



Automated Hardware Diagnostics for your custom controller board



- For engineers and managers who would rather spend their time on product development, and not on diagnostics, Koizio software eliminates the majority of custom test code development.
- Koizio has assembled thorough functional test suites, in an extendible architecture, that offers development engineers more visibility, automation, and control of their hardware.
- Koizio diagnostics are used by the leading electronics companies for board bring-up and debug, environmental test, manufacturing test, power-on self-test (POST), technical support, and returns testing.

Key Benefits:

- Typical delivery in 2-10 days
- More visibility, automation and control
- Improved debug method finds problems earlier and quicker
- Leverage diagnostics across the entire product cycle
- Provides a repeatable process
- Reduce unit test time in manufacturing and power-on self-test
- Save 6 to 18+ man-months

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Kozio Diagnostics - quick sanity check of all components
UART Test Suite (all channels)
UART 0 Test Suite
UART data path walking 0's test
##### Passed!
UART data path walking 1's test
##### Passed!
Interrupt Test: UART transail interrupt
##### Passed!
UART 1 Test Suite
UART data path walking 0's test
##### Passed!
UART data path walking 1's test
##### Passed!
Interrupt Test: UART transail interrupt
##### Passed!
SDRAM memory: Data bus walking 0's test:
##### Passed!
SDRAM memory: Data bus walking 1's test:
##### Passed!
Memory bus noise test to address 0x405000
##### Passed!

Test 9 of 15

Flash Test Suite - Quick
Flash walking 0's test: flash address = 0xfc3c0000, bus width = 16
##### Passed!
Flash erase test: start address = 0xfc3c0000, and address = 0xfc3d0000
##### Passed!
I2C Discovery Test
##### Passed!
Scanning I2C devices on channel 0
Device #0 detected on I2C channel 0 at slave address 0x90
Device #1 detected on I2C channel 0 at slave address 0xa4
Device #2 detected on I2C channel 0 at slave address 0xa6
Device #3 detected on I2C channel 0 at slave address 0xa8
Device #4 detected on I2C channel 0 at slave address 0xaa
Scanning I2C devices on channel 1
##### Passed!
PCI Test Suite
PCI Discovery and Configuration Test on interface 0
##### Passed!
PCI Scan first pass:
PCI Interface 0, bus # 0
Device #0 - IOSEL #10: Function=0, DeviceID=0x027f, VendorID=0x1014
PCI Scan second pass:
PCI Interface 0, bus # 0
Device #0 - IOSEL #10: Function=0, DeviceID=0x027f, VendorID=0x1014

Test Suite Totals: 15 Passed, 0 Failed, 0 Aborted, Running time 2.229 secs
Enter selection-ins>

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Software Requirements:

- Koizio software runs directly on the processor board
- 1 MB of Flash Memory, 4MB RAM
- Serial connection for user interface
- Host-based terminal emulation program such as Tera Term

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kDiagnostics Main Menu -
1. Quick Sanity Test Suite
2. Full Test Suite
> 3. DMA Test Menu
> 4. Ethernet Test Menu
> 5. Flash Test Menu
> 6. I2C Test Menu
> 7. NAND Flash Test Menu
> 8. PCI Test Menu
> 9. SDRAM Test Menu
> 10. UART Test Menu
> 11. USB Host Test Menu
> 12. USB Device Test Menu
> 13. Misc Test Menu

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Key Features:

- Proven, fully-supported diagnostics
- Pre-configured for the specific hardware platform
- Direct hardware access via menu and shell interface
- Self-booting or loadable through a boot loader
- Develop or modify test suites on the fly
- Multiple levels of deep tracing for fault isolation
- Tests for performance, data-path, DMA and fault isolation
- Control execution flow via looping and branching
- Full programming capabilities of Flash, FPGA, CPLD, EEPROM
- Software sets up and reports: MMU, Expansion Bus timings & settings, SDRAM controller & timings, pin multiplexing, PCI ID selects & interrupt routing, UART speeds & divisor



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