

CryptoCortex Introduction





Industry Leading Trading Technologies

“We bring knowledge and decades of experience in building, deploying and supporting institutional-grade intelligent trading systems to you in one top of the market trading platform.”

Delivering value for both
sell-side and buy-side clients

Core Components

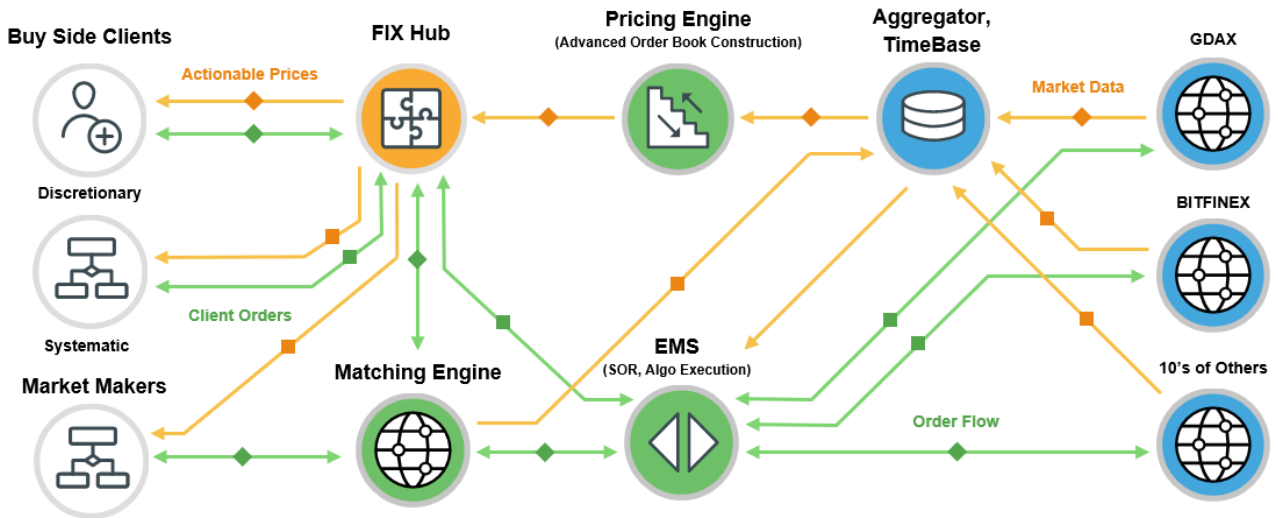
- Exchanges
- Broker/Dealers
- Dark Pools
- Market Makers and Arbitrageurs
- Over-The-Counter Desks
- Systematic Trading Firms
- Algo Execution

- Market Data Aggregator
- TimeBase
- FIX Hub
- Execution Server
- SOR and Algo Execution Engines
- Risk Management System
- Exchange Simulators
- Reporting System





Complete Eco-System for Secondary Markets

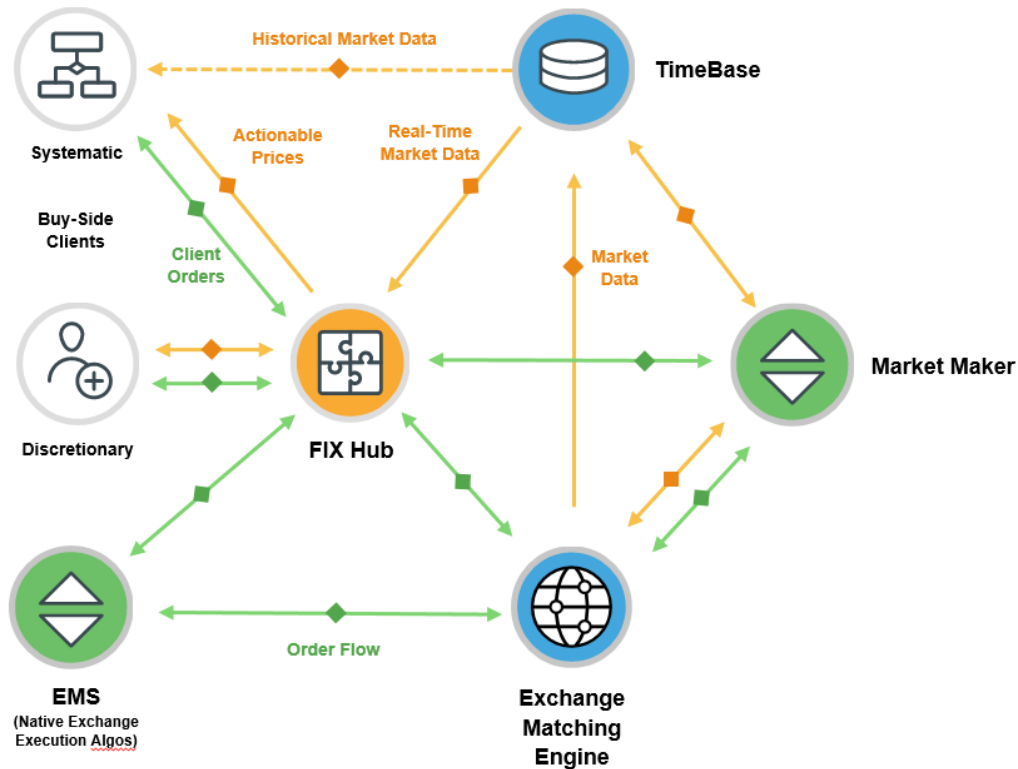


Technology Pack for Broker/Dealers

- Creation and streaming of consolidated order book from multiple exchanges
- Flexible Pricing Engine with ability to define custom price levels
- Advanced execution management system (EMS)
- Smart Order Routing (SOR)
- Custom Algo Execution
- Ability to develop, back-test and optimize custom SOR and execution algorithms
- Post-trade Transaction Cost Analysis (TCA) system
- Flexible pre-trade risk management
- Flexible CRM system with advanced account configuration and management
- Integration with crypto wallet management systems
- Intuitive Web interface with desktop, tablet and mobile resolution support

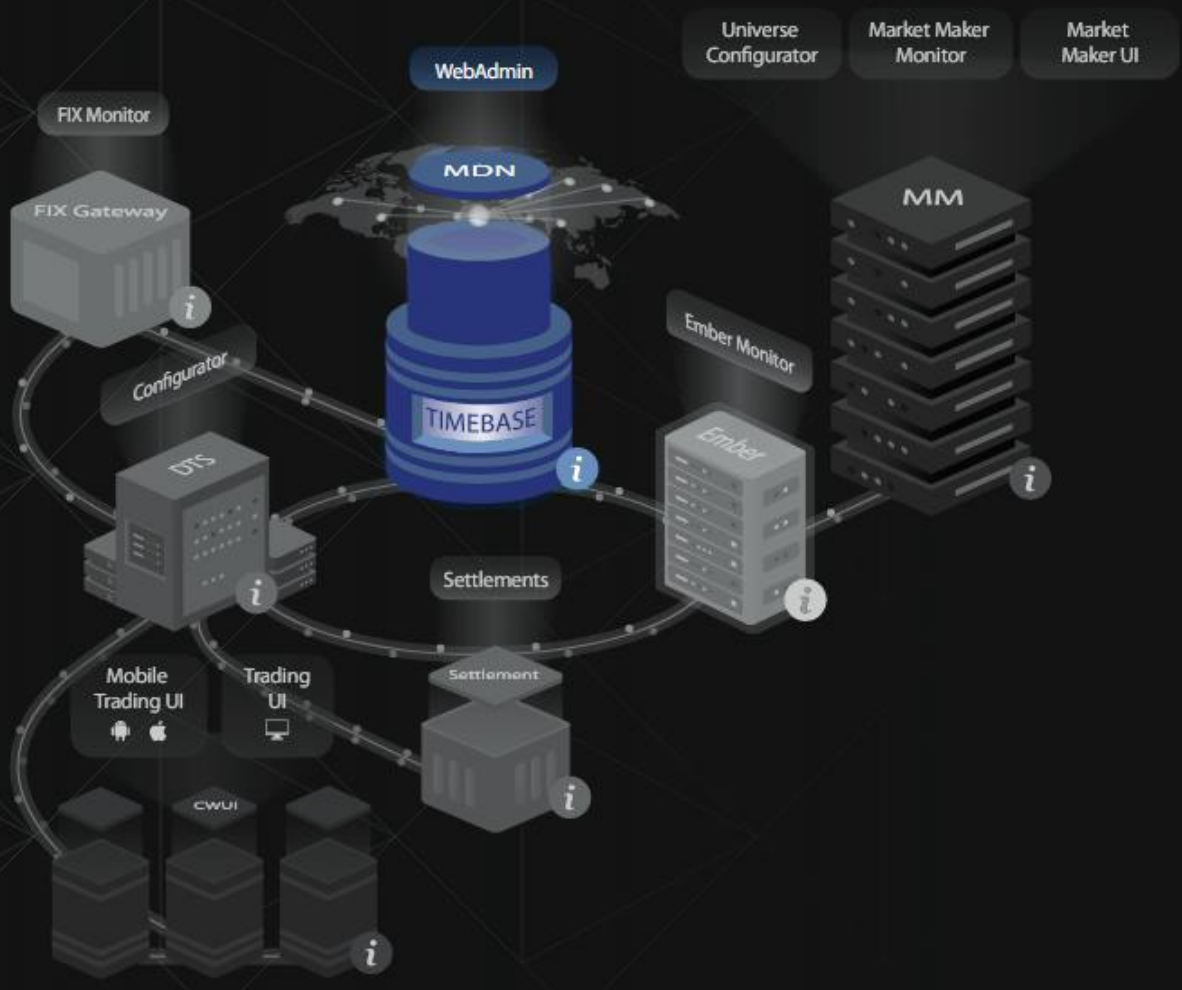


CryptoCortex Solution for Exchanges



Technology Pack for Exchanges

- Institutional-grade interfaces for streaming market data and receiving order flow
- Interfaces for advanced High Frequency Traders (HFT) and Market Makers
- Enterprise-grade time series data warehouse
- Ultra-low latency matching engine
- Custom order types
- Fully functional exchange simulator and UAT environment for trade simulation
- **Intuitive Web interface with desktop, tablet and mobile clients support**
- **Integration with external settlement systems**
- Audit and risk management



TimeBase | Introduction





Powering Real-Time Aggregation and Streaming of Market, News, Sensory and any other Time-Series Data

TimeBase is a high-performance secure enterprise-grade time-series data warehouse with messaging middleware and real-time data streaming capabilities.



“Current TimeBase is the result of 15 years of experience. TimeBase has been designed to be a time-series database with functionality to aggregate, store, monitor, visualize and stream any type of time-series and not only time-series data.”

TimeBase supplies data to other system components, which makes it a key technology in our system architecture.





High Throughput and Extremely Low Latencies: with our technology you can easily process millions of messages per second on low-end desktop hardware, which can satisfy even the most demanding monitoring and IoT products. Sub-microsecond latencies and extreme read throughput ensure you get and stream all data that you need with no delays.



Large Storage Capacity: TimeBase is designed to store tens of terabytes of data.



Flexibility of Data: TimeBase can store different types of data in a single stream of data.



Live Data Distribution: readers and writer can work at the same time to facilitate live data distribution.



Easy Onboarding: TimeBase is designed to be easy to install, deploy, and use on any hardware, from enterprise servers to personal laptops.



Unmatched Downscaling: unique design allows TimeBase to function, when necessary, on (relatively) low-end hardware with minimal consumption of RAM, while maintaining reasonable level of performance.



Short Learning Curve: take advantage of heterogeneous platform support and use tools appropriate for your environment (.NET, Java, Python, MATLAB, etc.). Built-in native object binding allows for a short learning curve and dynamic code generation without losing performance. Access the required data quick and easy with SQL-Like query language.



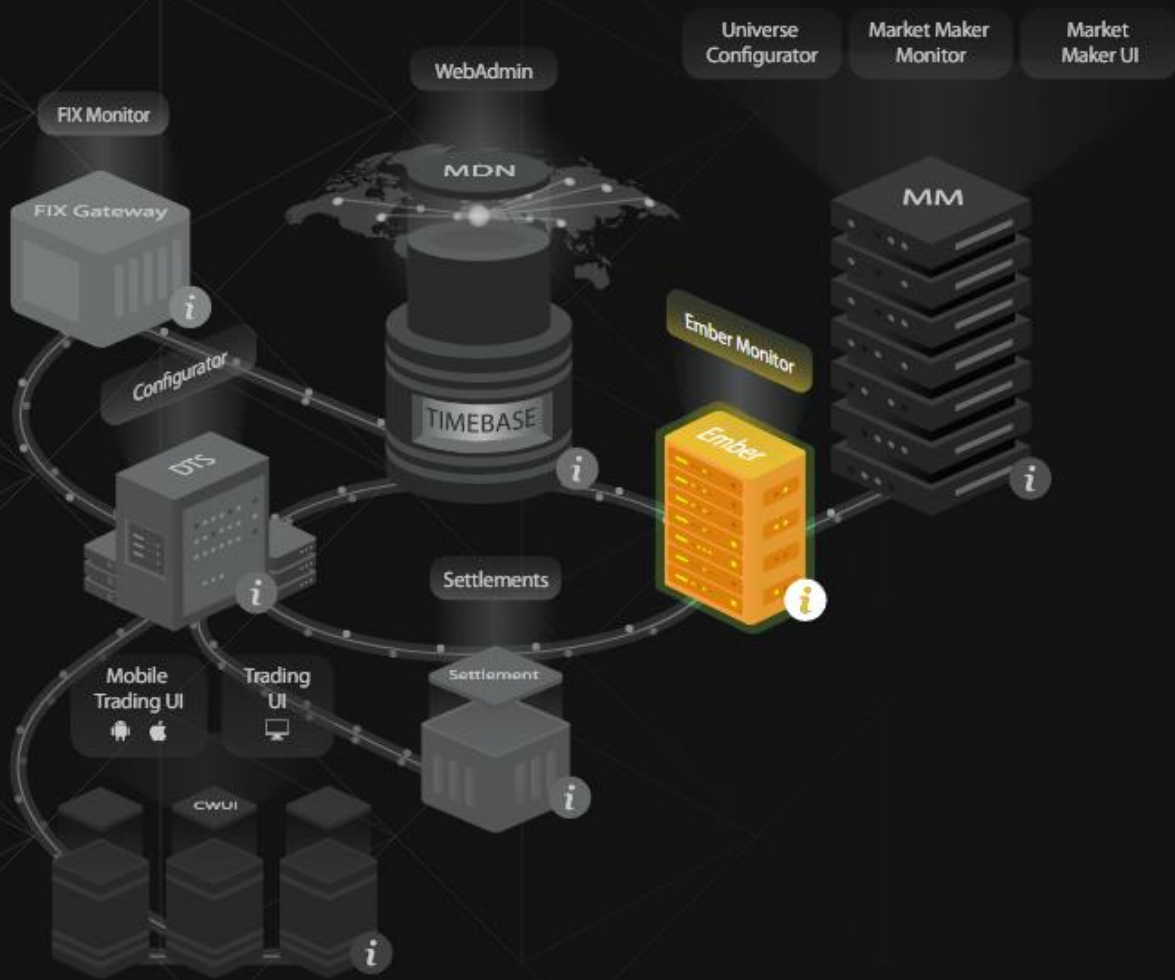
100+ Data Connectors: years of experience working with various market data vendors allow us to integrate with dozens of providers out of the box, and efficiently generate connections to others. User can start collecting data in minutes after the software is installed.



Seamless Integration: Timebase provides API for Java, C++, C#, and Python programming languages as well as REST/ Web Socket API.



Data Streaming and Messaging Middleware: TimeBase is not only a database system, but it is also a messaging middleware with real-time data streaming capabilities at the same time.



Execution Server Introduction





Industry Leading Trading Technologies

“Leverage years of expertise and unlock potential of complex mathematics applied to big data sets to gain actionable insights and perform “intelligent trading” and advanced quantitative research.”

Execution Server is advanced data stream processing framework and a platform for ultra-low latency real-time event and transaction state management.

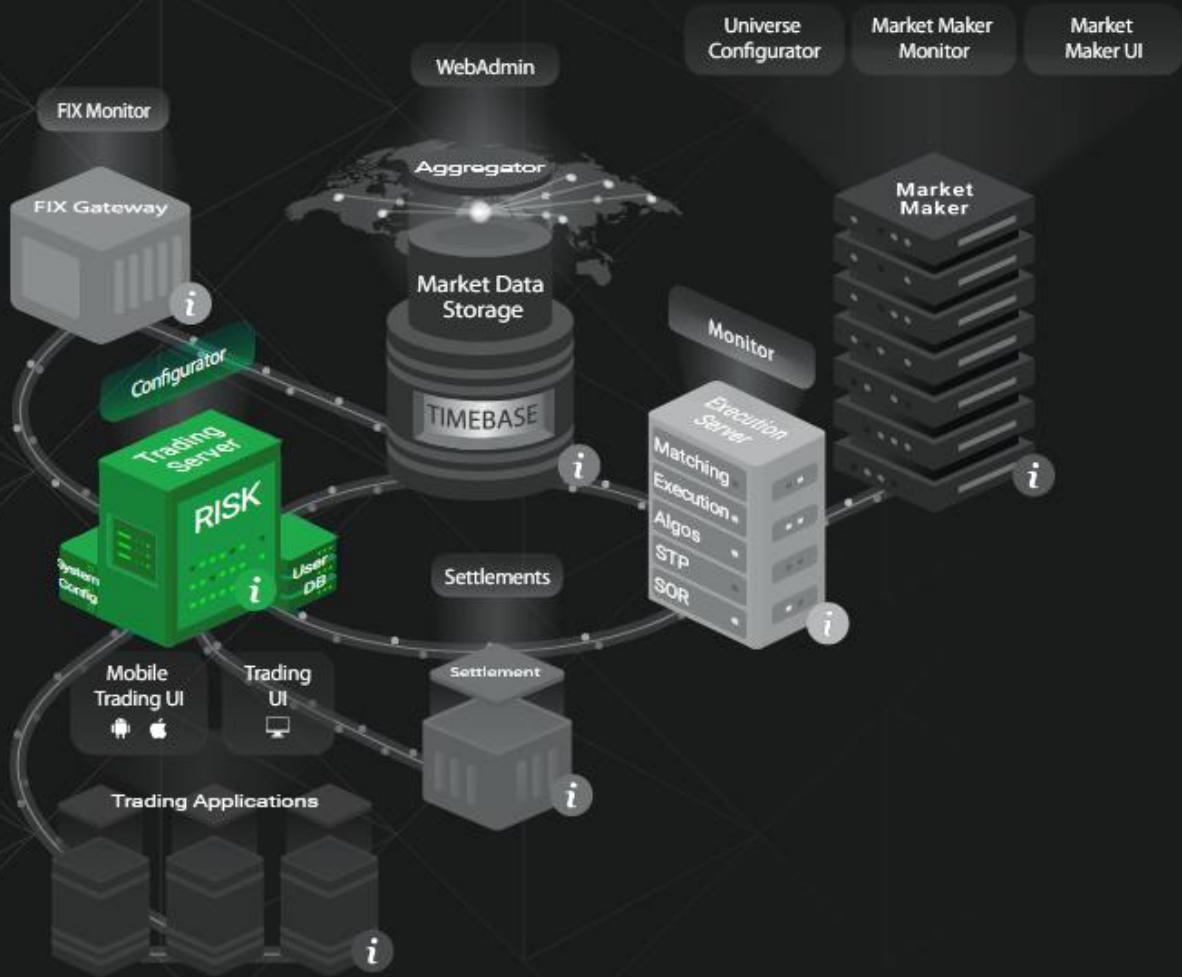


Key Functionality

- Platform for algo orders execution
- Matching Engine
- Trading gateway
- Risk monitoring system
- Software platform for Market Making solutions
- Ultra-low latency order management system
- Exchange Simulator
- Smart Order Routing
- And more

Execution Server Core Advantages

- Ultra-Low Latency and High Throughput
- Low Memory Consumption
- Low Onboarding Cost
- High-Load Performance
- Out-of-the-box industry standard execution algorithms
- Proprietary Matching Engines
- Built-in Trade Simulator
- Transaction Cost Analysis module
- Flexible risk management
- Flexible data warehousing options
- Intuitive Web GUI
- Security standards compliance
- Rich and well-documented API/SKD



Trading Server | Introduction





Industry Leading Trading Technologies

Trading Server - is distributed, big, fast and reliable trader's management system with flexible permissions model and multi-tenant support.



Open: Trading Server is open for integration and automation via proprietary REST API/WS. System has been designed with flexibility in mind and offers vast opportunities for customization.



Distributed: Trading Server can operate as master-master-cluster



Big: Trading Server can store up to 10M traders and never forget trader data



Fast: fast trader settings cache allows up to 10K orders/sec throughput and 1ms order execution latency



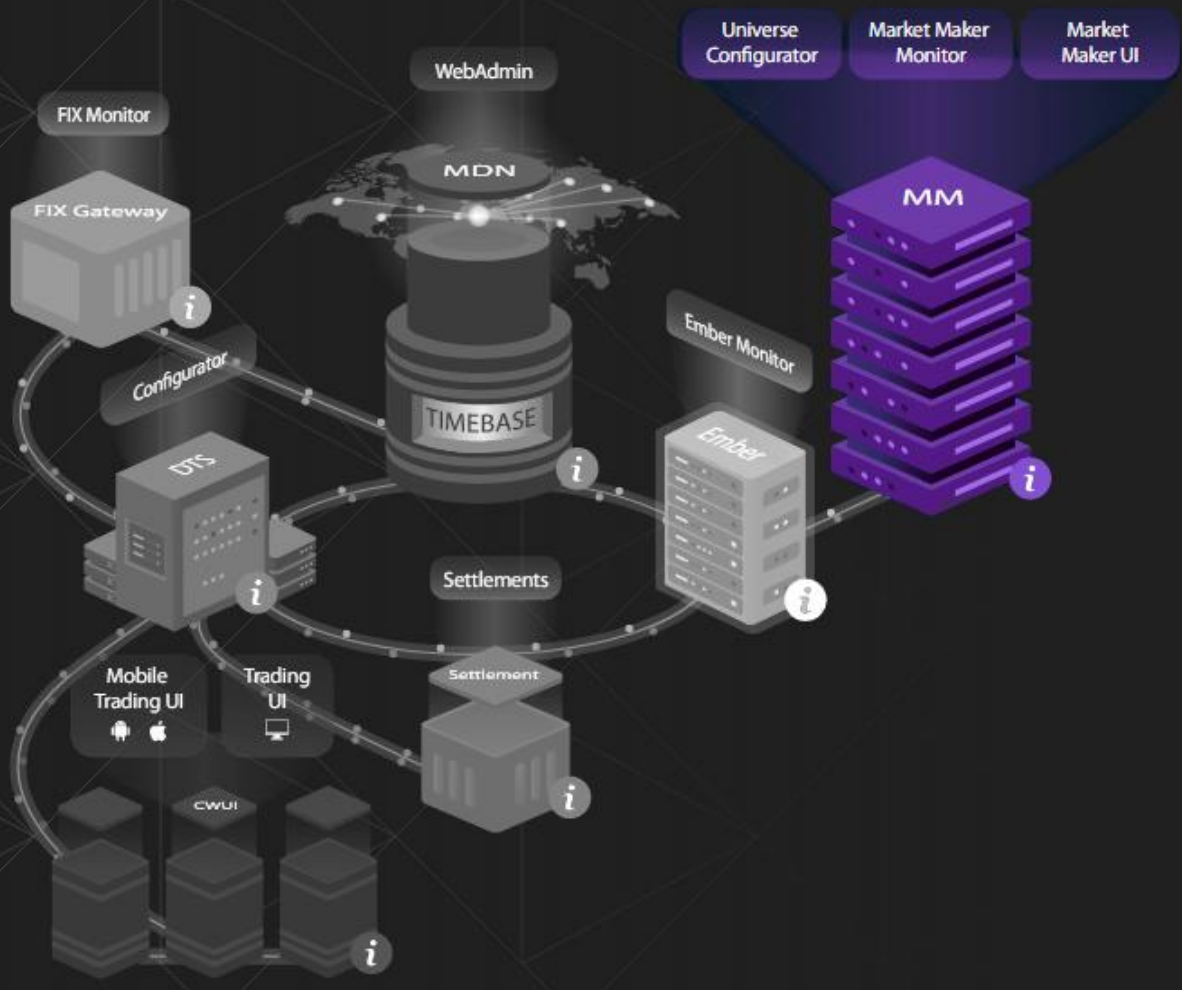
Reliable: fail-over cluster ensures high availability of applications and services and minimize downtime



Traders Management System: Trading Server offers a user-friendly, customizable and powerful GUI to manage trader settings, permissions and roles, custom data feeds, numerous and custom trade instruments, risk management, reports and more



Permissions Model: Trading Server allows creating a custom hierarchical organization with flexible permissions model to meet specific business model requirements



Market Maker Introduction





Advanced Technologies for Market Makers and Arbitrageurs

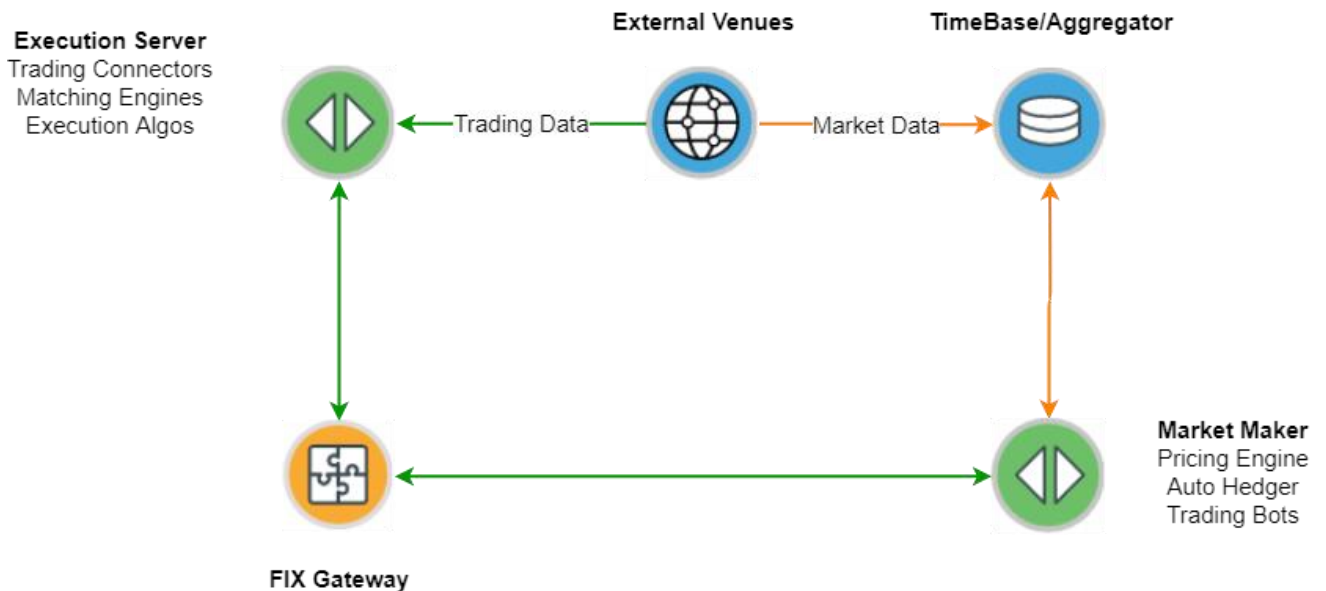
“We bring knowledge and decades of experience in building, deploying and supporting institutional-grade intelligent trading systems to you in one top of the market solution for market makers and arbitrageurs.”

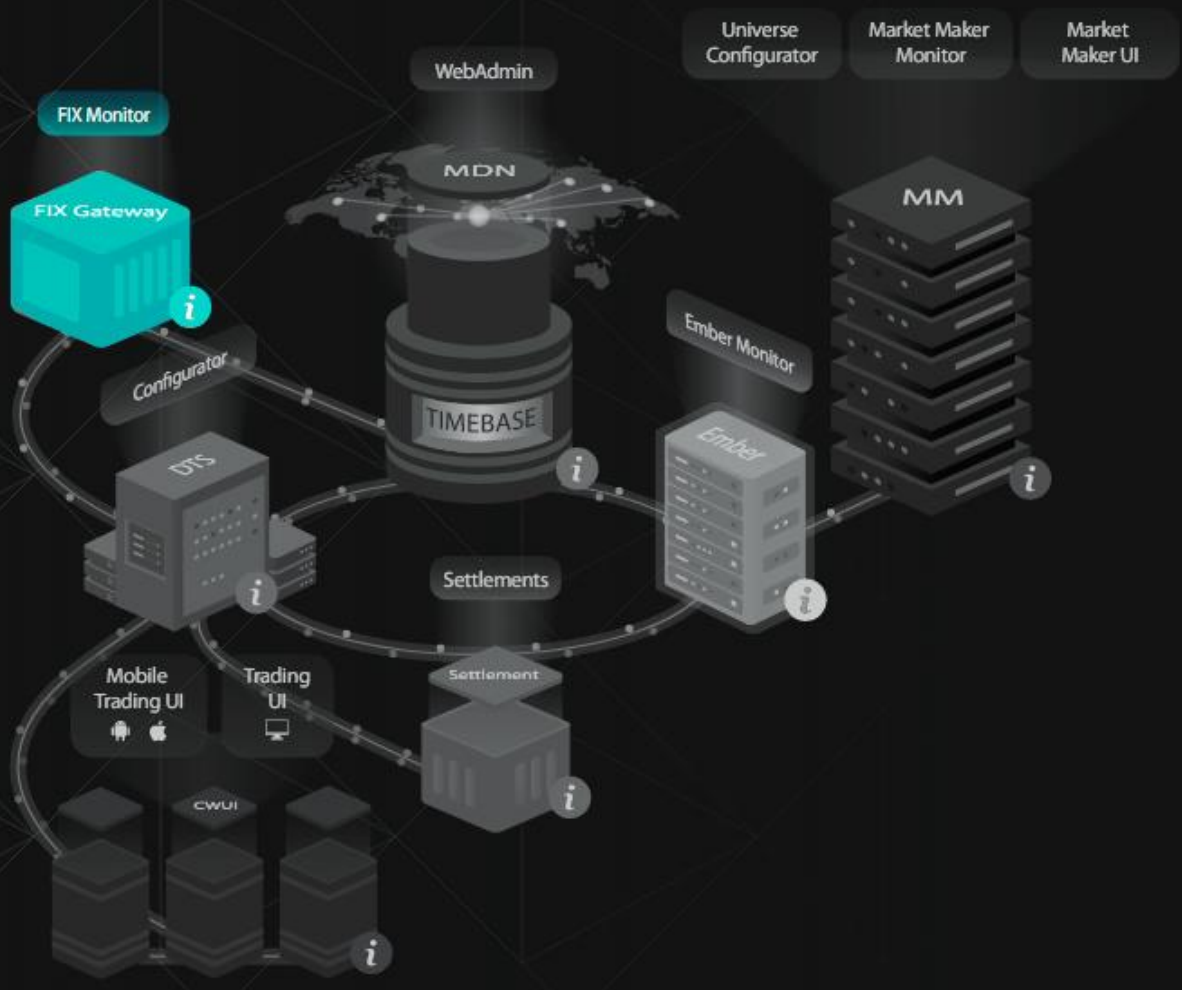


“Leverage years of expertise and unlock potential of complex mathematics applied to big data sets to gain actionable insights and perform “intelligent trading” and advanced quantitative research.”

Market Maker Core Components

- Trade crypto pairs on a dozen exchanges and liquidity pools that generate real trade volume
- Run market making and/or price arbitrage, including simple linear and triangular cases
- Enjoy simple Web front-end for configuring, running, and monitoring your trading bots
- Unlock new pricing capabilities with flexible pricing engine to control your price quotes
- Set up custom risk limits at trading bot level, currency/asset level, and at system level
- Take advantage of highly customizable hedging logic configurator to fit your needs
- Receive/View trading alerts via email
- Get actionable insights with real-time monitoring of trading statistics including day trading volume, open market volume and P&L
- Get instant access to Trade Reports and Wallet Balance Monitor
- Unlock power of seamless integration and automation of trading bots and risk rules with rich REST/WSAPI
- Perform market screening and create/run trading bots on-the-fly
- Extremely short time to market for running your personal application instance in Amazon AWS private cloud





CryptoCortex FIX | Introduction





Industry Leading Trading Technologies

“Leverage years of expertise and unlock potential of complex mathematics applied to big data sets to gain actionable insights and perform “intelligent trading” and advanced quantitative research.”

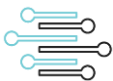
CryptoCortex FIX technology allows sending and receiving trading and market data to/from various system components using proprietary dialect of industry-standard FIX Protocol.



High Performance: process millions of FIX messages per second



User-Friendly Web GUI: use our intuitive Web application for real-time FIX sessions monitoring and management



FIX Protocol: we have developed a custom dialect of the industry-standard FIX Protocol to send/receive orders to/from Trading Server, Execution Server and/or Market Maker



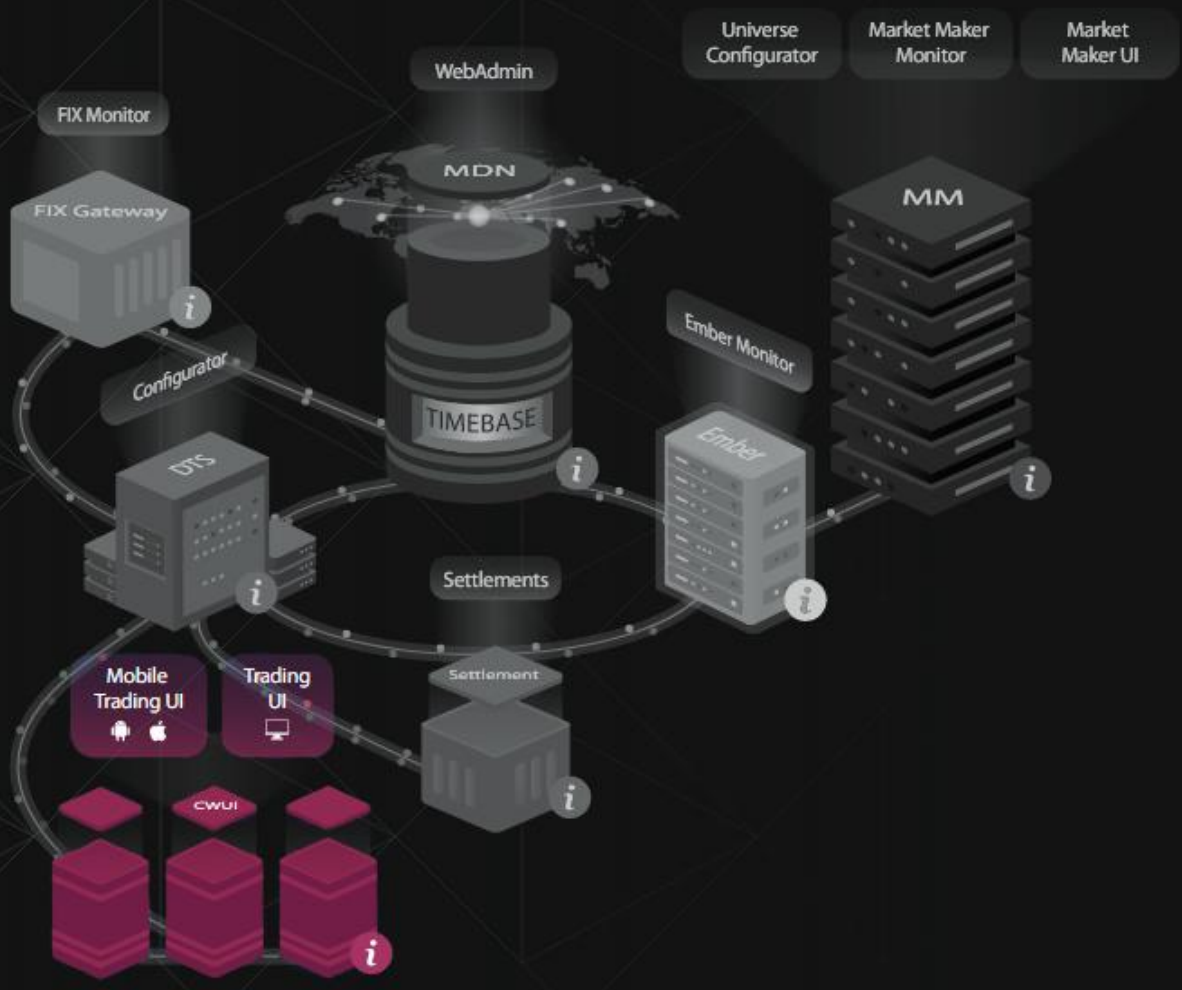
FIX Gateway: with our in-house FIX gateway you can process order entries and broadcast market data using FIX Protocol



Full FIX Engine: receives data from the FIX Gateway and supplies to the Trading Server via the proprietary FIX Protocol



Flexible Configuration: system is designed to allow custom configurations of FIX Gateways, Trading FIX Sessions and Trading FIX Sessions Users to meet specific business requirements



CryptoCortex Trading Application | Introduction





Industry Leading Trading Technologies

Trading Application for individual traders designed with the leading industry technologies and trader needs in mind



White Label: keep your unique touch and feel



Customizable: get a unique user experience with rich front and back-end customization options available even on a trader level



Use Across All Devices: unlock full-scale trading experience on all your devices



Advanced Trading Experience: support of all popular asset types, multiple types of orders, algo trading, Smart Order Routing, custom order types, trading widgets and more



Charts and Analytics: out-of-the box various dynamic price charts and industry-standard indicators



Multiple Trade Reports: real-time analytics and reports at your fingertips with multiple exporting options



Safety: multi-factor authentication, custom hierarchical security and trading settings, KYC, withdrawal protection



Wallet Management: make withdrawals and deposits in a few clicks. Out-of-the-box integrations with external custody services.



Trading and Market Data: 100+ market and trading data connections, liquid order book, various aggregation options



Seamless Integration and Automation: rich and well documented REST/WS API for rapid programmatic access and automation

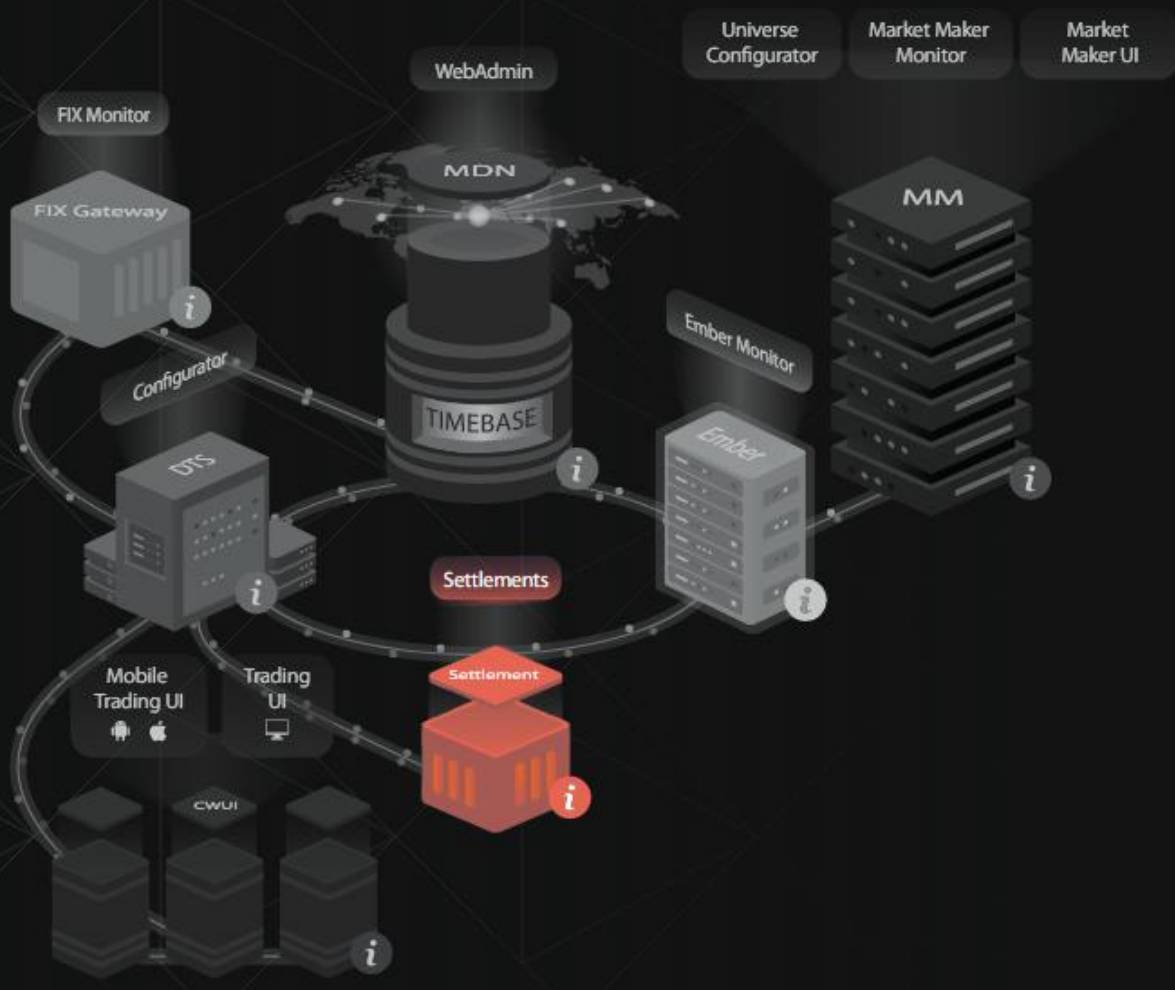


CryptoCortex Trading Application Mobile UI

“CryptoCortex is an institutional-grade trading platform. With our highly optimized mobile applications for Android and iOS Devices, traders can utilize all of the essential features on-the-go.”

- View Crypto Prices and Charts
- Place Market/Limit/Stop/SOR Orders
- View Transaction History
- Check Account Balances
- Initiate Withdrawals & Deposits
- And more!





CryptoCortex Settlements Introduction





Industry Leading Trading Technologies

Settlements Solution for Over-The-Counter (OTC) Trading Model.

CryptoCortex Settlements application allows creating and managing trade settlements.

Key Features

- Easy access to all accounts, settings and balances per organization
- Real-time monitoring of all trade deals
- Create manual trade settlements in a few clicks
- Create and manage automated settlements
- Manage pending settlements
- Create and manage notifications
- Intuitive Web interface

The screenshot displays the CryptoCortex Settlements application interface. The top section shows 'Details' for a settlement with ID 1713, including client information, start/end times, and transaction time. Below this is a 'Settlement Balances' table with columns for Account, Balance, and Status. The bottom section is a 'Transactions' table with columns for ID, Type, Ref ID, Date, Side, Size, Buy/Sell, Amount, Currency, Settlement ID, and Status. The interface is dark-themed and includes navigation tabs at the top.