

Product Brief

SFN5121T



Solarflare SFN5121T Dual-Port 10G Ethernet Enterprise Server Adapter

The Solarflare® SFN5121T dual-port, triple-speed 10GBASE-T enterprise server adapter delivers the industry's best application performance, lowest power consumption, and most scalable virtualization—enabling unmatched data center performance over installed and new UTP cabling.

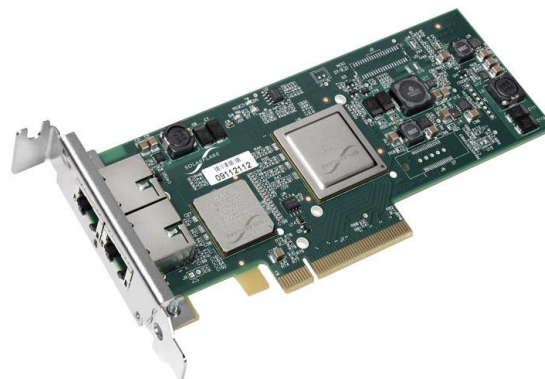
With triple-speed 10GBASE-T, the SFN5121T supports asymmetric upgrades. Because 10GBASE-T auto negotiates with 1000BASE-T and 100BASE-TX, servers can be upgraded asynchronously with switches at the other end of the wire. Equipped to handle application loads of the latest multi-core processors, the SFN5121T also delivers unmatched power efficiency for the consolidation and deployment of high-density servers. The SFN5121T supports data networking with concurrent iSCSI and NAS traffic – while providing cost effective, power-efficient and high-performance network I/O.

LOWEST POWER

At less than 13 Watts, the SFN5121T 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 SFN5121T also meets the Energy Star™ requirement of less than 8 Watt/port power consumption.

SCALABLE, HARDWARE-ASSISTED VIRTUALIZATION

The SFN5121T is designed to optimize virtualized application performance and maximize the use of network resources. With 10x the number of vNICs and virtual PCIe functions over the competition, it scales as the number of CPU cores and virtual machines increases for better performance and manageability.



LEADERSHIP APPLICATION PERFORMANCE

The SFN5121T has the industry's lowest-latency along with full 40 Gbps bidirectional line-rate performance. Featuring a rich set of stateless offloads, it provides efficient acceleration of the most demanding network protocol tasks.

The SFN5121T features hypervisor bypass and SR-IOV used to accelerate guest applications in leading hypervisors, including VMware, Hyper-V, and XenServer via direct guest access. This relieves network I/O bottlenecks hidden in virtualized environments, allowing IT managers to allocate network resources directly to applications. This enables the best performance and lowest CPU utilization in virtualized servers.

The SFN5121T is driver compatible with the SFN5122F product. It also supports Solarflare's OpenOnload® application accelerator, a high-performance user-level network stack for Linux. OpenOnload bypasses kernel networking overheads and is binary compatible with standard APIs and applications.

SPECIFICATIONS	ADVANCED FEATURES AND BENEFITS	
Product Number SFN5121T Dual port 10GBASE-T Standards and Compliance PCIe 2.0 5.0 GT/s IEEE 802.3an IEEE 802.3ad IEEE 802.1Q IEEE 802.1p IEEE 802.3x RoHS Compliant Power (typical) SFN5121T: 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)	I/O Virtualization	2048 guest OS protected vNICs; SR-IOV
	PCI Express	PCIe 2.0 @ 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 6.5 W per port, Dynamic Power Scaling™
	Low latency	Cut-thru architecture/intelligent interrupt coalescing
	Receive side scaling (RSS)	Distributes IPv4, IPv6 loads across CPU cores; MSI-X minimizes interrupt overhead
	Hardware Offloads	LSO, LRO; IPv4/IPv6; TCP, UDP checksums, NetQueue/VMQ
	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 filtering
	Intel QuickData™	Uses host DMA engines to accelerate I/O
Remote boot	Supports PXE, iSCSI, UEFI boot	
Management	ACPI v3.0, RMI, SNMP, SMBus, IPMI	
Virtualization support	VMware ESX 3.5, vSphere 4, Hyper-V, Red Hat KVM, XenServer 5.x Direct Guest Access	
OS Support	Windows Server 2003, 2008, Linux RHEL4/5/6; SLES9/10/11; Solaris 10	

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