



Dual-Port 10GbE SFP+ Mezzanine Adapter for Dell PowerEdge C Servers

Solarflare® SFN6832F dual-port 10G Ethernet SFP+ mezzanine adapter delivers unmatched message rates with low latency and jitter over standard Ethernet along with the lowest CPU utilization and power consumption, enabling the industry's best performance and scalability for Dell PowerEdge C servers.

The SFN6832F server adapter enhances the benefits of Dell PowerEdge C servers with increased scalability and optimized application networking performance in Dell's high-speed mezzanine card slot. This product provides unmatched performance scaling for high-density Dell PowerEdge C server deployments, while utilizing a single driver across all Solarflare server adapter products. The SFN6832F server adapters support data networking with concurrent support of iSCSI and NAS traffic

Lowest Latency at Highest Message Rates

SFN6832F delivers the industry's lowest latency at high message rates to customers with leading edge financial services and enterprise data center deployments. SFN6832F also delivers the industry's highest message rate and lowest latency jitter, 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.

SFN6832F supports a wide range of drivers that are compatible with all Solarflare products, including the market-leading SFN5122F. SFN6832F also supports Solarflare's OpenOnload® application accelerator, a full-featured, high-performance user-level network stack for Linux. OpenOnload provides unprecedented low latency performance with application

compatibility and protocol compliance, bypassing kernel and networking overheads, while featuring binary compatibility with standard APIs and applications.

Scalable, Hardware-Assisted Virtualization

With 10x the number of vNICs and virtual PCIe functions than the competition, SFN6832F performance scales as the number of CPU cores and virtual machines increase, resulting in enhanced application performance while supporting more applications per physical server. SFN6832F supports NetQueue, VMQ, and SR-IOV used to accelerate guest applications in leading hypervisors, such as VMware, Hyper-V, Linux KVM, and XenServer. This relieves network I/O bottlenecks in virtualized environments dedicating full network bandwidth directly to virtualized applications while maintaining full hypervisor management services.

Lowest Power

At less than 6 Watts, the SFN6832F consumes less than half the power of the leading competitors' products, and delivers 5-10x the efficiency of 1G Ethernet (Gbps/Watt). This results in a power efficient 10G network that can save thousands of dollars of operating costs for a typical data center. The SFN6832F is also compatible with the Energy Star® guideline for power consumption.



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SFN6832F

Specifications

Product Number
SFN6832F
Dual port SFP+

Standards & Compliance

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

Power (typical)
SFN6832F: 5.9W

Operating Range
0° to 55° C
0 LFM, Min.

Physical Dimensions

L: 11.2 cm (4.4 in)
W: 7.9 cm (3.1 in)
Dell PowerEdge C
Mezzanine form factor

Order Information

SFN6832F-C61
SKU for PowerEdge C6100
Series servers

SFN6832F-C62
SKU for PowerEdge C6220
servers

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Regulatory product code: S6102

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Advanced Features

I/O Virtualization

2048 guest OS protected vNICs; 254 Virtual Functions

PCI Express

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

10 Gigabit Ethernet

Supports high-performance 10GbE

SFP+ Support

Supports optical & copper SFP/SFP+ modules; Direct-Attach,
Fiber (10G or 1G), 1G/10G combo, 1000BASE-T SFP

1000BASE-T SFP Support

Supports 1G 1000BASE-T SFP modules

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)

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