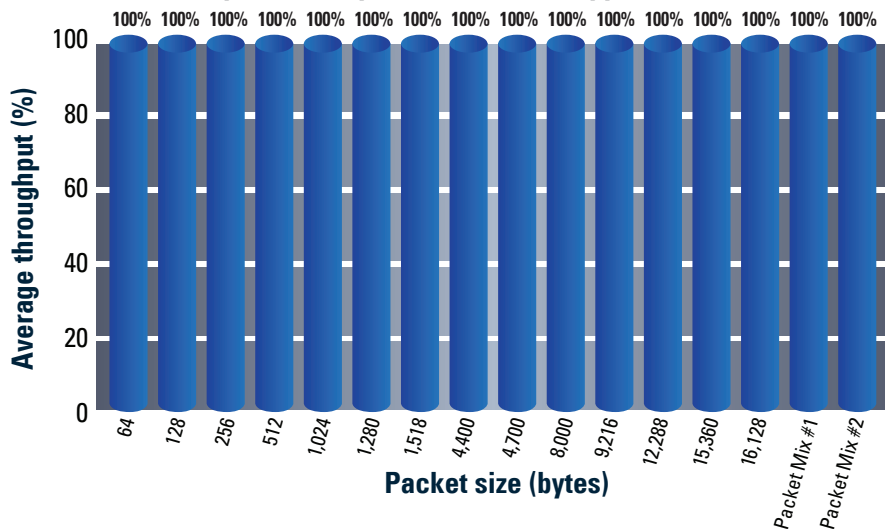


# Fujitsu XG2000 switch attains 10GbE throughput, ultra-low latency in performance tests

**Fujitsu XG2000 Layer 2 Zero-Loss Throughput Across 20 10GbE Ports in a Full-Mesh Configuration**  
As Reported by Spirent TestCenter Application 1.21



- Achieves 100% of line-rate zero-loss 10GbE throughput when tested across 20 full-mesh ports, when handling frame sizes ranging from 64 bytes to 16,128 bytes
- Drops zero frames when sustaining 100% zero-loss line rate across 20 10GbE ports when tested with multiple packet sizes in a full snake configuration
- Demonstrates ultra-low latency, just 339 ~ 363 nanoseconds (XFP transceiver latency included) across frame sizes ranging from 64 bytes to 16,128 bytes at 100% load in a full snake configuration

A recent Tolly Group test found that Fujitsu's XG2000 20-port 10 Gigabit Ethernet (10GbE) switch combines ultra-low latency with high 10GbE performance to link directly to 10GbE-capable servers as a high-speed interconnect.

The hands-on test, commissioned by Fujitsu, also found that the XG2000 delivers the ultra low-latency needed for high performance cluster computing — traditionally the domain of Infiniband and other proprietary technologies.

By offering ultra-low latency in an Ethernet switch, the same personnel that run the existing Ethernet network can extend those skills to support 10GbE without additional investment or training that may be required for "non-traditional" technologies, such as Infiniband.

In Layer 2 forwarding performance tests, the XG2000 achieved line-rate zero-loss throughput for all 14 frame sizes tested — ranging from 64 bytes to 16,128 bytes. Line-rate performance was realized for both a 10GbE, 20-port full-mesh scenario, and a 20-port snake configuration. Even when handling an Internet traffic mix (64, 78, 576 and 1,500 bytes), the XG2000 achieved line-rate throughput. Out of 6,067,080,940 frames of Internet-mix traffic transmitted, the XG2000 did not drop a single frame.

From a frame forwarding perspective, the XG2000 forwarded the theoretical maximum of 14,880,952 64-byte frames per second for each port, 812,743 frames at 1,518-byte frames per second, and 77,407 frames per second when tested with the maximum frame size of 16,128 bytes.

On the latency front, the XG2000 introduced latency ranging from a low of

339 nanoseconds (XFP transceiver latency included) with 16,128-byte frames to 359 nanoseconds with 64-byte frames, or 341 nanoseconds on average across the 14 frame sizes tested. When handling an Internet mix of traffic, latency introduced by the switch was just 363 nanoseconds (XFP transceiver latency included). This proves that XG2000 consistently provides ultra-low latency regardless of the frame size.

View the full test summary at:  
<http://www.tolly.com/DocDetail.aspx?DocNumber=208281>

**Sponsor: Fujitsu Computer Products of America, Inc.**

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Product class:

- 10GbE core network, data center switch

Products under test:

- Fujitsu XG2000 Series Switch

Testing window: July 2007

For more info on this test, visit:

- <http://us.fujitsu.com/ethernet>