



SFN5161T

## Dual-Port 10GBASE-T Performant Server Adapter

The Solarflare® SFN5161T dual-port, triple-speed 10GBASE-T Performant server adapter combines excellent performance and exceptional 10GbE value for data center, enterprise, SMB, high performance computing, and cloud computing environments over installed and new UTP cabling.

With triple-speed 10GBASE-T, the SFN5161T supports asymmetric upgrades. Because 10GBASE-T autonegotiates with 1000BASE-T and 100BASE-TX, servers can be upgraded asynchronously with switches at the other end of the wire. Equipped to handle application loads of the latest multi-core processors, the SFN5161T also delivers unmatched power efficiency for the consolidation and deployment of high-density servers. The SFN5161T supports data networking with concurrent support of iSCSI and NAS traffic – while providing cost effective, power-efficient and high-performance network I/O.

### Application Performance Leadership

The SFN5161T boasts the industry’s lowest latency along with full 40 Gbps bi-directional line-rate performance. Featuring a rich set of stateless offloads, it provides efficient acceleration of the most demanding network protocol tasks.

### Proven Powerful Technology

Based on standards-compliant, robust, power-efficient 10GbE controller and 10GBASE-T PHY technology currently shipping in OEM servers and switches, the SFN5161T enables high-performance, cost-effective solutions for next-generation applications.

### Scalable, Hardware-Assisted Virtualization

The SFN5161T is designed to optimize virtualized application performance and maximize the use of network resources. With 10x the number of vNICs and virtual PCIe functions than the competition, I/O performance scales as the number of CPU cores and virtual machines increase resulting in enhanced application performance supporting more applications per physical server.

The SFN5161T accelerates guest applications in leading hypervisors, supporting NetQueue and VMQ in VMware and Hyper-V, and SR-IOV in KVM and XenServer. SFN5161T relieves network I/O bottlenecks hidden in virtualized environments, allowing IT managers to allocate full network resources directly to virtualized applications. SFN5161T enables the highest performance and lowest CPU utilization in virtualized servers.

### Lowest Power

At less than 13 Watts, the SFN5161T consumes less than half the power of the leading competitors’ products, and delivers 5-10x the efficiency of 1G Ethernet (Gbps/Watt). This not only makes a power efficient 10G network possible, it can save thousands of dollars of operating costs for a typical data center. The SFN5161T is the only dual-port 10GBASE-T server adapter that is compatible with the Energy Star® guideline for power consumption.

SolarflareSFN5161T

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## Specifications

### Product Number

SFN5161T  
Dual-Port 10GBASE-T

### Standards & Compliance

IEEE 802.3an  
IEEE 802.3ad  
IEEE 802.1Q  
IEEE 802.1p  
IEEE 802.3x  
RoHS Compliant

### Power (typical)

SFN5161T: 12.9W

### Operating Range

0° to 55° C  
100 LFM, Min.

### Physical Dimensions

L: 16.74 cm (6.59 in)  
W: 6.89 cm (2.71 in)  
End bracket height:  
PCI Express standard  
12 cm (4.725 in)  
PCI Express low-profile  
7.92 cm (3.12 in)

## Advanced Features

### I/O Virtualization

2048 guest OS protected vNICs; 254 Virtual Functions

### PCI Express

PCIe x8 Gen 2.0 compliant @ 5.0 GT/s for full, 40 Gbps bi-directional bandwidth

### 10 Gigabit Ethernet

Supports high-performance 10GbE

### Autonegotiation

10GBASE-T, 1000BASE-TX, 100BASE-T

### Cabling

Up to 100 meters on Category 6A, 37 to 55 meters on Category 6 per TIA TSB155 and IEEE 802.3an. Category 5E links supported per IEEE 802.3an Clause 55.7\*

### Low Power Modes

Less than 6.5W per port, Dynamic Power Scaling™

### Low Latency

Cut-through architecture/intelligent interrupt coalescing

### Receive Side Scaling (RSS)

Distributes IPv4/IPv6 loads across CPU cores; MSI-X minimizes interrupt overhead

### Hardware Offloads

LSO, LRO, GSO; IPv4/IPv6; TCP, UDP checksums

### Adapter Teaming / Link Aggregation

LACP, MLAG for redundant links & increased bandwidth

### Jumbo Frames

9000 byte MTU for performance

### IP Flow Filtering

Hardware directs packets based on IP, TCP, UDP headers

### Advanced Packet Filtering

256 multicast filters; 4096 VLANs/port; adaptive TCP/UDP/IP, MAC, VLAN, RSS, RPS, RFS filtering; Accelerated Receive Flow Steering (RFS)

### Intel QuickData™

Uses host DMA engines to accelerate I/O

### Remote Boot

PXE, iSCSI boot; unattended installation

### Management

ACPI v3.0, SNMP, SMBus, IPMI

### Virtualization Support

ESX 3.5, vSphere 4.x, 5.0; Hyper-V; XenServer 5.6, 6.0; KVM; NetQueue; VMQ; SR-IOV

### Operating Systems

RHEL 5, 6; MRG; SLES 10, 11; SLERT; other Linux; Windows Server 2003, 2008, 2008R2; OS X v10.6.x, v10.7; Solaris 10 (x86)

\*Contact your local Solarflare sales office for more information about Category 5E cabling support.

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