

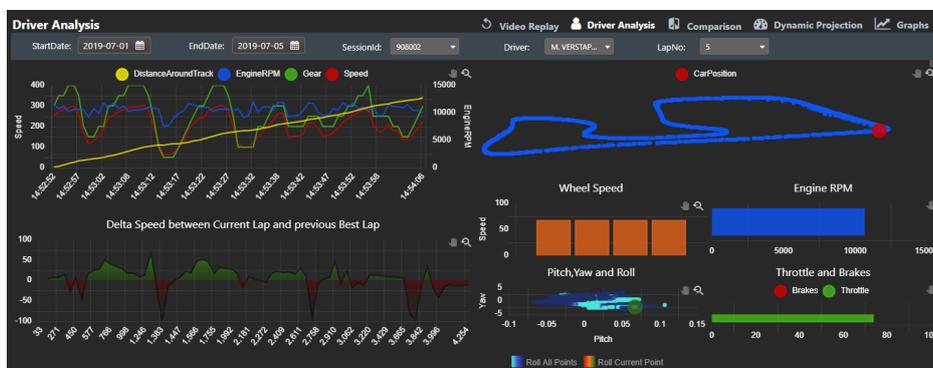
Kx Streaming Analytics

Driving innovation and disruption with real-time analytics in automotive

Data requirements in the automotive industry are particularly challenging, not only in terms of their volume and speed, but also in terms of the reliability and precision necessary to deliver both high-performance and safety. Electric vehicles, connected cars, autonomous systems, traffic services and 5G connectivity are simply adding to the deluge of data the industry must accommodate. But as well a challenge, the growing volume of data provides new opportunities for innovation and operational efficiencies in all areas from design and development to automation and in-vehicle analytics.

Kx Streaming Analytics can handle these data challenges and realize those opportunities with ease. It provides unparalleled response time to queries and analytics that enable users to perform complex engineering calculations and advanced analytics along with interactive visualizations – all in one, quick to deploy, easy-to-use platform.

To a world where lives depend on split-second results, on time, every time, Kx provides the answers.



Insights at Speed

From trackside telemetry in F1, to R&D testing and aerodynamics in wind tunnels, from autonomous cars in motion, Kx Streaming Analytics has the power and scalability to provide real-time analytics, instantaneous feedback and valuable insights into the vast amounts of data they produce.

“The Kx software stack delivers a modern data platform, one that fuses the latest industry paradigms, such as streaming, messaging and complex event processing, with the ability to handle huge amounts of time series data, all in real-time.”

**Daniel Hurst, Aero Technology
Development Team Leader,
Aston Martin Red Bull Racing**



At A Glance



Kx Streaming Analytics is a high-performance, cost-effective data platform for ingesting, processing and analyzing real-time, streaming and historical data across multiple industries – and ideally suited for the particularly high volume/velocity of data and demanding zero defect ecosystem of the automotive world

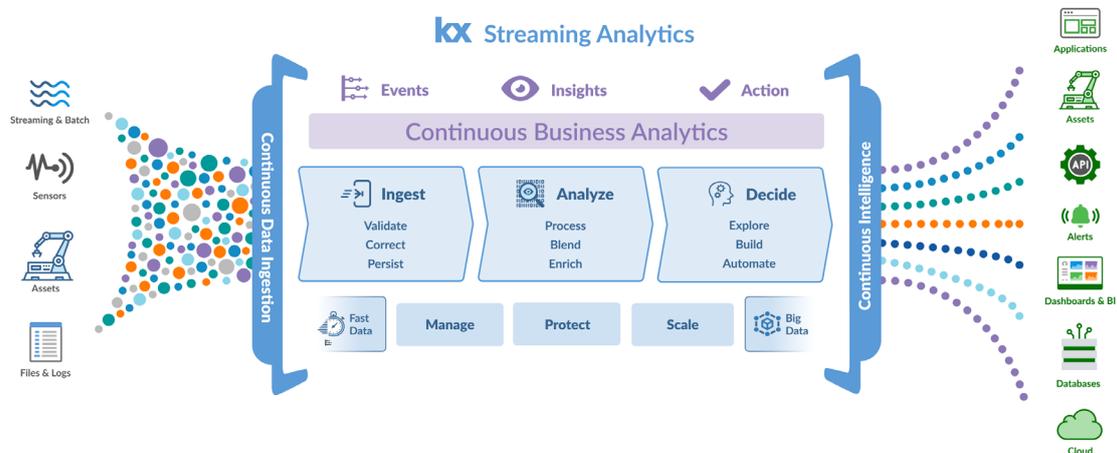
Highlights

- One platform for data processing, storage and analytics
- Augment existing systems to support massive increases in data
- Stream processing platform with in-built Complex Event Processing
- Deploy on premises, in the cloud – or at the edge
- Machine Learning integration and 3rd party support
- Rich customizable visualization through integrated dashboards
- Low TCO, quick to deploy, easy to maintain

Use cases

- Sensor data processing, analysis and management
- Fault Detection and Classification
- Telemetry
- Predictive Analytics
- Product R&D, testing and design: wind tunnel /aerodynamics

Kx Streaming Analytics



Analytics

Kx can capture, analyze and store high-frequency time-series data from thousands of sensors and support all measurement frequencies, tags and attributes to nanosecond precision in comparing with historical data and time-based aggregations.

These capabilities enable designers and engineers to increase the number of tests and changes that can be run on a vehicle or vehicle component in a given time window, in the factory or in the wind tunnel, resulting in faster time-to-market and higher quality engineering results.

The same capabilities enable manufacturers and component suppliers of connected cars to perform both centralised and in-vehicle analytics by collecting information about components, parts, use of entertainment systems and driving patterns to monitor performance, detect anomalies, predict failures, recommend maintenance and inform future product designs.

Visualization

Our out-of-the-box Dashboards product provides feature rich visualization and control tools including powerful OLAP drill-down features and query builders. Dashboards can be effortlessly customized and extended for specific testing, monitoring and research requirements. Dashboards can be shared across user groups or entitled to individual users

Interoperability

Use Kx to integrate with legacy systems and multiple data sources, enabling you to augment or replace existing historians. Transition from your current platform to the world's fastest; overcome legacy latency, volume and velocity issues with the sheer power of Kx.

About Kx

Kx is a division of FD, a global technology provider with 20 years of experience working with some of the world's largest finance, technology, automotive, manufacturing and energy institutions. Kx Streaming Analytics, built on the kdb+ time-series database, is an industry leading high-performance, in-memory computing, streaming analytics and operational intelligence platform. It delivers the best possible performance and flexibility for high-volume, data-intensive analytics and applications across multiple industries. The Group operates from 14 offices across Europe, North America and Asia Pacific, including its headquarters in Newry, and employs more than 2,500 people worldwide.

Machine Learning Integration

Kx Streaming Analytics provides out-of-the-box interfaces to popular machine learning tools such as TensorFlow, Theano and Keras as well as Kx tools like embedPy that enable continued use of existing libraries written in Python.

This interoperability enables it to instantly analyze data from wind tunnels, trackside, roadside and satellite to assess performance, identify faults, predict potential failures, plan maintenance to improve design, optimize performance and reduce cost.



Run Anywhere Deployment

Kx consolidates data capture, storage, processing and visualization into a single, integrated streaming analytics platform. The components are delivered in a single download and installation procedure. Its small footprint means the same software can be installed on premises, in the Cloud or at the Edge where it can be integrated into any continuous-integration workflow and deliver Complex Event Processing (CEP) at sub-millisecond latencies.

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