Product Overview

AST II is Spirent Communications' second generation of Advanced Switch Tests (AST). AST II is fully automated, contains an enhanced GUI with real-time graphing, is fully scalable, and supports the SmartBits® 200/2000 and 600/6000B chassis.

AST II is based in RFC 2285, Benchmarking Terminology for LAN Switching Devices, and RFC 2889, Benchmarking Metholody for LAN Switching Devices. AST II is considered the TRUE first-level benchmark for all switches.

Features

- Supports multiple chassis and GPS.
- Supports multi-user operation.
- Supports up to 1,024 ports and 256 addresses per port.
- Supports multiple 10/100/1000 Mbps Ethernet SmartCards/modules (within the same test).
- Generates graphical results that can be exported to HTML.
- Provides sample scripts and C code.
- Contains user-configurable test duration, burst size, frame size, and frame rate.
- Includes profile and search mode for frame rates.
- Supports Ethernet II and IEEE 802.3 Ethernet frame types.
- Supports VLANs.
- Supports port mirroring and flooding detection.
- Contains a built-in interburst gap calculator.
- Contains an email option upon test completion.
- Supports autonegotiation and flow control.

Test Descriptions*

Forwarding

Determines the forwarding performance of the device under test, as well as the device's frame loss, frame rate, and throughput. Supports full-mesh, partial mesh, and non-mesh traffic patterns.

Congestion Control

Determines the effect of a congested port on a non-congested port, otherwise known as *Head of Line Blocking*. Measures and graphs the frame loss and frame rate of both the non-congested and congested ports.

Address Learning Rate

Determines the rate at which a device can learn addresses without flooding. Measures the percentage of learned frames and determines the rate at which all addresses are learned.

*Consult Spirent Communications for details regarding SmartBits SmartCards and modules that comply with RFC 2889 test methodologies.
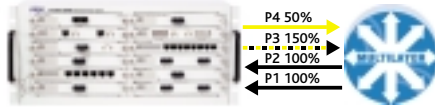
Full Mesh Forwarding

Error Filtering

Head of Line Blocking

P4 50%
P3 150%
P2 100%
P1 100%

Broadcast Forwarding/Latency

Address Learning/Rate

Forward Pressure

AST II test applications

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Address Caching

Determines the address caching capacity of the device under test. Measures the percent of addresses learned at a given rate.

Error Filtering

Determines the device's ability to handle errors. Errors include CRC, oversized, undersized, VLAN oversized, alignment, and dribble bit errors.

Broadcast Forwarding

Determines the device's ability to forward broadcast traffic by measuring frame loss and throughput. Users can set up multiple source ports, receiver ports, and monitor ports.

Broadcast Latency

Determines the latency of the broadcast traffic. Users can set up only one source port but can assign multiple receiver ports.

Forward Pressure

Determines the device's ability to handle forward pressure. Measures the number of frames received versus the number frames expected.

Requirements

- An SMB-200/2000 or SMB-600/6000B chassis with the appropriate SmartCards/modules for the test.
- An IBM or compatible Pentium™ PC running Windows® 98/2000/NT, with mouse and color monitor.

Ordering Information

SWF-1218A

AST II

SUS-SMB

12-month Software Update Support Service

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Supported SmartBits SmartCards/Modules

SMB-200/2000 SmartCard	Description
GX-1405B	1000Base-SX Ethernet, 1-port, multi-mode, 850nm SmartCard
GX-1405Bs	1000Base-LX Ethernet, 1-port, single mode, 1310nm SmartCard
GX-1420B	100/1000Base Ethernet, Copper, 1-port, SmartCard
ML-5710A	10Base-TX Ethernet/USB, 2-port, SmartMetrics SmartCard
ML-7710	10/100Base-TX Ethernet, 1-port, SmartMetrics SmartCard
ML-7711/ 7711s	100Base-FX Ethernet, 1-port, multi-mode/single mode, SmartMetrics SmartCard
SX-7210	10/100Base-TX Ethernet, MII, 1-port, SmartCard
SX-7410B	10/100Base-TX Ethernet, 1-port SmartCard
SX-7411	100Base-FX Ethernet, 1-port SmartCard

SMB-600/6000B Module	Description
LAN-3100A	10/100Base-TX Ethernet, 8-port, module
LAN-3101A	10/100Base-TX Ethernet, 6-port, SmartMetrics module
LAN-3102A	10/100Base-TX, Ethernet, 2-port, SmartMetrics module
LAN-3111A/As	100Base-FX Ethernet, 6-port, multi-mode/single mode, 1310nm, SmartMetrics module
LAN-3200A/ 3200As	1000Base-SX Ethernet, 2-port, multi-mode/single mode, 850nm/1310nm module
LAN-3201B	1000Base Ethernet, GBIC, 1-port, SmartMetrics module
LAN-3300A	10/100/1000Base-T Ethernet, Copper, 2-port, SmartMetrics module
LAN-3301A	10/100/1000Base-T Ethernet, Copper, 2-port, TeraMetrics module
LAN-3302A	10/100Base-T Ethernet, Copper, 2-port, TeraMetrics module
LAN-3310A	1000Base-FX Ethernet, GBIC, 2-port, SmartMetrics module
LAN-3311A	1000Base-FX Ethernet, GBIC, 2-port, TeraMetrics module
LAN-3710AS	10GBase-SR Ethernet, 1-port, 2-slot, multi-mode, 850nm module
LAN-3710AL/ 3710AE	10GBase-LR/ER Ethernet, 1-port, 2-slot, single mode, 1310nm/1550nm module

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