



# Customizable Algo/ Risk Management Platform

## THE KX ADVANTAGE

- Create your own tailored pricing to optimize profitability as opposed to simply aggregating liquidity from others
- Programmatically manage risk using highly configurable hedging rules by book based on a variety of factors
- High performance processing platform for developing, testing and executing bespoke algorithmic pricing and trading strategies
- Market replay facility to back-test and calibrate algorithms vs. historical and simulated data
- Connectivity to major data vendors, liquidity sources and trading applications
- Single Integrated software stack for quicker, easier implementation and lower TCO

Based on a proven, scalable Complex Event Processing (CEP) architecture, the KX Algo Platform provides the performance and flexibility to research, engineer, test and deploy a wide range of proprietary pricing and trading strategies while managing the associated risk in real-time. Risk can be organized into multiple books, each with their own positions and hedging rules. You can create books and configure routing rules in real-time while strategies may be tested and refined using a built-in simulator before being released to production.

**Unified Solution** - Each instance provides a complete suite of risk management functionality, including data capture and management, book construction, pricing, strategy development, order routing and execution management, and back-testing. Out-of-the-box dashboards provide feature-rich visualization and control tools which can be customized and extended for specific trading, monitoring and research requirements. Can be used seamlessly with KX Flow and FX Analytics or independently with 3rd party eFX trading technology.

**Performance** - KX Algo harnesses the power of the market-leading kdb+ database technology and connectivity to deliver unrivalled productivity and performance. A simplified yet optimised architecture designed for high velocity e-trading, market making and intelligent hedging.

**Pricing** - Risk Based Market Making – create your own bespoke pricing benefitting from automated intelligent aggregation, filtering, event gap and spike protection while applying tailored mark-ups and pricing skews based on data insights acting in real time.

**Position Management** - a real-time overview of positions by asset/currency, including unrealized and realized P/L. Flexible hedging rules can apply to an individual trade or an overall position using order types such as TWAP, Iceberg and Peg Orders for smarter hedging, reduced execution risk and increased profitability.

**Market Simulation** - A market simulation framework offers the ability to test and monitor the performance and market impact of strategies. Thousands of strategy parameters can be tested in parallel and distributions modelled using the power of kdb+

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# KX ALGO

## **INTUITIVE AND USER-FRIENDLY SETUP**

KX Algo is an intuitive platform that enables quick setup for multiple books or portfolios and is easy to design and maintain. The UI provides simple, rules-based, configuration parameters to enable you to allocate risk to books with flexible and customizable hedging rules available on a book by book based on a variety of factors. The system provides a real-time view of risk taking and hedging trades, with supporting performance analytics.

## **ORDER MANAGEMENT AND RISK CONTROL**

Allows strategies to query order state or define event handlers for execution interface replies. Limits engine provides P&L and pre-order limit checks. Publishes derived events that reflect the current order status, amount filled, aggregated position and P&L for each strategy instance /instrument combination. Smart Order Routing (SOR) algorithms can be easily defined. Configurable trading engine interface for order entry and market data which is fully integrated with the order management process.

## **STRATEGY CONTROLLER**

IDE for profiling and debugging, enabling rapid strategy development and optimization. Development and testing framework significantly reduces the time-to-market. Generic method of defining strategy parameter names and data types with the capability to define event handlers for market data events and special strategy control events. Strategy Controller allows full GUI control of strategies. Alerts module includes email and visual alerting based on system health.

## **BACKTESTING**

Market data replay of millions of records per second from disk, allowing users to test strategy performance across many variables and parameters. Transparent real-time view of all order status and backtest progress. All data is persisted for ex-post analysis of market data and performance / latency metrics. Backtesting and exchange simulator modules enable rapid development and strategy optimization.

## **CONNECTIVITY**

Can include connectivity to over 60 Bank and non-Bank liquidity providers and leading market data vendors. Connectivity can be provided to the primary and secondary liquidity venues, ECN's, multi dealer platforms and direct market access brokers. Additional feed handlers can quickly and easily be developed using any of the available API's or via a dedicated connectivity development team.