

Our Customers



IDM By DATARAM.AI

INSPECTION DATA MANAGEMENT SYSTEM
Distill petabytes into insights.

Dataram | Provider of High-Performance IT Infrastructure Products and Solutions

Dataram AI is a veteran-managed, U.S.-based technology company and a trusted global leader in enterprise-grade memory, storage, and networking hardware. Founded in 1967, our nearly six decades of experience position us as a reliable partner in the constantly evolving technology landscape. In recent years, to meet the growing demand from numerous OEMs that require viable solutions for mass data storage and management as manufacturing is getting smarter and AI-driven, Dataram has ventured into the world of mass data storage, security, and accessibility.

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Industry Trend: AI-assisted visual inspection is the new standard for quality control in smart manufacturing.

Strict tolerances and accelerating production schedules drive the need for automation. AI Visual Inspection delivers next - generation accuracy and automated detection, eliminating human error to maximize consistency and yields.

Global AI-vision inspection equipment market size is projected to reach approximately USD 41.7 billion by 2030 (CAGR ~13%).

Inspection expansion leads to data surge:



10+ PB/year · Billions of files
Retention for 10–15 years
(e.g., EV&battery)

Manufacturers are challenged by:

- ◆ High storage and long-term retention cost.
- ◆ Fragmented multi-equipment & multi-site data silos.
- ◆ Slow quality tracing and delayed process optimization.

Inspection Data Management System (IDM)

Dataram IDM is the engine of operational excellence, architected to empower the modern production line. We streamline the real-time inspection data capture, storage, and deep analytics by delivering **end-to-end data governance**. This enables manufacturers to immediately maximize efficiency, achieve unparalleled quality control, and secure a decisive, sustainable **competitive advantage**.

AOI, AVI, X-ray and other inspection EQP generate image, coordinate, and defect data.

IDM centralizes and governs inspection data for fast and reliable use.

QE / IT / EE use data for analysis, tracing, and optimization.



Production Line



Data Center



Business

Quality Improvement

Operational Efficiency

Compliance Ready

Lower TCO

Key Features



Data Intelligence

- ◆ High-speed quality analytics with billion-scale, sub-second search, tag filtering, and BI dashboards for fast quality insight.
- ◆ Accelerate root cause analysis via cross-site search and rapid bulk retrieval.
- ◆ AI-ready datasets deliver clean, structured data to accelerate model training, validation, and iterative development.



Data Governance

- ◆ Unified ingestion for AOI/AVI/X-ray/PL via incremental, QoS-aware, low-impact capture.
- ◆ Normalization and auto-labeling prepare inspection data for direct analytics and AI use.
- ◆ Automated hot / warm / cold tiering balances performance and cost across data lifecycles.
- ◆ CIFS/NFS/FTP/S3 connectivity delivers inspection data to MES, YMS/QMS, and AI systems for quality control and process optimization.



Data Storage

- ◆ Distributed architecture enables EB-scale linear expansion as lines, cameras, and plants grow.
- ◆ Compression and automated tape archiving reduce long-term retention cost while ensuring regulatory compliance.
- ◆ Redundancy, integrity checks, and secure access ensure reliable, audit-ready inspection data.

Key Benefits

100x

Traceability from days to hours with cross-site search

65%

Faster quality analysis via rapid search and BI insights

30%+

Reduced IT/O&M effort with automation

55%

Lower storage TCO via compression and tape archiving