

Exegy Nexus™ Market Data Platform

The next generation of ultra-low-latency market data platform—built for speed, efficiency, and scale.

THE CHALLENGE

Market Data Under Pressure

Rising market data volumes and volatility are straining legacy infrastructure. Firms face escalating power, space, and operational costs—while chasing ever-lower latency across more venues.

Traditional, server-heavy architectures can't scale efficiently:

- » Software-only feed handlers consume excessive CPU and rack space, while introducing jitter and latency inconsistency.
- » Current FPGA-enabled market data solutions provide determinism, but struggle to scale since firms require end-to-end latency and existing solutions still burden downstream applications with the data volume load.
- » Maintaining separate tech stacks across different latency profiles or trading workflows increases operational complexity and total cost of ownership.

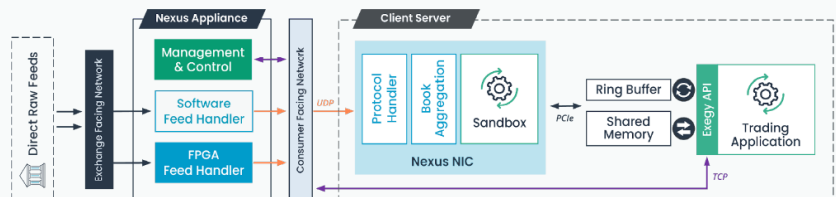
THE SOLUTION

Exegy Nexus™ Market Data Platform

Exegy Nexus is a fully managed market data platform that combines a high-performance processing appliance with an innovative Smart NIC to solve both processing and throughput challenges.

A Unified Architecture

Nexus consolidates fragmented market data stacks into a single solution that serves every desk—from ULL market making to agency brokerage and time-series capture



Nexus Feed Handler Appliance

- ✓ Software or FPGA feed handler
- ✓ 1U or 2U AMD-based managed server
- ✓ Data normalization, A/B arbitration
- ✓ Live order management & book building

Nexus Smart NIC

- ✓ FPGA-based connector
- ✓ Order book aggregation & data distribution to memory
- ✓ Innovative low latency PCIe stack
- ✓ FPGA execution with optional logic sandbox

The Exegy Nexus™ Advantage: Beyond Normalization

Most market data solutions stop at normalization, leaving your trading teams to struggle with a “firehose” of data that burdens downstream CPUs. Exegy Nexus goes further. By combining FPGA processing with a dedicated low-latency PCIe NIC, Nexus delivers normalized data directly into application memory. This holistic approach solves both the processing and throughput challenges, freeing your developers to focus on execution rather than infrastructure maintenance.

Why Exegy Nexus™ is Different



Direct-to-Memory Delivery: Minimizes downstream CPU load by pushing data directly into application memory via the Nexus NIC.



Consolidated Stack: Replace fragmented infrastructure with a single platform that serves multiple use cases—from ULL trading to compliance and time-series capture.



Deterministic Performance: End-to-end FPGA and Layer 1 architecture ensures jitter-free, consistent latency even during peak market volatility.



Customizable Logic: Includes an optional FPGA “sandbox” for proprietary market-making strategies, arbitrage logic, or risk modules.

Performance Highlights

Metric	Value / Benefit
Latency	<2.0 μ s (UBBO-triggered trade), <270 ns (raw signal-triggered)
CPU Utilization	1 active polling thread for event notifications
Server Footprint	22% – 40% reduction in rack space
Annual Savings	22% – 31% depending on deployment
Operational Efficiency	Up to 3x reduction in operations staffing requirements
Reliability	Dual FPGA/Software redundancy with CTA/UTP support

High-Level Use Cases

- **Buy-Side:** Ultra-Low Latency Execution Integrate raw and normalized feeds from all major U.S. exchanges (Nasdaq, NYSE, Cboe, MEMX, MIAx, IEX) into a deterministic FPGA data path. Use the custom sandbox for basket calculations and proprietary alpha.
- **Sell-Side:** Efficient Infrastructure Offload Consolidate software feed handlers into a high-density managed appliance to free up significant power and cooling (up to 180 kW in modeled deployments). Supports full FPGA Smart Order Routing (SOR) and embedded risk checks.

Fast Facts

- **Scalability:** Supports software and hardware implementation for greater reliability.
- **High Density:** 1U-2U AMD-based servers supporting up to 8 FPGA processing cards.
- **Connectivity:** Embedded Layer 1 switching with 8 QSFP ingress and 16 QSFP-DD egress ports.
- **Managed Service:** 24/7 monitoring, updates, and performance assurance by Exegy experts.
- **Hybrid Flexibility:** Start with software handlers and upgrade to FPGA performance when required.

