



SOLARSTORM™ SFC4000E vNIC 10GbE CONTROLLER

PERFORMANCE WITHOUT COMPROMISE FOR VIRTUAL AND STORAGE ENVIRONMENTS

The Solarstorm SFC4000E vNIC controller delivers the optimal balance of maximum performance and minimum power—driving the widespread adoption of 10 Gigabit Ethernet throughout data center and enterprise networks.

HIGHLIGHTS

- 10 Gigabit Ethernet
- Virtual NIC Support
- x8 PCI Express
- Triple Speed (100/1000/10G)
- Receive Side Scaling (RSS)
- IP/UDP/TCP Checksum Offload
- Transmit Rate Pacing (per queue)
- iSCSI Acceleration
- Adapter Teaming
- Jumbo Frame Support
- MSI and MSI-X
- Remote Boot
- IP Flow Filtering
- Low Latency
- Intel® QuickData Technology
- RoHS Compliant

PRODUCT SPECIFICATIONS

- **Product Number**
 - SFC4000E
- **Package**
 - 35mm x 35mm, BGA, no active or passive heat-sink required
- **Power**
 - 2.0 Watts typical, 2.2 Watts under full load
- **Software Driver Support**
 - Windows® Server 2003 & 2008 (32 bit and 64 bit, WHQL certified)
 - Windows® Vista (32 bit and 64 bit, WHQL certified)
 - Linux® 2.4 & 2.6 Kernels (32 bit and 64 bit)
 - VMWare ESX v3.5 (plus Update 1)
 - XEN 3.2
 - NetWare 6.5
 - DOS NDIS2

High Performance

Several key architectural features separate the SFC4000E from the rest of the pack, making it the lowest-latency and highest-performing 10GbE controller in the industry. The first true non-blocking 10GbE controller, SFC4000E utilizes an x8 PCIe interface supporting up to 18Gbps of full wire-speed bidirectional performance.

Low Power

Thermal management has become a major issue in today's challenging environments. Attaining 18Gbps bidirectional throughput at 2.2 watts, the SFC4000E meets this challenge with the best performance per watt of any Ethernet controller on the market today.

Easy Migration

The SFC4000E performs at 100Mbps, 1000Mbps and 10Gbps—supporting copper cabling IEEE standards of 100BASE-TX, 1000BASE-T, and 10GBASE-T; optic solutions based on 1000BASE-X and 10GBASE-R; as well as blade servers supporting 10GBASE-X4. By allowing both newer and older servers to run at 10Gbps, a cost-effective and easy migration is possible.

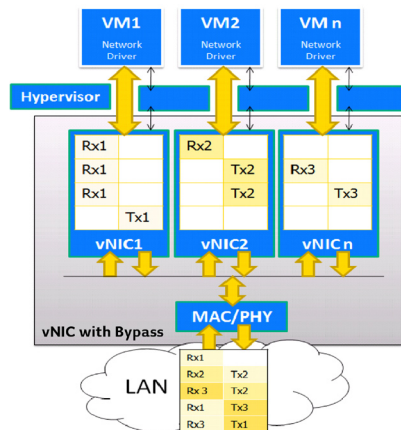
Virtualization and iSCSI Acceleration

Virtualization of the SFC4000E host interface, vNIC, is the simplest, most efficient way to accelerate I/O in virtualized operating system deployments. The vNIC interface also provides a vehicle for iSCSI header and data digest offload, delivering real performance benefits over a broad range of applications.

Results

The acceleration feature of the SFC4000E controller relieves network I/O bottlenecks hidden in virtualized environments—allowing IT managers to direct server resources to the applications that need performance, thereby enabling server consolidation. Solarstorm's virtualization acceleration boosts network throughput by threefold, and reduces CPU utilization of the hypervisor dramatically from 95% to 8%. Virtual machine applications get back the I/O and server resources they need, especially in a consolidated, virtualized environment.

Virtualization and iSCSI Acceleration



Solarflare's virtualization acceleration bypass shows 3X improvement over non-accelerated application:

