Emerald-MM-8P

with

XILINX Chip Replacement (XC2S50)

Temperature Test Report

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END OF REPORT ..... ERROR! BOOKMARK NOT DEFINED.

Revision History:

Rev	Issue Date	Originator	Description
1.0	12/01/2010	Alex Tran	Initial Version Rev A

1. INTRODUCTION

This document describes the test results for two EMM-8P-XT serial I/O boards with the new XILINX chips installed at U1.

2. SETUP

a) The two boards were temperature tested at -40°C and +85°C.

b) Boards were powered on, and operational running Burn-In Passmark software.

c) The Burn-in Passmark program was set up to perform the following tests:

3. TEST DESCRIPTION

Serial port test

(Applicable to BurnInTest Pro version only)

Tests the serial communications ports connected to the PC. Up to 64 serial ports may be tested simultaneously. The serial ports and test speed can be selected from the Test Preferences window.

A serial port loop back plug per port is required to run this test. These can be purchased from the PassMark web site (www.passmark.com) or you can make them yourself.

Each loopback test cycle corresponds to about 10 seconds of data transmission followed by a signal pin test phase. The signal pin test phase checks that the following pins on the serial port are functioning correctly.

RTS – Request to Send

CTS - Clear to Send

DTR – Data terminal ready

DSR – Data set ready

The number of 'ops' corresponds to the number of bytes sent and received. The duty cycle affects the time spent waiting between cycles.

The serial port selected must not already be in use by Windows (for example by the mouse or an active modem), for the test to be carried out.

The speed that the serial port operates at is independent from the modem speeds. Even if you have a 56Kbit/s modem your serial port may operate at a higher speed. The maximum serial port speed depends on the type of chip installed on your motherboard. Most PC's will only do up to 115Kbit/s, so don't be

alarmed if the test fails at 128Kbit/s or above.

If the "detect only" option was selected in the preferences window then the loopback test will not be performed. The presence of the serial port in the system will still be checked for however.

The following information is displayed for each port being tested.

Serial Port

This is the Windows name for the serial port being tested. The port can be selected from the Test Preferences window. Any port between COM1 and COM64 is supported.

Speed

This is speed that the serial port is configured for. The speed can be selected from the Test Preferences window.

To cycle through each speed setting starting from the lowest to the highest, select either "Cycle to 115K" or "Cycle to 256K". In these cases a test of approximately 30 seconds will be carried out for each of the following speeds, in the following order:

300 Baud

600

1200

2400

4800

9600

14400

19200

38400

56000

57600

115200 (Cycle back to 300 Baud for "Cycle to 115K" option)

128000

256000 (Cycle back to 300 Baud for "Cycle to 256K" option)

Bytes Sent

This is the number of bytes that have been sent to the serial port.

Bytes Received

This is the number of bytes that have received from the serial port.

Errors

This is the number of errors detected.

Note: - From V4.1 1025 the Serial Port error reporting has been improved, with framing errors, buffer overrun errors, input buffer overflow errors, parity errors and Transmit buffer full errors now reported, rather than a broader error description.

Throughput

This is the real measured throughput for the port. This will generally be less than the Speed (see above) as there is some overhead in the code and in the data transmission itself (e.g. Stop bits).

4. TEST RESULTS

The two boards tested were:

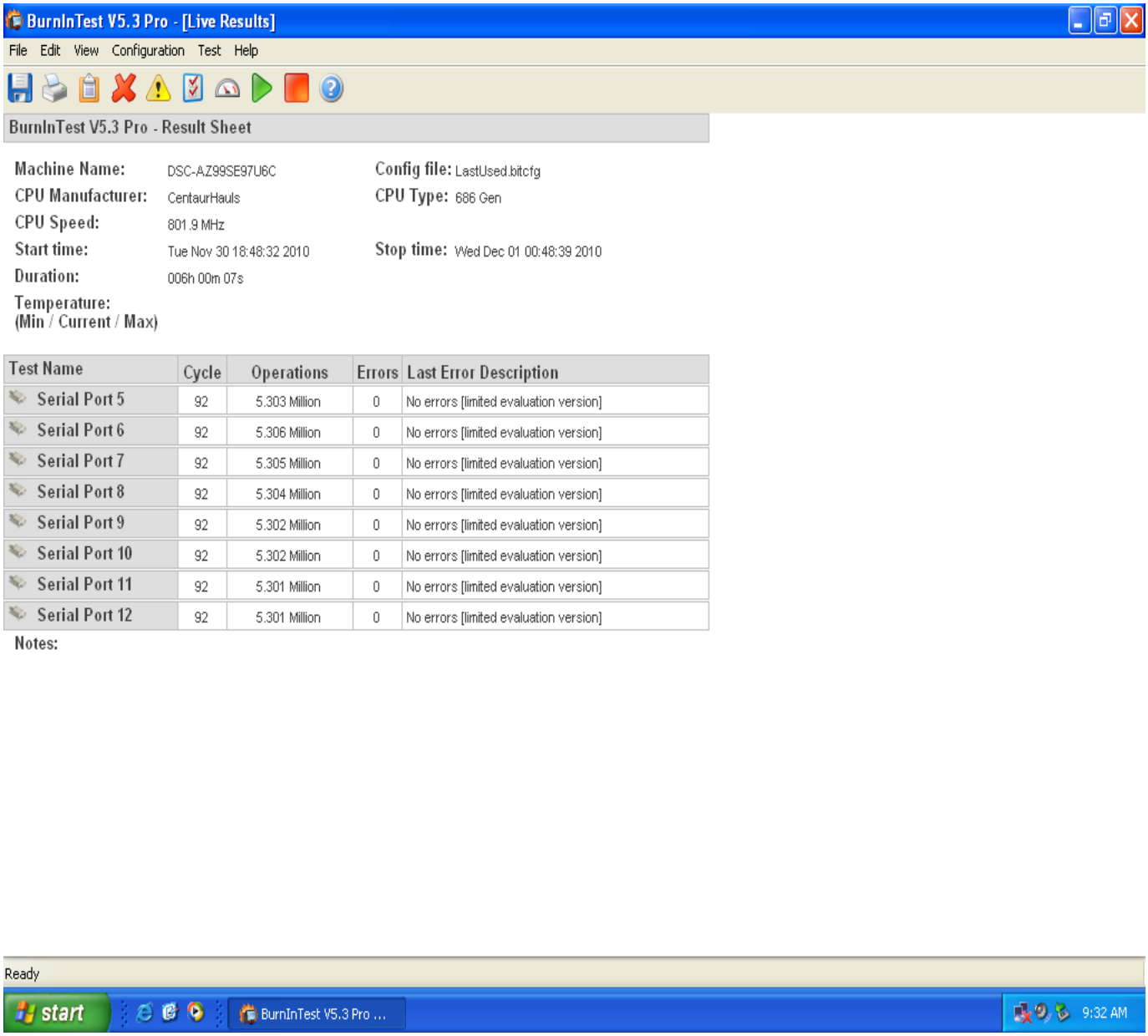
1. S/N W408840
2. S/N W408839

Both boards ***Passed*** temperature testing at -40^{o}C and +85^{o}C with no errors.

5. APPENDIX – TEST DATA

The complete PassMark log files can be found at: S:\Test Reports\EMM-8P-XT

Interpreting the results



BurnInTest V5.3 Pro - [Live Results]

File Edit View Configuration Test Help

BurnInTest V5.3 Pro - Result Sheet

Machine Name: DSC-AZ99SE97U6C
Config file: LastUsed.bitcfg
CPU Manufacturer: CentaurHauls
CPU Type: 686 Gen
CPU Speed: 801.9 MHz
Start time: Tue Nov 30 18:48:32 2010
Stop time: Wed Dec 01 00:48:39 2010
Duration: 006h 00m 07s
Temperature: (Min / Current / Max)

Test Name	Cycle	Operations	Errors	Last Error Description
Serial Port 5	92	5.303 Million	0	No errors [limited evaluation version]
Serial Port 6	92	5.306 Million	0	No errors [limited evaluation version]
Serial Port 7	92	5.305 Million	0	No errors [limited evaluation version]
Serial Port 8	92	5.304 Million	0	No errors [limited evaluation version]
Serial Port 9	92	5.302 Million	0	No errors [limited evaluation version]
Serial Port 10	92	5.302 Million	0	No errors [limited evaluation version]
Serial Port 11	92	5.301 Million	0	No errors [limited evaluation version]
Serial Port 12	92	5.301 Million	0	No errors [limited evaluation version]

Notes:

Ready

start BurnInTest V5.3 Pro ... 9:32 AM

SN # 408840

SN # W408839

This part of the main window displays a summary of all the results of all the tests that are currently running.

Test Name

This column shows a picture depicting the test type and the name of the test. Only those tests actually running are displayed.

Cycle

The number of test cycles that have been executed for a particular test. The meaning of a 'test cycle' varies from test to test. For example for the Printer test it is the number of full pages printed, for the Hard disk test it is the number of file write / verify cycles that have occurred. See the test description for more details about the significance of this field.

Ops (Operations)

The number of test operations that have been executed for a particular test. The meaning of a 'Operation' varies from test to test. For example, for the Printer test it is the number of characters printed, for the Hard disk test it is the number of bytes that have been written or verified. See the test description for more details about the significance of this field. The values are expressed in Units, Millions, Billions, Trillions and Quadrillions.

Errors

The number of errors that have been encountered while the test has been executing. This value should normally stay at zero. A value of greater than zero indicates there has been an error in the hardware or the software controlling the hardware. In some cases it is possible for the computer to self-detect an error. (such as the math's and disk tests). In other cases the user must check themselves that no error has occurred (e.g. Is there sound coming from the speakers? Are printouts complete, clear and legible?).

Here is a Results Summary from those Logfiles:

Serial Number	Bit_Log		Note: ~ 16 Hrs @ -40°C ~4 Hrs @ +85 °C
W408840	Start	Nov-30	18:48 P.M.
	Stop	Dec-01	00:48 A.M.
	PASS	Duration	
W408839	Start	Dec-01	12:29 P.M.
	Stop	Dec-02	9:24 A.M.
	PASS	Duration	

End of Report