

# Solution Brief

Solarflare 10GbE Server Adapters with OpenOnload

## Solarflare 10GbE Server Adapters with OpenOnload

Optimized for Low-Latency, High-Performance Financial Services Application

### FEATURES & BENEFITS

One Adapter for Every Financial Services Application

- OpenOnload® accelerates both TCP, UDP and multicast traffic, so both incoming market data feeds and outgoing data are accelerated
- Ideal for feed handlers, order routing, algorithmic trading engines, messaging applications, order execution, data distribution and client communications

Superior Latency Performance

- Lowest TCP latency in the industry
- Lowest UDP latency in the industry
- Multicast and unicast acceleration
- Single-ended acceleration eliminates the need for custom network hardware or protocols
- Predictable, deterministic system performance for higher message rates
- Highest peak message rate and lowest latency jitter in the industry

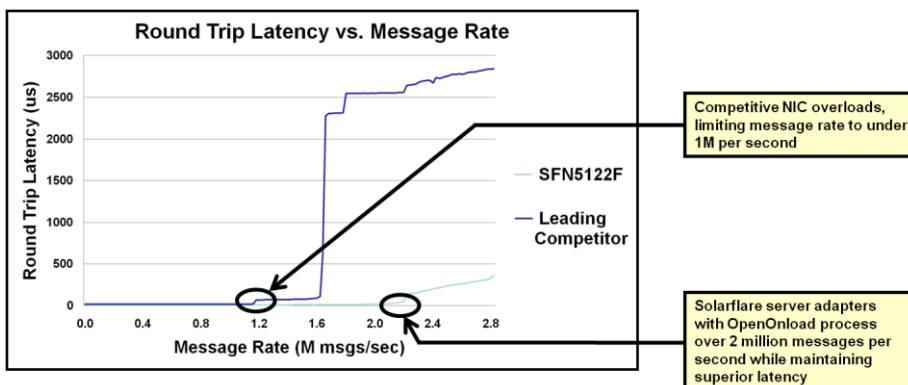
### COMPLETE APPLICATION ACCELERATION SOLUTION

Solarflare® server adapters with OpenOnload are optimized to provide the performance demanded by high-frequency trading and other high-performance financial services applications. While other vendors rely on third-party software stacks, Solarflare delivers a complete, integrated, fully tested, and fully supported solution for financial services application acceleration.

Solarflare provides unmatched latency, the highest message rates possible, and predictable, consistent performance for the most demanding applications. Solarflare products are based on industry standards and fully compatible with existing applications and APIs, so accelerated performance is achieved without application modifications, without proprietary or double-ended protocols, and without specialized networks.

### Predictable, Deterministic System Performance

Solarflare adapters with OpenOnload application acceleration middleware enable IT managers to build predictable, deterministic systems that maintain low jitter and latency even as message loads increase. Competitive solutions can overload without warning and create severe reduction in processing performance. With Solarflare, IT managers can architect high workload environments that scale gracefully so applications can run at much higher message rates.



## FEATURES & BENEFITS

### Easy-to-Deploy

- POSIX API compatible – no changes to applications in order to achieve accelerated performance
- Fully compatible with TCP/IP protocols - no proprietary or single-vendor protocols
- Fully Ethernet compatible - no need to use RDMA or iWARP to accelerate performance
- Supports all TCP/IP traffic engineering
- Completely compatible with firewalls

### Complete Solution Supported by Solarflare

- Performance is not dependent on third-party software

### Boosts Performance of Popular Applications

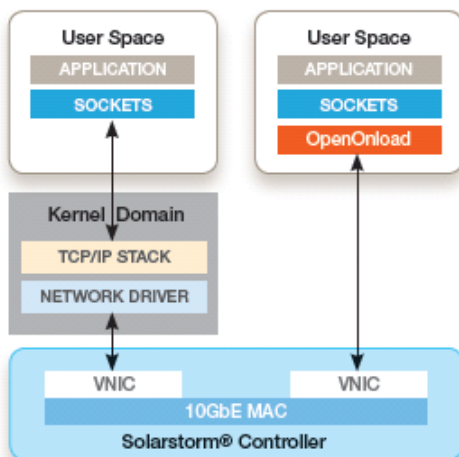
- Informatica Ultra Messaging Streaming Edition (UMS)
- IBM Websphere® Low Latency Messaging (WLLM)
- Other custom applications

### Superior Wire-Speed Performance

- 40Gb/s measured aggregate throughput across two ports with modest CPU utilization

### Industry-Leading Energy Efficiency

- Less than half the power of leading competitors



### Lowest TCP Latency in the Industry

Only Solarflare accelerates TCP traffic, delivering the lowest TCP latency. This accelerates orders to exchanges or data transmitted other parties, enhancing overall performance. The capability also enables a single high-performance networking solution to be used for receiving feeds and other crucial data using UDP, and transmitting orders, confirmations, and other latency-critical data using TCP.

### Lowest UDP Latency in the Industry

Solarflare delivers the industry's lowest UDP latency, enabling the fastest access to market feeds and other critical data. This provides users with a significant competitive advantage in financial services applications.

### Lowest Latency Jitter

Solarflare delivers the lowest latency jitter in the industry, insuring that applications experiencing heavy workloads with high-message rates will predictably and consistently deliver high-performance.

### Highest Message Rates in the Industry

Solarflare server adapters with OpenOnload achieve the highest message rates in the industry while maintaining ultra-low latency and latency jitter by eliminating overheads and bottlenecks that can impact performance. This allows the application performance to keep up with the efficient network I/O processing of the Solarflare server adapter.

### API Compatibility with Acceleration

Other vendors claim to be compatible with industry standard APIs and applications, but won't deliver the best performance unless you use customized protocols and modify the applications. Solarflare achieves maximum performance with full application and API compatibility.

### Single-Ended Acceleration

Solarflare achieves accelerated performance while utilizing industry standard protocols, so performance acceleration is possible without the need to control the entire network or implement special or proprietary protocols at both ends of the connection.

### Multi-Vendor Standards-Based

While competitors rely on niche protocols or single-vendor standards such as RoCE or iWARP that require customized implementations, Solarflare products are based on widely adopted and deployed industry standards, including Ethernet, UDP, TCP, and IP multicast. This insures that customers have the lowest implementation cost and risk, and are able to deploy best-in-class point solutions based on open standards.