

QE Verification Test Plan

Release No : 06E010028

Product Model	GENE-5315
Description	SubCompact Board
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : GENE-5315 A0.2 <input checked="" type="checkbox"/> BIOS : GENE-5315 BIOS Rev.1.0 (10/12/2006) <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> North Bridge : AMD /Geode LX700 /Geode LX 800 <input checked="" type="checkbox"/> South Bridge : AMD /CS5536AD <input checked="" type="checkbox"/> VGA Chipset : Geode LX700 /Geode LX800 <input checked="" type="checkbox"/> Audio Chipset :Realtek /ALC203 CODE <input checked="" type="checkbox"/> Ethernet Chipset : Realtek /RTL8139DL <input checked="" type="checkbox"/> I/O Chipset : ITE /IT8712-I +IT8888G <input checked="" type="checkbox"/> Remark : QE NPDP P5 External Report
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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Manager

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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
PCB Model / Version	GENE-5315 Rev:A0.2	1,2,3,4,5,,6,7,8,9,10,11
BIOS / Version	GENE-5315 BIOS Rev:1.0 (10/12/2006)	1,2,3,4,5,,6,7,8,9,10,11
CPU Type	Geode GX-MMX 433MHz & 500MHz	1,2,3,4,5,,6,7,8,9,10,11
Memory Type	DSL / ELPDAEBD11UD6ADDA-6B /1GB /DDR333	1,2,3,4,5,,6,7,8,9,10,11
Primary IDE Master	IBM / IC35L060AVV207-0 /61.4GB / ATA33	1,2,3,4,5,,6,7,8,9,10,11
Primary IDE Slave	TEAC / CD-540E / 40X	1,2,3,4,5,,6,7,8,9,10,11
CRT	ViewSonic E773	1,2,3,4,5,,6,7,8,9,10,11
LCD	N/A	
Compact Flash	N/A	
Riser Card	N/A	
Backplane	N/A	
Operating System	[<input checked="" type="checkbox"/>] Linux-RedHat 9.0 or [<input type="checkbox"/>] Fedora Core 4	9
	Windows Server 2003 English Version / Standard Edition 5.2.3790	N/A
	Windows XP Professional English Version V2002 Service Pack 2	9
	Windows 2000 Professional English Version V5.00.2195 Service Pack 4	N/A
	Windows 98SE English Version V4.10.2222A	N/A
	Windows NT Workstation 4.0 English Version Service Pack 6	N/A
	MS-DOS 6.22	1,2,3,4,5,,6,7,8,9,10,11
	Power Supply	ATX Power : SHARK / SPC5110-250ATZ2 250W
	AT Power : LEMACS / LP2-4250F 250W	1,2,3,4,5,,6,7,8,9,10,11

Test Result for Certification

1. Dynamic / Boot_UP Burn_In Test

Test Method	Test Condition	Result		
		Pass	Fail	N/A
Diagnostics Software Burn-In Test.	0°C ~60°C, 30%RH~80%RH, 48 hrs	X		
Power On/Off Test.	0°C ~60°C, 30%RH~80%RH, 24hrs	X		

2. Power On and Reset Test

Test Method	Test Condition	Result		
		Pass	Fail	N/A
Power On/Off Test in DOS Mode-100V Power Function Test	10 times in Room Temperature	X		
Power On/Off Test in DOS Mode-210V Power Function Test	10 times in Room Temperature	X		
KB Reset in Dos Mode-110V Power Function Test	20 times in Room Temperature	X		
Hardware Reset in Dos Mode-110V Power Function Test	20 times in Room Temperature	X		

3. I/O Peripheral Function Test

I/O Peripheral Function Test –I/O Function	Result		
	Pass	Fail	N/A
Floppy Connector / Driver A:	X		
Primary IDE Master	X		
Primary IDE Slave	X		
Secondary IDE Master			X
Secondary IDE Slave			X
Third IDE Master			X
Third IDE Slave			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	X		
COM 2-232	X		
COM 2-422	X		
COM 2-485	X		
COM 2- (5V /+12V)	X		
COM 3			X
COM 4			X

COM 5			X
COM 6			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
SIR / 115.2 Kbps	X		
FIR / 4M bps			X
USB 1&2 Ports	X		
USB 3&4 Ports	X		
USB 5 Ports			X
USB 6 Ports			X
USB 2.0 1 & 2 Ports	X		
USB 2.0 3 & 4 Ports	X		
USB 2.0 5 Ports			X
USB 2.0 6 Ports			X
DVI Function			X
DIO Connector	X		
Card Bus			X
PC/104	X		
PC/104-Plus			X
PCI-104			X
TFT TTL LCD	X		
TFT LVDS LCD	X		
TV-out / S Terminal			X
TV-out / AV Terminal			X
Touch Screen – 8 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
ATX simulates AT				X
Audio Out Selection (W/O & W/ Amplifier)				X
LCD Voltage Selection		X		
COM2- 5V/12V Selection		X		
COM2 RS-232/422/485 Selection		X		
Clear CMOS		X		
Touch Screen Operating Mode Selection				X
Clock Shift of TFT LCD		X		
Power Connector & Function		Result		
		Pass	Fail	N/A
ATX Power Connector		X		
ATX Power_12V Connector				X
AT Power Connector (P8 & P9)				X
Big 4P Power Connector		X		
Mini 4P Power Connector				X
External Power Connector (-12/-5V)				X
Option ATX Power Connector (PS-ON / +5VSB)		X		
I/O Peripheral Function Test – 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
I/O Peripheral Function Test – PCI Connector & Function		Result		
		Pass	Fail	N/A
PCI Slots				X
PCI Express				X

4. Power Consumption Test (Run Prime95 Program)

Test Environment Mode	ATX Power: SHARK / SPC5110-250ATZ2 250W				AT Power: LEMACS / LP2-4250F 250W			
	CPU: Geode GX-MMX 433MHz		CPU: Geode GX-MMX 500MHz		CPU: Geode GX-MMX 433MHz		CPU: Geode GX-MMX 500MHz	
OS Environment	WIN XP		WIN XP		WIN XP		WIN XP	
Normal Mode (+5V)	1.09	A	1.12	A	1.02	A	1.14	A
Suspend Mode (+5V)	0.99	A	1.01	A		A		A
5VSB in Power Off Mode (ATX Mode)	0.11	A	0.11	A	-----	A	-----	A
5VSB in Power On Mode (ATX Mode)	0.2	A	0.2	A	-----	A	-----	A
Normal Mode (+12V)		A		A		A		A
Suspend Mode (+12V)		A		A		A		A
Normal Mode (+3.3V) (ATX Mode)		A		A	-----	A	-----	A
Suspend Mode (+3.3V) (ATX Mode)		A		A	-----	A	-----	A
Normal Mode (-12V)		A		A		A		A
Suspend Mode (-12V)		A		A		A		A
Normal Mode (-5V)		A		A		A		A
Suspend Mode (-5V)		A		A		A		A

5. Power Connector Test (110V / 220V)

Test Method	Result		
	Pass	Fail	N/A
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		

6. 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		
	255 sec	X		

7. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
OnBoard LAN1 LED		Active LED				X		
		Link LED				X		
		Speed LED				X		
OnBoard 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
LAN1	10/100/1000 Mbps	HP J4095A 24 Ports	100M	100 Mbps	100	X		
		D-Link DGS-1008T	100M	1Gbps	100	X		
		Intel InBusiness 8 Ports	100M	100 Mbps	100	X		
		LEMEL LM-S5 5 Ports	100M	100 Mbps	100	X		
		Accton Desktop-3005	100M	100 Mbps	100	X		
		SVEC FD916H	100M	10 Mbps	10	X		
Location	Speed	Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
LAN2	10/100/1000 Mbps	HP J4095A 24 Ports	100M	100 Mbps	100	X		
		D-Link DGS-1008T	100M	1Gbps	100	X		
		Intel InBusiness 8 Ports	100M	100 Mbps	100	X		
		LEMEL LM-S5 5 Ports	100M	100 Mbps	100	X		
		Accton Desktop-3005	100M	100 Mbps	100	X		
		SVEC FD916H	100M	10 Mbps	10	X		

8. Hardware Compatibility

CPU Compatible Test						
Type	Clock Speed	FSB	Prime95 Version	Result		
				Pass	Fail	N/A
Geode GX-MMX 500MHz			V2414	X		
Geode GX-MMX 433MHz			V2414	X		
Memory Compatibility Test						
Brand / Memory Size	Chipset	Frequency	MemTest86 Version	Result		
				Pass	Fail	N/A
ELPIDA / 1GB / DDR333	EBD11UD8ADDA-6B		V1.65	X		
HYNIX / 512MB / DDR333	HY5DU121622AT-J		V1.65	X		
Kingston /256MB /DDR333	KVR333X64SC25/256/ V58C2256164SBT5		V1.65	X		

On Board Audio Function Test						
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
4-channel mode for 4 speaker output						X
6-channel mode for 5.1 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	
LVDS	AU B104SN02 / 10.4" / 800*600 / 18bit	3.3V	X			
	Hyundai HT12X11-200 / 12.1" / 1024*768 / 18bit	3.3V	X			
	Samsung LTM150XH-L04 / 1024*768 / 24bit	3.3V	X			
	AU G065vn01 v.0 / 6.5" / 640*480 / 18bit	3.3V	X			
TTL	Toshiba LTM10C209A / 10.4" / 640*480 / 18bit	5V	X			
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit	3.3V	X			
	LG LM151X2-C2TH / 15" / 1024*768 / 18bit	3.3V	X			
PCI Slot Function (PCI Adapter Card) Test						
Model		Type	Result			
			Pass	Fail	N/A	
Matrox G450		VGA Card			X	
CHAINTECH NVIDIA GeForce4 MX440-8X		VGA Card			X	
SC3000 CMI8738/C3DX		Sound Card			X	

Takram DC-395U V1.02	SCSI Card			X
Adaptec Ultra160 SCSI ASC-29160	SCSI Card			X
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	LAN Card			X
Realtek RTL8139B Ethernet	LAN Card			X
D-Link DGE-530T 1000BASE-T Gigabit Ethernet Adapter	LAN Card			X
D-Link DWL-520+ Wireless LAN	LAN Card			X
Genuine GM56-AMI2019	Modem Card			X
ABIT HotRod 100 Pro	RAID Card			X
D-Link DU-520 USB 2.0	Other Card			X
Tekram TR-822 Serial ATA 150 [SA-001] + SATA HAA Seagate ST312 0026AS 120GB [ID-200305]	Other Card			X

PCI-Express Function Test

Model	Result		
	Pass	Fail	N/A
SksKonnect SK-9E21D 10/100/1000Base-T Adapter PCI-Express X1 LAN Card			X
WinFast PX6200 TC TDH PCI-Express X16 VGA Card			X

HDD Compatibility Test

Model	Result		
	Pass	Fail	N/A
Hitachi / HDS722525VLAT80 / 250GB / ATA-100	X		
IBM / DTLA-307045 / 46.1GB / ATA-100	X		
FUJITSU / MPE 3136AH / 13.6GB / ATA-66	X		
Maxtor / 4G160J8 / 160GB / ATA-133	X		
Quantum / Fireball Plug AS / 30GB / ATA-100	X		
Seagate / ST310210A / 10.2GB / ATA-66	X		
Western / WD400BB-75DEA0 / 40GB / ATA-100	X		
Seagate / ST3120026AS / 120GB / ATA-100 / S-ATA			X

CD/DVD-ROM Compatibility Test

Model	Result		
	Pass	Fail	N/A
Acer DVP1640A / 16X / DVD-ROM	X		
Pioneer / DVR-A11FXC1 / 8X DVD-RW / 6X DVD-RW	X		
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM	X		
Pioneer / DVD-121 / 16X / DVD-ROM	X		
SAMSUNG / SH-W08 / DVD+R 8X / DVD-R 8X / CD-R 32X	X		
NEC / ND-2500A / DVD R/RW / +R8X-R8X	X		

IDE Cable Function test

IDE Model	Result		
	Pass	Fail	N/A
40 Pin Cable ATA33			X
44 Pin Cable ATA33	X		
80 Pin Cable ATA100			X

USB Function Test				
USB Basic Function Test (USB1/2 on USBRJ1 connector)		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
Use High Speed Device USB2.0 CD-R/W Ben-Q / 4824W1-ON2 to play Nero CD/DVD Speed		X		
USB Device Full Loading Test				
USB Device Full Loading Test		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
FUJITSU MCB3064SS	SCSI			X
IO-Mega zip 100 parallel port	Parallel	X		
IO-Mega zip 100MB Internal ATAPI Drive	IDE	X		
DOC2000 M-System / MD2200-D16				X
PQI FC512 512MB	Type-I CF Card	X		
HITACHI / HMS360402D5CF00	Type- II CF Card	X		
Digital I/O Connector Test		Result		
		Pass	Fail	N/A
Input Address: (801)		X		
Output Address: (801)		X		
VCC: (5V)		X		
DIO-1 Function Test		X		
DIO-2 Function Test				X

Adapter Compatibility- Industry Control Card PC/104, PC/104+, PCI-104 Modules					
Interface	Model	Type	Result		
			Pass	Fail	N/A
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-3730	Intel 82559 LAN Module			X
On-Board SCSI Function Test					
Model	Interface	Result			
		Pass	Fail	N/A	
RICOH MP7060S	SCSI-CDROM 24X			X	
Fujitsu MCB3064SS	SCSI-MO Device			X	
Seagate 32155W	SCSI-HDD 2.15GB			X	
IBM DNES-309170	SCSI-HDD 9GB			X	
Seagate ST39205LW/P	9GB / Ultra160 / LVD			X	
COM Port Send / Receive Test			Result		
Use software program: COMTEST.exe			X		
Use software program: LL5.exe			X		
Disk On Module [DOM] Compatibility Test					
Model	Interface	Result			
		Pass	Fail	N/A	
DOM-256-026P Rev: A1K20	IDE 40 Pin			X	
DOM-064-426P Rev: A2A11	IDE 44 Pin	X			
Mini PCI Card Compatibility Test					
Model	Interface	Result			
		Pass	Fail	N/A	
GM-100 WLAN 11g Mini PCI Card (Model: Sky Thru GC-100)	Wireless LAN	X			
GM-101 WLAN 11b/g 54Mbps Mini PCI Card (Model: VNT6655AM)	Wireless LAN	X			
AAEON PER-C100 Mini PCI Card	RTL-8100C 10/100M	X			
	RTL-8110S 10/100/1000M	X			
COM/LPT Ports & RS-232/422/485 Function Test			Result		
RS-422 for COM2			X		
RS-485 for COM2			X		
COM1			X		
COM2			X		
COM3					X
COM4					X
COM5					X
COM6					X

LPT1	X		
LPT2			X
Card Bus(PCMCIA) Compatibility Function Test			
Model	Result		
	Pass	Fail	N/A
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

9. O.S. Compatibility Test

Installation Operation System Compatibility Test			Result		
			Pass	Fail	N/A
Linux-Red-Hat 9.0 Kernel 2.4.20-8			X		
Fedora Core 4					X
Windows Server 2003 English Version / Standard Edition 5.2.3790					X
Windows XP Professional English Version V2002 Service Pack 2			X		
Windows 2000 Professional English Version V5.00.2195 Service Pack 4					X
Windows 98SE English Version V4.10.2222A					X
Windows NT Workstation 4.0 English Version Service Pack6					X
MS-DOS 6.22			X		
Utility and Driver Test					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Linux-Red-Hat 9.0 / Kernel 2.4.20-8	Graphics Media	Default	X		
	LAN1 Driver	Default	X		
	LAN2 Driver	Default	X		
	Audio Driver	Default	X		
Windows Server 2003 English Version / Standard Edition 5.2.3790	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows XP Professional English Version V2002 Service Pack 2	Graphics Media	Advanced Micro Devices Win XP Graphics Driver Ver: 3.0.2.0	X		
	LAN1 Driver	Realtek RTL8139 Family PCI Ethernet Ver :5.398.613.2003	X		
	LAN2 Driver	Realtek RTL8139 Family PCI Ethernet Ver :5.398.613.2003	X		
	Audio Driver	GeodeLX Audio Driver Ver: 2.3.0.0	X		
Windows 2000 Professional English Version V5.00.2195 Service Pack 4	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X
Windows 98SE English Version V4.10.2222A	Chipset Software				X
	Graphics Media				X
	LAN Driver				X
	Audio Driver				X

10. 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			
APM Power Management Test	X		
ACPI 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 (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		
Swap Floppy Drive & Boot up Floppy Seek Function Test	X		
USB Onboard Device Function Test	X		
COM Address / IRQ Test	X		
LPT Address / IRQ Test	X		
BIOS AWDFLASH Program Test	X		

11. Performance Test

English Windows 2000 Professional with SP4 5.00.2195 + 1024x768x32bit / 60Hz + Direct 9.0		
ZD WinBench 99 V2.0		Unit
Business Disk WinMark99	5760	Thousand bytes/sec
High-End Disk WinMark99	23100	Thousand bytes/sec
Business Graphics WinMark99	94.9	
High-End Graphics WinMark99	259	
Final Reality V1.01—BenchMark Test (Reality Marks)		
2D Image	3.24	
3D	0.43	
Bus transfer	6.85	
Overall	2.23	Reality marks
ZD 3D Winbench 2000 V1.1		

3D WinMark 2000	N/A	Frames / sec
ZD Multimedia Content Creation Winstone 2004 V1.0.1		
Multimedia Content Creation Winstone 2004	N/A	
3Dmark2001SE Pro (Demo version)		
3DMark2001SE Build 330_Benchmark mode	N/A	
English Windows XP Professional with SP2 V2002 + 1024x768x32bit / 60Hz + Direct 9.0		
Business Winstone 2004 v1.0.1		
Business Winstone2004	N/A	