

SmartBits® 2000

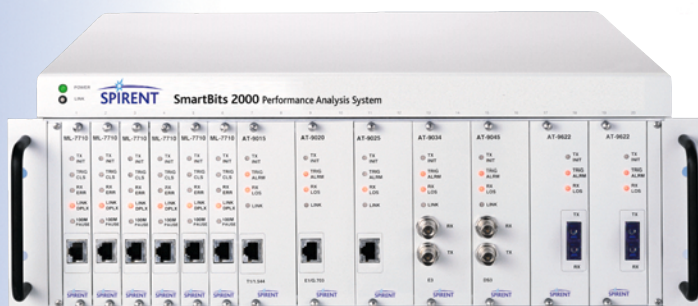
PRODUCT OVERVIEW

Spirent Communications' SmartBits 2000 (SMB-2000) has become the industry standard for measuring the performance limits of everything from an emerging technology in a development lab to the largest enterprise network. The SMB-2000 is widely used to test a variety of network devices and complex network configurations, including 10/100 Mbps Ethernet, Gigabit Ethernet, ATM, and Frame Relay.

Each SMB-2000 chassis can be configured with any combination of up to 20 single-port SmartCards. SMB-2000 test systems are completely scalable and may be grouped to support 640 ports with local or remote control over the Internet.

SMB-2000 IS DESIGNED FOR:

- Network Equipment Manufacturers: Perform comprehensive performance analysis for engineering, production, and QA testing.
- Evaluation Labs: Test and certify different devices from various manufacturers to benchmark their performance.
- Telcos and ISPs: Perform end-to-end testing to check for trouble spots and weaknesses.
- Enterprise Users: Test end-to-end performance to monitor throughput and prevent overload.



SMB-2000 FEATURES

- Accommodates a comprehensive set of powerful, technology-based SmartCards for Ethernet, ATM, and Frame Relay.
- Bundled with three PC-based software applications for comprehensive performance analysis (Smart - Window™, SmartLib™, and SmartApplications™).
- Supports a 10 Mbps Ethernet connection to a host PC.
- Provides remote control through the Internet. Can also be controlled via an RS-232 port.
- Provides GPS Support. You can remotely synchronize the timing mechanism of multiple chassis by using the external GPS kit. This allows accurate measurement of one-way latency and jitter, 100-ns accuracy timestamps, and system start/stop.
- One workstation can control up to eight SmartBits stacks (32 chassis with a total of 640 ports) via SmartLib.
- Multiple users can simultaneously access the SMB-2000.
- Includes RJ-45 expansion-in and expansion-out jacks. Accepts external 10 MHz clock signals.

SUPPORTED APPLICATIONS

SmartWindow

SmartWindow is a Windows®-based virtual front panel used to control all SmartCard/module functions. The application provides a convenient method to set up any combination of ports, monitor module status, and view-gathered data.

SmartLib Programming Library

SmartLib is a powerful programming tool that developers can use to create custom applications for testing networks and network devices using SmartBits chassis. SmartLib supports programming in Visual Basic, C, C++, or Tcl in Windows 98/2000/NT environments, and C, C++, or Tcl in a UNIX® environment.

SmartMulticastIP™

SmartMulticastIP measures IP multicast performance of routers and switches.

SmartApplications

SmartApplications provides automated testing for throughput, packet loss, and latency according to RFC 2544.

SmartBits 2000

ScriptCenter™

ScriptCenter provides a user-friendly, platform-independent environment for creating and running canned and customized scripts.

SmartFlow™

SmartFlow enables QoS testing to analyze the performance and characteristics of policy-based network devices. Traffic with differing levels of service is generated and the performance of each incoming stream is analyzed to quantify the ability of the device under test to handle the priority policies under varying traffic loads.

SmartVoIPQoS™

SmartVoIPQoS tests a network's ability to deliver both voice and data.

SmartMulticastIP™

SmartMulticastIP measures IP multicast performance of routers and switches.

SmartTCP™

SmartTCP characterizes TCP session performance of server load balancers by measuring the capacity of a device to establish, maintain, and tear down TCP sessions.

SmartxDSL™

SmartxDSL provides traffic performance analysis for testing and evaluating xDSL products and services.

SmartCableModemTest™

SCMT measures key cable modem performance parameters, such as latency and sequence tracking under varying traffic loads.

SmartSignaling™

SmartSignaling measures the capabilities of ATM switches and ATM/LAN edge devices to accept calls and to set up and tear down switched virtual circuits.

AST II™

AST II tests the overall performance of LAN switches. The application supports a variety of tests, including full-mesh switch testing based on RFC 2285 and the IETF Switch Methodology Draft.

VAST™

VAST measures the throughput and packet loss of VLAN-configured switches.

SUPPORTED SMARTCARDS

Select up to 20 of the following SmartCards, in any combination, to fill the SMB-2000's 20 chassis slots. Most SmartCards require one chassis slot; ATM and Gigabit Ethernet SmartCards require two chassis slots each.

SmartCard	Description
AT-9xxx	ATM SmartCards (OC-3c/STM-1, OC-12c/STM4, DS3, E1, E3, DS1, 25 Mbps)
GX-1405B/1405Bs	1000Base-SX or -LX Ethernet SmartCard
GX-1420B	100/1000Base Copper SmartCard
GX-1421A	100/1000Base GMII Ethernet SmartCard
ML-5710	10 Mbps Ethernet and USB, SmartMetrics SmartCard
ML-7710	10/100Base-TX Ethernet, SmartMetrics SmartCard
ST-6410/SE-6205	10 Mbps Ethernet SmartCards
SX-7x10	10/100Base-TX SmartCards
SX-7x05, SX-7411	100 Mbps Ethernet SmartCards
TR-8405	4/16 Mbps Token Ring SmartCard
WN-3405	V.35 WAN Frame Relay, SmartMetrics SmartCard
WN-3415	T1 WAN Frame Relay, SmartMetrics SmartCard
WN-3420A	E1 WAN Frame Relay, SmartMetrics SmartCard
WN-3441A	T1 WAN Frame Relay/PPP, SmartMetrics SmartCard
WN-3442A	E1 WAN Frame Relay/PPP, SmartMetrics SmartCard
WN-3445A	DS3 WAN Frame Relay/PPP, SmartMetrics SmartCard

REQUIREMENTS

- One SMB-2000 chassis and SmartCards to support the required tests.
- One Ethernet cable and one 10/100 Ethernet card installed in the PC; an RS-232 straight-through (not null modem) cable for initial configuration.
- An IBM or compatible Pentium™ PC running Windows 98/2000/NT, with mouse and color monitor.

ORDERING INFORMATION

SMB-2000 SmartBits 2000 (includes SmartWindow, SmartLib, and SmartApplications)

SUS-SMB 12-month Software Update Support Service (includes firmware support)

SPECIFICATIONS

- SmartBits chassis with 20 SmartCard slots. Controllable over the Internet or from a PC via SmartWindow.
- Includes a 19" rackmount.
- Dimensions: 19"W x 6.75"H x 15"D (48.3W x 17.2H x 38.1D cm).
- Input Power: 90-264 VAC. Nominal 115 or 230 VAC, 47-63 Hz.
- Weight: 27 lbs. (12 kg) fully-loaded. Shipping weight approximately 30 lbs. (13.5 kg).
- Operating environment: 59° to 104° F (15° to 40° C); 20 to 80% relative humidity. Must have space for unimpeded airflow into the fans at the side of the chassis.
- Local stacks must be located within 1 meter of each other.