



Flareon Ultra Dual-Port 10GbE SFP+ PCIe 3.0 Server I/O Adapter for Stratus Technologies

The Stratus Technologies SFN7122F-ST dual-port 10G Ethernet SFP+ server adapter optimizes Stratus ftServer Gen 8 and ftScalable Gen 3 platforms delivering unmatched message rates with low latency and jitter over standard Ethernet along with low CPU utilization, enabling the industry's best performance and scalability for enterprise data center environments.

The Stratus SFN7122F-ST dual-port 10G Ethernet SFP+ server adapter delivers the industry's lowest latency and highest message rates accelerating trading applications, and credit and debit card authorizations that require processing in real-time, where even the smallest amount of system downtime or latency can be detrimental. The combination of the Stratus SFN7122F-ST with Stratus ftServer and ftScalable storage deliver the industry's highest levels of availability and ultra-fast, consistent processing and will keep trading platforms always-on and processing at the highest speeds available on the market.

Optimized Server I/O

Featuring a full set of stateless offloads, the Stratus SFN7122F-ST reduces CPU processing loads for the most demanding network tasks. With OpenOnload®, the SFN7122F-ST bypasses kernel and networking overheads, providing unprecedented performance with seamless application compatibility and protocol compliance. OpenOnload features binary compatibility with all standard APIs and applications. The SFN7122F-ST's CPU offload along with high performance enables servers to provide more services to more users in high performance computing, cloud, grid, Big Data, storage, Web 2.0, VoIP, and financial services enterprise data center environments.

Ultra-Low Latency

The Stratus SFN7122F-ST supports PCIe 3.0 with ultra-low latency features such as direct packet transfer (Tx PIO) mode and the templated send API. The SFN7122F-ST also features hardware acceleration to optimize packet delivery, such as UDP multicast replication, integrated layer 2 switching capability and VLAN insertion / removal, along with TCP segmentation offload (TSO) to reduce CPU load.

Scalable, Hardware-Assisted Virtualization

With 10x the number of vNICs and virtual PCIe functions than the competition, the Stratus SFN7122F-ST performance scales as the number of CPU cores and VMs increase, supporting more applications per physical server. The SFN7122F-ST also supports NetQueue, VMQ, and SR-IOV used to accelerate guest applications in leading hypervisors, such as KVM and Xen. This relieves network I/O bottlenecks dedicating full network bandwidth directly to VMs while maintaining full hypervisor management services. Sixteen physical PCIe functions enable finer granularity and greater scalability when allocating Quality of Service for optimized bandwidth utilization as I/O dynamically fluctuates.

Stratus
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SFN7122F-ST

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Stratus
Technologies
SFN7122F-ST

Specifications

Product Number
SFN7122F-ST

Standards & Compliance

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

Power

7.3W (typical)

Operating Range

0° to 55° C
100 LFM, Min.

Physical Dimensions

L: 13.4 cm (5.3 in)
W: 6.9 cm (2.7 in)
End bracket height:
PCI Express standard
12.0 cm (4.725 in)
PCI Express low-profile
7.92 cm (3.12 in)

Order Information

Stratus P/N U116-P

Advanced Features & Benefits

I/O Virtualization

2048 guest OS protected vNICs; SR-IOV; 240 virtual functions;
16 physical functions

PCI Express

PCIe 3.0 x8 @ 8.0 GT/s

SFC9120 10G Ethernet Controller

Supports high-performance 10GbE

SFP+ Support

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

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 all CPU cores;
MSI-X minimizes interrupt overhead

Hardware Offloads

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

Adapter Teaming/Link Aggregation

LACP for redundant links & increased bandwidth
(compatible with MLAG)

Jumbo Frames

9216 byte MTU for performance

Enhanced Tuning

Adaptive interrupt moderation

IP Flow Filtering

Hardware directs packets based on IP, TCP, UDP headers

Advanced Packet Filtering

4096 multicast filters; 4096 VLANs/port; adaptive
TCP/UDP/IP, MAC, VLAN, RSS, 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

SNMP, ACPI v3.0

Virtualization Support

Linux KVM and Xen

Operating Systems

RHEL 7

Regulatory product code: S7120

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