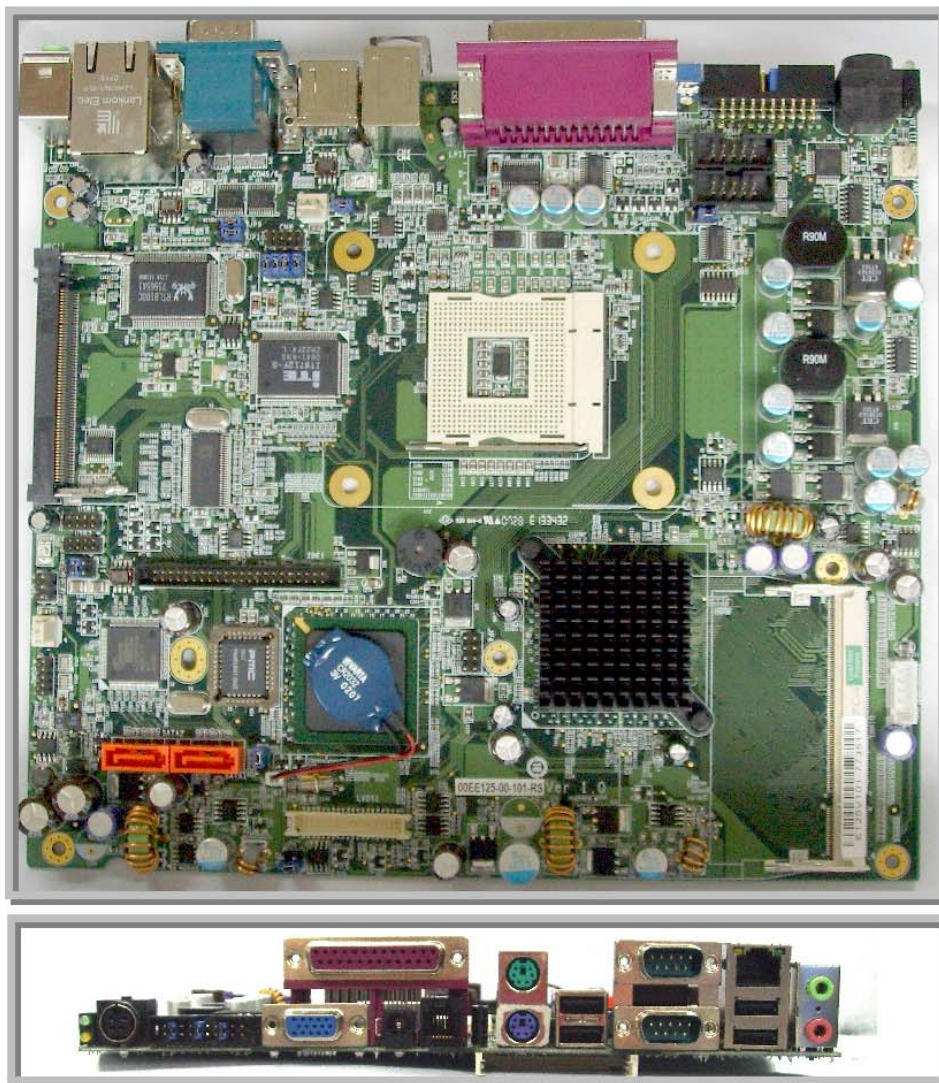




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ICP Electronics, Inc.

B Test Report

TYSSO-7000



One-Piece Flow Lean Management · Do It Right The First Time !

UEMS

Unique Electronic Manufacturing Service



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ICP Electronics, Inc.

ICP TYSSO-7000 B Test Report

Created By:	Fanny Hsieh	Revised By:	Mars Jiang
Date Created:	2007/7/18	Date Last Updated:	2007/08/04
BIOS Version:	E125MR13	PCB Version	1.01
Revision:	V1.0	Sample Quantity	3

Executed By:	Fanny Hsieh
Date Completed:	2007/08/04
Test Enginner:	Fanny Hsieh
Result decide	Pass (under SPEC)



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1.0 Introduction

The following procedure should be followed for testing all hardware compatible products. These are generic tests that will help ensure hardware compatibility with other PC devices and software. Any board-specific features should be tested accordingly. Because this test plan is a generic test plan that doesn't cover features that vary and are specific to the Mother Board and the BIOS it is using other test plans may be required. See the BIOS test plan for tests specific to BIOS feature validation. Use the touch screen validation test plan for touch screen validation etc. Features tested in other test plans do not need to be repeated for this test plan.

The test results should be recorded individually as each test is performed. If all of the listed sections of each test pass then check the passed box. If a failure occurs in any given section of a test then make a note of the failure in the comments space for that test. If the tests do not pass, or cannot be run, then check the failed box. Log any anomalies even if it's not considered a failure.

BIOS revision, Driver revision, OS type and revision (i.e. Service Pack) and test software revision information must be recorded here (for tracking purposes, when identifying or attempting to recreate issues during debug).

Specific instructions needed to load the drivers correctly must also be recorded here if there are any. They may be placed in the Appendix. B

The tests are divided into several categories:

- Diagnostics
- Benchmarks
- Applications
- Operating Systems
- Hardware compatibility



2.0 Functional Exercises

2.1 Test Software

Microsoft DOS	Revision 6.22
Microsoft Windows 2000	Revision SP4
Microsoft Windows XP Professional	Revision SP2
QTpro for DOS	Revision 4.8
BurnInTest.Pro	Revision V5 1001
Hardware Compatibility Test (HCT)	Revision 11.2
HD Tach	Revision 3.01
SiSoftware Sandra	Revision 2007.9.10.105
PCMark 2005	Revision 1.01
3DMark® 2001	Revision 1.0
3DMark 2001 SE	Revision 3.3
CINEBENCH 9.5	Revision 1.0
M.C.C Winstone 2004	Revision 1.01
Business Winstone 2004	Revision 1.01



3.0 Hardware Test Result

Name	ICP Model No.	Date	BIOS Version / File Name
E125	TYSS0-7000	2007/7/18	E125MR13 06/25/2007

Test Item	Test Description	Test Result (Pass/Fail)	ReMark
	Setting CPU Type [JP2]	Pass	
	Clear CMOS [JP8]	Pass	*1
	LCD Voltage Setup [JP6]	Pass	
	K/B Use Selection [JP5]	Pass	
	COM1,COM2 Port RI and Voltage Selection [JP11]	Pass	*2
	COM3,COM4,COM5 Port RI and Voltage Selection [JP1]	Pass	
	COM6 RS232 or RS422/485 Selection [JP9]	Pass	
	COM6 RS232 or RS422/485 Selection [JP7]	Pass	
	COM6 RS422 or RS485 Selection [JP10]	Pass	
	LCD Type BIOS Select [JP4]	N/A	*3
	Power Button [CN9 5-6]	Pass	
	PWR LED [CN9 1-2]	Pass	
	HDD LED [CN9 3-4]	Pass	
	Reset Button [CN8]	Pass	
	Speaker	Pass	
	AUDIO Jack-In Connectors [AUDIO1]	Pass	
	ATX 4PIN Power Connectors [CN2]	Pass	
	RJ-11 DIO Connectors [CN3] [280h]	Pass	*4



	IDE1	Pass	
	SATA1	Pass	
	SATA2	Pass	
	CF1	Pass	
	LPT1	Pass	
	COM port Connector [COM2~COM6]	Pass	
	KB Pin Header Connector [CN6]	Pass	*5
	USB Connector [CN5A/B USB1/2 CN7B]	Pass	*6
	CN7A: 100M-LAN RJ45 Connector	Pass	
	VGA1	Pass	
	VGA_POWER1: DC POWER Jack	Pass	
	CN1:INVERTER Connector	Pass	
	Fan Connector [FAN1 /FAN2]	Pass	
Memory Test	DIMM1	Pass	
OnBoard Function Test	VGA connector	Pass	
	Keyboard connector	Pass	
	PS/2 connector	Pass	
	IDE connector	Pass	
	SATA connector	Pass	
	Compact Flash connector	Pass	
	Lin-Out	Pass	
	MIC-In	Pass	
Add on Card Slot	MPIC1	Pass	



測試註記:

- *1. Clear CMOS Short JP8 不會出現 CMOS Error 畫面!
- *2. EE RD 表示 COM1 提供予 Touch 使用; COM1, COM2 Port RI and Voltage Selection [JP11], 實際測試 COM2 Jumper Setting [2-4 為 5V; 4-6 為 12V] 與實測結果 [2-4 為 12V; 4-6 為 5V] 不符!! , 請 EE RD 再次確認其功能, 必要時請修改 Jumper Setting!! (Jumper setting 已修正)
- *3. LCD Type BIOS Select [JP4] 詢問 EE RD 表示此項功能 BIOS 尚未 Ready 故無法測試!!
- *4. RJ-11 DIO Connectors [CN3] [280h] 使用收銀機抽屜測試 Pass! 預設 280h = 0F ; 280h = F0
- *5. KB Pin Header Connector [CN6] Test 使用客供刷卡機治具, 測試 Pass!!; 連接線僅接前 6pin!!
- *6. USB Connector [CN5A/B USB1/2 CN7B] Test, Jumper setting 標示有誤! CN5A/B 寫成 CN3A/B, 已通知 EE RD 修改 Jumper Setting!! (Jumper setting 已修正)
- *7. IDE connector 測試過最大容量 HDD: Seagate ST3750640A/P 750GB;7200RPM
- *8. SATA connector 測試過最大容量 HDD: Seagate ST3500630AS/P 500 GB;7200RPM
- *9. Thermal Analysis Result : U2 ISL6614ACBZ 零件測得溫度超過 85°C 以上! (使用客供散熱片附風扇 以及 U2 週圍貼附客供散熱片) (由客戶同意放行)



4.0 Operation System Test Result

System Configuration :

BIOS : E125MR13 08.00.11 06/25/2007
 CPU : Intel Pentium 4 2.40GHz FSB:533MHz
 Memory : Kingmax MSAD42D-D8MH3 1GB DDR333 SODIMM
 VGA Card : Onboard Intel 82852GM
 HDD : TOSHIBA MK4025GASHDD2190 40GB;4200RPM; IDE 2.5" HDD
 CD-ROM : 華碩 DVD ROM CB-5216A COMBO
 O.S. : Windows XP professional version 2002 service pack 2
 Power : EDACPOWER EA11603A

Test Description	Test Result (Pass/Fail)	Remark
DOS 6.22	<i>Pass</i>	
Windows 98se / 2K / XP / Vista(32bit)	<i>Pass</i>	
WinPOS (XPE)	<i>Pass</i>	
Linux (Fedora Core 7)	<i>Pass</i>	
SUSE 10	<i>Pass</i>	
Madriva Linux 2006/2007	<i>Pass</i>	

註: 如果有其它的測試項目請自行增減



4.1 Temperature Test Result

System Configuration :

BIOS : E125MR13 08.00.11 06/25/2007
 CPU : Intel Pentium 4 2.40GHz FSB:533MHz
 Memory : Kingmax MSAD42D-D8MH3 S/N:E6C003209001 MDB 1GB DDR333
 VGA Card : Onboard Intel 82852GM
 HDD : WD WD1600JB/P 160GB;7200RPM IDE 3.5" HDD
 O.S. : Windows XP professional version 2002 service pack 2
 Power : EDACPOWER EA11603A

Temp.	Test Description	Test Result (Pass/Fail)	Test Application
60℃	Burn-in 12 Hours	Pass	HCT 11.2 System Stree
25℃	Burn-in 12 Hours	Pass	HCT 11.2 System Stree
-20℃	Burn-in 12 Hours	Pass	HCT 11.2 System Stree

4.2 Power On/Off Test Result

Temp.	Test Times	Pass Times	Fail Times	Remark
60℃	1760	1760	0	Pass ATX
常溫	7134	7134	0	Pass ATX
-20℃	1361	1361	0	Pass ATX

CF Card OS:DOS



5.0 Hardware Test Log

Please include a description of all hardware used during testing. Model and Serial number are important.

5.1 EUT Information (Misc.)

5.1.1 CPU:

Mfg.:	Model:	Capacity/Speed:	Interface / Manufacturing Technology	Description:
Intel	Mobile Celeron	1.20GHz FSB:400MHz	478 pin 0.13 micron	L2: 256KB / 20.8W
Intel	Celeron	2.80GHz FSB:400MHz	478 pin 0.13 micron	L2: 512KB / 68.4W
Intel	Pentium 4 - M	1.70GHz FSB:400MHz	478 pin 0.13 micron	L2: 512KB / 30W
Intel	Pentium 4	2.40GHz FSB:533MHz	478 pin 0.13 micron	L2: 512KB / 59.8W

5.1.2 Memory:

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
Transcend	S/N:132994-0425[QL]	1GB DDR400 CL3	SODIMM DDR	B9501409 hynix HY5DU12822C FP-D43 608AA
Kingmax	MSAC22F-D8KT3 S/N:E6C008802001 FAB	512MB DDR333	SODIMM DDR	B9600543 Kingmax KDLD88P4LAG- 53X
Transcend	S/N:130125-0016[TK]	256MB DDR400 CL3	SODIMM DDR	B9501411 hynix hy5DU121622CTP-D43 602U
Transcend	S/N:154412-0553[LF]	512MB DDR333 CL2.5-3-3	SODIMM DDR	B9507977 hynix HY5DU12822CTP-D43 647AC



Apacer	S/N:200537316312	512MB PC3200 CL3 DDR400	SODIMM DDR	B9305532 0528PR V58C2256804SAS5
Apacer	S/N:2004397-90129	256MB PC2700 CL2.5 DDR333	SODIMM DDR	B9305533 0432VR V58C2256804SAT5B
Kingmax	MSAD42D-D8MH3 S/N:E6C003209001 MDB	1GB DDR333	SODIMM DDR	B9600542 6ND22 D9FBN
Trascend	TS64MSD64V6M	512MB DDR-266 CL2.5	SODIMM DDR	B9507978 hynix HY5DU121622CTP-D43
Kingston	KVR400X64SC3A	512MB DDR400	SODIMM DDR	B9501408 hynix HY5DU121622CTP-D43
Transcend	TS64MSD64V4	512MB DDR400	SODIMM DDR	B9501410 Samsung

Test program: Memtest 86+ v1.70 & BurnInTest.Pro.v5.0.Build.1001

5.1.3 Hard drive:

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
Seagate	ST3750640A/P	750GB;7200RPM	IDE	3.5" HDD B9606968
Seagate	ST330831A	300GB;7200RPM	IDE	3.5" HDD B9404207
WD	WD1600JB/P	160GB;7200RPM	IDE	3.5" HDD B9606962
TOSHIBA	MK4025GASHDD2190	40GB;4200RPM	IDE	2.5" HDD B9503321
Seagate	ST3500630AS/P	500 GB;7200RPM	SATA II	3.5" HDD B9505878
Seagate	ST3160023AS	160G;7200RPM	SATA	3.5" HDD B9304594
WD	WD12 00BEVS- 22LAT0 01.0	120GB;7200RPM	SATA	2.5" HDD B9505543
Seagate	ST380013ASS	80G;7200RPM	SATA	3.5" HDD B9300006



5.1.4 Compact Flash:

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
Transcend	136524R 0334 6600 22 128MCP	128MB / 80X	CF	
Apacer	AP-CF128MC2CG-NR	128MB	CF	For Industry
SanDisk	EXTREME III CF-2GB	2GB	CF	B9402584
PQI	AC65-1280R0444	128MB	CF	
PQI	AC65-2560R0444	256MB	CF	
PQI	AC65-5120R0444	512MB	CF	

5.1.5 CD-ROM drive:

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
ASUS	CB-5216A	16X DVD-ROM	IDE	COMBO B9402743
LITE-ON	SHD-16P1S	16X DVD-ROM	IDE	
BENQ	1650T-0N2	16X DVD-ROM	IDE	
Pioneer	DVR-A09XLA/B/C	16X DVD-ROM	IDE	DVD-RW B9402730



5.1.6 USB device:

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
威剛	PD4	512MB	USB2.0	Flash Disk B9403787
TRANSCEND	JF110	512MB	USB2.0	Flash Disk B9402389
TRANSCEND	JF110	256MB	USB2.0	Flash Disk B9500449
Thermaltake	Muse A2291		USB	HDD B9604493
Microsoft	X800898-134		USB	Mouse
捷元	HE3003(GM3S-3003B)		USB	Mouse
Microsoft	RT2300		USB	Keyboard
新巨	WK-715		USB	Keyboard
Sony	MPF82E-U1	1.1	USB	Floppy
MITSUMI	D353FUD	1.1	USB	Floppy
ASUS	CRW-5232A-U/QT	52X CD-ROM	USB 2.0	CD-RW B9401969

5.1.7 Power Supply:

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
EDAC	EA10953A	12~17V Max: 80W	DC Output	6.6A
EDAC	EA11603A	12~17V Max: 150W	DC Output	10.0A



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5.1.8 Panel Type:

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
AUO	M150XN07	15"	LVDS	3.3 V

5.1.9 Add on Card (PCIR-168):

Mfg.:	Model:	Capacity/Speed:	Interface:	Description:
WESTMINSTER	WN-4401C	IEEE 802.11g	Mini PCI	Wireless LAN card B9400308
RTL8185L	M01-WM252-D10	IEEE 802.11g	Mini PCI	Wireless LAN card
Texas Instruments	M01-WMG24-E20	IEEE 802.11g	Mini PCI	Wireless LAN card
QNAP	Promise PDC40718-GP	SATA II	Mini PCI	SATA 4 Port card



6.0 System Performance Test

System Configuration :

BIOS : E125MR13 08.00.11 06/25/2007
 Memory : Transcend S/N:154412-0553[LF] 512MB DDR333 CL2.5-3-3
 VGA Card : Onboard Intel 82852GM
 HDD : WD 3.5" SATA HDD ST3160023AS 160G; [B9304594]
 CD-ROM : BENQ 1650T 16X DVD-ROM
 O.S. : Windows XP professional version 2002 service pack 2
 Power : EDACPOWER EA11603A

Program \ CPU	Intel Pentium 4 2.40GHz FSB:533MHz L2:512KB SL6PC 59.8W 0.13 micron	Intel Celeron 2.80GHz FSB:400MHz L2:128KB SL77T 68.4W 0.13 micron	Pentium 4 - M 1.70GHz FSB:400MHz L2:512KB SL5Z7 30W 0.13 micron	Intel Mobile Celeron 1.20GHz FSB:400MHz L2:256KB SL7MG 0.13 micron
Business Winstone 2004 V1.01	13.7	11.7	13.2	9.9
C.C Winstone 2004 V1.01	16.8	15.1	15.3	11.3
3DMark2001SE330 ® 2005 V1.2	1351	1150	1358	1287
CINEBENCH 9.5 Ver: 1.0	179	145	162	111
PC Mark2005 build 1.0.1	PC Mark: N/A CPU: 2132 Memory: 2077 Graphics: N/A HDD: 4898	PC Mark: N/A CPU: 2667 Memory: 1311 Graphics: N/A HDD: 4838	PC Mark: N/A CPU: 1777 Memory: 2034 Graphics: N/A HDD: 4900	PC Mark: N/A CPU: 1420 Memory: 1611 Graphics: N/A HDD: 4885
SiSoftware Sandra 2007.9.10.105 Processor Arithmetic Benchmark*1	ALU: 4056 ISSE2: 3402	ALU: 6307 ISSE2: 5281	ALU: 3776 ISSE2: 3221	ALU: 2661 ISSE2: 2248
SiSoftware Sandra 2007.9.10.105 Processor Multi-Media Benchmark*2	Integer: 11162 it/s Float: 12662 it/s	Integer: 17361 it/s Float: 19661 it/s	Integer: 10516 it/s Float: 12227 it/s	Integer: 7416 it/s Float: 8412 it/s
SiSoftware Sandra 2007.9.10.105 Memory Bandwidth Benchmark*3	Integer: 1503 MB/s Float: 1498 MB/s	Integer: 1387 MB/s Float: 1472 MB/s	Integer: 1457 MB/s Float: 1458 MB/s	Integer: 1432 MB/s Float: 1441 MB/s



HD Tach V3.0.1.0 – Read Speed IDE Port (WD 3.5" WD1600JB/P 160G)	Average Read Speed: 31.5 MB/s CPU utilization: 4 % (+-2%) Burst Speed: 32.2 MB/s
HD Tach V3.0.1.0 – Read Speed IDE Port (Seagate 3.5" ST3750640A/P 750G)	Average Read Speed: 31.7MB/s CPU utilization: 2 % (+-2%) Burst Speed: 32.5 MB/s
HD Tach V3.0.1.0 – Read Speed SATA Port1 (WD 2.5" WD12 00BEVS-22LAT0 01.0 120G)	Average Read Speed: 33.1 MB/s CPU utilization: 4 % (+-2%) Burst Speed: 111.9 MB/s
HD Tach V3.0.1.0 – Read Speed SATA Port1 (WD 3.5" ST3160023AS 160G)	Average Read Speed: 46.8 MB/s CPU utilization: 5 % (+-2%) Burst Speed: 106.4MB/s
HD Tach V3.0.1.0 – Read Speed SATA Port2 (Seagate ST380013ASST 3.5" 80G) B930006	Average Read Speed: 47.3 MB/s CPU utilization: 4 % (+-2%) Burst Speed: 102.2 MB/s
HD Tach V3.0.1.0 – Read Speed SATA Port2 (ST 3.5" ST3500063 0AS 3 AA 500G SATA II)	Average Read Speed: 64.6 MB/s CPU utilization: 4 % (+-2%) Burst Speed: 116.7 MB/s

***1 Processor Arithmetic Benchmark**

ALU Dhrystone ALU MIPS

ISSE2 Whetstone iSSE2 MFLOPS

***2 Processor Multi-Media Benchmark**

... Integer. Integer iSSE2 it/s

Float Floating-Point iSSE2 it/s

***3 Memory Bandwidth Benchmark**

Int Buff RAM Bandwidth Int Buff'd iSSE2 MB/s

Float Buff RAM Bandwidth Float Buff'd iSSE2 MB/s

***4 Display Resolution: 1024x768, 32 bit Color**



6.1 Power Consumption

System Configuration :

BIOS : E125MR13 08.00.11 06/25/2007
 CPU : Intel Celeron 2.80GHz FSB:400MHz L2:128KB SL77T 68.4W 0.13 micron
 Memory : Transcend S/N:154412-0553[LF] 512MB DDR333 CL2.5-3-3
 VGA Card : Onboard Intel 82852GM
 HDD : WD 3.5" SATA HDD ST3160023AS 160G; [B9304594]
 O.S. : Windows XP professional version 2002 service pack 2
 Power : EDACPOWER EA10953A
 Application : 3D mark 2001 SE330

	3.3V	5V	5Vsb	12V	-12V	Total
Max. (Run 3D mark 2001 SE330 Benchmark 1 loop)	N/A A	N/A A	N/A A	5.94 A	N/A A	71.28 W



6.2 Thermal Analysis Result

Hardware Test Equipment

Infrared Thermography

Company	: NIPPON AVIONICS CO.,LTD.
Model	: Neo Thermo TVS-700

TVS-700 Specifications

Temp. Range	: -20°C ~ 500°C
Temp. Resolution	: 0.08°C at 30°C Black Body (0.05°C or less with averaging)
Frame Rate	: 30Hz (NTSC)
Detector	: 320(H) x 240(V) Uncooled Microbolometer
Spectral Range	: 8 to 14μm
FOV	: 26.0°(H) x 19.6°(V)
Spatial Resolution	: 1.4 mrad
Focus Range	: 30cm to ∞
Correction	: Emissivity /Reflection Correction, Amb. Temp. Correction, Drift Correction, 2 Point Correction
Display	: 3.8" Color LCD Monitor, Color View Finder (option)
Range Setting	: Auto Range Setting(Auto Sens, Auto Point), Manual Setting
Image Improvement	: Averaging (2,4,8,16)
Operating Temp.	: 0°C to 40°C





Software Test Programs & Tools

1	Passmark Burn-In Test (Loading Test for Windows)
2	TVS Viewer 3
3	TAS Thermal Analysis Utility

6.2.1 CPU : Intel Celeron 2.00GHz FSB:400MHz

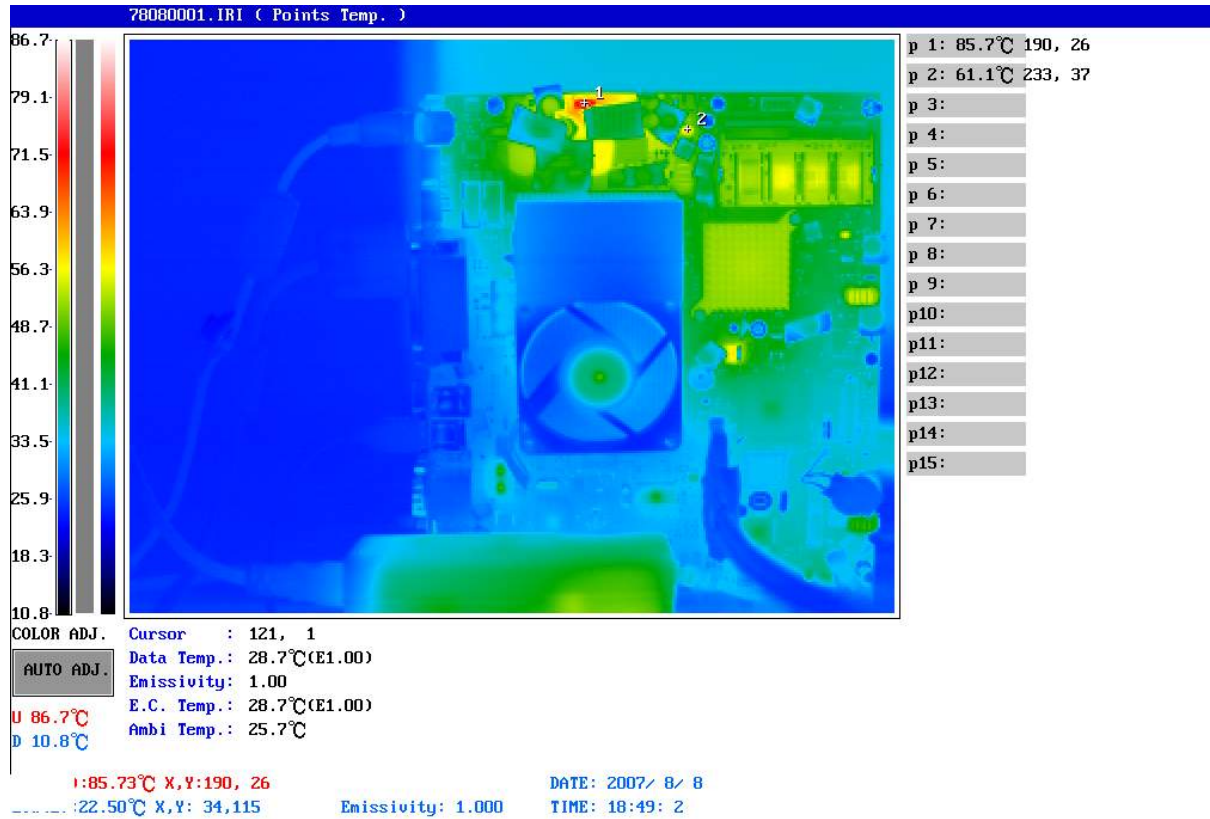
6.2.1.1 System Configuration :

BIOS : E125MR13 08.00.11 06/25/2007
 Memory : Transcend S/N:154412-0553[LF] 512MB DDR333 CL2.5-3-3
 VGA Card : Onboard Intel 82852GM
 HDD : WD 3.5" SATA HDD ST3160023AS 160G; [B9304594]
 CD-ROM : BENQ 1650T 16X DVD-ROM
 O.S. : Windows XP professional version 2002 service pack 2
 Power : EDACPOWER EA11603A



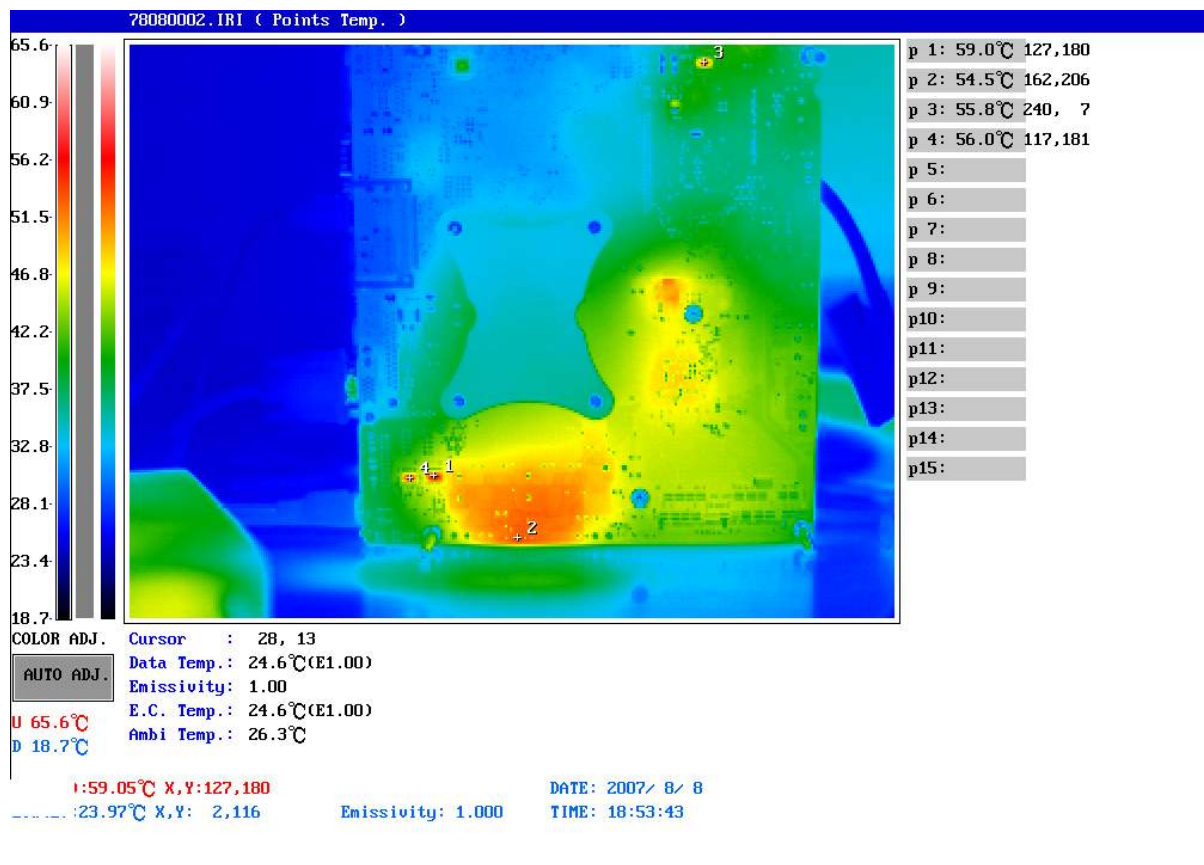
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6.2.1.2 Front Side





6.2.1.3 Back Side



6.2.1.4 High Temperature Area

Chipset Temp.	U2 其他 IC DRIVER; ISL6614ACBZ; INTERSIL	U37 INTERFACE IC; GD75232PWR; TI	U36 INTERFACE IC; GD75232PWR; TI	Q26 POWER MOSFET; NTD4806NT4G;	U43 INTERFACE IC; GD75232PWR; TI	Q4 LINEAR IC; RT9173BPS; RICH-TEK
	85.7°C	59°C	56°C	67.4°C	55.8°C	61.1°C



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6.3 USB 2.0 High Speed Compliance Test

6.3.1 Signal Quality Test Results in Tek format

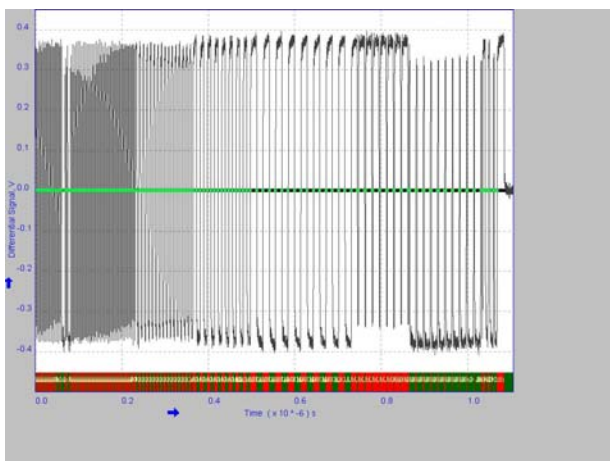
Device ID: E125 V1.01

Device Description: High Speed, Near End Device, Down Stream Testing, Tier 6, USB 03.

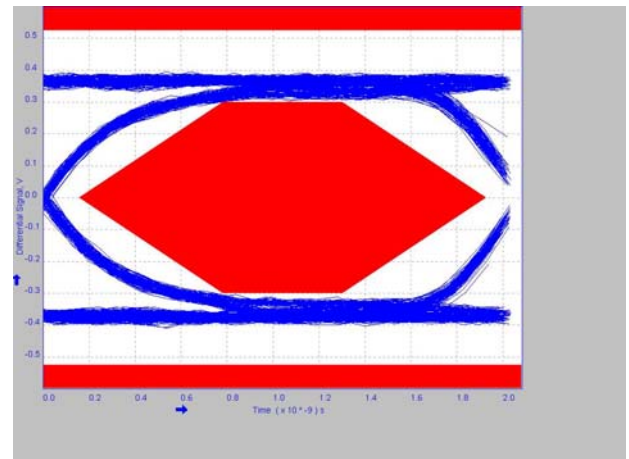
Date: Thu Aug 02 13:16:15 PDT 2007

Overall Result: **Pass***

6.3.1.1 Waveform Plot



6.3.1.2 Eye Diagram





6.3.2 Results based on USB-IF / Waiver Limits :

Measurement Name	Minimum	Maximum	Mean	pk-pk	Standard Deviation	RMS	Population	Status
Monotonic Property	-	-	-	-	-	-	0	Pass
Eye Diagram Test	-	-	-	-	-	-	-	Pass
Signal Rate	470.9307 Mbps	488.7218 Mbps	480.0636 Mbps	0.0000 bps	2.139223 Mbps	480.3455 Mbps	513	Pass
EOP Width	-	-	16.49576ns	-	-	-	1	Pass
EOP Width (Bits)	-	-	7.919016	-	-	-	1	Pass
Rise Time	851.4768 ps	1.240255 ns	1.016880 ns	388.7781 ps	75.54161 ps	1.019656 ns	107	Pass
Fall Time	904.2411 ps	1.349666 ns	1.032456 ns	445.4253 ps	86.55368 ps	1.036044 ns	107	Pass

Monotonicity test is performed on the test limits of 15.0% and 85.0%.

*The Overall Result for this test is **Pass**, because one or more individual status of the measurements is **Pass**. For this test, the recommended configuration for USB2 testing (as per USB-IF) is on Tier 1.

6.3.3 Bus-Powered Droop Test Results in Tek format

Device ID: E125 V1.01 USB Droop Test

Device Description: High Speed , 03.

Date: Thu Aug 02 15:09:05 PDT 2007

Droop Test Result: **Pass**

Measurement Name	Measured Droop Voltage	USB Limits	Status
Droop Test	220.00mV	<330mV	Pass

Droop value measured at: Port 1 of HUT



6.4 SATA Signal Measurement Test

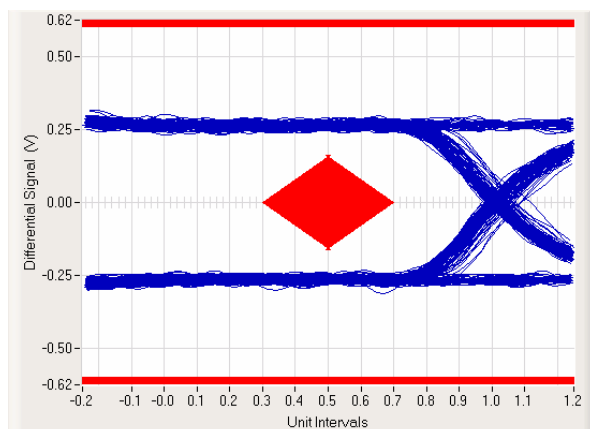
6.4.1 SATA 1

6.4.1.1 Signal Measurement

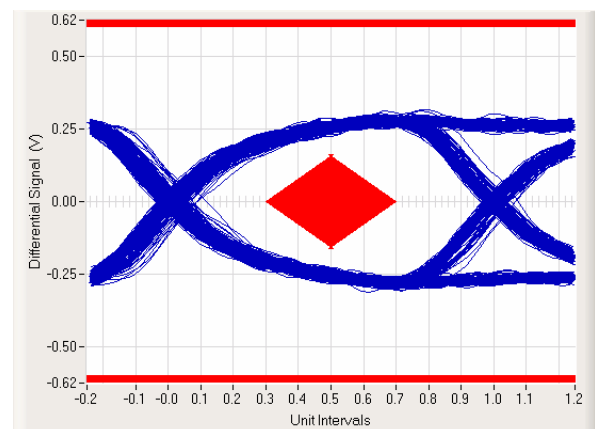
Test Description	Test Result (Pass/Fail)	Remark
Data Rate	Pass	Data Rate (Gb/s): 1.500061
Median to Peak Jitter	Pass	Mean : 57.077138 ps Max : 57.077138 ps Min : 44.351895 ps
Peak to Peak Jitter	Pass	Mean : 83.202024 ps Max : 102.749696 ps Min : 65.563542 ps
Transition Eye Violations	Pass	Minimum : -0.311203 volts Maximum : 0.315656 volts Minimum Non : -0.312 volts Maximum Non : 0.315656 volts

6.4.1.2 Eye Diagram:

Worst Non Transition Signal Eye



Worst Transition Signal Eye





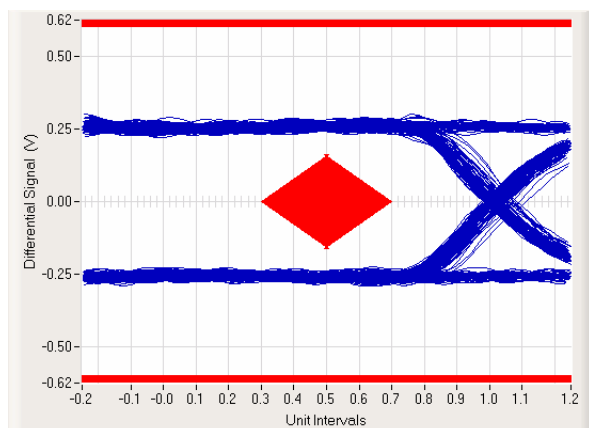
6.4.2 SATA 2

6.4.2.1 Signal Measurement

Test Description	Test Result (Pass/Fail)	Remark
Data Rate	<i>Pass</i>	Data Rate (Gb/s): 1.500063
Median to Peak Jitter	<i>Pass</i>	Mean : 55.289459 ps Max : 75.802166 ps Min : 41.298346 ps
Peak to Peak Jitter	<i>Pass</i>	Mean : 84.273579 ps Max : 108.140672 ps Min : 68.657614 ps
Transition Eye Violations	<i>Pass</i>	Minimum : -0.292 volts Maximum : 0.294187 volts Minimum Non : -0.296 volts Maximum Non : 0.3 volts

6.4.2.2 Eye Diagram:

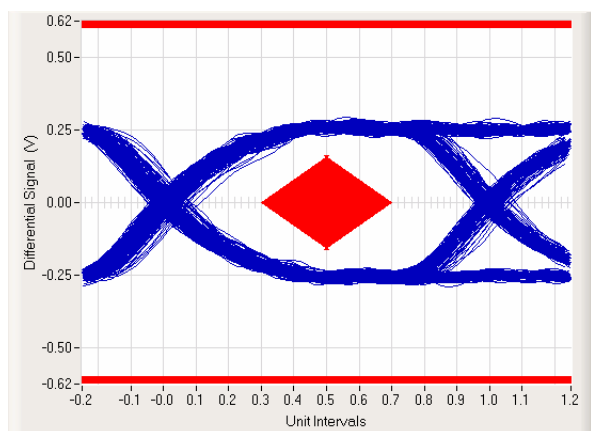
Worst Non Transition Signal Eye



Worst Transition Signal Eye



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6.5 NuStreams IPC NIC Test

6.5.1 System Information

Master Version	0.22
Agent Version	0.94
Linux Kernel Version	2.6.3-4mdk
Model Name	E125 V1.01
CPU Vendor	Intel(R) Celeron(R) CPU 2.80GHz
CPU Frequency(MHz)	2800.397
Cache (KB)	128
Memory (KB)	483064

6.5.2 Test Time

Test Begin Time	8/3/2007 10:13:46 PM
Test End Time	8/3/2007 11:33:44 PM

6.5.3 Data Integrity Test Setting

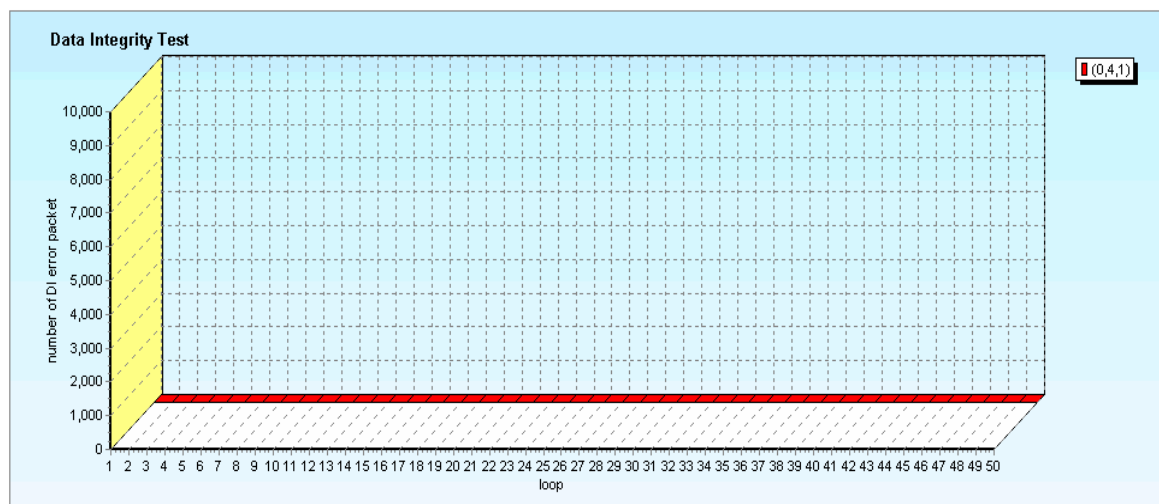
Port Number	(0, 4, 1)
NIC Vendor	eth0: Realtek RTL-8139
Test Media Type	100FULL
Test Loop	50 loop
Frame Count Per Loop	3
Frame Length	1514 byte
Frame Gap	9602 bit time

6.5.4 Data Integrity Test Result

Port Number	(0, 4, 1)
MAC Address	00-E0-4C-77-12-58
Total Frame Count	150
DI Error Count	0



6.5.5 Data Integrity Test Status Chart



6.5.6 Transmit Performance Test Setting

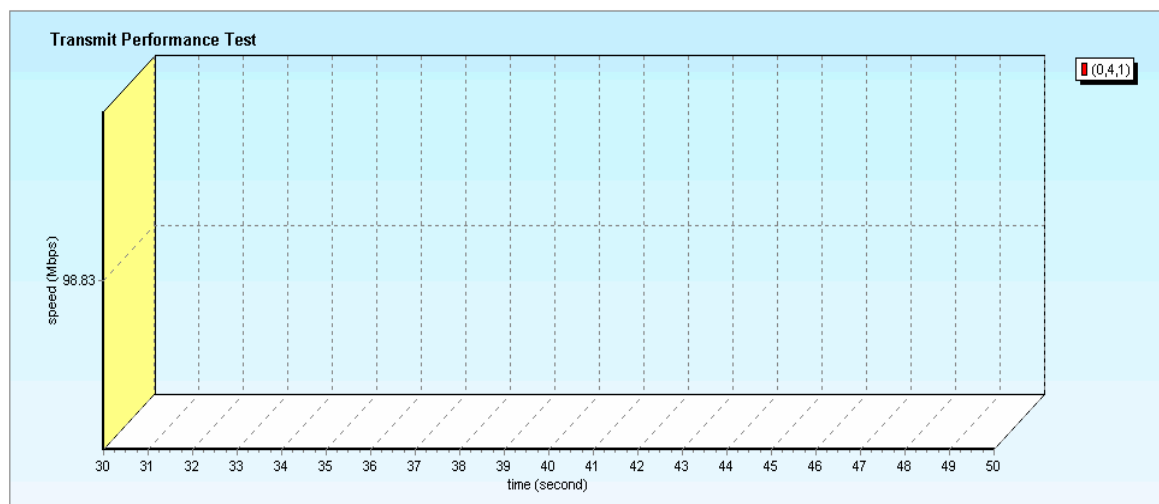
Port Number	(0, 4, 1)
NIC Vendor	eth0: Realtek RTL-8139
Test Media Type	100FULL
Test time	50 second
Sample Time	30 second
Frame Length	1514 byte

6.5.7 Transmit Performance Separate Test Result

Port Number	(0, 4, 1)
MAC Address	00-E0-4C-77-12-58
Maximum Value	98.83 Mbps
Minimum Value	98.83 Mbps
Average Value	98.83 Mbps
Standard Deviation	0 Mbps
CRC Error Packet	0
Alignment Error Packet	0
Dribble Error Packet	0



6.5.8 Transmit Performance Test Status Chart



6.5.9 Receive Performance Test Setting

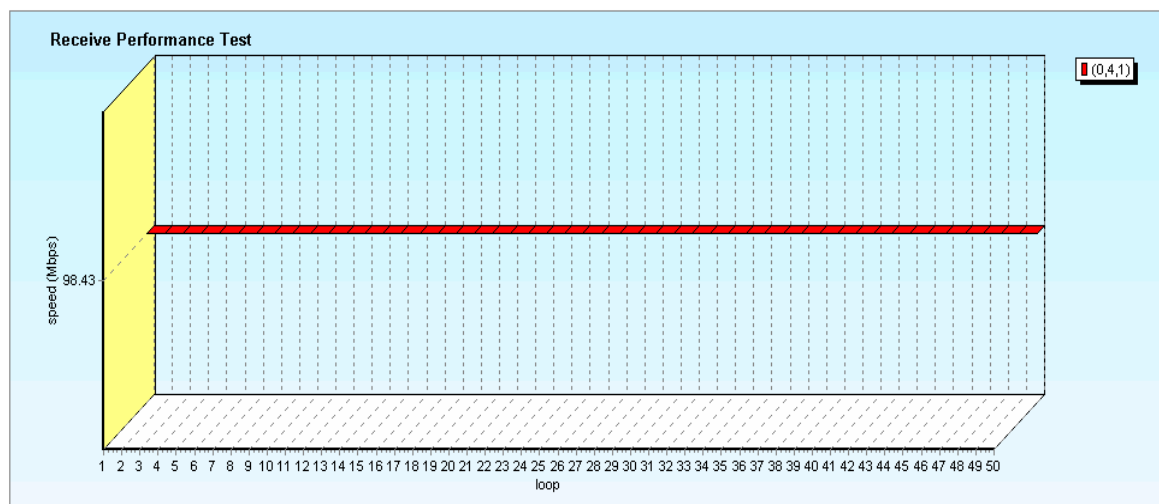
Port Number	(0, 4, 1)
NIC Vendor	eth0: Realtek RTL-8139
Test Media Type	100FULL
Test Loop	50
Sample Time	50 second
Frame Length	1514 byte
Frame Gap	96 bit time

6.5.10 Receive Performance Separate Test Result

Port Number	(0, 4, 1)
MAC Address	00-E0-4C-77-12-58
Maximum Value	98.43 Mbps
Minimum Value	98.43 Mbps
Average Value	98.43 Mbps
Standard Deviation	0 Mbps



6.5.11 Receive Performance Test Status Chart



6.5.12 Round Trip Time Test Setting

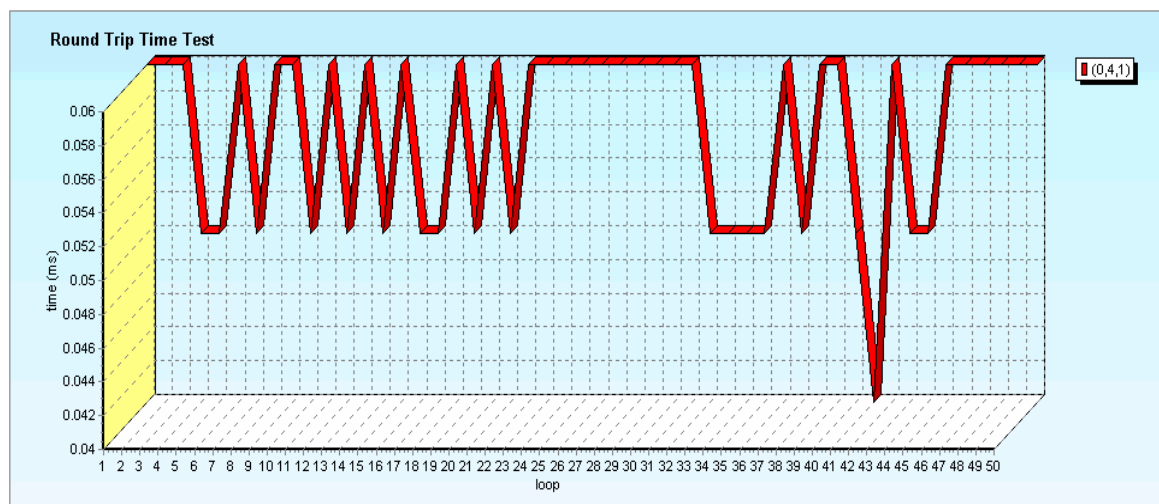
Port Number	(0, 4, 1)
NIC Vendor	eth0: Realtek RTL-8139
Test Media Type	100FULL
Test Loop	50
Frame Length	1514 byte

6.5.13 Round Trip Time Test Result

Port Number	(0, 4, 1)
MAC Address	00-E0-4C-77-12-58
Maximum Value	0.06 ms
Minimum Value	0.04 ms
Average Value	0.05 ms
Standard Deviation	0 ms



6.5.14 Round Trip Time Test Status Chart



6.5.15 Media Type Test Setting

Port Number	(0, 4, 1)
NIC Vendor	eth0: Realtek RTL-8139
Media Type Test Flow	100FULL 100HALF 10FULL 10HALF
Test Loop	50

6.5.16 Media Type Test Result

Port Number	(0, 4, 1)
MAC Address	00-E0-4C-77-12-58
Total Change Times	200
Correct Times	200
Wrong Times	0



6.6 Ethernet Physical Layer Compliance Test

Test Report for 100Base-TX

Time: 15:43:53

Device ID : TYSSO-6000 v1.01

Device Description : RTL8100C

Port ID : 10/100

Test	Spec. Range	Measured Value	Result
AOI Template	Fit the template		Pass
Output Voltage (+Vout)	950mV to 1050mV	985.9mV	Pass
Output Voltage (-Vout)	-950mV to -1050mV	-998.3mV	Pass
Amplitude Symmetry	0.98 to 1.02	0.988	Pass
Rise Time(+ve)	3ns to 5ns	4.31ns	Pass
Rise Time(-ve)	3ns to 5ns	4.55ns	Pass
Fall Time(+ve)	3ns to 5ns	4.36ns	Pass
Fall Time(-ve)	3ns to 5ns	4.25ns	Pass
Rise/Fall Symmetry(+ve)	<500ps	50.8ps	Pass
Rise/Fall Symmetry(-ve)	<500ps	298ps	Pass
Overshoot(+ve)	<5%	1.10%	Pass
Overshoot(-ve)	<5%	0.70%	Pass
Transmit Jitter(+ve)	<1.4ns	650ps	Pass
Transmit Jitter(-ve)	<1.4ns	650ps	Pass
Distortion (Duty Cycle)	<500ps(± 250 ps)	283ps	Pass
Transmitter Return Loss			Not Available
Receiver Return Loss			Not Available



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6.7 VGA Signal Measurement Test

Tektronix VM5000 Option VGA Video Measurements Results Report

E125 v1.01

August 02, 2007 11:05 AM

Resolution: 1024x768 Refresh Rate: 60Hz Timing Standard: DMT

Reference File: C:\VM5000PC\RefLimFiles\DMT\DefaultReference1024X768@60-RGB.csv

Limit File: C:\VM5000PC\RefLimFiles\DMT\DefaultLimits1024X768@60-RGB.csv

Autoscale: On Stop On Limit Error: Off

MIU: Used Sync Polarity Auto Detection: Enabled

SUMMARY:	Status	Warnings
H Sync	PASS	
V Sync	PASS	
Color Bars	PASS	
Ch-Ch Mismatch	PASS	
Ch-Ch Skew	PASS	
Luma Levels	PASS	
Noise Inj Ratio	PASS	
H Sync Jitter	PASS	

H Sync

Line: 200

Average: 1

Polarity (Pos/Neg)	Neg
Pulse Width (us)	2.092
Sync Period (us)	20.674
Frequency (KHz)	48.37
Rise Time (ns)	1.305
Fall Time (ns)	1.168
Overshoot (%)	18.124
Undershoot (%)	20.124
Overshoot Settling Time (ns)	2.8
Undershoot Settling Time (ns)	3.2
Monotonic Rise (Y/N)	Yes
Monotonic Fall (Y/N)	Yes
Logic Level 1 @ 2.21k(mV)	3253.763
Logic Level 0 @ 2.21k(mV)	117.792
Logic Level 1 @ +/-8mA(mV)	2942.427
Logic Level 0 @ +/-8mA(mV)	460.5



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V Sync

Line: 153

Average: 1

Polarity (Pos/Neg)	Neg
Pulse Width (us)	124.042
Sync Period (ms)	16.663
Frequency (Hz)	60.013
Rise Time (ns)	1.18
Fall Time (ns)	1.083
Overshoot (%)	14.998
Undershoot (%)	21.786
Overshoot Settling Time (ns)	2.4
Undershoot Settling Time (ns)	9.2
Monotonic Rise (Y/N)	Yes
Monotonic Fall (Y/N)	Yes
Logic Level 1 @ 2.21k(mV)	3252.89
Logic Level 0 @ 2.21k(mV)	99.239
Logic Level 1 @ +/-8mA(mV)	2944.621
Logic Level 0 @ +/-8mA(mV)	442.805

Color Bars

Line: 184

Average: 1

Color Bars	G	B	R
White	728.41	729.371	730.9
Yellow	728.588	1.02	730.78
Cyan	729.085	728.445	1.399
Green	729.32	1.221	0.199
Magenta	1.895	729.015	730.079
Red	0.512	1.103	730.816
Blue	0.237	728.785	1.571
Black	0.111	1.255	0.366

Ch-Ch Mismatch

Line: 325

Average: 1

Ch-Ch Mismatch	mV	(%) Peak-Peak
G to B	-1.897	-0.261
G to R	-3.309	-0.453
B to R	-2.064	-0.283



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Ch-Ch Skew

Line: 383 Average: 1

Ch-Ch Skew	ns	(%) Pixel Clock
G To B	0.0	0.0
G To R	0.0	0.0
B To R	0.0	0.0

Luma Levels

Line: 383 Average: 1

Luma Levels	G	B	R
Max (mV)	732.127	733.222	735.135
Min (mV)	4.368	4.449	4.61

Noise Inj Ratio

Line: 537 Average: 1 500 MHz Filter: Enabled

Noise Inj Ratio	G	B	R
mV	< 1.0	12.226	6.811
dB	< -56.9	-35.612	-40.685
Inj Ratio (%)	< 0.143	1.657	0.924

H Sync Jitter

Line: 100 Average: 1

H Sync Jitter	ns	(%) Pixel Clock
HSync Jitter	0.4	2.6



7.0 Environmental Tests

7.1 Temperature and Relative Humidity Test

Operate the equipment at an ambient temperature of 25°C and RH level 50% for a minimum period of 0.5hrs.

Decrease the chamber's temperature at a rate of 30°C/hr to -20°C. RH is not controlled.

Operation system maintained a temperature -20°C, any RH for 12 hrs.

Increase the chamber's temperature at a rate of 30°C/hr to 60°C. Increase the RH to attain a 50% level by the time the target temperature is attained.

Operation system maintained a temperature 60°C and RH of 50% for 12hrs and temperature 60°C and RH of 90% for 12hrs

The system must running cannot hang or crash. The application must run 12H in chamber normal.

Cold start test: (1) power off the system and waiting 1H. Verify it can into the OS normal when system power on. Test 10 times at 60°C and -20°C.

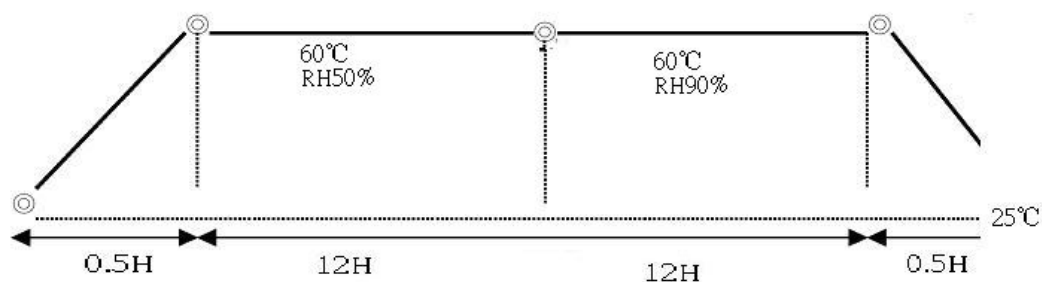
Cold Boot test: (2) Power on /off 1000 times at 60°C and -20°C (base on DOS).

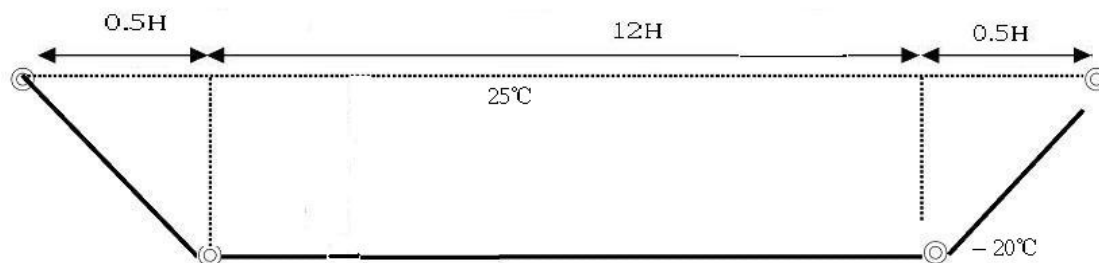
Warm start test: (1) power off the system and waiting 1H. Verify it can into the OS normal when system to reset. Test 10 times at 60°C and -20°C.

Warm Boot test: (2) Power reset 100 times at 60°C and -20°C (use ccwinstone 2001 to set system reset).

(Start test 1000 times only can fail one time.)

Test Environment Curve: high temperature




Test Environment Curve: low temperature

System Configuration :

BIOS : E125MR13 08.00.11 06/25/2007
 CPU : Intel Pentium 4 2.40GHz FSB:533MHz
 Memory : Kingmax MSAD42D-D8MH3 S/N:E6C003209001 MDB 1GB DDR333
 VGA Card : Onboard Intel 82852GM
 HDD : WD WD1600JB/P 160GB;7200RPM IDE 3.5" HDD
 O.S. : Windows XP professional version 2002 service pack 2
 Power : EDACPOWER EA11603A

7.2 Temperature Factor

Temp.	Program	Time	Status
-20 °C	HCT System Stree	12 Hours	<i>Pass</i>
25°C	HCT System Stree	12 Hours	<i>Pass</i>
60 °C	HCT System Stree	12 Hours	<i>Pass</i>

7.3 Cold Boot

Item	Temp.	P/S Off	On/Off	Remarks
1	-20°C	1 Hour	10 Times	<i>Pass</i> 329 Times
2	-20°C		1000 Times	<i>Pass</i> 1361 Times ATX
3	60°C	1 Hour	10 Times	<i>Pass</i> 247 Times
4	60°C		1000 Times	<i>Pass</i> 1760 Times ATX



7.4 Warm Boot

Item	Temp.	P/S Off	On/Off	Remarks
1	-20℃	1 Hour	10 Times	<i>Pass</i>
2	-20℃		100 Times	<i>Pass</i> ATX (WinXP)
3	60℃	1 Hour	10 Times	<i>Pass</i>
4	60℃		100 Times	<i>Pass</i> ATX (WinXP)

Windows XP Reboot Test

7.5 Power On/Off Test

Test Times	Pass Times	Fail Times	Remark
7134	7134	0	<i>Pass</i> ATX



8.0 Appendix A

8.1.1 Boot sequence:

Prior to loading any Applications, go to the BIOS and verify the Boot Sequence so that the EUT will boot off the Floppy Drive first. If not make the appropriate change.

Note: Prior to performing this task, insure that the drivers needed for the various components within the EUT (CD-ROM, LS120, ZIP, etc.), are available on a floppy disk or CD-ROM for downloading.

8.1.2 Loading the CD-ROM Driver:

Boot the system and install the CD-ROM driver by inserting the drive diskette into the floppy drive and running "setup".

Example: x:\setup, where "x" is the floppy drive designator.

Note: You will have to use the appropriate driver for the CD-ROM drive used by the EUT.

If the EUT does not have a CD-ROM, a portable, external CD-ROM unit (such as Backpack®) may be used. Load the software for the external CD-ROM as described above.

8.1.3 Printer setup:

Some software does not allow saving the test results. They must be sent to a local printer, network printer or print to file. This section will explain the print to file method. On your Windows OS add a new printer device. When prompted choose print to file. If you can use a generic printer for this use it. If you select a specific type of printer you will only be able send that .PRN file to that specific printer type later. Note: There are also some 3rd party drivers available that can be loaded to print to HTML format etc...

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10.0 Test Plan Revision History

Each time the test Plan is updated or changed, the revision level must be incremented. This section should include a description of the change(s) made to the plan. Revisions should be listed in descending order.

Revision:	Date	By:
Section(s):		