Algorithmica Qfix

What is the Algorithmica Qfix?

Algorithmica QFIX Solution is a modular and low-latency RFQ trading platform designed for electronic fixed income markets. The solution combines advanced components for real-time pricing, smart routing, yield curve construction, risk assessment, and post-trade analytics. Built on open standards and proprietary technology, QFIX enables seamless integration, high performance, and full transparency supporting faster and smarter trading decisions from quote to execution.

The Shifting Fixed Income Paradigm

Electronic trading has moved from the margins to the mainstream, rapidly becoming the new standard in fixed income markets. Key trends underscoring this shift include:

• Pervasive Electronification

A significant and growing portion of trading across diverse fixed income segments (government bonds, corporate bonds, emerging market debt) is now electronic.

• Rise of Automation & Algorithmic Trading

Algorithmic execution for trade optimization and efficiency is increasingly prevalent.

• Data Analytics & Al as Core Tools

Advanced analytics and AI are becoming indispensable for price discovery, liquidity forecasting, risk management, and trade execution.

· Interoperability Imperative

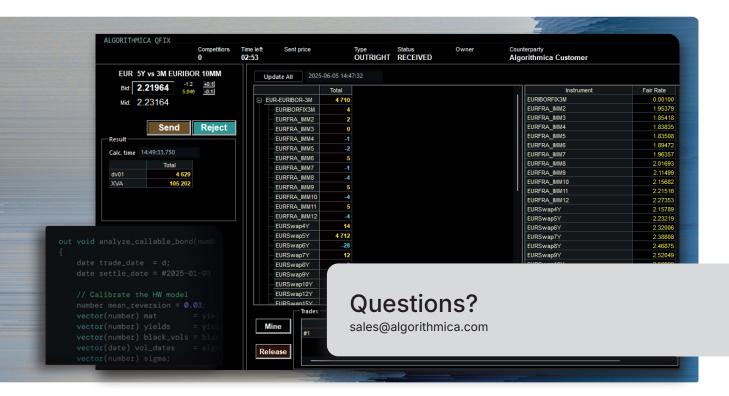
Enhanced connectivity and protocol standardization (e.g., FIX) are crucial for seamless system integration (trading platforms, OMS).

• Innovation in Trading Protocols

New models like all-to-all trading and portfolio trading are reshaping market structure.

Enhanced Liquidity Access & Transparency

Electronic platforms are improving liquidity, especially in less liquid market segments, and bolstering transparency, aiding regulatory compliance (e.g., MiFID II).





Algorithmica's advanced modular RFQ Trading Platform

• RFQ Gateway & Router

FIX 5.0/5.0 SP2 compliant, utilizing FPML 5.13 for comprehensive product definitions, tiered routing based on client segmentation, low-latency transport with a roadmap for FIXP binary encoding to achieve <100µs message round-trips and planned WebSocket delivery for lightweight frontend API integration.

- Market Data & Yield Curve Engine
 Real-time, multi-currency OIS/IRS/basis curve
 construction using robust methodologies
 (bootstrapping, monotone cubic spline
 interpolation) and fallback logic, flexible data
 streaming via REST, IQC, and an optional FIXP
 high-performance feed and support for all standard
 industry conventions and multi-curve frameworks.
- Asynchronous Risk Engine
 Subscribes to trade messages (from Qfix) and curve updates via internal REST APIs and message queues, in-memory Directed Acyclic Graph (DAG) engine (C++/Qlang) where nodes represent risk metrics, allowing for millisecond rescoring across VaR, ES, CVA through precomputed graphs, supports historical simulation, parametric VaR, custom stress scenarios, and counterparty exposure calculations, pre-trade risk limit checking and capital charge add-ons computed and asynchronous execution ensures no blocking of critical trader workflows.
- Data Lake & Analytics Layer
 Database agnostic storage architecture supporting any ODBC-compatible RDBMS, comprehensive post-trade analytics capabilities including P&L attribution, transaction Cost Analysis (TCA), margin impact modeling, and missed-opportunity analysis, data exposure via REST/GraphQL APIs for seamless integration with Jupyter notebooks, BI dashboards, and machine learning pipelines.

What makes Qfix unique?

- In-Memory DAG Risk Engine
 A pre-aggregated dependency graph enabling sub-millisecond risk updates.
- FPML 5.13 Compliance
 Ensuring the richest product coverage aligned with the latest ISDA definitions.
- Database agnostic
 Providing plug-and-play compatibility with diverse enterprise RDBMS systems.
- ML-Ready Platform
 Designed with seamless data pipelines to support advanced quantitative research and machine learning initiatives.

Benefits of Qfix



Reduced Time-to-market (~30%)

Modular microservices and open APIs will accelerate deployment and integration compared to monolithic alternatives.



Revenue uplift (~5-15%)

Low-latency quoting and dynamic clientspecific skews are projected to directly increase trading revenue.



Operational resilience

Asynchronous risk processing and robust failover mechanisms will minimize downtime, operational risk and lower support costs.



Cost-efficiency (~20-40%)

The database agnostic ODBC layer and strategic use of open-source components will minimize licensing costs.



Future proofing (+5 years)

Advanced features such as WebSocket delivery, FIXP support, and ML-ready data pipelines will ensure long-term platform viability with minimal refactoring.

Questions?

sales@algorithmica.com

Headquarters

Algorithmica Research AB Drottninggatan 25, 4tr SE-111 51 Stockholm Sweden

