JABIL

Reducing Latency with the **AMD Solarflare™** X4 Ethernet Adapters in Jabil Servers

A High-Speed, Low-Latency Networking Solution for Fintech and Financial Trading

> For financial traders and fintech innovators, speed directly impacts revenue, risk, and customer experience.

Financial services infrastructure increasingly resembles high-performance computing environments. Trading platforms must ingest massive volumes of market data, process transactions in real time, and scale horizontally without introducing unpredictable latency.

For many fintech organizations, maximizing returns from faster CPUs and accelerators requires an equally advanced network — Jabil's high-throughput servers combined with AMD Solarflare Ethernet adapter ensure that networking performance scales in step with compute, eliminating bottlenecks and sustaining low-latency gains. Conventional Ethernet adapters that rely on the Linux kernel networking stack can introduce interrupt processing, packet copies, and scheduling delays that create latency; especially during market data bursts. These factors can manifest as latency jitter and inefficient scaling across nodes which cannot be tolerated in latency sensitive trading applications.

Solving for Speed

Jabil addresses this challenge by integrating the AMD Solarflare X4 low-latency Ethernet Adapters into Jabil-engineered server platforms optimized for high I/O bandwidth and deterministic performance. This solution delivers sub-microsecond port-to-port latency and reduced tail latency compared to the Solarflare X2 Ethernet Adapters in Jabil validated environments.*

For fintech and financial trading customers, the results are clear: measurably faster application response and improved tail latency behavior, and greater confidence in meeting strict SLA and regulatory requirements.*

The Power of the Jabil Server Platform with AMD Solarflare X4 Ethernet Adapters

The AMD Solarflare X4 Ethernet Adapter is purpose-built for environments where microseconds matter. It combines an ultra-low-latency hardware fast path with on-chip acceleration to reduce host CPU involvement in packet processing. Support for Smart Data Cache Injection (SDCI) and kernel bypass technology via OpenOnload, along with user-space networking frameworks, allows applications to avoid the unpredictability of most traditional kernel networking stacks.**

The AMD Solarflare X4 is a half-height, half-length PCIe® Gen5 x8 card supporting up to 100 GbE line rates, all while consuming under 25 W — making it well suited for dense, performance-optimized server deployments.*

By combining Jabil's system-level server optimization with the AMD Solarflare X4's low-latency networking technology, customers achieve more deterministic communication, lower tail latency, and consistent performance under load compared to the Solarflare X2.* This holistic approach ensures that networking performance scales in step with compute and doesn't become a bottleneck.

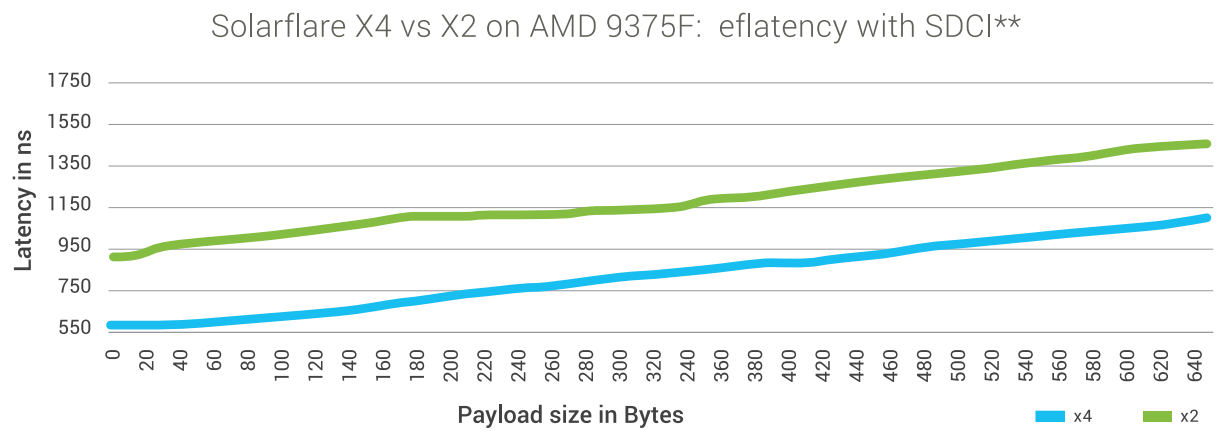
Jabil brings manufacturing scale, platform customization, and accelerated time-to-market, while the AMD Solarflare X4 Ethernet Adapter — part of the AMD networking portfolio — brings proven leadership in ultra-low-latency Ethernet performance. Jabil provides the optimization, validation, and support needed to reduce deployment risk and enable predictable performance for mission-critical financial workloads, powered by AMD Solarflare X4 technology.

* Performance results are based on internal Jabil validation testing using specific hardware, software and configuration parameters, including those specified on page 5. Performance may vary by user environment, network conditions, workload, and configuration.

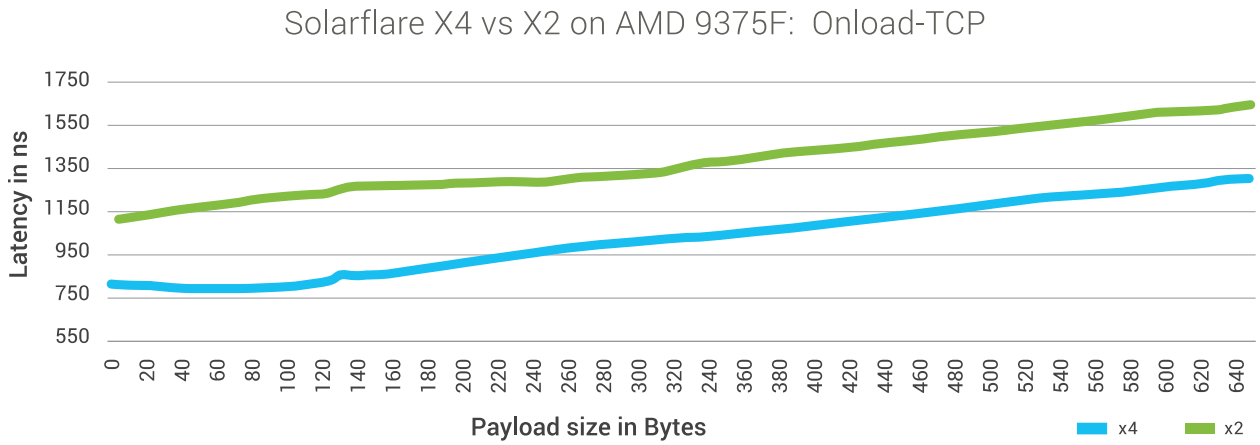
** SDCI is supported only on AMD EPYC™ 9005 series processors.

Performance Highlights

In Jabil validation tests using OpenOnload and port-to-port latency measurements, the Solarflare X4 Ethernet Adapter demonstrated over 30% lower latency compared to the Solarflare X2 Ethernet Adapters.*



The AMD Solarflare X4 Ethernet Adapter also sustains **high packet rates under extreme concurrency** in most circumstances, absorbing microbursts common in market data feeds while maintaining predictable latency. Determinism is critical for real-time trading applications where consistency matters as much as absolute speed— enabling measurably **faster order execution** and **reduced exposure to market volatility.***



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Servers Built for Performance

Jabil's portfolio of predefined and customizable server platforms is designed for low-latency, high-throughput workloads. Our server design philosophy emphasizes balanced I/O bandwidth, minimizing contention and ensuring that networking performance scales with compute. These systems feature:

- Latest-generation Intel Xeon and AMD EPYC™ server CPUs
- PCIe Gen5 architectures with multiple FHHL and OCP 3.0 slots
- NUMA-aware PCIe topology, enabling close proximity between Ethernet adapters, CPUs, and accelerators
- Optimized airflow and power delivery, supporting sustained high-load operation

Representative platforms used in validation of the AMD Solarflare X4 low-latency Ethernet Adapters include the J422-S (Bigfoot), J421E-S (Maverick), and J322-S (King Ranch) systems.

Deterministic Performance for Trading Infrastructure

Ultra-low latency is a competitive necessity in financial trading. Jabil-engineered servers integrated with the AMD Solarflare X4 Ethernet Adapter can deliver measurable latency reduction, improved determinism, and scalable performance for the most demanding fintech workloads when compared to the Solarflare X2 Ethernet Adapter.*

This solution can deliver higher effective utilization of compute infrastructure, improved customer experience for latency sensitive services, and reduced risk of SLA breaches.* It also provides a scalable foundation for future growth as bandwidth and performance

Best Practices for Deployment

- Align Ethernet adapter placement with NUMA locality
- Use PCIe Gen5 slots closest to target CPUs/accelerators
- Enable OpenOnload kernel bypass
- Enable SDCI (for AMD EPYC™ Gen5 platforms)
- Tune queue depths, RSS, and interrupt pinning
- Optimize driver and congestion control settings

Jabil provides validated reference configurations to simplify deployment and reduce time-to-value.

Contact your Jabil Sales Representative or visit jabil.com/financial-services for configuration options and technical details.

This document is for informational purposes only and does not constitute a performance guarantee.

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