

“Having QMS, LIMS, and SPC connected to our plant floor in one platform changed how we manage quality.”
Quality Manager, Global Food & Beverage Manufacturer



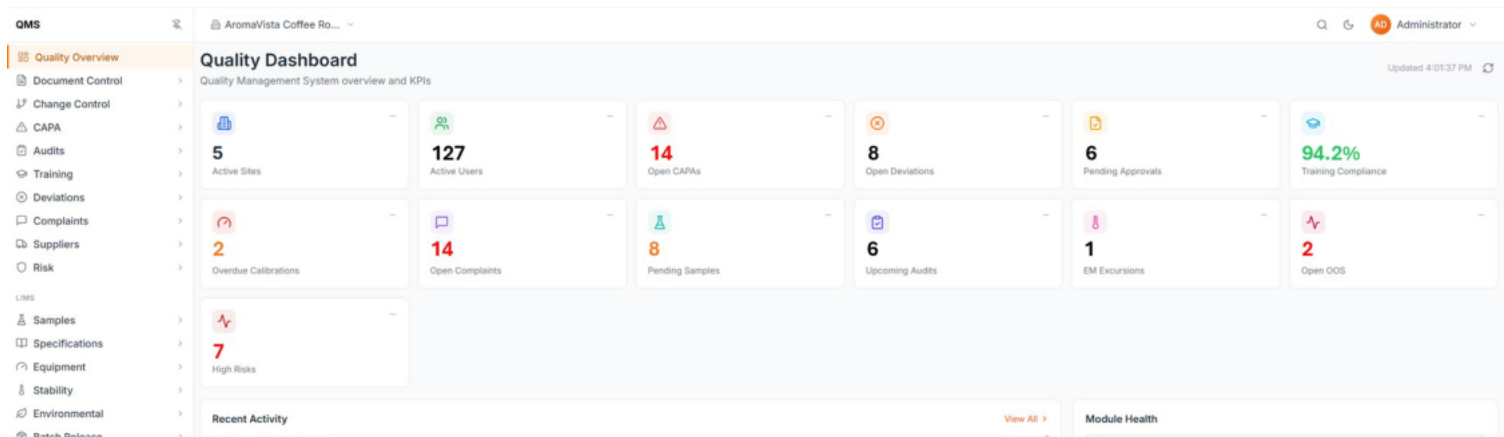
DATASHEET

Quality Management System

Regulatory Compliance & Connected Quality Excellence

Quality management in manufacturing has long been fragmented where procedure & methods in document control is in one system, CAPA tracking is on another, lab results in spreadsheets, and no connection to the shop floor where quality events actually originate. This fragmentation creates blind spots, delays investigations, and turns regulatory audits into resource-intensive exercises. The LOGICAL SYSTEMS Quality Management System (QMS) unifies standard operating procedures, document control, change management, CAPA, audit management, training, nonconformance handling, complaint management, risk management, and full Laboratory Information Management System (LIMS) capabilities into a single plant-floor-connected platform to ensure regulatory compliance.

Built on the Inductive Automation® Ignition platform, the QMS module is natively integrated with real-time OPC-UA tags, alarms, and historian data. A temperature excursion auto-creates a deviation. An equipment alarm triggers a calibration check. A batch parameter out of range initiates an OOS investigation. Unlike cloud-only solutions that sit disconnected from manufacturing operations, LOGICAL SYSTEMS QMS bridges the gap between the quality office, the production floor and the laboratory which enables turning reactive quality management into proactive, event-driven quality intelligence.



QMS operates as part of a three-module ecosystem alongside the LSA Task Management System (TMS) and LSA Statistical Process Control (SPC) modules. SPC out-of-control events auto-create QMS deviations. CAPA corrective actions become TMS tasks. Lab test results feed SPC control charts. No other platform offers this level of integrated manufacturing quality capability with unlimited licensing and no per-user fees.

Quick Actions

[Sync SPC Data](#) [Sync TMS Tasks](#) [Run Health Check](#) [View Activity Log](#)

Integration Architecture



Core Capabilities

Document Control & Change Management

- Document lifecycle: Draft → In Review → Approved → Effective → Obsolete → Archived
- Sequential/parallel approval routing with electronic signatures and distribution tracking
- Change requests with impact analysis and change order execution

Deviations & CAPA

- Deviation workflow with classification, severity grading, MRB review, and disposition
- CAPA: Open → Investigation → Root Cause → Assignment → Action Plan → Implementation → Verification → Closure
- Root cause tools: 5-Why, Ishikawa/Fishbone, Fault Tree, Pareto
- Effectiveness verification with recurrence monitoring

Audit Management

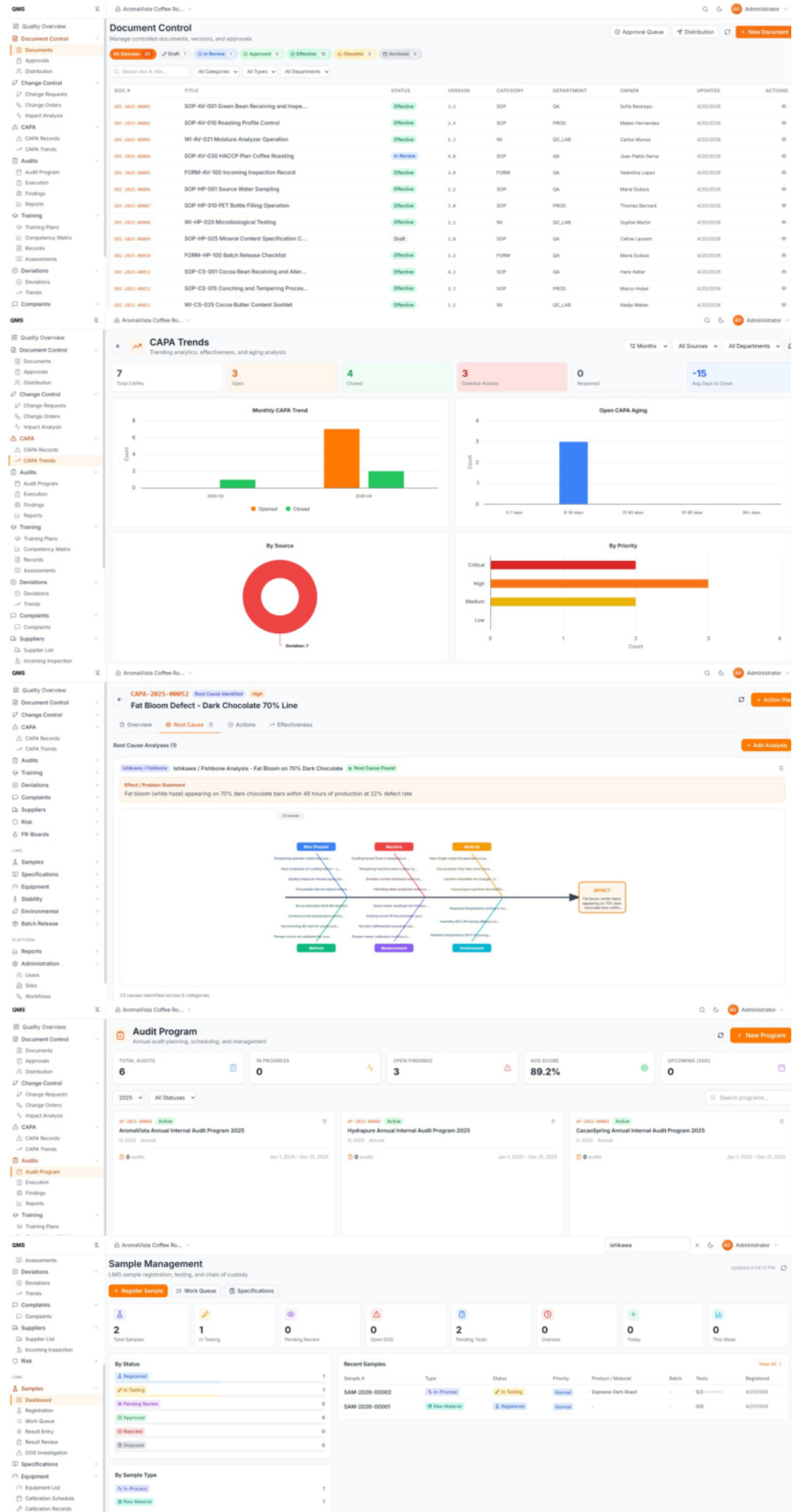
- Audit programs across ISO 9001, ISO 22000, and other configurable standards
- Configurable checklists with compliance scoring and finding classification
- Finding-to-CAPA linkage; Internal, External, Supplier, Regulatory, Customer audits

Training & Competency

- Training plans by role, department, or document (classroom, video, assessment, mentoring)
- Competency matrix: skill by person by proficiency level with certification tracking and expiry management
- Online assessments with automatic certification; auto-retraining on document revision

LIMS & Sample Testing

- Specifications with test methods, acceptance criteria (USL/LSL), and SPC integration
- OOS investigation: Phase I (lab) and Phase II (full) with retest authorization
- Equipment calibration (time, usage, or event-based) and IQ/OQ/PQ qualification



QMS

Assessments

Deviations

Complaints

Suppliers

Risk

LIMS

Samples

Dashboard

Registration

Work Queue

Result Entry

Result Review

OOS Investigation

Specifications

Equipment

Calibration Schedule

Calibration Records

Qualification

Stability

Studies

Protocols

Pull Schedule

Trending

Environmental

AromaVista Coffee Ro...

ishikawa

Administrator

30d60d90d180dEquipment

Overdue0Due ± 7 Days0Due ± 30 Days7Compliance Rate100%Completed YTD0Open Cals0

3 Overdue Calibrations3 Critical

EQ-2025-00004Agtron Color Meter SCA (QC Lab Room 101)131 days overdueCalibrate Now

EQ-2025-00003HPLC Shimadzu LC-20 (QC Lab Room 103)19 days overdueCalibrate Now

EQ-2025-00007ICP-OES Agilent 5110 (Mineral Analysis Lab)6 days overdueCalibrate Now

Upcoming Calibrations (16)

OVERDUE (3)

EQ-2025-00004CRITICALSpectrophotometerDue: Dec 31, 2025131d overdueCalibrate

EQ-2025-00003CRITICALHPLCHPLC Shimadzu LC-20Due: Apr 22, 202619d overdueCalibrate

EQ-2025-00007CRITICALSpectrometerICP-OES Agilent 5110Due: May 5, 20266d overdueCalibrate

WEEK OF MAY 10 - MAY 16 (1)

EQ-2025-00005CRITICALFillerBottling Filler Kronen 12kDue: May 15, 20264d remainingCalibrate

QMS

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Specifications

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Pull Schedule

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Locations

Schedule

Results

Excursions

Batch Release

Batch Review

Checklist

CoA Generator

CoC Generator

AromaVista Coffee Ro...

Administrator

Method LibraryNew Specification

Total Specifications16Test Parameters35Test Methods20Review Due Soon0

All Statuses16Draft0In Review0Approved0Effective16Obsolete0Archived0

Search spec #, title, product...All TypesAll Departments

SPEC #	TITLE	TYPE	STATUS	VERSION	PRODUCT / MATERIAL	TESTS	OWNER	UPDATED	ACTIONS
SPEC-2025-00001	Green Coffee Arabica Grade AA	Raw Material	Effective	1.0	Green Coffee Arabica GC-ARA-AA	3	Sofia Restrepo	4/20/2026	
SPEC-2025-00002	Roasted Coffee Medium Roast	Product	Effective	1.0	Signature Medium Roast FG-MED-250G	4	Sofia Restrepo	4/20/2026	
SPEC-2025-00003	Roasted Coffee Dark Roast	Product	Effective	1.0	Espresso Dark Roast FG-DRK-250G	2	Sofia Restrepo	4/20/2026	
SPEC-2025-00004	Kraft Packaging Bag 250g	Packaging	Effective	1.0	Kraft bag 250g PEG-KR-250	0	Sofia Restrepo	4/20/2026	
SPEC-2025-00005	Source Water Evian	Raw Material	Effective	1.0	Source Water BW-SRC-EVIAN	4	Marie Dubois	4/20/2026	
SPEC-2025-00006	Natural Mineral Water 1.5L PET	Product	Effective	1.0	Natural Mineral Water 1.5L FG-NM-1500	4	Marie Dubois	4/20/2026	
SPEC-2025-00007	PET Bottle 1.5L	Packaging	Effective	1.0	PET Preform 28g PEG-PET-15L	0	Marie Dubois	4/20/2026	
SPEC-2025-00008	Cap HDPE 28mm	Packaging	Effective	1.0	HDPE Cap 28mm PEG-CAP-28	0	Marie Dubois	4/20/2026	

Integration & Intelligence

Connecting Quality to the Plant Floor and Beyond

Cross-module integration connects quality processes with LOGICAL SYSTEMS Statistical Process Control (SPC) & Task Management System (TMS), enabling automated quality event creation from out-of-specification or out-of-control conditions and bidirectional task synchronization for CAPA actions — turning the plant floor into a real-time source of quality intelligence.

- SPC Integration – OOC events auto-trigger deviations. Spec limits sync with SPC characteristics.
- Task Management – CAPA actions push to LSA TMS. Task completion updates CAPA status.
- Automation Rules – Tag/alarm/SPC-driven automatic deviation and notification creation.
- Stability & Environmental – ICH-Compliant stability studies with chamber tag integration. Cleanroom monitoring with ISO/GMP classification and excursion management.
- Batch Release – Batch record review, sample aggregation, and CoA/CoC generation.
- Supplier Quality – Qualification workflows, supplier CAPA tracking, scorecards, incoming inspection.

Analytics & Management Review

- Management Review – ISO 9001:2015 Clause 9.3 data pack tracking Training Compliance, CAPA Closure, Deviation SLA, Audit Completion, and OOS Rate.
- Compliance – ISO 9001, ISO 22000, 21 CFR Part 11, and additional standards through configurable compliance frameworks.
- Risk Management – Risk register with 5×5 matrix, FMEA with RPN, HACCP with CCP monitoring.



Key Features and Benefits

Features

- Unified QMS + LIMS in a single Ignition module
- Document control and change control with versioning, approvals, and distribution
- CAPA with 5-Why, Fishbone, Fault Tree, Pareto root cause tools
- Audit programs with checklists and finding-to-CAPA linkage
- Training plans, competency matrix, and online assessments
- LIMS: sample lifecycle, OOS investigation, chain of custody
- Equipment calibration and IQ/OQ/PQ qualification
- Stability studies, environmental monitoring, and batch release
- Risk register, FMEA, and HACCP management
- 21 CFR Part 11 e-signatures, ALCOA+ audit trail, automation rules

Benefits

- One platform for quality management and laboratory operations - no integration gaps
- Faster non-conformance resolution through structured workflows
- Improved CAPA closure with automated escalation
- Faster audit preparation with centralized documentation
- Training compliance through auto-assignment on document revision
- Stronger supplier quality via scorecards and qualification
- Audit-ready compliance across multiple standards

Technical Requirements

System Requirements

Ignition® (8.1.+) Core Modules, Quad-core processor, 16 GB RAM, 10 GB free disk space

Supported Operating Systems

Windows Server 2019/2022/2025, Windows 10/11, macOS (X, 10.16+), Linux (Ubuntu, CentOS, RHEL)

Supported Protocols

MQTT, OPC UA / OPC DA, REST API (JSON Payloads)
Kafka (via connector), Snowflake (via pipeline, data bridge)

Supported Databases

Microsoft SQL Server, Oracle, MySQL, MariaDB, PostgreSQL, any database with JDBC driver

Supported Browsers

Chrome, Firefox, Safari, Microsoft Edge

LOGICAL SYSTEMS

QMS

Quality Intelligence for the Digital Factory.

LOGICAL SYSTEMS QMS transforms fragmented quality operations into a unified, plant-floor connected quality intelligence platform that delivers compliance, consistency, and continuous improvement.

LOGICAL SYSTEMS
AUTOMATION & INTEGRATION SERVICES

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