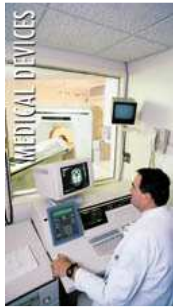


Enterprise Quality Management Software Suite

Implemented at 6 of 10 Top US Aerospace & Defense Firms



100% Web-Based Quality Assurance Solution

When product quality is critical to your customers, **TIPQA**[™] Enterprise Quality Management Software Suite can help assure that their most stringent quality standards are met by your manufacturing operations. **TIPQA**[™] offers comprehensive integrated functionality with workflow discipline to support “paperless” on-line visibility and traceability of quality data throughout the manufacturing process from material receipts to end product delivery.

TIPQA[™] is designed specifically for manufacturers of complex products where quality is mission critical. Unmatched in functionality, flexibility and sophistication, **TIPQA**[™] is a true COTS (commercial off-the-shelf) solution that can interoperate with most Legacy / ERP systems to extend on-line visibility and traceability at an enterprise-wide level.

TIPQA[™] has become the de facto quality systems standard in the Aerospace & Defense Industry with successful implementations worldwide. It is common to “Bolt-On” **TIPQA**[™] to your ERP / MES system for closed loop real-time information. Whether your company specializes in Aerospace & Defense, Medical Devices, or other complex products where product quality is mission critical, **TIPQA**[™] can deliver a cost effective & affordable solution on which your enterprise can standardize.

TIPQA[™] – Enterprise Quality Assurance

- Receiving Inspection
- Nonconformance
- Corrective Action (CAPA)
- Supplier Rating
- Audit Management
- Complaint Handling
- In-Process Inspection
- Serialized Test & Inspection
- Gage & Tool
- Training Management
- Statistical Process Control
- Document Management
- Access Control

Challenges Addressed

- Reduce Defective Materials / Supplier Returns
- Proper Information to Make Better Business Decisions
- Poor Departmental Communications
- Lack of Timely Information
- High-Maintenance Costs of Homegrown Systems
- Lack of Visibility & Traceability
- Materials Held Up by Material Review Board
- Failed Audits
- Multiple Quality Systems
- Multiple Business Units
- Duplicate Data Entry
- Lost Paper / Paper Lag Time
- Inaccurate Supplier Rating
- Report Writing From Multiple Data Sources

KEY FEATURES & BENEFITS

- ✓ “Best in Class” QA System
- ✓ Supports ISO / AS / QS Standards / Mil Spec Requirements
- ✓ Six Sigma
- ✓ FDA 21 CFR Part 11
- ✓ Complete Device History Records
- ✓ Multiple Business Units
- ✓ Real-Time Reporting / Analysis
- ✓ Escalation of Past Due Materials to Reduce Cycle Times
- ✓ Complete and Protected Audit Trail
- ✓ Closed Loop Collaboration with Suppliers
- ✓ Elimination of Double Data Entry
- ✓ Eliminates Redundant Standalone Systems

Simplify Operations - Reduce Cycle Time - Become More Competitive

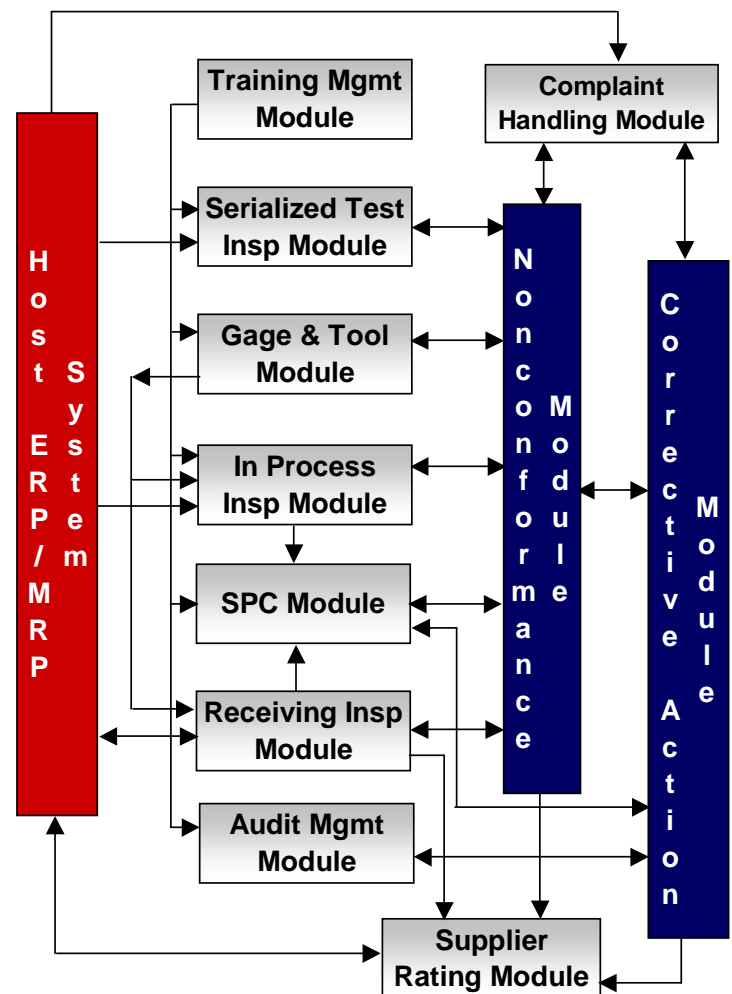
TIPQA[™] is a simple, yet complete solution for manufacturers who view quality as a competitive advantage. It provides precise management/business process metrics that enables you to reduce cycle time from defect detection to correction. **TIPQA**[™] generates detailed records with audit trail, including time stamps and electronic signatures - all collected and maintained throughout Material Disposition and Material Review Board processes. Notifications of required actions are easily integrated with your email system, eliminating delays due to queuing and action notification problems. **TIPQA**[™] enables your company to achieve continuous and measurable quality assurance improvements while increasing customer service, productivity and profitability.

Flexible, Fully Integrated Modules

TIPQA[™] consists of thirteen (13) integrated modules that support the complete range of quality assurance functions. Table-driven user defined parameters allow you to perform sophisticated customization with and between all twelve modules. You can develop multiple document types with different user-defined processes that meet the needs of complex manufacturing environments. All document changes and status are precisely revision controlled, including maintenance of original and subsequent electronic signatures. An audit history is maintained throughout all the modules to provide visibility of who did what and when they took the action, particularly on all material disposition actions. Each module of the system adds both power and flexibility to support the variety of complex business requirements facing manufacturers today.

Modules Include

- Receiving Inspection
- Nonconformance
- Corrective Action (CAPA)
- Supplier Rating
- Audit Management
- Complaint Handling
- In-Process Inspection
- Serialized Test and Inspection
- Gage & Tool Tracking
- Training Management
- Statistical Process Control
- Access Control
- Document Management



Key System Wide Features

Meet ISO 9000, FDA and MIL Standard Requirements

- Complete on-line nonconforming material control system, fully compliant with ISO 9000, FDA and MIL-Standard Requirements

Inspection Instructions On-Line with Full Multimedia Capabilities

- All inspection instructions are maintained on-line with graphics, video or other support

Integrated Problem Reports

- Gage and Tool system is integrated with In-process Inspection, Receiving Inspection and Nonconformance modules
- Enables a common system for production and tool problem reporting

Automatic E-Mail Notification of Required Actions

- Integrated with customer's standard e-mail system

Provides Highly Configurable User Defined Document Types

- Powerful and flexible data collection and reporting of information throughout the system
- Supports user defined codes by document type

Provides Powerful Query and Reporting Capabilities

- Supports extensive on-line query and reporting capabilities including on-line charts and graphs

Communication with Host ERP/MES and External System

- Interfaces with host ERP/MES system to transfer Receiver, Item Master, Vendor Master, and other key data to **TIPQA**TM
- Interfaces with host ERP/MES system to update material status and MRP disposition, as well as other key data from **TIPQA**TM to the host system
- Supports On-line Detailed Data Query with Import/Export Capability

Open Oracle Database Architecture

- Open Oracle architecture allows easy access to all quality data using your ODBC compliant report writers and browsers
- Relational design and sophisticated set-up parameters offer extensive flexible options to shape your business rules

Microsoft MAPI/Exchange Compliant

- Microsoft compliant for desktop fax/export of data to exchange compatible software

Flexible Implementation Options

- Product supports any phased implementation plan; i.e., all modules can be implemented in any combination or one at a time depending on customer requirements.

TIPQATM – Enterprise Quality Management offers a **“Return On Investment”** with a 100% Web-Based solution that:

- ✓ **Streamlines Efficiency of Quality Process**
- ✓ **Easily Configurable to Meet Enterprise-Wide QA Requirements without Programming**
- ✓ **Provides Real-Time Quality Information Enterprise-Wide**
- ✓ **Provides Real-Time Reporting & Data Analysis**
- ✓ **Displaces Redundant QA Point Applications to Reduce IT Administrative Costs and Improve Data Consistency**
- ✓ **Improves Supplier Management & Performance**
- ✓ **Provides On-Line Visibility & Traceability of Materials throughout Entire Manufacturing Process**
- ✓ **Eliminates Lost Paper & Reduces Paper Lag Time**
- ✓ **Eliminates Duplicate Information and Duplicate Data Entry**
- ✓ **Provides Seamless Integration with Business System**
- ✓ **Identifies Current Location of Materials and Who Has What Information**
- ✓ **Speeds Problem Identification & Resolution**
- ✓ **Automatic E-Mail Escalation of Quality Issues**
- ✓ **Improves Departmental Communications**
- ✓ **Simplifies the Audit Process by Providing Accurate Information On-Line**
- ✓ **Helps Meet ISO, FDA, and Mil Spec Requirements**
- ✓ **Accelerates Implementation of Common Processes Across Multiple Sites**

Key Features	Benefits
Fully-Integrated Quality Management System	Provides one common quality system that helps maintain better control of the quality workflow process while eliminating duplicate data entry and improving accuracy and timeliness of information.
On-Line Enterprise Visibility & Traceability	Provides a “paperless” quality system that makes it easy to track material flow from receipt to final product shipment.
Commercial Off-the-Shelf (COTS) Solution	Eliminates the need for custom programming and provides a system with much lower maintenance costs than a homegrown quality or legacy systems.
Quality Knowledge Base	Provides a system with complete up-to-date quality information to help make smarter business decisions.
100% Web-Based System	Drastically reduces the amount of administrative time and resources to maintain a quality system. Provides easy accessibility via the Internet.
Comprehensive Quality System	A comprehensive quality system that meets the stringent quality needs of complex, government regulated products.
Real-Time Analysis & Reporting	Provides accurate, consolidated quality information for real-time analysis and reporting.
Proven Results-Based Solution	Has been successfully implemented at manufacturing companies worldwide with proven results of increased productivity, faster time-to-market, and better quality products at reduced costs.
Better Supplier Management	Provides a system to better manage suppliers by providing accurate and timely supplier ratings to help reduce defects and improve supplier performance.
Customer Responsive System	Improves customer responsiveness by reducing defects and lowering manufacturing cycle times.
Business Unit	Allows multiple business units run by their own set of quality rules in combined single database environment.

Receiving Inspection



Provides On-Line, Real-Time Inspection Recording

TIPQATM – Receiving Inspection Module (RI) automates the inspection processing of received materials through manufacturing and/or engineering operations. RI prompts receiving inspectors to enter inspection information entirely on-line. Results are then available for on-line viewing by other departments, such as Purchasing, Quality Assurance, Engineering, etc. RI eliminates the possibility of lost paperwork, improves accuracy by validating data entry against master records, and speeds the processing of inspection information. In addition, RI is highly configurable to conform to the standard procedures for each installation.

Receiving Inspection – Main Functions

- Source Inspection Data Collection Capability
- Automates Routings & Work Instructions
- Automatic Sampling
- ANSI Z1.4 Sampling
- Automates Skip Lot Process
- Certified Instructions at Supplier Level
- On-Line Measurement Data Collection with SPC Capability
- Provides On-Line Charts and Graphs
- On-Line History of Past Inspections
- Integrates With Nonconformance Module
- Bi-Directional Interface with ERP System

Challenges Addressed

- Accomplishing Inspection Planning Changes – Getting All Old Copies
- Communication of Supplier Problems for Increased Inspection Needs
- GIDEP Alert Notification – Special Inspection Requirements
- Providing Communication of Supplier Status to Inspection Personnel
- To Provide Visibility of Supplier Serial Numbers to Internal Serial Numbers and/or Date Codes

Key Features	Benefits
Automated Tracking for Sampling Requirements	Eliminates manual tracking for sampling requirements.
Automated SPC Capability within Module	Provides automated link of measurements during inspection directly into SPC, which saves time and eliminates double data entry.
Simplified Processing of Nonconforming Material	Automated routing of any nonconformance through the various processing steps and automated approval determination eliminates the need for personnel to scan through all nonconforming material to determine what they should work. Additionally, the standardization of the NC process eliminates confusion and lead to faster determination of supplier problems relative to poor quality.
Automated Integration of Inspection Results with Supplier Rating	Automatic incorporation of delivery calculations and nonconformance problems found in receiving inspection eliminate any need for duplicate data entry into a standalone Supplier Rating system. Additionally, real time visibility of delivery and/or quality problems can be dealt with promptly and effectively, thereby, reducing, if not eliminating, continuing problems.

Nonconformance



Helps Insure Proper Action on Non-Conforming Materials

TIPQATM – Nonconformance Module (NC) automates the identification and processing of nonconforming material in manufacturing or engineering operations. NC documents the history of nonconforming material fully on-line, taking the place of multi-part forms mailed throughout the company. NC eliminates lost paperwork, improves accuracy by validating data entry against master records, and speeds the processing of nonconforming material.

Nonconformance – Main Functions

- User Defined Routings / Document Types
- Revision Control of All Document Status Reversals
- Supports MRB & Defect Collection Needs
- Supports Depot Level Tear Down / Retro Fit Facilities
- Failure Chain Data Collection & Reporting
- Root Cause Analysis & Reporting
- Automates Failure Chaining Process Supporting Root Cause Analysis
- Automated Record Processing & Action Assignment
- On-Line Electronic Approval Signatures
- Code Segregation Capability by Factory or by Record Type
- Extensive On-Line Reporting, Including Pareto Analysis with Charts
- Unique Data Collection Capability Via Customer Driven Pop-Up Screens

Challenges Addressed

- Reasonable Material Review Turn Around Time
- More Material than Desired in the Nonconformance Review Cycle
- Standardization of MRB Review Process
- Lost or Incomplete Nonconformance Documentation
- Lack of Failure Chain Reporting
- Lack of Visibility with Paper Based NCs
- “Sneaker Net” Document Routing
- Long Queue Times
- Visibility of Required Action Notifications

Key Features	Benefits
Reduces NC Cycle Times	Reduces materials tied up in the MRB process which helps drive down the quantity of required inventory.
Elimination of Lost Documents	Helps eliminate lost documents by providing an on-line system that prevents documents, once written, from being lost and thereby eliminates the time to re-inspect material that is known nonconforming.
High Degree of Flexibility of Document Types	Provides a high degree of flexibility that provides the customer with the capability to customize nonconforming documents so only the precise processing steps are used and can be streamlined to eliminate non essential activities.
Automated Processing and Approval Requirements	Automated approval determination based on disposition codes eliminate missed approvals and/or reprocessing of documentation for approval after the fact.
Simplification of NC Processes	Automated routing of any nonconformance through the various processing steps and automated approval determination eliminates the need for personnel to scan through all nonconforming material to determine what they should work. Additionally, the standardization of the NC process eliminates confusion and lead to faster determination of supplier and/or process problems relative to poor quality.
Integrated Failure Chain Process	Leads to faster Root Cause Analysis resolution and enables faster process correction time thereby reducing the occurrence of failures.

Corrective Action (CAPA)



Helps Maintain Closed Loop Corrective Action

TIPQATM – Corrective Action Module (CA) automates a formal, closed loop corrective action system for resolving quality problems encountered in the course of normal operations. CA documents the history of corrective actions from request through follow-up and closure. This on-line system eliminates the possibility of lost paperwork, improves accuracy by validating data entry against master records, and speeds the processing of corrective actions.

Additionally, the automatic e-mail capability can send notification of CAs that are either coming due or are overdue for response and/or corrective action completion. Finally, automated e-mail notifications can be escalated up the management chain, as necessary, to further promote prompt completion of the corrective action(s).

Corrective Action (CAPA) – Main Functions

- User Configurable Corrective Action Document Report Types
- Closed Loop Corrective Action
- ISO 900X Compliant Corrective Action Records
- Revision Control of All Document Status Reversals
- Automatic Approval Requirements
- On-Line Tracking and Electronic Approval Signature Capability
- Automated Input of Standard Text for Discrepancies or Audit Findings
- Code Segregation Capability by Document Type
- Unique Data Collection Capability via Customer Driven Pop-Up Screens

Challenges Addressed

- Lost or Incomplete Corrective Action Documentation
- Lack of Visibility of Corrective Assignee(s)
- Non Standardization of Multiple Corrective Action Processes
- Longer than Desired Corrective Action Cycle Times
- Lack of Closed Loop Follow-Up and Closure
- Lack of Trend and History Data for Process Improvement
- Multiple Departmental Databases for Tracking Various Types of Corrective Actions

Key Features	Benefits
Fully Integrated with Multiple Modules	Eliminates duplicate data entry.
Elimination of Multiple Systems	Reduced system maintenance requirements.
High Degree of Flexibility of CA Document Types	CA type allows fitting the CA type to the process versus fitting the process to the CA type.
Automated Processing and Approval Requirements	Automated approval determination based on CA type eliminates missed approvals and/or reprocessing of documentation for approval after the fact.

Supplier Rating



Helps Keep Accurate Information About Suppliers

TIPQA™ – Supplier Rating Module (SR) provides the most powerful supplier rating features available in a quality assurance application, including robust management of certification, bid awards, and support for best value decisions. The **TIPQA™** solution combines delivery, quality and vendor response/action data into a blended performance rating for suppliers. Sophisticated user set-up parameters enable you to tailor the supplier rating calculation to fit your company's business model. Ratings are calculated at the Supplier, Supplier Commodity Code and Supplier Part level. Detailed backup data for all decisions about suppliers can be easily maintained. Report Cards, or Rating Letters that are user defined can include performance targets and trend data. Corrective action documentation can be printed, faxed or automatically e-mailed via the Internet to the entire supplier base.

Supplier Rating – Main Functions

- User Definable Rating System
- Supplier Capability Tables
- Supplier Web Portal
- Calculates Ratings for Quality, Delivery & Blended
- Rating for Dormant Suppliers
- Approval / Disapproval of Suppliers
- Provides Quote Comparison Tool with Certified Supplier Recognition
- Supports Certified Supplier at Part Number or Supplier Level
- Provides for Unlimited Types of Supplier Rating Letters
- Automatic E-Mail of Supplier Report Cards

Challenges Addressed

- Inadequate or Totally Lacking Supplier Rating System
- Adversarial Relationship with Suppliers
- Non-Objective Supplier Evaluation/Rating
- Paper Based Supplier Report Cards
- Inclusion of Supplier Caused Production Assembly Failures into Supplier's Rating

Key Features	Benefits
Integrated with Receiving, Nonconformance, and Corrective Action	Integration with these modules eliminates the need for manual input into Supplier Rating module.
Automated Processing of Supplier Rating Letters	Background processing eliminates on-going manual effort to collect, prepare and distribute.
Rapid Visibility of Supplier Status and Desirability	Provides history of supplier performance and calculates Quality and Overall ratings for current, 3 Month, 6 Month and 12 Month.
Provides Objective Evidence of Supplier Rating Information	Provides detail information for delivery and/or quality issues to facilitate prompt resolution based on facts and not innuendo.

Audit Management



Helps Simplify the Entire Audit Process

TIPQATM – Audit Management Module (AM) provides complete support of internal and external audits ensuring compliance with all ISO, MIL Standard and other regulatory requirements. It provides the ability to establish any number of "audit types" and to build criteria with weighting factors, if desired, for these "audit types". Once established, appropriate audit schedules can be generated to provide on-line real time tracking of audit completions. The Audit Management Module documents the history of audits as they are accomplished and records any Corrective Actions associated with those audits. This on-line system improves accuracy by validating data entry against master records, simplifies the auditing process and speeds the processing of corrective actions associated with audit findings.

Audit Management – Main Functions

- User Definable Audit Types
- On-Line Audit Scheduling
- Automatic Audit Rescheduling Capability
- Multiple Audit Criteria
- Supports Weighted Score Factor
- Automated Update of Supplier Rating Module
- Extensive On-Line Reporting and Schedule Monitoring
- Fully-Integrated with Corrective Action Module

Challenges Addressed

- Non-Standardization of Audit Process
- Lack of Visibility of Audit Schedule Assignee(s)
- Lack of Visibility of Audit Assignee(s)
- Multiple Audit Processes
- Paper Based Audit Plans and Results
- Multiple Departmental Audit Databases
- Enterprise Visibility of All Audit Types and Results

Key Features	Benefits
High Degree of Flexibility in Audit Types	Allows a customer to tailor the Audit type to the process and not the process to the Audit type.
High Flexibility in Development of Audit Criteria	Simplifies the planning/instruction process for audit criteria.
Automatic Audit Schedule Generation	Eliminates the on-going need to manually generate routinely scheduled audits.
Automatic Notification of Audit Actions	Eliminates forgotten audit schedules and improves communication of audit schedule.
Fully-Integrated with Corrective Action Module	When required, audit results can automatically generate a Corrective Action type with little, if any, additional input other than what is recorded as part of the audit.

Complaint Handling



Provides On-Line Complaint Handling Processing

TIPQA™ makes two versions of the Complaint Handling Module (CH) available within the suite in order to accommodate the needs of various customers.

The CH Module is a data collection and processing system. The entire CH process workflow is automated from complaint receipt through final resolution and closure. Additionally, the CH Module is fully integrated with the Nonconformance and Corrective Action Modules thereby eliminating manual paperwork, minimizing data input, providing control and sequencing of task assignments as well as providing significant process reporting capability

The Complaint Handling - Medical (CH-Med) version is designed to meet the specifications of the MedWatch FDA 3500A report. Within the CH-Med version, the FDA 3500A report can be produced on demand.

The Complaint Handling - Standard (CH-Std) version was developed for use within the A&D and other business sectors to provide non-medical users with a comprehensive Customer Complaint Handling system.

Complaint Handling – Main Functions

- Automated Complaint Handling Task Assignment
- Initiation Screen
- Product Screen
- Complaint Screen
- Evaluation Screen
- Cause / Corrective Action, Review / Approval & Closure Screens
- On-line Electronic Review / Approval
- MedWatch Form 3500A Report
- FDA 21 CFR Part 11 Compliance
- Multiple User Defined Codes for Cause, Corrective Action, Evaluation, Patient, Product, etc.
- Complaint Action History
- Integrated with Closed Loop Corrective Action Module
- Integrated with Nonconformance Module
- On-line Pareto Charting of Complaint Related Codes

Challenges Addressed

- Manual Complaint Form Generation
- FDA 3500A Report Compliance
- Minimized Data Input
- FDA 21 CFR Part 11 Compliance
- Customer Complaint Handling Integrated into Quality Process Workflow
- Automatic Notification of Complaint Requiring Baseline Report
- Centralized Collection / Storage of All Data Relative to the Customer Complaint, Corrective Action Process and Complaint Resolution
- User Configurable Complaint Types
- Real Time Data Collection with Preset Default Inputs
- Comprehensive Complaint Action History

Key Features	Benefits
Real Time Data Input	Real Time Complaint Analysis Capability
Default Data and/or Code Setup Capability	Minimizes Data Input Requirements
Multiple User Defined Complaint Types	Highly Configurable User Defined Complaint Types
Integrated with Nonconformance System	Provides Linkage of Complaint to Nonconformance Record, If Desired
Integrated with Corrective Action System	Provides Linkage of Complaint to Formal Corrective Action Record, If Desired
Automatic Baseline Reporting Notification	Eliminates Missed Baseline Reporting Requirement
E-Mail Notification of Required Actions	Eliminates Phone Calls and Reduces Cycle Times

In-Process Inspection



Simplifies Entire Inspection Process

TIPQATM – In-Process Inspection Module (IP) automates the process of recording inspection/test results of material assigned to Work Orders in manufacturing or engineering operations. IP is used to enter and maintain inspection or test criteria for all processed parts. In addition, the system maintains an on-line history of inspection and test results at the part number or part number/part revision level. IP eliminates lost paperwork, improves accuracy by validating data entry against master records, and speeds the processing of inspection and test results.

In-Process Inspection – Main Functions

- Wireless Inspection / Data Collection
- Maintains Test & Inspection Yield Data
- On-Line Test and/or Inspection Instructions
- Inspection Requirements by Process Code
- Inspection by Serial Number
- Identification of Initial versus Re-Inspect or Re-Test
- Capability to Record Lot or Batch ID
- On-Line Measurement Data Collection with SPC Capability
- Provides On-Line Charts & Graphs
- Automatic Sampling, Skip Lot and Customer Sampling Capabilities
- ANSI Z1.4 Sampling
- Lot Certification Report
- Prepares Lot Certification Letters
- Defects Per Million Reporting Capability with Automatic E-Mail Notification

Challenges Addressed

- Accomplishing Planning Changes – Getting All Old Copies
- Communication of Process Problems for Increased Inspection Needs
- GIDEP Alert Notification – Special Inspection Requirements
- Lack of Consistent Yield Reporting

Key Features	Benefits
Elimination of Manual Tracking for Sampling Requirements	Automated tracking of good/bad lots per specification requirements eliminates errors associated with manually recording data selection of sample sizes.
Automated SPC Capability within In-Process Inspection	Automatic flow thru and generation of SPC graphs for inspection data when recorded.
Integration with Nonconformance Module	Eliminates duplicate data entry when a nonconformance is discovered during the inspection and/or test process.
Simplified Planning Capability	Enables planning criteria by part number, commodity code, part group or Process Code for standardization of inspection planning.

Serialized Test & Inspection



Brings the Test Inspection Process On-Line

TIPQATM – Serialized Test & Inspection Module (SN) automates the inspection processing of serialized items in manufacturing and/or engineering operations. Operators can manually input or scan bar-coded serial numbers and part numbers, select user-defined defect codes, and enter other relevant inspection results completely on-line. Once the serial numbers are scanned, the information is available on-line for viewing with a wide array of options, including Pareto analysis of defect trends for resolving recurrent problems. SN eliminates the possibility of lost paperwork, improves accuracy by validating data entry against master records, and speeds the processing of test and inspection information.

Serialized Test & Inspection – Main Functions

- Serialized Part Location Tracking
- Internal Serial Number to Customer Serial Number Cross Reference Tables
- Serial Number “Where-Used”
- Serialized Bill of Materials
- Serialized Configuration History with Associated Nonconformance History
- Device History Records Consistent with FDA Regulations & Meeting Needs of Aerospace & Defense
- Maintains On-Line Routings
- Defects Per Million Reporting Capability with Automatic E-Mail Notification
- Unique Data Collection Capability via Customer Driven Pop-Up Screens
- Special Process Capability – Wave Solder & Environmental Stress Screening

Challenges Addressed

- Paper Configuration Reporting System
- Failure to Complete Nonconformance Documentation on Completed Configuration
- Difficult Serialization Tracking System
- Inability to Record Failure Chain Without Using Nonconformance Documentation
- “Where-Used” Traceability for Potential Problem Parts
- Customer Required Traceability and/or “As-Built” Data Delivery Requirements

Key Features	Benefits
Serialized Configuration History	Captures multi-level serialized configuration listing to any level desired by the customer.
Simplified Input for Configuration Data	Enables input of serial numbers to standard Bills of Material with automatic part revision determination.
Nonconformance History Linkage with Multi-Level Serialized Configuration	Facilitates buy-off of assemblies with no open quality issues.

Gage & Tool



Accurately Track Tooling Throughout Manufacturing Cycle

TIPQATM – Gage & Tool Module (GT) automates procedures for calibration and tracking over the use of tools and gages. Users can scan bar-coded serial numbers on tools and gages as well employee ID numbers to locate, issue, return, calibrate, and report on tools and gages. GT also includes an inventory control system for tracking consumable materials and eliminates the possibility of lost paperwork. The system improves accuracy by validating data entry against master records, and speeds the processing of gage and tool tracking information.

Gage & Tool – Main Functions

- Durable Tool Inventory Tracking
- Calibration Recall
- Automated E-Mail Notification for Tool Check-In and/or Calibration Recall
- On-Line Calibration Steps and Instructions
- Skill Level Functionality For Inspections Steps
- User Definable Test Station Hierarchy
- Manufacturing Usage Tracking
- Consumable Tool & Re-Order Point Tracking
- Tool Location Tracking
- Tracks Tool Repair History

Challenges Addressed

- Lack of Visibility for Tools Due Calibration
- Exhaustive Effort Required to Pinpoint Material Inspected with Out of Calibration Tools
- Inability to Track Who Has Which Tools
- Customer Owned Tooling Difficult to Locate/Track
- Calibration Recall Not Automated
- Multiple Gage and Tool Tracking Databases in Existence

Key Features	Benefits
Integrated with Receiving and In-Process Inspection	Helps insure that only calibrated tools are available for production.
Rapid Determination of Tool Availability	Provides the capability to view current tool status to determine availability.
Automated Recall System	Eliminates need for manual recording and/or maintenance of tool recall schedule.
Automated Overdue Tool Check-In Notification	Provides automatic notification to assignee when tools are overdue for check in. Additionally, if needed can provide escalation notice to supervisors when warning notice is ignored.
Automated Scheduling of Calibrations	Provides automatic recalibration schedule based on completed calibrations.
Automated Calibration Frequency Adjustment	Provides capability to automatically adjust frequency between calibrations based on good/bad calibration results.

Training Management



Helps Keep Accurate Records of Employee Certifications & Training

TIPQATM – Training Management Module (TM) provides the capability for defining and tracking Skill Levels within the organization and assigning or monitoring at the Employee level. This module simplifies the assignment of Skill Levels needed in multiple modules and provides an audit trail of by whom and when skill level assignments were modified. Additionally, this module provides for automated early warning E-mail notification to the Employee and/or the supervisor when skills with predetermined expiration dates are due for re-certification.

Training Management – Main Functions

- Tracks Date Skill Attained and Date for Re-certification
- Tracking Skill Level Attainment by User
- Notification of Skill Expiration
- Provides for Skill Level Extensions
- Documents Skill Level Assignment

Challenges Addressed

- Integrates Skill Levels Across Multiple Modules
- Automated notification of Skill Level Expiration
- Ensures Appropriate Skill Level for Task(s)

Key Features	Benefits
Integrates with Receiving Inspection, In-Process Inspection, Audit, Gage & Tool and Serialized Tracking Modules	Simplifies the assignment of Employee skills within multiple modules.
Automated Notification of Skill Expiration	Eliminates Lost or Forgotten Re-certification Dates
Provides Objective Evidence of Skill Level Achievement	Facilitates Internal/External Audit Verification of Skill Levels

Statistical Process Control



Provides the Information You Need, When You Need It

TIPQATM – Statistical Process Control Module (SPC) automates the measurement data collection in manufacturing or engineering operations. SPC users enter inspection measurements on-line as the readings are taken or can be entered after the fact. Results are immediately available for on-line viewing by other departments. SPC eliminates the possibility of lost paperwork, improves accuracy by validating data entry against master records, and speeds the processing of process data.

Statistical Process Control – Main Functions

- Supports Direct Workstation Data Collection
- Automated SPC Chart Generation for Receiving and/or In-Process Inspection Measurement Data Collection
- On-Line Graphics & Charting Capabilities
- On-Line Run, XBAR & Range Charts
- Supports Both Attribute & Variable Charting
- Calculates Process Capability (CPK)
- Supports Preventative Quality Control

Challenges Addressed

- Lack of SPC Process
- Extensive Training to Utilize Paper Based SPC System
- Lack of Interface Between SPC Package and Inspection Records

Key Features	Benefits
Simple Data Entry	Entry of measurement data automatically linked to chart type, control limit determination and run charting. No operator decisions are required.
Integrated with Auto Flow of Measurements from Receiving and/or In-Process Inspection	Eliminates redundant data entry and captures SPC information without additional training of the users.
Real-Time Results Integrated with Nonconformance and Corrective Action Modules	Eliminates redundant data entry when generating a nonconformance or corrective action from within the SPC module.
Simplified Viewing of Past Results	Simple query screen provided to simplify the selection of past result data.

Document Management



Simplifies Entire Document Management Process

TIPQATM – Document Management Module (DM) provides an automated and secure approach for controlling and the dissemination of documents as well as other files imported into TIPQA. With DM, users can establish and maintain revision control, automate approval routings and release notifications. The DM module provides a central storage point for all controlled documents as well as any revisions for access, archiving, backup, etc. It also provides the ability to establish automated document review schedules as well as controlling restricted and unrestricted documents based on type. The complete document life cycle, from the initial creation through obsolescence, can be controlled and automated through the DM module.

Document Management - Main Functions

- Fully web based solution.
- Automates document ratings, approvals and release notifications.
- Supports compliance issues through document management segregation, approvals and automated review.
- Provides flexible document categorization and dissemination.
- Provides keyword as well as advanced phrase queries, wildcard queries, proximity queries and range queries.
- Provides security to protect against loss, tampering, privacy and restricted / public documents.
- Provides complete revision control including obsolescence and multi – version / superseded version control.
- Simplified access and ease of use.
- Fully integrated solutions with other TIPQA modules.

Challenges Addressed

- Storage, Retrieval, Filing, Security, Audit Trail
- Document Workflow and Release Notification
- Provides Import / Revision Control regardless of document type for application independence.
- Ease of document storage and retrieval for all users from a common document storage.
- Provides offline check in / out function.

Key Features	Benefits
Fully Integrated with all TIPQA Modules	Eliminates duplication of Paper versus electronic documents. Allows easy linkage to Inspection Criteria, Audits, Corrective Actions, etc. for your managed documents.
High Degree of Flexibility of Document Management Types	DM Types allows for customization of approval / release requirement as well as user access.
Security Control for View / Edit Capability	Secure Document Viewer for Restricted / Unrestricted documents minimized user license requirements.
Restricted versus unrestricted documents	Provides security for documents with private / sensitive information versus documents available to the general work force.
Simplified Access to records with Keyword search capability and email notification of document review cycles	Elimination of "Lost" documents. Reduction, if not elimination of expired documents and / or missed review cycles.
Central Document Storage	All documents are stored in the TIPQA database for ease of control and security.

Access Control



Easily Maintain System-Wide Security

TIPQA™ – Access Control Module (AC) is to control user access to all of the other. This module provides System Administrators the tools to define and maintain individual user access to the screens within the system based on their need to function within those screens. AC is also used to perform and control general administration procedures for system security and to establish Global System Parameters needed by all other modules.

Access Control – Main Functions

- Single or Multiple Level System Administration Capability
- Security Group Methodology by Defined Templates
- Security Control to Menu, Screen & Tab Levels
- User Definable Work Day / Fiscal Calendar
- User Definable Test Week Reporting
- Multiple User Definable Approval Groups Per Person
- Copy Wizard Minimizes Security Set-Up
- On-Line Interface Monitoring

Challenges Addressed

- System administration of multiple systems
- Understanding the security level / needs of personnel accessing multiple systems

Key Features	Benefits
Capability for Multiple Administrators, If Needed	Allows for shared responsibility by module.
Simplified Use of Templates for Security Assignment	Development of specific functional templates enables administrators to assign security to multiple screens within multiple modules simply and effectively.
On-Line Interface Monitor with Error Codes as Required	Provides rapid view of any data errors that may have occurred within the appropriate interface.

Customer List

BAE Systems, Inc. <ul style="list-style-type: none"> • Aberdeen, SD • Louisville, KY • Minneapolis, MN 	BAE Systems – Operations <ul style="list-style-type: none"> • Barrow-in-Furness, UK • Scotstoun, UK • Waterlooville, UK 	General Atomics Sorrento Electronics Inc. <ul style="list-style-type: none"> • San Diego, CA
		General Dynamics Amphibious Systems <ul style="list-style-type: none"> • Woodbridge, VA
BAE Systems – IEWS <ul style="list-style-type: none"> • Pomona, CA • Lexington, MA • Hudson, NH • Merrimack, NH • Nashua, NH • Yonkers, NY • Lansdale, PA • Ft. Worth, TX • Manassas, VA 	BAE Systems Aerospace Electronics, Inc. <ul style="list-style-type: none"> • Lansdale, PA 	General Dynamics Land Systems <ul style="list-style-type: none"> • Anniston, AL • Eynon, PA • Imperial, CA • Lima, OH • Muskegon, MI • Sterling Heights, MI • Tallahassee, FL
	BAE Systems Infrared Imaging Systems <ul style="list-style-type: none"> • Lexington, MA 	
	BAE Systems Integrated Defense Solutions <ul style="list-style-type: none"> • Mojave, CA • Austin, TX 	
	Boeing Integrated Defense Systems <ul style="list-style-type: none"> • Anaheim, CA • Huntington Beach, CA • Huntsville, AL • St. Louis, MO 	GKN Aerospace Chem-Tronics <ul style="list-style-type: none"> • El Cajon, CA • Santa Ana, CA (Astech Manufacturing) • Seattle, WA (Thermal Joining Center) • Mexicali, Mexico • Derby, UK (Kanaban Freight & Carriage)
BAE Systems – AMS <ul style="list-style-type: none"> • Broad Oak, UK • Hillend, UK 	CMC Electronics Inc. <ul style="list-style-type: none"> • Quebec, Canada 	
BAE Systems – Avionics <ul style="list-style-type: none"> • Basildon, UK • Crewe Toll, UK • Rochester, UK • Silverknowes, UK • South Gyle, UK 	DRS Test & Energy Management, Inc. <ul style="list-style-type: none"> • Huntsville, AL 	Hitachi Medical Systems America, Inc. <ul style="list-style-type: none"> • Twinsburg, OH
	EDO Electro-Ceramic Corporation <ul style="list-style-type: none"> • Sale Lake City, UT 	ITT Industries Space Systems, LLC <ul style="list-style-type: none"> • Clifton, NJ • Ft. Wayne, IN • Rochester, NY
	EDO Communications and Countermeasure Systems <ul style="list-style-type: none"> • Thousand Oaks, CA 	
BAE Systems – CNIR <ul style="list-style-type: none"> • Wayne, NJ • Greenlawn, NY 	GE Healthcare - Surgery <ul style="list-style-type: none"> • Salt Lake City, UT 	Implant Innovations Inc. (3I) <ul style="list-style-type: none"> • Palm Beach Gardens, FL
BAE Systems - Controls <ul style="list-style-type: none"> • Irving, TX 	General Atomics Aeronautical Systems Inc. <ul style="list-style-type: none"> • San Diego, CA 	Indal Technologies, Inc. <ul style="list-style-type: none"> • Mississauga, Ontario

Customer List

International Fuel Cells <ul style="list-style-type: none"> • So. Windsor, CT 	Moog, Inc. <ul style="list-style-type: none"> • East Aurora, NY 	Northrop Grumman Ryan Aeronautical Center <ul style="list-style-type: none"> • San Diego, CA
Kaiser ElectroPrecision <ul style="list-style-type: none"> • Irvine, CA 	<ul style="list-style-type: none"> • Chatsworth, CA 	Northrop Grumman Systems Corp. – Denro Systems <ul style="list-style-type: none"> • Gaithersburg, MD
Kaman Aerospace <ul style="list-style-type: none"> • Hartford, CT 	<ul style="list-style-type: none"> • Torrance, CA 	<ul style="list-style-type: none"> • San Jose, CA
L3 Communications - Link Simulation & Training <ul style="list-style-type: none"> • Dallas, TX 	<ul style="list-style-type: none"> • Salt Lake City, UT 	Orbital Sciences – Space Systems Group <ul style="list-style-type: none"> • Dulles, VA
L3 Communications - Display Systems <ul style="list-style-type: none"> • Atlanta, GA 	<ul style="list-style-type: none"> • Ashchurch-Tewkesbury, Gloucestershire, UK 	Orbital Sciences - Launch Systems Group <ul style="list-style-type: none"> • Chandler, AZ
L3 Integrated Systems <ul style="list-style-type: none"> • Waco, TX 	<ul style="list-style-type: none"> • Baugio, Philippines 	SCS International <ul style="list-style-type: none"> • Peoria, IL
L3 Communications - Power Paragon <ul style="list-style-type: none"> • Anaheim, CA 	<ul style="list-style-type: none"> • Bangalore, India 	Sechan Electronics, Inc. <ul style="list-style-type: none"> • Lititz, PA
L3 Communications – Combat Propulsion Systems <ul style="list-style-type: none"> • Muskegon, MI 	<ul style="list-style-type: none"> • Stuttgart, Germany 	Smiths Aerospace - Electronics Systems <ul style="list-style-type: none"> • Cheltenham, Gloucester, UK
Labinal - Corinth, Inc. <ul style="list-style-type: none"> • Corinth, TX 	<ul style="list-style-type: none"> • Luxembourg 	<ul style="list-style-type: none"> • Clearwater, FL
Lockheed-Martin Management & Data Systems <ul style="list-style-type: none"> • King of Prussia, PA • Litchfield Park, AZ • San Jose, CA 	<ul style="list-style-type: none"> • Cork, Ireland 	<ul style="list-style-type: none"> • Germantown, MD
	<ul style="list-style-type: none"> • Hiratsuka, Japan 	<ul style="list-style-type: none"> • Grand Rapids, MI
	Northrop Grumman Laser Systems <ul style="list-style-type: none"> • Apopka, FL 	
	Northrop Grumman Navigation Systems Division <ul style="list-style-type: none"> • Northridge, CA • Moorpark, CA • Ocean Springs, MS • Salt Lake City, UT • San Diego, CA • Woodland Hills, CA 	

Reseller Partner



acQA, Limited
 UK
 44 1572 820020
 Email: info@acqa.co.uk
 Web site: www.acqa.co.uk