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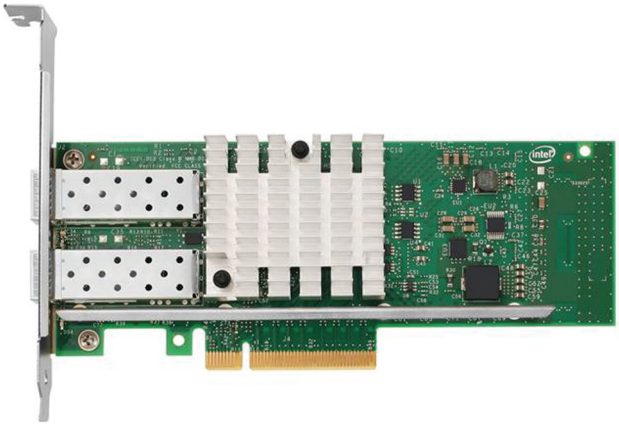
Intel X520 Dual Port 10 GbE SFP+ Adapter Family

Delivers high performance networking for your virtualized data center



The explosive growth in virtualization is driving the need for a faster network. Meanwhile, network-intensive applications, such as video and real-time media, are also demanding more bandwidth. The Intel X520 Dual Port 10 GbE Adapter Family is an excellent choice for addressing the needs of today's data center networks.

Why System x

System x is the leading provider of x86 systems for the data center. The portfolio includes rack, tower, blade, dense and converged systems, and supports enterprise class performance, reliability and security. System x also offers a full range of networking, storage, software and solutions, and comprehensive services supporting business needs throughout the IT lifecycle.

For more information

To learn more about the Intel X520 Dual Port 10 GbE SFP+ Adapter and the Intel X520 Dual Port 10 GbE SFP+ Embedded Adapter, visit: **ibm.com**/systems/x/options/networking or contact your Lenovo Business Partner or representative.

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Specifications

Part number	• 49Y7960 – Intel X520 Dual Port 10 GbE PCIe Adapter • 49Y7980 – Intel X520 Dual Port 10 GbE Embedded Adapter
ASIC	Intel 82599
Ports	2 open cages to hold SFP+ Transceivers and DAC cables
Bus interface	x8 PCIe Gen 2.0
Standards	• 10GBASE-SR, 10GBASE-LR, SFF8431 10 GSFP+ Cu (DAC) • IEEE802.3ad (Link Aggregation) • IEEE802.1q (VLAN), 802.1p (QoS/CoS) • IEEE802.3x (Flow Control),802.1au (Congestion Notification) • IEEE 802.1ae (MAC Level Encryption) • IEEE 1588 (Time Stamping) and 802.1as (Timing and Synchronization) • Jumbo Frames (9,000 bytes)
VMDq	• Offloads the data-sorting functionality from the hypervisor to the network hardware, improving data throughput and CPU usage • Provides QoS feature on the Tx data by providing round-robin servicing and preventing head-of-line blocking • Sorting based on MAC addresses and VLAN tags
Next-generation VMDq1 (64 queues per port)	• Enhanced QoS feature by providing weighted round-robin servicing for the Tx data • Provides loopback functionality, where data transfer between the virtual machines within the same physical server need not go out to the wire and come back in, improving throughput and CPU usage • Supports replication of multicast and broadcast data
Virtual machine load balancing	Virtual machine load balancing (VMLB) provides traffic load balancing (Tx and Rx) across virtual machines bound to the team interface, as well as fault tolerance in the event of switch, port, cable, or adapter failure
Physical features	• PCIe: 5.73 inch long, without bracket, standard bracket (low profile available) • Embedded: conforms to System x® mezzanine form factor
Environmental	• Operating temperature: 0° to 55°C (32° to 131°F) • Storage temperature: -40° to 70°C (-40° to 158°F) • Relative humidity: maximum 90% noncondensing
Supported servers	Visit the ServerProven® page for the latest supported servers at: **ibm.com**/servers/eserver/serverproven/compat/us/
Supported operating systems	For latest information, visit ServerProven information at: http://www.03.ibm.com/systems/info/x86servers/serverproven/compat/us/xseries
Power	6.5 W nominal
Warranty	One-year limited warranty. When installed in a System x server, these cards assume your system's base warranty

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