

## Ethernet Server Adapters Deliver 118 Gigabits per Second Network Performance



Solarflare, a company pioneering 10 Gigabit Ethernet (10GbE), today announced the results of testing with the Intel Xeon Processor 7500 Series Server, the next-generation server processor previously codenamed “Nehalem-EX.” The company equipped four Solarstorm SFN5122F dual-port 10GbE NICs on a four processor Intel Xeon Processor 7500 Series Server, achieving a new LAN speed record at 118 Gb/s network throughput.

The test addresses the growing need for low-latency, high-performance 10GbE switch-to-server solutions for consolidated and virtualized computing environments. Testing conducted by Solarflare with the latest Intel server platform shows greater than 100Gb/s application throughput can be achieved with commercially available 10GbE products.

The company measured the application performance of TCP/IP protocol processing using four SFN5122F dual-port 10GbE server adapters on four socket Intel Xeon Processor 7500 Series server running RHEL 5.4. Interrupts were affinized between adapters and processors to enable efficient mapping of network traffic to the multiple cores, and the Ixia Chariot test tool was used to set up application-level, bi-directional TCP/IP streams.

It was found that as each CPU/NIC was brought online, the application-level bandwidth scaled by an additional 30Gb/s, peaking at 118 Gb/s application level throughput for 80 streams, 40 in each direction with a total CPU utilization of only 25%.

“IT managers require efficient and scalable high-performance servers and I/O to meet large-scale server consolidation demands,” said Jim Pappas, Director Industry Initiatives at Intel. “Intel Xeon Processor 7500 Series platform demonstrates I/O bandwidth performance that will be at the core of virtualized data centers.”

The Intel Xeon Processor 7500 Series platform is designed for high-end computing environments and offers four high-bandwidth QuickPath Interconnect links per CPU to provide significant scalability. It also offers up to nine times the memory bandwidth<sup>1</sup> of previous generation Intel Xeon 7400 platform and doubles the memory capacity with up to 16 memory slots per processor socket.

“It’s clear that servers with this level of processor power and bandwidth can greatly benefit from 10GbE upgrades,” said Russell Stern, CEO at Solarflare. “Solarflare’s products are delivering the leading power, performance and cost characteristics to address the burgeoning demand for I/O performance in virtualized and cloud computing environments that will take advantage of these greatly improved servers.”

The SFN5122F is the highest-performing, lowest-latency 10GbE server adapter on the market. Combined with Enterprise OpenOnload<sup>®</sup>, a unique application acceleration product optimized for high-frequency trading in financial services markets, the Solarflare adapter achieves sub 5 microseconds latency at less than 2.5 watts per port. It also features a rich set of stateless offloads, providing efficient acceleration of the most demanding network protocol tasks. The SFN5122F features hypervisor bypass and SR-IOV, alleviating network I/O bottlenecks in virtualized environments. Solarflare is now selling the SFN5122F directly to data center managers and IT buyers through channel partners.

For generation information and to learn more about Solarflare’s products please visit [www.solarflare.com](http://www.solarflare.com) [1].

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[1] <http://www.solarflare.com/>