

edgeGuardian

MAKE STREAMING OPERATIONAL DATA TRUSTWORTHY, STANDARDISED, CONTEXTUALISED, AND POLICY-AWARE AT THE POINT OF CAPTURE

PRODUCT OVERVIEW

EdgeGuardian is EdgeMethods' real-time trust and governance layer for streaming operational data. Sitting at the edge, it inspects every packet the moment it is created and validates that it is complete, standardised and semantically aligned. Only data that meets these checks continues its journey, ensuring that the streams feeding analytics, digital-twin and AI workloads start life as high-quality, policy-compliant assets.

Where EdgeConnect moves the data, EdgeGuardian makes that data auditable. It applies ISO 42001 Annex A.7 controls—schema and unit standardisation, metadata tagging, lineage, provenance and access policy—before the data is ever persisted or lands in the cloud. The result is streaming telemetry that reaches Azure, Databricks or Purview already labelled, traceable and AI-ready, eliminating the cost and risk of downstream remediation.

PROBLEM

Amplified Risk



Without agreed standards and semantics at the point of capture, downstream analytics, digital twins, and AI systems amplify inconsistency and risk rather than value.

Distributed Data Silos



Heterogeneous data - from analytical results to video feeds - frequently remains siloed, inconsistent, and difficult to trust or reuse.

Downstream Remediation



Relying on central data platforms to fix poor quality data increases complexity, cost, and risk within the wider data estate.

SOLUTION

How EdgeGuardian Works

1 Govern at Source:

Validates, standardises, and contextualises data at the point of capture so downstream systems are built on trusted, usable data - fulfilling ISO 42001 data-quality duties.

2 Enterprise Alignment:

Publishes governed metadata and lineage into enterprise data catalogues and governance platforms, ensuring data enters the estate already standardised, semantically aligned, and policy-aware.

3 Zero-Trust Security:

Validates data before it enters enterprise systems, reducing the attack surface, preventing policy violations at source, and supporting zero-trust principles across distributed environments.

Capabilities & Governance



Streaming Catalogue, Audit & Lineage

Captures metadata, provenance, and lineage from the point of creation to support auditability, compliance, and traceability across regulated environments. Publishes governed metadata, lineage, and classifications into enterprise catalogues and systems of record such as Asset Management, CRM, and LIMS.



Policy Enforcement

Applies practical normalisation including naming conventions, unit standardisation, timestamp alignment in-flight, and business-specific semantics. Enforces ownership, access, retention, classification, and governance rules so data is consistent, contextualised, and usable from the moment it is created.



Consent, Access & Sovereignty Controls

Defines how data can be used, where it can be stored or processed, who can access it, and under what conditions. Supports stronger data sovereignty, governance, and compliance across distributed environments.

Business Benefits

OPERATIONAL & STRATEGIC GAINS

- ✓ Enable trusted batch records & process lineage (Quality by Design).
- ✓ Accelerate deviation investigation & root-cause analysis.
- ✓ Create a trusted foundation for reliable digital twins, OEE, optimisation & AI.
- ✓ Reduce rework caused by inconsistent or unverifiable data.
- ✓ Minimise manual validation effort, downstream remediation & cost in central data platforms.

CUSTOMER & MARKET IMPACT

- ✓ End-to-end lineage from sensor to insight, strengthening evidentiary audit trails for regulated & high-value domains.
- ✓ Consistent policy enforcement across distributed & central environments.
- ✓ Faster onboarding of trusted operational data into analytics, digital twins & AI.
- ✓ Reduced regulatory risk before problematic data ever lands in the wider estate.

PLATFORM POSITIONING

Why **EdgeGuardian** comes first is simple: without agreed standards, semantics, context, and governance at the point of capture, downstream analytics, digital twins, and AI amplify inconsistency and risk rather than value.

EdgeGuardian is the trust, conformance, and governance layer of the EdgeMethods platform. It standardises, contextualises, and governs operational data at source, creating a trusted, interoperable, and compliant foundation for downstream analytics, digital twins, and AI.



edgeConnect



edgeGuardian



edgeLiberator



edgeDataTwin

EdgeGuardian validates, contextualises, and governs operational data at the point of capture, enabling a trusted, consistent, and compliant foundation for downstream analytics, digital twins, and AI.