

P5 Verification Test Plan

Release No : 10P010003

Product Model	ONYX-2122
Description	Core 2 Duo Thin Client 21.5" Wide LCD with COM/USB isolation
Test Configuration	<ul style="list-style-type: none"> ⌘ New product <ul style="list-style-type: none"> ⌘ System : ONYX-2122 ⌘ CPU Board : GENE-9310 Rev A1.0 ⌘ BIOS : ONYX-2122 BIOS Rev 1.0(01/15/2010) ⌘ Power Supply : SINPRO Power Supply / output:24V / MPU100-108 ⌘ LCD : AUO 21.5" LCD /M215HW01 V0 /1920*1080 ⌘ Touch Panel : Liyitec TR5-216F-X01-02 5 Wire Resistive ⌘ Chipset : <ul style="list-style-type: none"> ⌘ CPU : Intel (R) Core2 Duo U7500 @ 1.06GHz / FSB 533MHz ⌘ North Bridge : Intel 945GME ⌘ South Bridge : ICH7M ⌘ Audio Chipset : Realtek AC97 2.3 Codec 2CH Audio ⌘ Ethernet Chipset : Intel 82573L 10/100/1000 Base-TX LAN ⌘ I/O Chipset : ITE IT8712 ⌘ Remark : QE P5 Report for ONYX-2122
Test Result Summary	
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

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Issue date

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There are 3 test results in this document; they are described as follows:

Pass: Function worked perfectly

Fail: Function failed and must be modified in the next version

N/A: Outside of specification or no test equipment

Platform Information:

Item	Device Information	Test Item
System Model	ONYX-2122	1,2,3,4,5,6,7,8
CPU Board	GENE-9310 Rev A1.0	1,2,3,4,5,6,7,8
BIOS / Version	ONYX-2122 BIOS Rev 1.0(01/15/2010)	1,2,3,4,5,6,7,8
CPU Type	Intel (R) Core2 Duo U7500 @ 1.06GHz / FSB 533MHz	1,2,3,4,5,6,7,8
Memory Type	DSL DDR2 SO-DIMM /1G/ 667MHz/ ELPIDA / E5108AJB	1,2,3,4,5,6,7,8
Primary IDE Master	N/A	N/A
Primary IDE Slave	Fujitsu 2.5 “ SATA H.D 80G / MHZ2080BH	1,2,3,4,5,6,7,8
CRT	View Sonic CRT 17” E70	1,2,3,4,5,6,7,8
I/O Board	PER-T135 A0.1	1,2,3,4,5,6,7,8
Touch Panel	Liyitec TR5-216F-X01-02 5 Wire Resistive	1,2,3,4,5,6,7,8
Operating System	[] Linux-RedHat 9.0 or [X] Fedora Core 6 -kernel 2.6.18	1,2,3,4,5,6,7,8
	Windows Server 2003 English Version / Standard Edition 5.2.3790	N/A
	Windows Server 2003 English Version /Standard x64 Edition	N/A
	Windows XP Professional English Version V2002 Service Pack 3	1,2,3,4,5,6,7,8
	Windows XP Professional English Version /Standard x64 Edition	N/A
	Windows Vista 32-bit	1,2,3,4,5,6,7,8
	Windows Vista 64-bit	1,2,3,4,5,6,7,8
	Windows 2000 Professional English Version V5.00.2195 Service Pack4	N/A
	Windows Server 2000 English Version	N/A
	Windows 98SE English Version V4.10.2222A	N/A
	MS-DOS 6.22 English Version	N/A
	Windows XP Embedded	N/A
Power Supply	ATX Power : N/A	N/A
	AT Power : N/A	N/A
	DC Power: SINPRO Power Supply / input: 100-240V output:24V / MPU130-108	1,2,3,4,5,6,7,8

Test Result for Certification

1. I/O Peripheral Function Test

I/O Peripheral Function Test –I/O Function	Result		
	Pass	Fail	N/A
Floppy Connector / Driver A:			X
IDE Master			X
IDE Slave			X
SATA Port 1	X		
SATA Port 2			X
RAID 0 Function Test			X
RAID 1 Function Test			X
SATA1 / Serial ATA Connector 1	X		
SATA2 / Serial ATA Connector 2			X
SATA3 / Serial ATA Connector 3			X
SATA4 / Serial ATA Connector 4			X
Compact Flash – Type I			X
Compact Flash – Type II			X
DOC (Disk On Chip)			X
DOM (Disk On Module) – 40 Pin			X
DOM (Disk On Module) – 44 Pin			X
COM 1-232	X		
COM 2-232			X
COM 2-422			X
COM 2-485			X
COM 2-Ring /+5V /+12V			X
COM 3-232	X		
COM 4-232	X		
COM 5-232			X
COM 6-232 (For Touch)	X		
PS/2 Mouse & Keyboard (Internal)	X		
PS/2 Mouse & Keyboard (External)			X
Audio Connector	X		
Audio 5.1 Channel / S/P DIF			X
LPT 1			X
LPT 2			X
IRDA			X
USB 1/2/3 Ports	X		
USB 4/5 Ports	X		
USB 2.0 1/2/3 Ports	X		
USB 2.0 4/5 Ports	X		
DVI Function			X
DIO Connector			X
PC/104			X

PC/104-Plus				X
PCI-104				X
CD-In Connector				X
TFT TTL LCD				X
TFT LVDS LCD (System LVDS)		X		
TV-out / S Terminal				X
TV-out / AV Terminal				X
Touch Screen – 4 Wire				X
Touch Screen – 5 Wire		X		
DIMM Slots		X		
Watchdog IRQ n				X
Watchdog Software Control		X		
CPU FAN Connector				X
System FAN Connector				X
Front Panel		Result		
		Pass	Fail	N/A
Power On Button		X		
IDE LED				X
External Buzzer				X
On Board Buzzer				X
Power LED		X		
Reset Switch				X
Keyboard Lock				X
Jumpers Function		Result		
		Pass	Fail	N/A
Clear CMOS		X		
Power Connector & Function		Result		
		Pass	Fail	N/A
DC Power Connector		X		
ATX Power Connector				X
ATX Power_12V Connector -4 Pin				X
AT Power Connector				X
LAN Connector & Function		Result		
		Pass	Fail	N/A
LAN Speed LED	LAN1	X		
	LAN2			X
LAN Active LED	LAN1	X		
	LAN2			X
LAN Link LED	LAN1	X		
	LAN2			X
LAN 10/100 Ethernet		X		
LAN 1G Ethernet		X		
PCI Connector & Function		Result		
		Pass	Fail	N/A
Mini PCI Slots (Gigabyte GN-WIAG/GN-WPEAG (mini) PCI)		X		
PCI Slots				X

PCI Express *4			X
PCI Express *16			X
Mini PCI Express			X
PCMCIA Function	Result		
	Pass	Fail	N/A
Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW)			X
Accton 10/100 Fast Ethernet CardBus PC Card			X

2. Power Connector Test

Test Method	Result		
	Pass	Fail	N/A
DC Power Connector- Power On/Off for 10 times in DOS	X		
ATX Connector - Power On/Off for 10 times in DOS			X
AT Connector - Power On/Off for 10 times in DOS			X
5V Only - Power On/Off for 10 times in DOS			X

3. Timer Accuracy Test

System Clock & RTC Clock Test				
Test Method	Margin for error	Result		
		Pass	Fail	N/A
System Clock in Power On Mode	±1 second during 24 hours	X		
RTC Clock in Power On Mode	±1 second during 24 hours	X		
RTC Clock in Power Off Mode	±1 second during 24 hours	X		
Watchdog Timer Test		Result		
		Pass	Fail	N/A
Time-out Interval	10 sec	X		
	60 sec	X		
	120 sec	X		

4. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1 LED		Active LED				X		
		Link LED				X		
		Speed LED				X		
LAN2 LED		Active LED				X		
		Link LED				X		
		Speed LED				X		
Location	Speed	HUB Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
		D-Link DGS-1008T	100M	1GBps	1G	X		
		Accton DeskTop-3005	100M	100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		

5. Hardware Compatibility

CPU Compatible Test							
CPU Type	FSB	Prime95 Version	Result				
			Pass	Fail	N/A		
Intel (R) Core2 Duo U7500 @ 1.06GHz	533	V 25.11	X				
Memory Compatibility Test							
Memory Brand	Memory Chipset	Frequency	Size	MemTest86 Version	Result		
					Pass	Fail	N/A
DSL	ELPIDA / E5108AJB	667	1 G	V4.00	X		
Audio Basic Function Test					Result		
					Pass	Fail	N/A
System Sound					X		
CD_In							X
CD_In Sound Recorder							X
Play Sound Recorder					X		
Line Out					X		
Line In							X
Line In Sound Record							X
MIC Speaker			Dynamic		X		
			Condenser		X		
MIC Sound Recorder			Dynamic		X		
			Condenser		X		
Audio 5.1 Channel with S/P DIF Function Test					Result		
					Pass	Fail	N/A
2-channel mode for stereo speaker output					X		
S/P DIF function Test			Input				X
			Output				X
On Board TV Function Test					Result		
					Pass	Fail	N/A
NTSC		AV Terminal					X
PAL							X
NTSC		S Terminal					X
PAL							X
On Board LCD Function Test							
TFT LCD	Type	Voltage	Result				
			Pass	Fail	N/A		
System LCD	AUO M21HW01 V0 /21.5" / 1920x1080	12V	X				
PCI Slot Function (PCI Adapter Card) Test							
Model	Type	Result					
		Pass	Fail	N/A			
CHAINTECH NVIDIA GeForce4 MX440-8X	VGA Card				X		

SC3000 CMI8738/C3DX	Sound Card			X
Takram DC-395U V1.02	SCSI Card			X
I-VIEW CP-1400AS (with Age STD-477FAI CCD)	Capture Card			X
D-Link DWL-520+ Wireless LAN	LAN Card			X
ADAPTEC 1420SA RoHS 4-Port SATA II RAID	RAID Card			X
D-Link DU-520 USB 2.0	USB Hub Card			X
ISA Slot Function Test		Result		
		Pass	Fail	N/A
Creative CT4170 Sound Blaster Sound Card				X
Adaptec AHA-1510/20/22B SCSI Card				X
PCI-Express Function Test				
Model		Result		
		Pass	Fail	N/A
SUNIX SATA1414 VER 1.1 PCI-Express x1 SATA Card				X
SksKonnnect SK-9E21D 10/100/1000 Base-T Adapter PCI-Express x1 LAN Card				X
Adaptec AAR-1430SA SATAII HostRAID Controllers PCI-Express x4 RAID Card				X
ASUS EAX1600PRO/TD/256M/A (ATI Chipset) PCI-Express x16 VGA Card				X
WinFast PX6200 TC TDH PCI-Express x16 VGA Card				X
HDD Compatibility Test				
Model		Result		
		Pass	Fail	N/A
Fujitsu 2.5 " SATA H.D 80G / MHZ2080BH		X		
CD/DVD-ROM Compatibility Test				
Model		Result		
		Pass	Fail	N/A
LITE-ON LITEON DX-20A4PU (USB DVD-ROM)		X		
SONY USB2.0 DVD-R/W DRX-830UL (USB DVD-ROM)		X		
ASUS DRW-1604P-D/WHT/G/ASUS (USB DVD-ROM)		X		
IDE Cable Function test				
IDE Model		Result		
		Pass	Fail	N/A
40 Pin Cable ATA66				X
44 Pin Cable ATA33				X
80 Pin Cable ATA100				X
USB Function Test				
USB Basic Function Test		Result		
		Pass	Fail	N/A
USB Controller		X		
USB 2.0 Controller		X		
USB Keyboard Support		X		

USB Mouse Support		X					
USB 1.1 Compatible Test		Result					
		Pass	Fail	N/A			
USB 1.1 Compatible Test		X					
USB 2.0 Compatible Test		Result					
		Pass	Fail	N/A			
USB 2.0 Compatible Test		X					
USB 2.0 Function Test		Result					
		Pass	Fail	N/A			
Install Windows XP Professional from HighSpeed Device: USB2.0 DRW-1604P-D/WHT/G/ASUS		X					
USB Device Full Loading Test		Result					
Model		Pass	Fail	N/A			
Mitsumi FLL3.5 D353GUE/FUE		X					
USB HDD 20GB		X					
USB Card Reader		X					
USB Mouse		X					
USB Thumb drive – Kingston USB H.D 8G		X					
Floppy Disk Controller Function Test		Result					
		Pass	Fail	N/A			
Copy and compare file between C: and A / B:				X			
Change Floppy to None value				X			
Swap FDD				X			
Peripheral Compatibility-Storage Device							
Model		Interface		Result			
				Pass	Fail	N/A	
DOC		Chip			X		
Type-II CF		Fix / PIO Mode			X		
Type-II CF		Fix / UDMA Mode			X		
Digital I/O Connector Test		Result					
		Pass	Fail	N/A			
Input Address:				X			
Output Address:				X			
VCC: (5V)				X			
DIO-1 Function Test				X			
Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104 Modules							
Interface		Model		Type		Result	
						Pass	Fail
PC/104		AAEON PCM-5600		Modem Module			X
		AAEON PCM-3115B		PCMCIA Module			X
PC/104+		AAEON PCM-3430		SCSI Module			X
PCI-104		AAEON PCM-FA00		Mini-PCI Converter			X
		AAEON PCM-3794		SCSI Module			X

	AAEON PCM-3730	Intel 82559 LAN Module			X
On-Board RAID Function Test					
Model	Interface	Result			
		Pass	Fail	N/A	
Set SATA HDDs as RAID 0	SATA			X	
Set SATA HDDs as RAID 1	SATA			X	
Set SATA HDDs as RAID 10	SATA			X	
Set SATA HDDs as RAID 5	SATA			X	
COM Function Test		Result			
		Pass	Fail	N/A	
COM Port Burn In Test overnight –COM1		X			
COM Port Burn In Test overnight –COM2				X	
COM Port Burn In Test overnight –COM3		X			
COM Port Burn In Test overnight –COM4		X			
Disk On Module [DOM] Compatibility Test					
Model	Interface	Result			
		Pass	Fail	N/A	
Transcend / TS512MDOM40V / 512MB	IDE 40 Pin			X	
Transcend / TS512MDOM44V / 512MB	IDE 44 Pin			X	
Mini PCI Card Compatibility Test					
Model (Use PCI-104 transform board: MBC-1TM Rev.A1.0)	Interface	Result			
		Pass	Fail	N/A	
MiniPCI -WLAN Card - Gigabyte GN-WIAG/GN-WPEAG (mini) PCI WLAN Card	WLAN	X			
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	LAN			X	
PER-C20S SATA RAID MiniPCI Card (Silicon Image Sil3512ECTU128 QF7227.1-1)	SATA			X	
COM/LPT Ports & RS-232/422/485 Function Test		Result			
		Pass	Fail	N/A	
RS-422 for COM2				X	
RS-485 for COM2				X	
RS-232 for COM1 ~COM4		X			
LPT1				X	
LPT2				X	
Card Bus(PCMCIA) Compatibility Function Test					
Model		Result			
		Pass	Fail	N/A	
Intel PRO/Wireless 2011B LAN PC Card (WPC2011BWW)				X	
PQI 16MB Compact Flash Adapter (64MB PQI CF Card inserting)				X	
Kingston datapack DP-PCM2 / 2GB (PC Card TypeII HDD)				X	
PCI GW-NS54SG Cardbus Adapter Wireless LAN Type-II				X	

6. O.S. Compatibility Test

Installation Operation System Compatibility Test		Result			
		Pass	Fail	N/A	
[] Linux-RedHat 9.0 or [X] Fedora Core 6 -kernel 2.6.18		X			
Windows Server 2003 English Version / Standard Edition 5.2.3790				X	
Windows Server 2003 English Version /Standard x64 Edition				X	
Windows XP Professional English Version V2002 Service Pack 3 -32bit		X			
Windows XP Professional English Version /Standard x64 Edition -64bit				X	
Windows Vista™ Ultimate English Version -32bit		X			
Windows Vista™ Ultimate x64 English Version -64bit		X			
Windows 2000 Professional English Version V5.00.2195 Service Pack4				X	
Windows Server 2000 English Version				X	
Windows 98SE English Version V4.10.2222A				X	
DOS 6.22 English Version				X	
Windows XP Embedded				X	
Utility and Driver Test					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Fedora Core 6 -kernel 2.6.18	Chipset Software	Default Driver	X		
	Graphics Media	Default Driver	X		
	LAN Driver	Default Driver	X		
	Audio Driver	Default Driver	X		
Windows Server 2003 English Version Standard Edition 5.2.3790	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows Server 2003 English Version Standard x64 Edition	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows XP Professional English Version V2002 Service Pack 3	Chipset Software	Intel(R) Chipset Device software - 8.3.1.1009 - 07/26/2007	X		
	Graphics Media	Mobile Intel(R) 945 Express Chipset Family - 6.14.10.4864	X		
	LAN Driver	Intel(R) PRO/1000 PL Network Connection - 9.10.8.0 - 08/30/2007 GN-WIAG/GN-WPEAG (mini) PCI WLAN Card - 7.3.1.42 - 06/18/2007	X		
	Audio Driver	Realtek AC'97 Audio - 5.10.0.6270 - 10/26/2007	X		
Windows XP Professional x64 Edition English Version Service Pack 2 V2002	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN1 Driver	N/A			X

	LAN2 Driver	N/A			X
	Audio Driver	N/A			X
Windows Vista™ Ultimate English Version -32bit	Chipset Software	Intel(R) Chipset Device software - 8.3.1.1009 -07/26/2007	X		
	Graphics Media	Mobile Intel(R) 945 Express Chipset Family - 7.14.10.1504 - 06/18/2008	X		
	LAN1 Driver	Intel(R) PRO/1000 PL Network Connection - 9.10.8.0 - 08/30/2007 Gigabyte	X		
	Audio Driver	Realtek AC'97 Audio - 6.0.1.6251 -08/14/2007	X		
Windows Vista™ Ultimate x64 English Version -64bit	Chipset Software	Intel(R) Chipset Device software - 8.3.1.1009 -07/26/2007	X		
	Graphics Media	Mobile Intel(R) 945 Express Chipset Family - 7.14.10.1504 - 06/18/2008	X		
	LAN 1Driver	Intel(R) PRO/1000 PL Network Connection - 9.10.8.0 - 08/30/2007 Gigabyte	X		
	Audio Driver	Realtek AC'97 Audio - 6.0.1.6251 -08/14/2007	X		
Windows 2000 Professional English Version V5.00.2195 Service Pack 4	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows Server 2000 English Version	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows 98SE English Version V4.10.2222A	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X
Windows XP Embedded	Chipset Software	N/A			X
	Graphics Media	N/A			X
	LAN Driver	N/A			X
	Audio Driver	N/A			X

7. BIOS Function Test

Test Item	Result		
	Pass	Fail	N/A
Memory Beep Test			X
Standard CMOS Setup Test	X		
Boot Sequence Test	X		
Power Management Test			
ATX Power Management Test	X		
AT Power Management Test			X
Power On Function Test			X
Wake Up Event Test	X		
Power On after Power Failure Test	X		
CMOS Backup / Clear CMOS Test	X		
Boot ROM Test (RPL/PXE)	X		
Supervisor / User Password Test	X		
CRT / LCD / TV Function Test			X
TV Standard Function Test			X
Init Display First Function Test	X		
On-Chip Serial ATA Function Test	X		
SATA Mode-IDE/RAID Function Test	X		
PC Health Status			
Voltage Monitor Test	X		
FAN Speed Monitor Test			X
Temperature Monitor Test	X		
USB Onboard Device Function Test	X		
COM Address / IRQ Test	X		
LPT Address / IRQ Test			X
BIOS Award Program Test	X		

8. Performance Test

Platform Information

System Model	ONYX-2122
BIOS	ONYX-2122 BIOS Rev 0.1 (07/10/2009)
Operating System	Windows XP Professional SP3 -SP3
CPU	Intel (R) Core2 Duo U7500 @ 1.06GHz / FSB 533MHz
Memory	DSL DDR2 SO-DIMM /1G/ 667MHz/ ELPIDA / E5108AJB
SATA H.D	Fujitsu 2.5 “ SATA H.D 80G / MHZ2080BH
CRT	ViewSonic E70 17' CRT
LCD	N/A
Chipset Software	Intel(R) Chipset Device software - 8.3.1.1009 - 07/26/2007
Graphics Media	Mobile Intel(R) 945 Express Chipset Family - 6.14.10.4864
LAN Driver	Intel(R) PRO/1000 PL Network Connection - 9.10.8.0 - 08/30/2007
Audio Driver	Realtek AC'97 Audio - 5.10.0.6270 - 10/26/2007
Power Supply	SINPRO Power Supply / input: 100-240V output:24V / MPU130-108

Test result:

Final Reality V1.01—BenchMark Test (Reality Marks) (1920*1080 32bit)		
2D Image	24.54	
3D	5.39	
Bus transfer	46.94	
Overall	17.37	Reality marks
3Dmark2001SE Pro (1920*1080 32bit)		
3DMark2001SE Build 330_Benchmark mode	1231	
3Dmark2003 v360 (1920*1080 32bit)		
3Dmark Score	295	
CPU Score	430	
PCMark2002 (1920*1080 32bit)		
CPU	4213	
Memory	8433	
HDD	1462	
PCMark05 (1920*1080 32bit)		
PCMark	N/A	
CPU	2729	
Memory	2360	
Graphics	726	
HDD	4618	