Sp3996 NAND Flash Memory Tester (SigNAS II)   SIGLEAD

Introduction

Easy-to-use NAND analyzer system providing effective solutions for operation verification of NAND memory given by various vendors; access time measurement, error analysis, detailed error causation analysis and measurement of ECC performance, etc. The system consists of a motherboard with FPGA (Altera Cyclone III); a daughterboard with TSOP/BGA socket for NAND; and Windows-based analysis software.

Features

1. Mother board (Sp3991)
- Altera Cyclone III has been deployed.
- NAND controller in configuration ROM
- USB 2.0 for PC connection
- Connection with 2 daughter boards, up to 4 NAND devices can be measured at the same time
- Customization is possible for advanced NAND measurements

2. Daughter board
- TSOP48pin socket is deployed for NAND memory
- For 1 daughter board, it is possible to deploy 2 NAND
- Other socket types (BGA etc.) are available

3. Analysis software
An easy-to-use GUI enables: (part of features)
- NAND interface timing setting
- NAND device ID information and status check
- Bad block scan, management
- Access time measurement
- P/E cycle dependence of access time
- Command Sending (erase, program, read)
- Program pattern setting
  (Increment, Pseudo Random, Page Stripe, etc.)

- Dump of read data and save to file
- P/E cycle
  (cycle number and program pattern programmable)
- Script execution (Siglead Script Language; SSL)
- Error rate measurement (Bit ER, Page ER after ECC)
- ECC power setting
  (code length and correctable bit number)
- Data retention measurement (time vs bit error)
- Program disturb measurement (P/E cycle vs bit error)
- Error distribution (page/column dependence)

Compatible NAND devices
- ONFI 4.1-based devices (SLC / MLC / TLC / 3D)
- NAND IF : Asynchronous / Synchronous / Toggle DDR
- Package : TSOP 48pin, BGA 63/100/132/152pin
- Correct operation of latest NAND have been verified.
  (Toshiba 15nm, Micron/Intel 16nm, Samsung 14nm)
- If a NAND device is not compatible, please contact us for the adjustment to achieve compatibility

Support
- 1 year technical support (telephone and email)
- 1 year free version-up/bug-fix of analysis software
- For support after 1 year since purchase, an extra support contract is needed

Deliverables
Deliverables of SigNAS consist of the following parts. Immediate analysis can be done at the date of delivery.
- Mother board (Sp3991)
- Daughter board with 2 TSOP sockets
- Analysis software
- NAND controller circuit and firmware
  (implemented in configuration ROM)
- Operation manual

Specifications introduced herein are subject to change by Siglead without notice

Please contact us for further works such as customization and peripheral circuit design

SIGLEAD Inc.

1-38-10-203 Nakagawachuo Tsuzuki-ku
Yokohama-city Kanagawa-ken
224-0003, Japan

■ Contact and Ordering Information
TEL/FAX : 045-509-1885
E-mail : info@siglead.com

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http://www.siglead.com