



it's about time

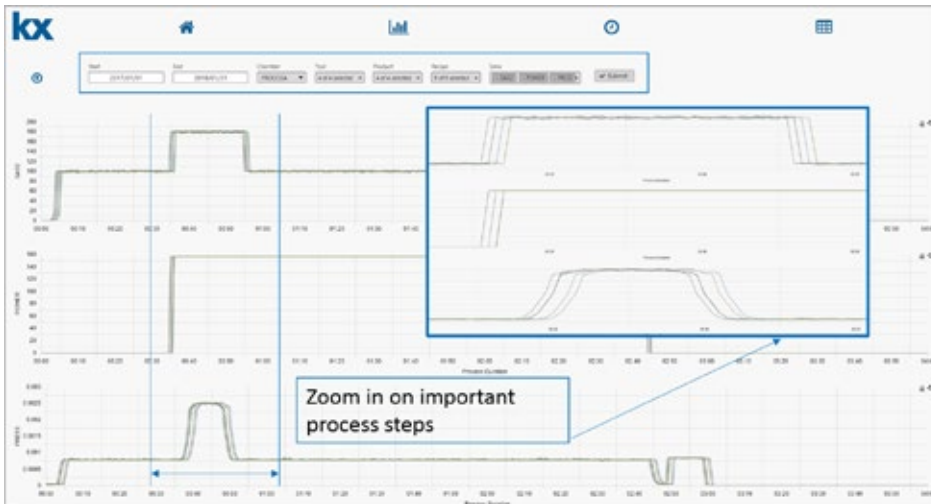


Kx for Sensors

Advanced Sensor Data Management & Analytics

The Internet of Things and sensors (such as weather, smart meters, SCADA, manufacturing equipment, mobile devices) generate massive amounts of data, and present significant challenges for organizations to collect, process, analyze, store, and most importantly act on this information.

In one platform, Kx for Sensors can simultaneously ingest, validate, transform, process and analyze massive amounts of streaming and historical data from sensors, with unparalleled performance in the industry. Kx for Sensors enables organizations to use data from sensors to make decisions faster and improve customer experience, operations, lower costs, and generate revenue.



Rich real-time analysis of this data presents significant opportunities for optimizing business operations, customer engagement, and offering new services and products.



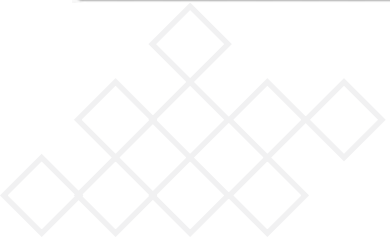
At a Glance



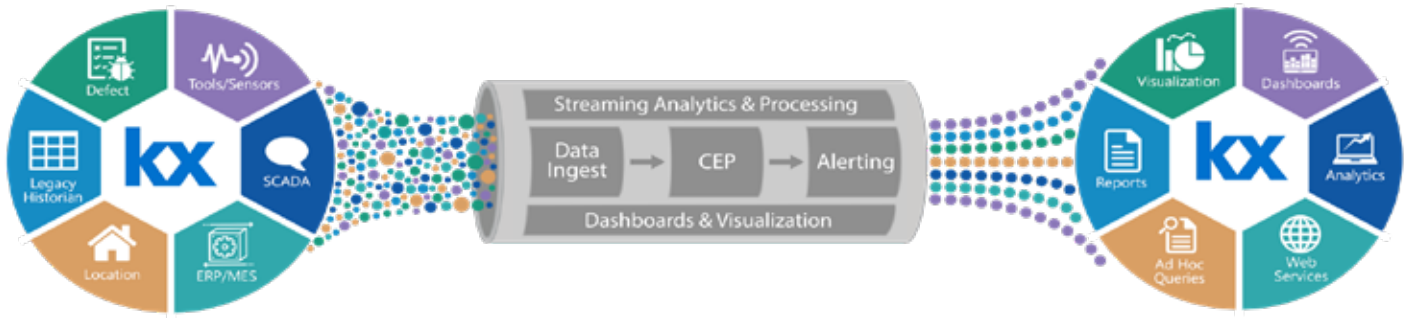
Kx for Sensors is a platform for analyzing and accessing fast moving and large volumes of time series and related data. Enable and radically speed up your real-time, streaming and historical data processing and analytics.

The Kx Advantage

- One integrated platform for sensor analytics and data management
- Analyzes sensor data 10s to 100s of times more quickly than alternatives for competitive advantage and lower TCO
- Ingests, validates, estimates, filters and cleanses streaming, real-time and batch data
- Supports any sensor measurement, frequency, tags and attributes with nanosecond precision
- Scales to support millions of sensors, and trillions of records
- Calculations, aggregations, alerting and reporting
- Provides real-time actionable insights for improved customer experience and business operations
- Enterprise features, multi-tenancy, security, auditing, logging, on-line archive, and compression
- Deploy on premises or in the cloud



Big & fast data from any source
Ingest, process & publish
Send to any output in real time with Kx



Ingest and Store

- Ingest & validate (check)
- Estimate, correct, edit, transform & derive
- Store, update & version
- Any sensor data & derivatives (calculated)
- Reference & other data
- Millions of sensors
- 30+ million readings per second per CPU

Process and Analyze

- Calculations, aggregations, queries on the fly
- Streaming & historical data
- Rich joins, analytics & functions
- Use for real-time control
- Machine learning platform
- Terabytes to petabytes
- 30+ GB/s per node

Retrieve and Publish

- Reports & visualizations
- Queries & retrievals
- Alert, notify & control
- Ad-hoc & scheduled
- Export to files & systems
- Low latency ~µs & ms response

Manage System and Data

- Scale horizontally & vertically
- On premises & cloud
- Compression & tiering
- On-line archive
- Extensible with rich APIs
- Logging & auditability
- High availability, resiliency & disaster recovery

kdb+

- World's fastest time-series database
- Vertical and horizontal scalability
- Columnar & fully relational
- Complex joins & analytics
- Low latency, time-series data
- Cloud, on-premises, or edge
- Array-oriented functional and scripting language

Data Integration

- API bindings for C, C++, C#, Java, GO, and Scala
- Machine learning library support
- In-process Python integration
- ODBC / JDBC drivers
- Sockets, WebSockets, SOAP
- Adapters including OPC UA, Kafka, Spark

Customer Use Cases

- Analytics tool for Smart Meter Data
- OEM Engine & historian for SCADA, OMS, DMS, DER
- Surveillance & Monitoring
- Meter Data Management SaaS
- Fault detection
- Trace data/machine learning for predictive yield control

Customer Benefits

- Improved performance 10x to 500x
- Less infrastructure 90% less
- Lower operating costs
- Improved scalability
- Reduced time to market
- Results in minutes vs hours and days

About Kx

Kx has been the software leader for complex analytics on massive-scale streaming data for over two decades. The Kx technology is an established and trusted standard for trading, surveillance and research in financial services. Kx has emerged as the elegant, integrated solution to the analytic needs of the Pharma, Retail, Telecommunications, Utilities and High Tech Manufacturing industries scaling effortlessly to the data challenges of the Internet of Things.

Kx is a division of First Derivatives plc. Listed on the London Stock Exchange [FDP:LN] First Derivatives is a specialist software and consulting organization with a uninterrupted track record of customer success and profitable growth since it was listed in 2002.

Kx in Action

Visualize and Explore Data

- Dashboards for Kx
- Analyst for Kx

Control, Deploy & Monitor

- Control for Kx
- Stream for Kx
- Kx for Monitoring

Industry Solutions

- Finance
- Manufacturing
- Industrial IoT
- Semiconductors
- Telco
- Utilities



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