Finisar ®

Xgig® GENERATOR SAS/SATA TRAFFIC GENERATION to 6 Gb/s

DATA SHEET

FEATURES

▶ Part of the best-of-breed Xgig platform of design and test tools

▶ Generates arbitrary SAS (SSP, SMP, and STP) and SATA protocol traffic

▶ Operates at speeds of 1.5, 3.0, and 6.0 Gb/s

▶ Utilizes the simple-to-use Xgig Maestro GUI software

▶ Runs on Windows XP, Vista, 2000 (Professional and/or Server), and 2003

BENEFITS

▶ Licensing of one, two, or four Generators per blade allows users to purchase only what they need, when they need it

▶ Having both GUI and API options allow control from simple commands to complex regression test libraries, making the tool useful to a range of users

OVERVIEW

Finisar continues its tradition of providing best-of-breed tools to assist storage equipment designers, testers, and manufacturers develop and debug their products with the introduction of its latest tester, the Xgig® Generator. Part of the Xgig platform of design and test tools, the Generator connects to users' systems and supports arbitrary creation of SAS protocol traffic at 1.5, 3.0, or 6.0 Gb/s, and SATA traffic at 1.5 and 3.0 Gb/s, allowing emulation of either SAS or SATA devices. The tool also includes support for the SAS sub-protocols, Serial SCSI Protocol (SSP), SATA Tunneling Protocol (STP) and SAS Management Protocol (SMP). For maximum usability, Generator's user control is via either a Graphical User Interface (GUI) or an Application Programming Interface (API). With Generator, companies can accelerate bring-up, regression, and manufacturing testing—to name just a few possibilities.

EXCEPTIONAL CAPABILITIES

The Generator builds upon the proven Xgig platform. Xgig employs a flexible chassis-and-blade hardware architecture that supports multiple protocols. Utilizing this architecture and Finisar's 6 Gb/s 4-Wide blade with dual mini-SAS connectors, the Generator allows bidirectional SAS or SATA traffic creation and emulation up to 8 ports per chassis. The double-width blade occupies two slots in a 4-slot Xgig chassis[1]. Using the Xgig's multi-function capabilities users can config-ure the Generator function to any other supported Xgig SAS/SATA function, such as Analyzer or Jammer, simply by toggling software switches.[2]

Xgig also provides flexibility to its users by offering either port synchronization, or the ability to support many users. The Xgig platform's cascade function allows cascading of multiple Xgig chassis together to form a "sync group". Sync groups can provide anywhere from 2 to 32 SAS/SATA synchronized ports. In noncascaded scenarios, Xgig can support a maximum of 32 simul-taneous users.

Xgig Platform featuring 6Gb/s Wide Blade

The core of the Xgig Generator, is its Application Programming Interface (API), is a superset of Finisar's legacy Monarch (SAS) product. With only slight modifications, the Generator is able to utilize legacy scripts and provide equivalent functionality. The Xgig Generator also brings updated functionality and the ability to generate on up to 8 links per Xgig chassis.

A COMPLETE RANGE OF OPERATION: FROM SIMPLE TO COMPLEX

The Xgig˚ Generator provides its users with three testing modes of increasing sophistication and automation; interactive, macro, and compiled test. All accessed from one easy-to-use Maestro application framework. So whether you require simple operations or complex scenarios, the Generator can provide it all.

Interactive Mode

For users whose testing needs are simple, or who wish to quickly start using the Xgig Generator, Interactive Mode provides powerful traffic generation capabilities with point-and-click ease. Simply select an API function from Generator's extensive list, and press "Play" to execute a command to a device-under-test (DUT). For added time savings, users can also create a table of often-used commands and execute them from the table eliminating the need to search through the entire API list for the correct command.
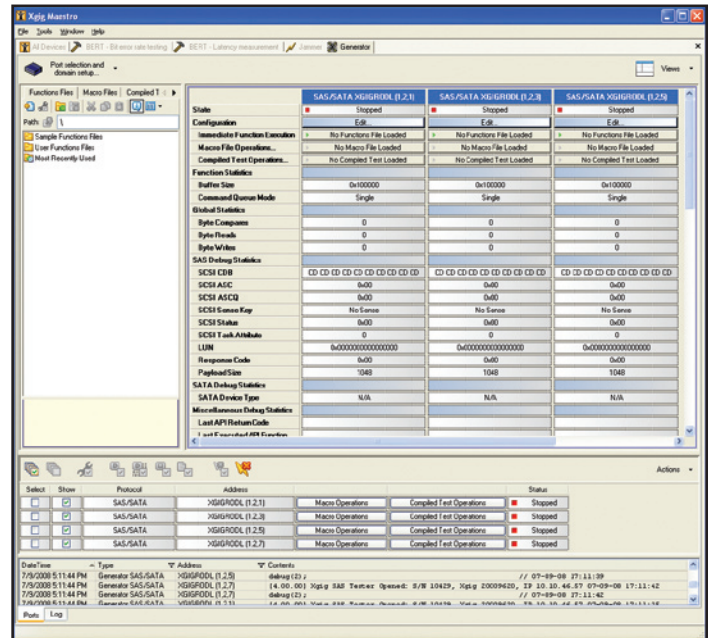
Macro Mode

For users who wish to perform multi-step operations but do not want the complexity of a compiled environment, Macro Mode allows users to create multi-step command scripts. Simple branching capabilities, allow the Generator to execute multi-step or repeated command sequences. Once created, individual test scripts can be saved and recalled, allowing the creation of test libraries suited to particular products or developments.

Compiled Test Mode

To unleash the full power of the Xgig Generator, users can create extensive test scenarios using a compiled C/C++ API, (compatible with, and a superset of, Finisar's previous Monarch APIs). Test scenarios can be accessed via either the command line or a GUI and can control multiple Xgig Generators as well as execute time-sensitive tests.

Other Capabilities

Hardware Compare: The Generator allows data read from a target device to be verified against expected data without imposing a per-

Generator is a component of the Xgig Maestro GUI

formance penalty on the data transfer. Using the IFC-3/IFC-4/IFC-5 Testers' patented hardware data compare circuitry, the Generator compares received data bound for the onboard read buffer (DMA) against data in the same location of the write buffer. Any errors are reported to the screen or log file.

Speed Negotiation Control: The Generator allows setting link speeds using the specified SAS and SATA speed negotiation protocols.

"Loss of Sync" Insertion: The Generator can optionally force a "Loss of Sync" either by temporarily changing clock rate, or by sending constant disparity and/or code violation errors. The Generator will optionally continue with no OOB re-initialization, initiate an OOB re-initialization, or respond to an OOB from the target.

PART NUMBERS::

Blade: Xgig-B860SA (6 Gb/s SAS/SATA Wide Port Blade with miniSAS connectors, 16 GB memory)

Development Software Options (Licensable per port pair):
Xgig-S16GS-D Generator Key – Dev. 6 Gb/s SAS/SATA, (single port generation, 1/4 Wide-Blade)
Xgig-S26GS-D Generator Key – Dev. 6 Gb/s SAS/SATA, (two ports generation, 1/2 Wide-Blade)
Xgig-S46GS-D Generator Key – Dev. 6 Gb/s SAS/SATA, (four ports generation, Full Wide-Blade)

1 Wide-blades are only compatible with the 4-blade Xgig chassis.
2 Additional functions are available through the purchase of a function key.

Finisar®

1389 Moffett Park Drive
Sunnyvale, CA 94089
Phone (US Toll Free): 888.746.6484
Phone Intl: 408.400.1000
Email: networktools-sales@finisar.com
www.finisar.com