

# P5 Verification Test Plan

Release 08P010021

Product Model	<b>POP-190</b>
Description	<b>Engineering Specification</b>
Test Configuration	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> CPU Board : POP-190 A0.1 <input checked="" type="checkbox"/> BIOS : POP-190 BIOS Rev 1.0(2008/12/02) <input checked="" type="checkbox"/> Carrier Board : N/A <input checked="" type="checkbox"/> Expansion Board : N/A <input checked="" type="checkbox"/> Chipset : <input checked="" type="checkbox"/> CPU : Onboard CPU INTEL Celeron M 370 1.5GHz <input checked="" type="checkbox"/> North Bridge : Intel 82852/82855 GM/GME <input checked="" type="checkbox"/> South Bridge : Intel ICH4 <input checked="" type="checkbox"/> VGA Chipset : Intel 82852/82855 GM/GME <input checked="" type="checkbox"/> Audio Chipset : Realtek ALC655 <input checked="" type="checkbox"/> Ethernet Chipset : Intel 82562 10/100Mb <input checked="" type="checkbox"/> I/O Chipset : IT8712 <input checked="" type="checkbox"/> TV Chipset : N/A <input checked="" type="checkbox"/> SDVO : N/A  <input checked="" type="checkbox"/> Remark : P5 Report for POP-190 A0.1
<b>Test Result Summary</b>	
<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation Comment: _____ _____	

*2008/12/16*

**Issue date**

*Wenyuan Yang*

**Manager**

*Jerry Tsai*

**Test Engineer**

## Summary Table of contents :

Summary Table of contents	2
Platform Information	3
1. I/O Peripheral Function Test	6
2. Power Consumption Test	8
3. Power Connector Test	9
4. Timer Accuracy Test	9
5. Network HUB / LAN Connection Test	9
6. Hardware compatibility	10
7. O.S. Compatibility Test	15
8. BIOS Function Test	17
9. Performance Test	18

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	POP-190 A0.1	
Carrier Board	N/A	
BIOS / Version	POP-190 BIOS Rev 1.0(2008/12/02)	
CPU Type	Onboard CPU INTEL Celeron M 370 1.5GHz	
Memory Type	Onboard DDR 266 512MB	
SATA	N/A	
Primary IDE Master	FUJITSU 2.5" 40GB IDE HDD	
Primary IDE Slave	N/A	
CRT	ViewSonic E70	
LCD	N/A	
Compact Flash	N/A	
Backplane	N/A	
Riser Card	N/A	
Expansion Board	PER-V03B A0.1 (DVI Output via SDVO interface)	
	PER-V04B A0.1 (18/24bit LVDS output via SDVO interface)	
Operating System	[ ] Linux-RedHat 9.0 or [ ] Fedora Core 6	N/A
	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 2000 Professional English Version V5.00.2195 Service Pack4	6
	Windows Server 2000 English Version	N/A
	Windows 98SE English Version V4.10.2222A	N/A
Power Supply	MS-DOS 6.22 English Version	N/A
	ATX Power Supply : N/A	N/A
	AT Power Supply: N/A	N/A
	DC Adapter : AC ADAPTER LE-0316B160080	1,2,3,4,5,6,7,8

## Test Result for Certification

### 1. I/O Peripheral Function Test

I/O Function	Result			Note
	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	
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	Transcend / TS512MDOM40V / 512MB / IDE 40 Pin
DOM (Disk On Module) – 44 Pin			X	Transcend / TS512MDOM44V / 512MB / IDE 44 Pin
COM 1-232	X			
COM 2-232	X			
COM 3-232			X	
COM 4-232			X	
COM 2-422	X			
COM 2-485	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	
SIR / 115.2 Kbps			X	
FIR / 4M bps			X	
USB 1/2 Ports	X			
USB 3/4 Ports			X	
USB 2.0 1/2 Ports	X			
USB 2.0 3/4 Ports			X	
DVI Function			X	
DIO Connector			X	
Card Bus			X	
PC/104			X	
PC/104-Plus			X	
PCI-104			X	
CD-In Connector			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			
FAN1 Connector	X			
FAN2 Connector			X	
Express card			X	
Speaker Connector	X			
LCD Backlight Power Connector			X	
DC in Connector			X	
PCI Express Mini Card			X	
Power Button	X			
Battery Connector	X			
Front Panel (CN34)	Result			Notes
	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			Notes
	Pass	Fail	N/A	
BIOS write protection Selection and boot Selection	X			
Backlight enable level Selection and LVDS Power Selection			X	
COM1 +12V/+5V/RING Selection			X	
COM2 +12V/+5V/RING Selection			X	
Auto Power button Selection and power on selection			X	
Power source selection			X	
FAN Power Selection			X	
CMOS Clear Selection	X			
LCD Brightness and speaker level Selection			X	
Power Connector & Function	Result			Notes
	Pass	Fail	N/A	
Standard AT Power Connector			X	
Standard ATX Power Connector			X	
5V Only Power Connector			X	
DC Adapter	X			
LAN Connector & Function	Result			Notes
	Pass	Fail	N/A	
LAN Link / Speed LED	LAN1	X		
	LAN2		X	
LAN Active LED	LAN1	X		
	LAN2		X	
LAN 10/100 Ethernet	X			
LAN 1G Ethernet			X	

PCI Connector & Function	Result			Notes
	Pass	Fail	N/A	
Mini PCI Slot			X	
PCI Slot			X	
PCI Express x1			X	
Express card			X	

## 2. Timer Accuracy Test

System Clock & RTC Clock Test				
Test Method	Margin for error	Result		
		Pass	Fail	N/A
System Clock in Power On Mode	±2 second during 24 hours	X		
RTC Clock in Power On Mode	±2 second during 24 hours	X		
RTC Clock in Power Off Mode	±2 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		

## 3. Network HUB / LAN Connection Test

Location		LED Type				Result		
						Pass	Fail	N/A
LAN1 LED		Active LED				X		
		Link / Speed LED				X		
Location	Speed	HUB Type	Cable Length	HUB Speed	Onboard LAN Speed	Result		
						Pass	Fail	N/A
Onboard LAN1	10/100/1000 Mbps	D-Link DGS-1008T	100M	1GBps	100	X		
		Accton DeskTop-3005	100M	100 MBps	100	X		
		SVEC FD916H (10 Mbps HUB)	100M	10 MBps	10	X		

## 4. Hardware Compatibility

CPU Compatible Test						
CPU Type		FSB	Prime95 Version	Result		
				Pass	Fail	N/A
Onboard CPU Celeron M 370 15.GHz		33	V24.14	X		
Memory Compatibility Test						
Memory Brand	Memory Chipset	Frequency	Size	Mem	Result	

				Test86 Versio n	Pass	Fail	N/A
Onboard DDR	701VR V58C2512164SAJ5I	266	512	V1.70	X		
<b>Audio Basic Function Test</b>					<b>Result</b>		
					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
<b>Audio 5.1 Channel with S/P DIF Function Test</b>					<b>Result</b>		
					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
<b>On Board TV Function Test</b>					<b>Result</b>		
					Pass	Fail	N/A
NTSC		AV Terminal					X
PAL							X
NTSC		S Terminal					X
PAL							X
<b>TFT LCD Model</b>				<b>Result</b>			
				Pass	Fail	N/A	
LVDS	AUO G065VN01 V.0 / 6.5" / 640x480 / 18bit (4:3)					X	
	AUO G065VN01 V.0 / 6.5" / 640x480 / 24bit (4:3)					X	
	AU G084SN05 V.3 / 8.4" / 800*600 / 18bit (4:3)					X	
	AU G150XG01 V.0 / 15" / 1024*768 / 18bit (4:3)					X	
	AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)					X	
	AU M170EG01 V.D/ 17"/ 1280*1024 / 48bit (4:3)					X	
	AU M170XW01 V.1 / 17" / 1280x768 / 24bit (16:9)					X	
	AUO T260XW02 / 26" / 1366x768 / 24bit					X	
	AU M201UN02 V.5 / 20.1" / 1600x1200x48bit					X	
	AUO T370HW01 / 37" / 1920x1080 / 48bit					X	
Toshiba LTM10C209A / 10.4" / 640*480 / 18bit (4:3)						X	

TTL	NEC NL8060AC31-12 / 12.1" / 800*600 / 18bit (4:3)			X
	Sharp LQ121S1DG11 / 12.1" / 800*600 / 18bit (4:3)			X
	LG LM151X2-C2TH / 15.1" / 1024x768 / 18bit (4:3)			X
	Fujitsu FLC38XGC6V-06 / 15" / 1024*768 / 36bit (4:3)			X

**PCI Slot Function (PCI Adapter Card) Test**

Model	Type	Result		
		Pass	Fail	N/A
CHAINTECH NVIDIA GeForce4 MX440-8X	VGA Card			X
Creative Sound BLASTER Live5.1	Sound Card			X
Takram DC-395U V1.02	SCSI Card			X
ADAPTEC Ultra160 SCSI ASC-29160	SCSI Card			X
I-VIEW CP-1400AS (with Age STD-477FAI CCD)	Capture Card			X
Intel GD82559 10/100 Mbps Fast Ethernet Adapter	LAN Card			X
3Com 3C905C-TXM ETHERLINK 10/100 PCI	LAN Card			X
D-Link DWL-520+ Wireless LAN	LAN Card			X
ADAPTEC 1420SA RoHS 4-Port SATA II RAID	RAID Card			X
LEMEL MD V1456VQH-P2 PCI MODEM Card	Modem Card			X
D-Link DU-520 USB 2.0	USB Hub Card			X
Tekram TR-822 Serial ATA 150 [SA-001] + SATA HDD Seagate ST3120026AS 120GB	SATA Card			X

**PCI-Express Function Test**

Model	Result		
	Pass	Fail	N/A
SUNIX SATA1414 VER 1.1 PCI-Express x1 SATA Card (Just for CN39)			X
SkSConnect 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
SUNIX SATA II Express card (+ eSATA HDD External Box) (CN3)			X
Bear Mini-Express Function Test Card (CN47)			X

**HDD Compatibility Test**

Model	Result		
	Pass	Fail	N/A
SEAGATE ST340016A 40G 3.5" IDE HDD			X
Western Digital WD800JB-00JJC0 80GB 3.5" IDE HDD			X
Seagate ST3160815A 160GB 3.5" IDE HDD			X
Western Digital WD1600AAJS-00B4A0 160GB 3.5" IDE HDD			X

**CD-ROM Compatibility Test**

Model	Result		
	Pass	Fail	N/A
ASUS DVD-ROM DVD-E616A			X



Pioneer DVD-ROM DVD-126D			X
IBM GCR-8480B			X
IBM HL-DT-ST / GCR-8480B / 48X / CD-ROM/ ATA33			X
<b>IDE Cable Function test</b>			
<b>IDE Model</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
40 Pin Cable ATA100			X
44 Pin Cable ATA33	X		
80 Pin Cable ATA100			X
<b>USB Function Test</b>			
<b>USB Basic Function Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Remark: (1) CN14 is special connector that has only on1 USB port. (2) USB speed is limited at USB 1.X no matter USB 2.0 in BIOS is enabled or not.			
USB Controller	X		
USB 2.0 Controller	X		
USB Keyboard Support	X		
USB Mouse Support	X		
<b>USB 1.1 Compatible Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
USB 1.1 Compatible Test	X		
<b>USB 2.0 Compatible Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
USB 2.0 Compatible Test	X		
<b>USB 2.0 Function Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Install Windows XP Professional from HighSpeed Device: SONY USB2.0 DVD-R/W DRX-830UL	X		
<b>USB Device Full Loading Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
Model			
USB1	X		
USB2	X		
USB3			X
USB4			X
USB5			X
USB6			X
USB7			X
USB8			X
<b>Floppy Disk Controller Function Test</b>	<b>Result</b>		
	<b>Pass</b>	<b>Fail</b>	<b>N/A</b>
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	
MO [SCSI]	SCSI			X	
ZIP 100 [Parallel]	Parallel			X	
IOMega ZIP100MB Internal ATAPI Drive	IDE			X	
DOC				X	
Type-I CF	Fix / PIO Mode			X	
Type-I CF	Fix / UDMA Mode			X	
Digital I/O Connector Test (BIOS Setting: 8 In / 8 Out / 4 In, 4out)		Result			
Input Address: 801H (Fixed on BIOS)		Pass	Fail	N/A	
Output Address:				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-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			
Remark: COM1 ~ COM4 (from ITE-IT8712KX)		Pass	Fail	N/A	
COM Port Burn In Test overnight		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	Interface	Result		
		Pass	Fail	N/A
GM-100 WLAN 11g Mini PCI Card (Model: Sky Thru GC-100)	LAN			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		
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	
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	

## 5. O.S. Compatibility Test

Installation Operation System Compatibility Test		Result			
		Pass	Fail	N/A	
Windows 2000 Professional English Version		X			
Windows XP Professional English Version V2002 Service Pack 3		X			
Utility and Driver Test					
OS	Drivers Version		Result		
			Pass	Fail	N/A
Windows 2000 Professional English Version	Chipset Software	Intel Chipset software installation utility 6.0.1.1002(5/07/2004)	X		
	Graphics Media	Intel 82852/82855 GM/GME Graphics Controller 6.14.10.4020 (1/23/2005)	X		
	LAN Driver	Intel PRO/100 VE Network Connection 7.1.12.0 (2/10/2004)	X		

	Audio Driver	Realtek AC97 Audio 5.10.0.5630(7/1/2004)	X		
Windows XP Professional English Version V2002 Service Pack 3	Chipset Software	Intel Chipset software installation utility 6.0.1.1002(5/07/2004)	X		
	Graphics Media	Intel 82852/82855 GM/GME Graphics Controller 6.14.10.4020 (1/23/2005)	X		
	LAN Driver	Intel PRO/100 VE Network Connection 7.1.12.0 (2/10/2004)	X		
	Audio Driver	Realtek AC97 Audio 5.10.0.5630(7/1/2004)	X		

## 6. Performance Test

CPU Board	POP-190
Carrier Board	N/A
BIOS	POP-190 BIOS Rev 1.0(2008/12/02)
Operating System	English Windows XP Professional Service Pack3 V2002
CPU	Onboard CPU INTEL Celeron M 370 1.5GHz
Memory	Onboard DDR 266 512MB
SATA HDD	N/A
Primary IDE Master	FUJITSU 2.5" 40GB IDE HDD
Primary IDE Slave	N/A
CRT	Viewsonic E70 17"
LCD	N/A
Compact Flash	N/A
Expansion Board	N/A
Chipset Software	Intel Chipset software installation utility 6.0.1.1002(5/07/2004)
Graphics Media	Intel 82852/82855 GM/GME Graphics Controller 6.14.10.4020 (1/23/2005)
LAN Driver	Intel PRO/100 VE Network Connection 7.1.12.0 (2/10/2004)
Audio Driver	Realtek AC97 Audio 5.10.0.5630(7/1/2004)
Touchscreen Driver	USB Touchscreen controller 4.3.7.3203(8/3/2006)
Power Supply	AC ADAPTER LE-0316B160080

## Test Result:

Testing Software	Result	Unit
PCMark2002		

CPU	4959	
Memory	3233	
HDD	592	
<b>Final Reality V1.01—BenchMark Test</b>		
2D image	18.86	
3D	6.50	
Bus transfer	24	
Overall	12.83	Reality marks
<b>3Dmark2001</b>		
3DMark2001SE Build 330_Benchmark mode	1092	

**Test Result:**

Testing Software	Result	Unit
<b>PCMark05</b>		
PCMark	N/A	PCMarks
CPU	2336	
Memory	1508	
Graphics	N/A	
HDD	N/A	
<b>3Dmark2003 v360</b>		
3Dmark Score	52	
CPU Score	N/A	