even the Quasonix culture are built on a foundation of personal respect and empowerment. This begins with the hiring practices that ensure that only individuals with initiative and technical competence are considered for employment. The initial criteria for being considered is that someone within the company or a trusted contact must already know your work and be able to recommend you for employment, with regard to both technical ability and team attitude. The only exception to that hiring approach is when the company opts to hire someone as a temporary contractor as a ‘test drive’ before making a permanent hiring decision. This allows the company to obtain first-hand knowledge of someone’s work habits in lieu of an already-known candidate.

With an employee base built around the best team players available, the company has the ability to push decisions to the best position in the organization to make the most informed choice. Management ensures that this philosophy is clearly understood throughout the company so that very little traditional management is needed. Instead, throughout the organization decisions are made based on the best choice for the company overall, with no infighting or territorial thinking common in traditional corporate organizations. Leaders are elevated by the organization based on performance, rather than being hired untested into a leadership role.

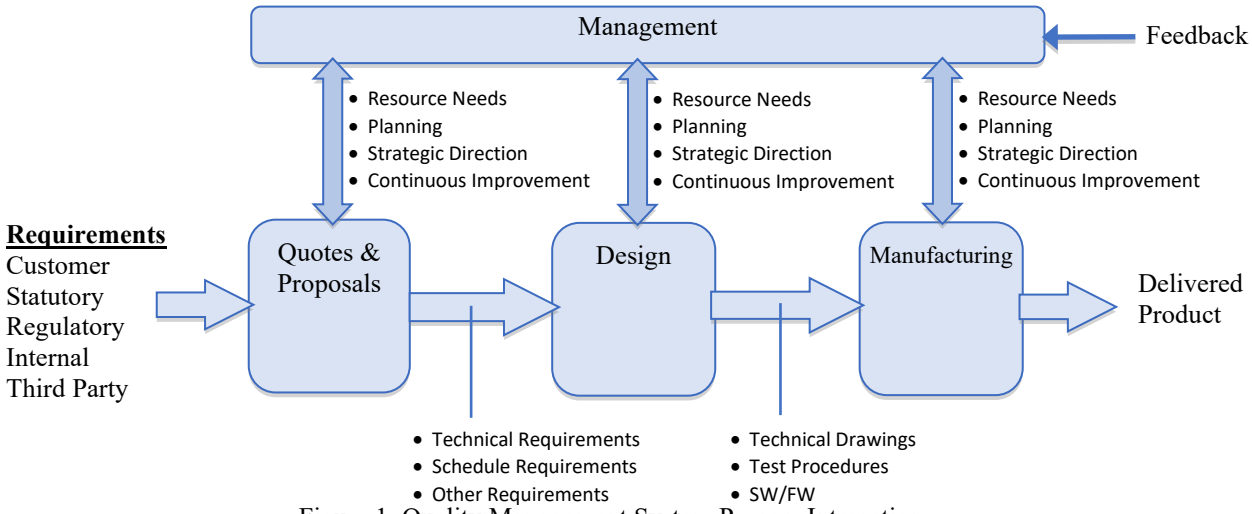

Figure 1. Quality Management System Process Interaction

The result is a set of processes where problems are solved because the team collectively recognizes that a solution is needed and process improvement is driven by solutions arrived at by consensus. The founder and president of Quasonix frequently reiterates that his apparent skill in managing the company is an illusion; his *real* skill is in building the company with people who are self-managing. This thinking is embodied within the Quality Management System by way of various approaches such as self-review of certain documents, a distributed document control function and other aspects that are built around individual competence and responsibility.

3 Quality Processes

3.1 Quotes and Proposals

Quasonix reviews customer requirements prior to agreeing to supply a product, as defined in procedure P2, Quotations and Proposals. Reviews ensure the following items are considered:

a. Product or order requirements are fully defined

b. Conflicting or ambiguous requirements are resolved

c. Suppliers or subcontractors, as well as Quasonix in-house personnel, have the ability to meet the defined requirements

d. Special requirements (such as new processes or equipment) for the product or order are determined

e. Risks have been evaluated (such as new technology, component availability, or short delivery time scale) with an aim to enhance customer satisfaction

Records of the results of the review and actions arising from the review are maintained. In the event that product requirements change for any reason, Quasonix maintains records of the change and notifies appropriate stakeholders, including the customer when appropriate.

The need for an export license is identified during the initial contract review. If a license is required for the order, the License Administrator is notified. Because improper exports risk causing serious harm to the company a documented procedure, P5, has been established to define how a license is obtained.

3.2 Design

The Product Design process is defined in detail in procedures P3-MP and P3-WC. These two procedures define the Design process is carried out in the Moorpark and West Chester facilities, respectively. As part of the merge of the two quality systems it was decided by Management that there was little value in forcing one location to adopt the process of the other location. When work is transferred between the two sites the process steps for each site can be maintained without conflict. This, each procedure defines how each site conducts design work and also defines how each site transfers work to or from the other site. The two processes operate in a similar manner, as described below.

3.2.1 Design Inputs

Design inputs may be received from customer requirements or may be formulated by company requirements independent of a specific customer request. When direction is received to initiate new design work, specifications are captured in the initial design documents in a form appropriate to the type of specification. These documents are maintained with the project files as a record to be used for verification and validation of the final design.

3.2.2 Design Reviews

Design work is reviewed at key milestones defined by the engineering team based on the scope and stage of the effort. Records of action items and their closure are maintained for all reviews.

3.2.3 Verification and Validation

All product testing is done to well defined and established test processes. To identify and address any risk that new products fall below customer expectations, new designs must meet the requirements of all applicable production tests as well as additional verification testing defined by the engineering team. Records of such testing are maintained in the production test database and in additional engineering records. All new design work is validated against the intended requirements as documented on the initial design documents.

3.2.4 Document and Data Control

Quasonix maintains its documents in a variety of formats, such as electronic, paper, and/or magnetic. Quasonix ensures, via proper training, that personnel have access to quality management system documentation, including, but not limited to, released drawings, standards, specifications, and change notices, and are aware of relevant procedures. The latest version of all Quality System documentation is found on the server at \\FILESERV\QualitySystems. Throughout the system, old versions not suitable for use are moved to ‘Archive’ folders. Management ensures that IT functions are well supported including a stable network and regular backups both on- and off-site.

The document originator controls all documentation required for product realization. Prior to release each new or revised document is stored in an area designated for in-process or non-production items. Whether for original release or revision, once documents are reviewed and approved, they are moved to a general access area for use in production of customer deliverables. Documentation needed for manufacturing is available in electronic and/or hardcopy format at the point of use.

Revision tracking is applied to all documents and old revisions are suitably controlled, though the nature of the customer base requires that old revisions must be available in some cases. When this is necessary, the risk of building an incorrect configuration is removed by clearly defining the customer requirements in the purchasing and shop order documentation to ensure that the proper configuration is delivered.

In some cases, Customer-supplied documentation is part of the requirements documents. If the Customer has not applied revision control markings then the company will assign them. These are stored in the project files as appropriate and are maintained by the person who is the primary Customer contact or by a designee.

3.3 Manufacturing

3.3.1 Purchasing

Quasonix ensures that purchased product conforms to specified purchase requirements. New Suppliers are evaluated on Form F28 by Engineering based on their ability to meet product quality, ISO 9001:2015 or AS-9100 requirements or other justification minimizing the risk of material issues on the production floor. The type and extent of control applied to the supplier and the purchased product is dependent on the effect of the purchased product on subsequent product realization or the final product.

The supplier will purchase OEM part as defined from BOM. If availability or lead time of part is unacceptable to Quasonix, the supplier will request schedule relief or request an alternate. If schedule relief is not possible or an alternate is not available, proceed with procurement of broker part. Using broker parts should be used ONLY as a last resort.

The supplier will procure, inspect, stock, and take ownership of the broker parts. In addition, the supplier will maintain records for which build broker parts have been used, testing or other verification of brokered parts will be determined on a case-by-case basis based on risk, cost and schedule.

If Customers who have comprehensive facilities for catching counterfeit parts supply brokered parts that they determine to be genuine, that's acceptable with Quasonix.

Suppliers of custom metal parts are required to maintain material certifications traceable to the Quasonix purchase order and part number. These records are to be made available on request.

- Purchased items are inspected on receipt per procedure P4, Manufacturing. Finding material issues early in the process minimizes the cost of correcting the issue and reduces the risk of interrupting production flow.
- Quasonix conducts periodic supplier quality reviews, as well as a weekly review of work in process including any non-conformances for appropriate actions.
- Should it be required by contract, Quasonix has the ability to use customer-approved special process sources.
- Quasonix maintains a list of approved suppliers.

3.3.2 Product Identification and Traceability

Where appropriate, to remove the risk of building an incorrect configuration, Quasonix identifies a product using a Job Traveler or other suitable means throughout product realization as defined in procedure P4. Quasonix maintains the identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed upon configuration. Completed Job Travelers are maintained as a quality record for the longer of 10 years or the life of the product.

3.3.3 Process Control

The Job Traveler is the monitoring document reflecting the required process steps and is used for accountability and configuration control during all phases of production. An individual Job Traveler is assigned to any serialized item.

Production equipment, tools, and programs are validated prior to use, as risk mitigation, and are maintained and inspected as appropriate to their criticality and risk.

3.3.4 Inspection and Testing

A Job Traveler identifies all inspection and testing requirements for each unit and provides for operator sign-off on all steps. Inspectors are trained to J-STD-001 and/or IPC-A-610 and use equipment with suitable magnification and lighting. Test equipment is calibrated on a scheduled basis to remove any risk that products fail to meet the intended specifications.

Most test records are retained electronically. Standard product testing is automated to ensure consistency. Testing of products with varying configurations is defined by Engineering and records are retained of all testing. All test records are retained in the production records for the longer of 5 years or the life of the product.

3.3.5 First Article Inspection

For standard products, Quasonix uses a representative item from the first production run of a new part or assembly to verify that the production processes, production documentation, and tooling are capable of producing parts and assemblies that meet requirements.

This process is repeated when changes occur that invalidate the original results (for example, engineering changes, manufacturing process changes, or tooling changes). First Article inspection is updated to include any changes to product configuration or production processes. First Article inspection documentation includes:

- A list of characteristics required by the product design including required tolerances (if any)
- Actual test results

First Article inspection and test results for new designs are maintained with the production test data and associated engineering project files. First Article results to re-validate production processes are maintained in the production test results.

3.3.6 Handling, Storage, Packaging, Preservation, and Delivery

Quasonix has established rules for handling material throughout the product lifecycle including Receiving, Inventory, Production and Shipping. In particular, handling procedures are in place for Electrostatic Discharge Sensitive (ESDS) electronic components. Appropriate containers, protective equipment and training are provided to remove any risk that sensitive components could be exposed to discharges that might cause damage.

3.4 Management

Company management is responsible for providing adequate resources to ensure that the quality system is operating effectively. Management is responsible for the performance of the system and assesses it at least quarterly in a Management Review where metrics for the system and for each primary process are reviewed using the Dashboard, form F1. Management has specific responsibility for the following areas.

3.4.1 Corrective Action

The steps below define the Corrective Action procedure. Corrective actions are initiated whenever a product design or process adjustment is needed to prevent recurrence of a situation that has created a defect. Typically, Corrective Actions are appropriate when the process change is indicated by events or conditions outside the process area, such as a product escape or an internal audit finding. The Corrective Action process is always initiated whenever a key process metric is out of bounds.

3.4.1.1 Initiating A Corrective Action

A situation worthy of Corrective Action Report (CAR) may be identified by anyone in the organization. The identifying party brings the situation to the attention of the Management Representative or appropriate technical lead

for the production team. If necessary, production or other affected work is stopped to reduce the risk that additional nonconforming product might be produced.

The identifying party and technical lead jointly make an assessment of the situation for the potential impact on production processes, safety, quality, performance, reliability, and customer satisfaction.

If it is determined that a CAR is appropriate the header information and Problem Description sections of the CAR form are completed, detailing the situation and why a CAR is needed. The person handling the CAR sets a deadline for the completion of the investigation of the problem and definition of a plan to correct the situation. The deadline may be set to just a few days or may extend for months depending on the specifics of the issue and the risk to customer satisfaction. Because the material cycle in the business can run over 12 months it is not uncommon for CAs to remain open for many months waiting for an opportunity to verify that the process has been corrected.

The CAR may be assigned to a supplier in cases where the cause involves purchased material. The lead for the CAR works with purchasing and/or planning to follow up with the supplier to ensure that the CAR is addressed in a timely manner.

3.4.1.2 Containment

An initial assessment is done to determine whether immediate steps are required to reduce the risk of delivering nonconforming product, such as stopping production or putting a hold on shipping or material in stock. The lead assesses the risk that the problem might affect other product or processes and takes steps as appropriate. Actions are recorded in the Containment section of the report.

3.4.1.3 Identifying Root Cause

The lead for the CAR assigns tasks and collects information from others as needed to fully define the cause of the issue. This may be done using formal methods or informal methods to guide discussions. The results of the investigation are recorded in the Root Cause section of the report.

3.4.1.4 Proposed Action And Verification Plan

Based on the results of the investigation the lead completes the Corrective Action Plan section of the CAR form to define the action(s) to be taken. The form is then forwarded to the Management Representative, or a designee, who reviews the plan for effectiveness and approves the plan for implementation.

A completion date is assigned based on the circumstances and criticality of the issue. Typically, this is no more than 60 days from the date of plan approval.

3.4.1.5 Implementation

Once the plan is approved, the lead works with appropriate personnel to implement the action, including steps to test the results. Relevant notes are recorded in the Verification section of the report.

3.4.1.6 Verification

The MR ensures that a follow up audit or other appropriate action is taken to verify that the plan is fully implemented and is effective at eliminating the cause of the problem. If so, the MR or a designee signs the verification box of the report and includes any notes regarding future actions, as needed.

If the results of the follow up activity show that there is still an unacceptable risk of recurrence, whether because the Action Plan was not implemented or not effective, the MR takes any appropriate steps, including issuing a second CAR and escalating the problem to higher levels of management, as appropriate.

Completed CAR forms are retained for a minimum of 3 years.

3.4.2 Internal Quality Assessment

Management holds a formal review of the entire quality management system approximately quarterly. This meeting includes the President, senior staff and others as appropriate to recent issues. Data for Transmitter and Receiver products is reviewed at every meeting while data for the Antenna product area is reviewed at every other review (once per half) due to the much longer sales cycle for those types of products. These Management Reviews include discussion of data including top level metrics as well as recent CARs, NCRs, Customer Feedback and other data related to quality and customer satisfaction. Records of the reviews are kept using form F2 and are maintained on the common fileserver for a minimum of 3 years.

In addition, a weekly meeting is held to discuss upcoming work, including any factors that pose a risk to or present an opportunity to improve product quality and customer satisfaction such as recent customer feedback, audits, Corrective Actions and any other elements of the business as may be appropriate.

Finally, Quasonix management performs ongoing assessments of all processes, procedures and records that pertain to the effectiveness of the production and quality system, with the entire system audited at least once per year. The frequency of auditing a particular area may be adjusted based on the severity of any known issues.

3.4.2.1 Audit Planning

The purpose of conducting internal audits is two-fold. Internal audits identify processes at risk of failure so they can be corrected. Internal audits also identify opportunities to improve the key processes of the quality management system. Process based audits may cover a single procedure or may include several procedures, depending on the scope of the desired audit.

All audit work, including defining an audit schedule, is performed by the Management Representative or a designee. The MR reviews all audit reports and requests Corrective Actions as results indicate. No auditor may audit their own work, to reduce the risk of bias. So, for example, the Management Representative must delegate the auditing of the Management Review to someone else.

3.4.2.2 Audit Preparation

Each audit begins with the definition of the scope of the audit. The assessment criteria always include the QMS procedures, general QMS requirements including external requirements, previous audit results and CAs and the appropriate revision of the ISO9001 Standard.

The auditor prepares an audit guide including questions to be asked and specific records expected. The guide is in a suitable format, depending on the nature of the audit.

3.4.2.3 Audit Execution

The auditor arranges a suitable time with the auditees and uses the prepared questions to guide the discussion, following up with additional questions to resolve any potential issues that arise. The auditor requests an appropriate number of samples of relevant records. The auditor determines conformance or nonconformance for each item in the report.

For conforming items, the notes also include any specific statements by the auditees or documents reviewed to verify that the work is being done according to the requirements.

For nonconforming items, the auditor notes specifics of the situation including statements by auditees and records reviewed. The auditor also cites the specific text that is not being complied with from the relevant criteria document(s).

The auditor may also identify Opportunities for Improvement where a situation exists that has a possibility of creating product defects or may improve the operation of the company. Such items may be added to the Management OFIList file for future implementation or otherwise used as feedback to the process owners.

On completion of all audit activities, the auditor compiles the report, which may include recopying the report into a more legible form for record keeping. If the MR did not perform the audit, the auditor then delivers the report to the MR. If the auditor determines that a process is not effective this is noted in the report and a CAR is generated to review the problem.

3.4.2.4 Audit Closure

The MR reviews the audit report and any nonconformances are assessed for their criticality to current production. Immediate action is taken when an NC may impact customer satisfaction.

The MR has discretion to agree or disagree with the auditor on any particular item (conformance or nonconformance). The MR notes on the audit form any changes or additional information to explain the findings.

In the case of nonconformances the MR follows the Corrective Action procedure, completing the appropriate sections of the CA form and assigning it to the appropriate personnel. Resolution of the CA then proceeds per the Corrective Action procedure including the execution of a follow up audit or other action in a timeframe deemed appropriate by the MR to verify that the CA has been implemented and is effective in preventing a recurrence of the NC.

The Management Representative maintains records of the Internal Audit and results, including any resulting CAs, for a minimum of 3 years.

3.4.3 Qualification of Associates

Because having a team of high-quality individuals is key to the way the company operates, including the operation of the quality system, Quasonix does not hire from resumes and does not advertise openings. The company uses Performance Based Hiring exclusively. When a resource need is identified, the President, with input from stakeholders, determines the necessary competence required to fill the need. Input is then solicited from throughout the company to identify candidates that Quasonix associates or trusted contacts know first-hand to have the appropriate initiative and team-oriented attitude. Candidates are then further evaluated through appropriate means, including but not limited to interviews with the relevant stakeholders. The President collects input from interviewers and any other appropriate source and makes the hiring decision. Human resources personnel maintain a permanent record of the lineage to verify the hiring history. New hires are requested, but not required, to provide resumes, transcripts and other documentation.

Periodic training is provided in certain areas that directly impact quality. For example, assemblers and inspectors are trained to J-STD-001 and/or IPC-A-610. For individuals performing system audits, competence can be documented either by formal Lead Auditor Training, internal training by an auditor using form F7 or previous audit training documentation, as appropriate. Similarly, attendance at relevant seminars and symposia is encouraged. For individual training, the individual trainee maintains records of the training throughout their employment. When internal group training is done, Quality maintains a permanent record of the training.

Training effectiveness is determined in various ways based on the type of training. For example, the effectiveness of IPC-A-610 training is determined by informally monitoring the quality of work performed by the operator and the subsequent defect rate. The President or a designee makes a determination of the effectiveness of the training by observing the application of new knowledge to product designs or production processes. If the training is deemed ineffective, additional training may be required or, if training is effective, it may be offered to additional associates. Records of training and the evaluation of effectiveness are retained by Quality on form F23.

3.4.4 Control of Quality Records

The primary quality records are listed in Appendix C of this document. The Management Representative, or a designee in the appropriate area, controls all master blank forms. Most records (completed forms) are stored electronically in a designated area of the common fileserver while some are stored in hardcopy. Retrieval of electronic records requires Microsoft Word®, Excel® or Access® or Netsuite. Records are protected by providing limited access, where practical, or by password-controlled access.

The storage location and retention requirements for each record are defined in the procedure where the use of the form is defined. Once the retention period has passed, records may be disposed of with the permission of the person responsible for the relevant area or the Management Representative. Records listed in the record list in Addendum B will be retained for a minimum of 3 years unless otherwise specified by QMS procedures or by contract.

Once the retention period has passed the document owner can dispose of the record in an appropriate manner without further approvals.

3.4.5 Control of Nonconforming Material

Quasonix has a documented procedure within P4, Manufacturing, for the identification, documentation, evaluation, segregation, and disposition of nonconforming material. The procedure includes notification of concerned parties regarding a nonconforming product.

Quasonix procedures restrict the application of preliminary review to dispositions of rework, scrap, or return to supplier. Repaired or reworked products are reinspected in accordance with documented instructions and appropriate records are added to the Job Traveler.

Scrap product or material is conspicuously and permanently marked or separated from production material to prevent its use in production (risk mitigation).

Quasonix promptly notifies the Customer when it is discovered that a discrepant product has already been delivered. A Return Material Authorization (RMA) is issued.

3.4.6 Product Returns and Customer Supplied Product

In the normal course of business, the company handles customer property in the form of returned units and occasional customer items for production or testing. The process for handling returned units is defined in procedure P6, Customer Returns Process. Defect data from RMAs may be elevated to a Corrective Action and become an input to the feedback process.

When it is necessary to accept other types of customer property, the primary customer contact ensures that specific handling procedures are in place for the items, including identification and safekeeping, appropriate to their value and intended use.

3.4.7 Control of Inspection, Measuring, and Test Equipment

Various pieces of mechanical and electrical test equipment are used during FAT to validate the performance of deliverable systems. This equipment is kept in calibration to ensure the accuracy of test results. All equipment used to take measured data during Factory Acceptance Tests is calibrated with traceability to NIST standards. The calibration is performed by service providers certified to the appropriate scope of ISO 17025 or by the Original Equipment Manufacturer. Test items used in-process prior to final FAT are not required to be calibrated.

A Calibration Coordinator at each site maintains F21, a register of all items that require calibration at that site. The register identifies the unique identifier and due date for each item as well as other information. The register highlights items that are coming due and the Calibration Coordinator ensures that the item is recalled for calibration.

Each item is assigned a calibration period, typically 1 year. Because equipment does not suddenly go out of calibration on the due date, items may be used for up to 10% of their calibration period beyond the due date. This prevents, for example, a 12-month cycle from becoming an 11-month cycle.

A calibration record is retained for each item showing the due date, any standards used as part of the calibration, and the ‘as received’ condition. If an item is found to be out of calibration when received by the calibrator, the Calibration Coordinator and production personnel assess what measurements have been taken with the suspect item, including any delivered product. This list is reviewed to determine the level of risk. Customers may be notified and product may be recalled to ensure that all delivered products are within specification.

3.4.8 Continual Improvement

The quality system includes several feedback paths that identify opportunities for improvement through Corrective Actions, Internal Audits and process metrics measuring QMS performance. The overall performance of the system is assessed during Management Reviews, as described above. In addition, ideas for ways to improve the system may originate in a variety of informal ways. These ideas are collected by the Management Representative and assigned for implementation as appropriate.

3.4.9 Identification and Reduction of Risk

The key processes of the QMS have been planned and developed to include numerous steps to mitigate risk and take advantage of opportunities. Examples include Job Travelers to ensure all assembly steps are completed, the use of automated product testing and the use of in-process inspection of all assemblies, all of which reduce the risk of human error and improve quality and thereby increase customer satisfaction. Many additional steps to address risks and opportunities are identified within each procedure.

Management is always alert to identify additional steps that can be taken to address risks and opportunities and has built mechanisms into the QMS to address these as they are identified, including a formal Corrective Action process and an Opportunities For Improvement list. These are reviewed formally on a periodic basis. Metrics are applied to each of the key processes to verify that the QMS is achieving the intended outcomes and is improving.

3.4.10 Statistical Techniques

All products are 100% inspected and tested. No statistical control methods are implemented or required at the unit level. Efforts to analyze aggregate data such as on-time delivery and overall product defect rates are in use and constantly evolving to provide feedback input to new product and process design.

4 Transition Statement

All elements of the company relevant to this Quality Management System, including people, machines, suppliers and material, are deemed to be “suitable” as of the date of original release of this Procedure. For example, employees are deemed to be suitably trained based on prior experience, regardless of supporting documentation.

This transition statement notwithstanding, internal or external audits may still identify as nonconformances specific items where customer satisfaction may be impacted.

In addition, with the unification of the Quality Management Systems for the Moorpark, CA location and the West Chester, OH location, some records have been modified to be included in a unified record system. Whenever this is done, the record unique identifier is updated to be unique within the unified system while retaining it’s connection to the original system. In all cases, the original substantive content of the record is kept unchanged. All legacy records are archived in their entirety should they be needed for future reference.

Appendix A – Quality System Procedures

The most recent revision of each procedure is that which is available in the network folder \\FILESERV\QualitySystems\Procedures

P1	Quality Management (This document)
P2	Quotes and Proposals
P3-MP	Engineering Design (Moorpark Facility)
P3-WC	Engineering Design (West Chester Facility)
P4	Manufacturing
P6	Customer Returns

Appendix B – Quality Records

The following records are part of the Quality Management System. The master version of the form (blank record) may be found by looking in the Quality Systems / Forms folder. In that folder is either the blank form or a pointer to where the blank form is stored. There is no blank master for permanent records. Records (completed forms) are stored as listed in the table.

The table also lists the legacy forms that were used in each location to provide a connection to the records prior to the merge. At the time of the merge an evaluation was done to determine what the most appropriate disposition of those records. Depending on the type of record, some were fully merged into the current records while others remained separate. All records from prior to the merge are available for analysis and use if needed.

Form Number	Form Name	Record Storage Location	Record Owner	OHIO Legacy Form	MOORPARK Legacy Form
F1	QMS Dashboard	QMS Forms	Management	F-15	QF1
F2	Management Review Agenda	QMS Records	Management	F-13	QF2
F3	Corrective Action Log	Production/CAR Folder	Management	F-09	QF7
F4	Corrective Action Record	Production/CAR Folder	Management	F-08	QF3
F5	Internal Audit Schedule	QMS Forms	Management	F-16	QF4
F6	Hiring Tree	QMS Forms	Management	F-02	QF6
F7	Internal Training Record	QMS Records	Management	F-01	QF8
F8	Design Review Record	Project Folder	Engineering	F-03	QF5
F9-WC F9-MP	Engineering Change Order (ECO)	Production/ECN Folder Engineering Folder E	Engineering	F-06	QF9
F10-WC F10-MP	ECO Log	Production/ECN Folder Engineering Folder E	Engineering	F-07	QF10
F11	Customer Furnished Material	Customer Service Folder	Customer Service	-	QF11
F12	Nonconforming Material Log and Report	QMS Forms	Quality	F-11 F-12	QF12
F13	Sales Order Checklist	Customer Transaction Cycle Folder	Sales	F-18	-
F14	Production Procedure Template	QMS Forms	Production	F-14	-
F15	Configuration Files	Production Files	Production	-	QF17
F16	Production Traveler	Project Files	Production	-	QF16
F17-TX F17-RX F17-ANT	Returned Material Authorization Log	Production/RMA Folder Customer Service Folder	Production Customer Service	-	QF18
F18-WC F18-ANT	Returned Material Authorization Form	Production/RMA Folder Customer Service Folder	Production Customer Service	-	QF19
F19	Returned Material Addendum (International)	Customer Service Folder	Customer Service		QF20

Form Number	Form Name	Record Storage Location	Record Owner	OHIO Legacy Form	MOORPARK Legacy Form
F20	Quasonix Quality Notes	QMS Forms	Quality	F-20	-
F21-WC F21-MP	Calibration Log	Calibration Coordinator Files	On-Site Calibration Coordinator	-	QF21
F22-TX F22-RX F22-ANT	Defect Tracker	Production Files	Production	-	QF22
F23	Competency Matrix	QMS Forms	Quality	TRN001	-
F25	Perishables Data	QMS Forms	Quality	F-21	-
F26	Screwdriver Check Form	QMS Records	On-Site Calibration Coordinator	F-17	-
F27	Features and Performance Metric Sheet	QMS Forms	Quality	-	-
F28	New Supplier evaluation	QMS Forms	Engineering		
NA	Quotations – COTS Products	Netsuite	Sales	-	-
NA	Quotations – Antenna Products	Project Folder P	Project Files	-	-
NA	Proposals	Project Folder P	Project Files	-	-
NA	Contracts, Customer Purchase Orders – COTS Products	Netsuite	Sales	-	-
NA	Contracts, Customer Purchase Orders – Antenna Products	Project Folder P by project number	Sales	-	-
NA	Sales Orders	Netsuite	Sales	-	-
NA	Material Purchase Orders	Netsuite	Purchasing	-	-
NA	Design Requirements	Project Files	Engineering	-	-
NA	(Released) Engineering Drawings	Engineering Folder	Engineering	-	-
NA	Design Verification and Validation Records	Engineering Files	Engineering	-	-
NA	Product Test Records – COTS Products	Production Test Folder	Production	-	-
NA	Product Test Records – Antenna	Project Folder P, Test	Production	-	-

Form Number	Form Name	Record Storage Location	Record Owner	OHIO Legacy Form	MOORPARK Legacy Form
	Products	Records folder			
NA	Final Inspection Checklists	Quality Records	Quality	-	-
NA	Certificates of Conformance (Outgoing)	Shipping Records	Shipping	-	-
NA	Internal Audit Reports	QMS Records	Quality	-	-
NA	Provider-Generated Calibration Records	Calibration Coordinator Files	On-Site Calibration Coordinator	-	-
NA	Customer-Generated Records not listed elsewhere	Defined per project and communicated at project kickoff	Management	-	-
NA	Material Certifications	Purchasing records, if required by contract	Purchasing	-	-
NA	Supplier Evaluation Data	Purchasing records	Purchasing	-	-
NA	Supplier-Generated Records not listed elsewhere	Defined per project and communicated at project kickoff	Management	-	-

Appendix C – QMS Document Merge Background

Replaced procedures are identified as (WC) for West Chester documents and (MP) for Moorpark documents.

New Procedure	Name	Replaces	Rationale
P1	Quality Manual (This document)	(WC) Quality Manual (WC) AUD001 Internal Audits (WC) CPA001 Corrective Actions (MP) QP1 Management	There were very few differences in the management approach to the systems. The WC system was originally written to include some individual legacy documents that can now be combined into one. The title will be retained from the WC system to address those customers that expect a Quality manual
P2	Quotes and Proposals	(WC) SAL001 Determining Cust. Reqts. (WC) SAL002 Export License Procedure (MP) QP2 Bids and Proposals	While there were some differences in the processes to allow for more customization in the Antenna area, the overall process was similar. The new, single document defines a single process with accommodations for the customization aspects. Ultimately, the processes for generating a standard product quote or a full proposal for a custom item remain largely unchanged.
P3-WC	Design	(WC) ENG001 Design	There was significant legacy documentation not to mention habits of engineers to be carried forward in the new system. While some crossover of work was expected between the two sites, it would not be at a level that would cause conflict between the two approaches with regard to things like part numbers, changes notices, reviews and other QMS details. Management decided that there was no value in forcing one system on the other group with the requisite retraining and updating of legacy documents. Therefore, the two physical sites continue with their own rules. Both documents include a definition of how interactions occur.
P3-MP	Design	(MP) QP3 Design	
P4	Manufacturing	(WC) MAT001 Receiving Materials (WC) MAT002 Processing Materials (MP) QP4 Manufacturing	The overall processes were very similar, with distinct elements such as Travelers, inventory tracking and testing varying according to the products involved. The unified procedure is written to accommodate that variation within a single defining document. The actual work in each area is largely unchanged.
P6	Customer Returns	(WC) Returns Process (MP) Returned Material Process	The returns processes were already very similar. The only major difference was the existence of a Moorpark form to simplify international returns. This is accommodated in a unified procedure.

Revision History

Date	Description	Approved By	Version
6/2/14	Added Revision History table	Unpublished	2.2
6/4/14	Added Training Effectiveness; Test record retention	T Hill	2.3
6/12/14	Added designee in section 3.4.2	T Hill	2.4
6/19/14	Section 2.6, added words about TRN001_COM Section 3.2.4, added file locations	T Hill	2.5
6/26/14	Updated forms table	T Hill	2.6
7/3/14	Deleted Objective 4 per Mgt Rvw AI	T Hill	2.7
7/17/14	Updated scope and policy to resolve Eagle doc review comments	T Hill	2.8
9/24/14	Removed Simco reference to allow other cal sources Removed Specification Sheets from design area	T Hill	2.9
10/2/14	Updated form numbers to F-xx format	T Hill	3.0
2/26/15	Added F-14 SO Checklist guidance	T Hill	3.1
4/22/15	Removed “Inc.” from company name	T Hill	3.2
6/5/15	Updated organization of manual to better reflect process definitions; Added some forms to App C.	T Hill	4.0
12/8/15	Added F-16 to controlled forms list.	T Hill	4.1
1/13/16	Fixed duplicate form numbers on F-16.	T Hill	4.2
2/17/16	Removed 2 yr record keeping reqt from 3.3.6 Cal’n (CAR 1074)	T Hill	4.3
2/22/16	Removed PARs; Added Context (2.1)	T Hill	4.4
9/12/16	Updated forms list; Added “:2015” per ANAB	T Hill	4.5
12/20/16	Added ‘no brokers’ and ‘material cert’ bullets in Purchasing	T Hill	4.6
9/1/17	Added notes at Rev table (CAR 1085)	T Hill	4.7
3/22/18	Added form F-20 to list; Updated scope per OFI; Clarified Management Responsibility	T Hill	4.8
11/7/18	Added highlights of risk being addressed, including section 3.4.7; Bolded interested parties in section 2.1 Added F-21; Implemented various OFIs	T Hill	4.9
3/26/19	Added IT backup words (3.2.4)	T Hill	4.10
Not released	Updated from WC QM to be primary procedure for merged QMS for West Chester and Moorpark	T Hill	5.0
1/16/20	Updated to include results of system audit 201912	T Hill	5.1
1/27/20	Updated to new Quality Policy and Objectives	T Hill	5.2
4/16/20	Added form F27 to Appendix B after release at Q2 MR	T Hill	5.3
1/18/21	Added retention period for records section 3.4.4	T Hill	5.4
12/21/21	Added a new policy for broker parts section 3.3.1	T Hill	5.5
4/3/2023	Added Test items used in-process prior to final FAT are not required to be calibrated.	T Hill	5.6
4/3/2023	Added New Suppliers are evaluated on Form F28 by Engineering based on their ability to meet product quality, ISO 9001:2015 or AS-9100 requirements or other justification minimizing the risk of material issues on the production floor.	T Hill	5.7

12/18/23	Section 3.4.4 replaced quickbooks with Netsuite Addendum B replaced quickbooks & Mysis with Netsuite	T Hill	5.8
03/29/24	Section 3.1.4.6 Removed “part 6” and replace with “verification box”	T Hill	5.9
04/02/25	Fix typo in Revision History of 5.9 – 3.4.1.6 says 3.1.4.6 Add “documentation on auditor competence” in Section 3.4.3	T. Hill	5.10

NOTE:

1. Whenever this document is revised send a copy to the website coordinator to post on the Documents page.

2. If revising the Quality Policy contained within this document, send it to key suppliers, as required by ISO9001:2015 clause 5.2.2 (c).