

Boundary-Scan WGL Support Package

- ❑ Allows full boundary-scan tests to be executed on any external tester that supports the WGL file format
- ❑ Compatible with the Agilent 93000 Chip Tester and other third party testers
- ❑ Off line test vectors development is done on a PC using standard CORELIS ScanPlusTPG test pattern generator tools.
- ❑ Greatly reduces IC, MCM, ASIC, SoC, and Silicon Tester usage-time by diagnosing failures on a remote computer, on or off line
- ❑ Compatible with SVF formatted third party BiST files such as LogicVision
- ❑ Enables editing of test vectors which are otherwise inaccessible to the user
- ❑ Allows the user to perform custom boundary scan operations and simulate abnormal waveform situations
- ❑ Edited WGL files provide a way to overcome non-conforming device peculiarities and successfully scan non-conforming devices
- ❑ Intuitive Windows 2000/XP™ Graphical User Interface (GUI) with “XP Look and Feel”
- ❑ Compatible with the ScanPlus™ family of products for testing and in-system programming (ISP) of Flash memories and CPLDs

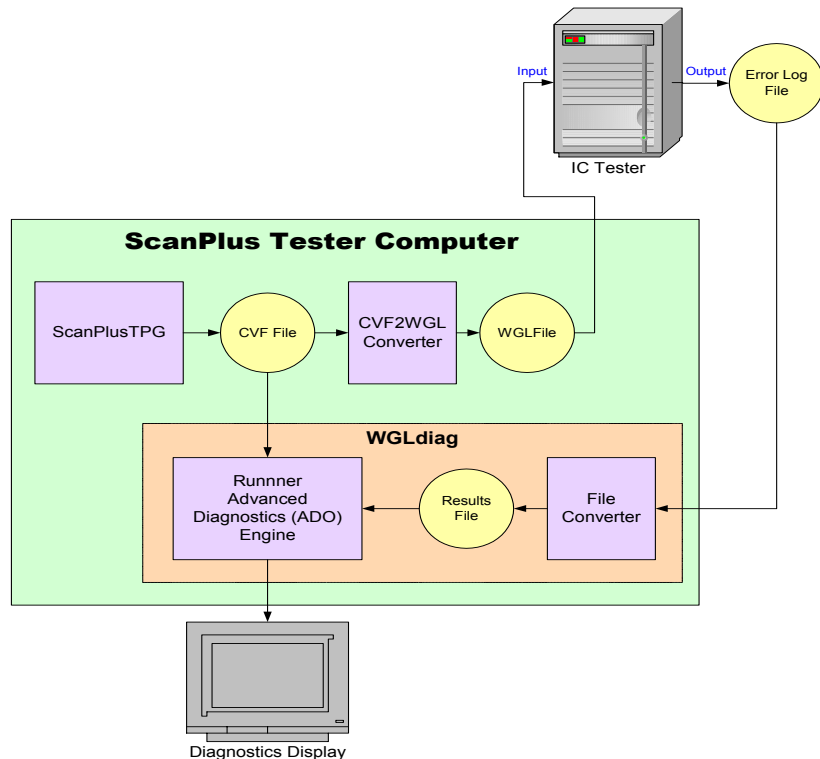


Figure 1 Typical Test Setup and Functional Diagram

Overview

IC, MCM, ASIC and SoC Tester manufactures offer powerful hardware and software solutions for both development and manufacturing but these testers are often very expensive to own and operate. The Corelis Boundary-Scan WGL Support Package was developed to effectively equip external testers with off-line boundary-scan test systems, such as the Corelis ScanPlus and ScanExpress systems, thereby greatly reducing the cost of test development and execution.

The Corelis Boundary-Scan WGL Support Package provides the user with the ability to generate test vectors off-line on a PC, transfer the test vectors to the external tester for execution, then download the captured boundary-scan test results

from the external tester back to a PC for diagnostics.

Functional Description

Waveform Generation Language (WGL), pronounced "wiggle", is a data description language. A WGL file is essentially a text file that contains signal patterns along with timing, diagnostics and other information. By converting the CORELIS proprietary Compact Vector Formatted files to a more universal file format such as WGL, tests can be run on third party testers such as the Agilent 93K semiconductor tester.

The migration of boundary-scan tests between the external tester and the remote PC is divided into two categories, each supported by a different software product:

1. **CVFtoWGL Converter** converts test vectors generated by ScanExpressTPG to WGL formatted files that can be run on external testers.
2. **WGL Diagnostics** converts the test results provided from the external tester to a compatible format used by the Corelis ScanPlus Runner Advanced Diagnostics (ADO) software to provide full boundary scan diagnostics capability.

CVFtoWGL Converter

The CVFtoWGL utility is a general purpose file converter utility that is used to convert standard Compact Vector Format (CVF) files that are generated by ScanExpress TPG into a go/no-go type WGL file format.

CVFtoWGL is an easy-to-use stand-alone utility program. It accepts a CVF file as its input and it generates from it a WGL file. It typically takes less than a second to convert an interconnect type CVF file to the WGL format. The program is Windows 2000/XP compatible and works on any Pentium based computer. Figure 2 shows the CVFtoWGL main window.

Additional features include the ability to specify signal timing information, add non-boundary scan I/O signal definitions, and input user defined comments to the WGL header during conversion.

WGL Diagnostics

The WGL Diagnostics tool augments the CVFtoWGL software by providing remotely displayed diagnostics information for boundary scan tests that are executed on an external tester. WGL Diagnostics enables the user to view boundary scan test results from an external tester on a remote PC, thereby minimizing expensive tester use-time and providing user friendly test results in a format similar to the popular Corelis ScanPlus Runner tool.

WGL Diagnostics takes the error log file generated by test platforms (such as the Agilent 93K, 83K, etc.) and converts this log to a meaningful result file that can be interpreted by the ScanPlus Runner advanced

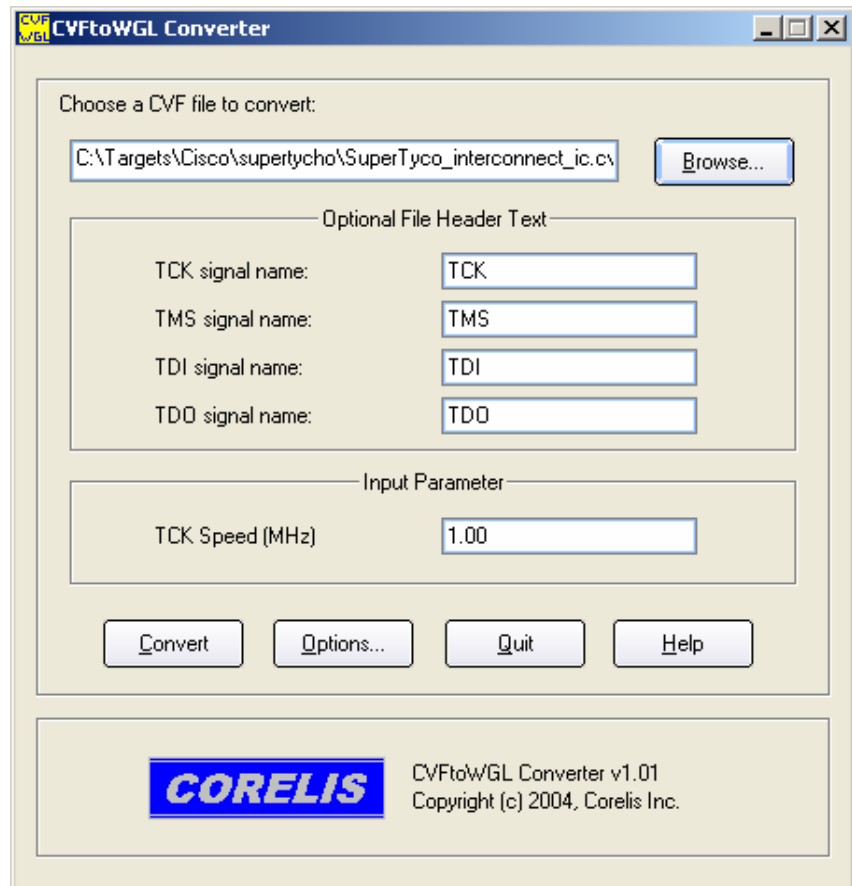


Figure 2 CVFtoWGL Converter Main Window

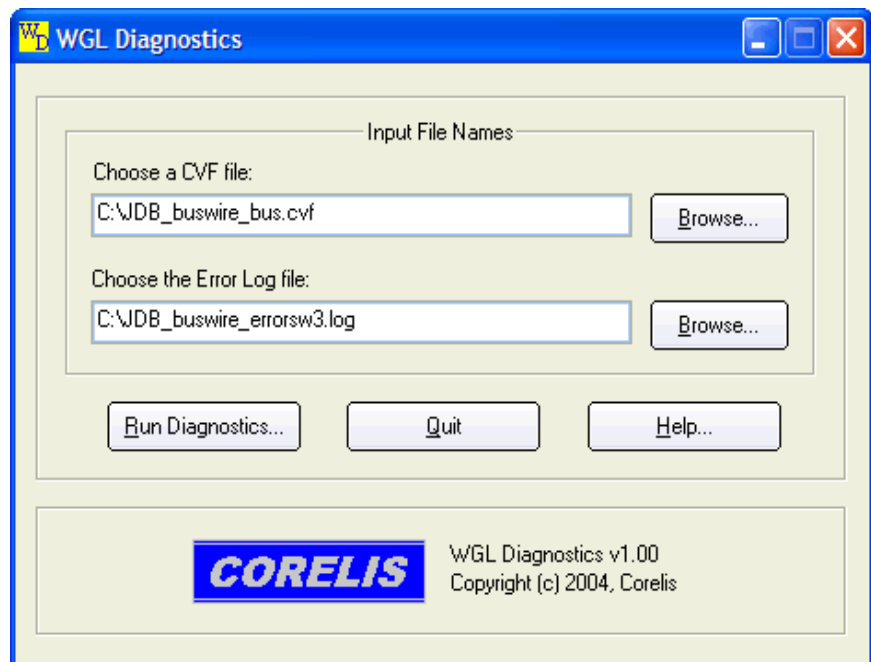


Figure 3 WGL Diagnostics Main Window

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