AXELLIO

Solution Sheet

# Financial Market Regulatory Analytics with FX-MicroCloud

## High Velocity, High Volume, Real-time Complex Analytics

### Solution: FX-MicroCloud, packet capture, and streaming analytics

Data-In-Motion processing promises to unlock a wealth of information, enabling organizations to react to what's happening in the moment, rather than the "rear-view mirror" approach of batch processing. Streaming Analytics can fundamentally change how organizations approach risk management, regularity compliance, client service, fraud detection, and other new solutions created every day from this data. Turning these data-streams into actionable information can be an expensive option for traditional enterprise computing approaches. To transform this data into value, a new approach with radically more performance and compute density is required.

### FX-MicroCloud for Streaming Network Packet Capture

In today's rapidly changing world of market reporting requirements, the need to have end-to-end visibility has never been greater. Complying with regulations, such as MiFID II, dramatically increase the amount of data that must be captured, preserved, and analyzed in real-time. However, in addition to regulatory compliance there is enormous value to the organization in being able to triage latency issues to ensure that trades are executed properly.

FX-MicroCloud packet capture and analysis solution integrates advanced FPGA accelerated network interfaces, and PTP timing cards with the latest x86 architecture and next generation NVMe on PCIe Fabric solid state storage (SSD). By leveraging the FabricXpress® platform's NVME/PCIe architecture, the result is a powerful multi-use solution offering, simultaneous packet capture and persistence, network analytics, alerting, and the ability to run real-time reporting even during the heaviest of traffic periods. With almost 500TB of dual-ported high-speed NVMe SSDs, the capture solution can support multiple 40Gbps or 100Gbps interfaces with internal data rates of up to 60 Gigabytes per second (full duplexed.) The FabricXpress platform combines the latest advances in NVMe solid-state storage technology and FPGA accelerated network capture and timing cards to form a solution designed for the most demanding environments.

### FX-MicroCloud for Streaming Real-time Analytics

Streaming analytics enables financial organizations to extract immense value from data-in-motion in ways that traditional approaches cannot satisfy. Streaming analytics allows companies to do event processing against massive volumes of data streaming into the enterprise at high velocity. Data streams can contain immense value for the organization but the challenge of handling such large amounts of real-time I/O has meant that traditional IT infrastructures have been required to compromise by separating ingest and analytic operations (increasing costs for hardware and software). The FabricXpress platform enables higher volumes of data to be processed with a fraction of the hardware required from traditional compute approaches, empowers complex analytics on massive-scale streaming data, and delivers a flexible environment for turning this data into valuable assets for financial institutions.

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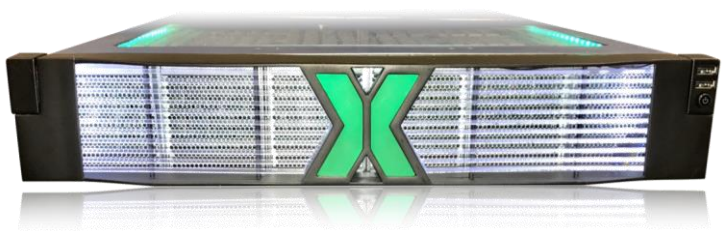
## Flexible, Reliable, Scalable

Streaming analytics enable financial organizations to react in ways and timeframes that were not possible just a few years ago. Traditional compute approaches have made these solutions increasingly more expensive and difficult to maintain, driving up the Total Cost of Ownership. Tightly coupling industry leading solutions, gives financial organizations a powerful, flexible, and scalable solution that reduces cost/risk and unlocks the true power for analytics on streaming data.



# Technical Specifications

| | | | | |
|---|---|---|---|---|
| **Configuration Options** | Each system includes two server modules, specifications listed are per appliance | | | |
| **Compute**** | CPU: 4 x Intel E5-2620v4<br>32 cores/64 threads @ 2.1GHz | CPU: 4 x Intel E5-2650v4<br>48 cores/96 threads @ 2.2GHz | CPU: 4 x Intel E5-2667v4<br>32 cores/64 threads @ 3.2GHz | CPU: 4 x Intel E5-2699v4<br>88 cores/176 threads @ 2.2GHz |
| **Memory** | 32GB to 2TB RAM | | | |
| **Network Connections** | 4x10 GbE or 4x40 GbE or 4x100 GbE | | | |
| **Storage Capability** | 1– 6 FlashPacs<br>Each FlashPac holds up to 12 Dual Ported NVMe SSDs (800, 1600, 3200 or 6400 GB)*<br>Total capacity: 9.6TB – 460TB*<br>I/O performance capacity: Over 60GB/s transfer rate, 12M+IOPS, fully populated<br>Storage Capability, share between server modules | | | |
| **Form Factor** | 2U (H 3.5" x W 17.25" x L 36.5") | | | |
| **System Cooling** | 7x60mm dual stage counter rotating heavy duty fans with PWM fan speed controls | | | |
| **Power Supplies** | 80 PLUS TITANIUM Grade Dual Redundant Power Supplies<br>@100-120v: Dual 1100W Out @100-120V, 15A + Dual 1000W Out @100-120V, 10.5-12.5A, 50-60Hz<br>@230-240v: Dual 1500W Out @230-240V, 11A, + Dual 2000W Out @230-240V, 9.8-10.0A,50-60Hz | | | |

* Increased capacity supported as higher capacity SSDs become available
** Shown are example CPU configurations. FabricXpress supports the full line of the Intel® XEON® processor E5-26xx V4 family

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