

Mainboard Product Certification Report

Release No : 03E010083

Product Model	EMB-830
Product Description	AIO Embedded ATX.Pentium4.533MHz FSB. LCD. Ethernet. Audio. CFD. PCMCIA & HighSpeed USB.Rev.A1.0
Test Reason	<input checked="" type="checkbox"/> New product <input checked="" type="checkbox"/> PCB : EMB-830 Rev:A0.1 / EMB-830 Rev:A0.2 <input checked="" type="checkbox"/> BIOS: EMB-830 BIOS Rev: 0.6 (03/03/2003) EMB-830 BIOS Rev: 0.7 (03/13/2003) EMB-830 BIOS Rev: 0.8 (03/24/2003) <input type="checkbox"/> Renew product <input type="checkbox"/> PCB : <input type="checkbox"/> BIOS: <input type="checkbox"/> Revision change <input type="checkbox"/> PCB : <input type="checkbox"/> BIOS: <input type="checkbox"/> Component:

2003-04-08

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Issue date

A.V.P.

Test Engineer

Test result for certification

Stability Test - Dynamic / Boot_UP Burn_In Test	Result
Dynamic Burn-In test. (Play VCD Operating at 0°C~60°C for 48hours)	Pass
Dynamic Burn-In test. (Power On/Off Operating at 0°C~60°C for 24hours)	Pass
Audio Play For Sound Codec Chipset Burn-In Test .(Operating at 0°C & 60°C for 2hours)	Pass
LAN Chipset Burn_In Test. (Operating at 0°C & 60°C for 2hours)	Pass
Boot_Up Burn_In Test .(Operating at Room Temp.)	Pass
Timer Accuracy Test	Result
System clock accuracy of +/-5 sec per day.	Pass
RTC timer accuracy of +/-3 sec per day.	Pass
Watchdog timer accuracy of +/-20 % per sec/ min.	Pass
Margin Test – Power Consumption –P4 3.06G , DDR266 256MB	Result
Electrical characteristics – Normal Mode(+3.3V)	1.58 A
Electrical characteristics –Suspend Mode(+3.3V)	1.57 A
Electrical characteristics – Normal Mode(+5V)	1.08 A
Electrical characteristics –Suspend Mode(+5V)	1.04 A
Electrical characteristics – Normal Mode(+12V)	0.20 A
Electrical characteristics –Suspend Mode(+12V)	0 A
Electrical characteristics (CPU) – Normal Mode(+12V)	4.89 A
Electrical characteristics (CPU) –Suspend Mode(+12V)	1.24 A
Power Margin test	Pass
Full Loading Power Consumption – P4 2.4G , DDR266 256MB	Result
Electrical characteristics – Normal Mode(+3.3V)	2.10A
Electrical characteristics – Normal Mode(+5V)	1.84A
Electrical characteristics – Normal Mode(+12V)	0.20A
Electrical characteristics (CPU) – Normal Mode(+12V)	3.13A
Network HUB / LAN Connects Test	Result
LAN1 HP J4095A 24Ports [100 /10 Mbps]	Pass
LAN1 D-Link DES-1008 [100 / 10 Mbps]	Pass
LAN1 Intel InBusiness 8 Ports [100 / 10 Mbps]	Pass
LAN1 LEMEL LM-S5 5 Ports [100 / 10 Mbps]	Pass
LAN1 Accton DeskTop-3005 [100 / 10 Mbps]	Pass
LAN1 SVEC FD916H [10 Mbps]	Pass
LAN2 HP J4095A 24Ports [100 /10 Mbps]	Pass
LAN2 D-Link DES-1008 [100 / 10 Mbps]	Pass
LAN2 Intel InBusiness 8 Ports [100 / 10 Mbps]	Pass
LAN2 LEMEL LM-S5 5 Ports [100 / 10 Mbps]	Pass
LAN2 Accton DeskTop-3005 [100 / 10 Mbps]	Pass
LAN2 SVEC FD916H [10 Mbps]	Pass
Touch Screen for serial Ports Test	Result
COM 1 Serial Port	Pass
COM 2 Serial Port	Pass

COM 3 Serial Port	Pass
COM 4 Serial Port	Pass
CPU Compatible Test	Result
Pentium 4 3.06G (533 FSB)	Pass
Pentium 4 2.53G (533 FSB)	Pass
Pentium 4 2.4G (533 FSB)	Pass
Pentium 4 2.0G (400 FSB)	Pass
Pentium 4 1.8G (400 FSB)	Pass
Celeron 1.8G (400 FSB)	Pass
Memory Test –DDR 333/266	Result
Kingston / SAMSUNG K4H560838C-TCB0 / DDR266 / 256MB	Pass
Kingmax / KDL684T4AA-60 / DDR333 / 256MB	Pass; Note ¹
Transcend / SAMSUNG 229 K4H560838C-TCB3 / DDR333 / 512MB	Pass; Note ¹
SAMSUNG / K4H280838B-TCB0 / DDR266 / 128MB	Pass
SAMSUNG / K4H280838B-TCB0 / DDR266 / 256MB	Pass
SAMSUNG / K4H560838D-TCB3 / DDR333 / 256MB	Pass; Note ¹
On Board Audio Function Test	Result
System Sound	Pass
Play CD_IN	Pass
Play Sound Recorder	Pass
Line Out	Pass
Line In	Pass
Line In Sound Recorder	Pass
MIC Speaker – Dynamic / Condenser	Pass
MIC Speaker Recorder – Dynamic / Condenser	Pass
VGA Card Compatible Test	Result
3D Blaster Savage 4 / PCI Card	Pass
Maxtor G450 / VC-200203 / PCI Card	Pass
Multi Media Card Compatible Test	Result
Creative Sound BLASTER Live5.1 (PCI bus)	Pass
SCSI Card Compatible Test	Result
Takram DC-395U / V1.02 (PCI bus)	Pass
Modem Card Compatible Test	Result
Genuine GM56-AMI2019 (PCI bus)	Pass
LAN Card Compatible Test	Result
3 COM 3C905-TX (PCI bus)	Pass
D-Link FE-530TX Fast Adapter (PCI bus)	Pass
Intel SB82559 (20/100Mbps) (PCI bus)	Pass
Other Card Test	Result
YUAN DVD MPEG-2 MPEG CARD (PCI)	Pass
UPMOST 1394 CardBus + FireWire 3.5" HardDisk Enclosure	Pass
PixelView Play Tvpro	Pass

RAID Adapter Card Test	Result
ABIT HotRod 100 Pro (PCI bus)	Pass
HDD Compatible Test	Result
IBM IC35L180AVV207-1 / 185.2GB / ATA-100	Pass
IBM DTLA-307075 / 76.8GB / ATA-100	Pass
Maxtor 4G160J8 / 160GB /ATA-133	Pass
Maxtor 54610H6 / 46.1GB / ATA100	Pass
Seagate ST340016A / 40GB / ATA-100	Pass
Seagate ST380021A / 80GB / ATA-100	Pass
Seagate ST31276A / 1.2GB / ATA-33	Pass
Fujitsu MPE 3136AH / 13.6GB / ATA66	Pass
Maxtor 33073U4 / 30GB / ATA66	Pass
IBM DDRS-39130 / SCSI HDD	Pass
CDROM / DVDROM Test	Result
NEC C&C-BCD F561B / 52X	Pass
ASUS CD-S520/A / 52X	Pass
TEAC CD-540E / 40X	Pass
GENUINE GC-952B / 52X	Pass
SONY CDU5231 / 52X	Pass
4KUS CCD-52X60 / 52X	Pass
Acer 656A-074 / 56X	Pass
Acer DVP 1640A /16X /DVD-ROM	Pass
MITSUMI FX5400W / 54X	Pass
AOPEN CD-952E /52X	Pass
AFREEY CD-2050E / 52X	Pass
ARTEC CHM-56 / 56X	Pass
LEMEL LCD-5200S-563 52X	Pass
IBM HL-DT-ST GCR-8480B / 48X	Pass
USB Compatible Test	Result
CMOS Setting Test	Pass
CyberLink Power DVD XP4.0 Remote control	Pass
Acer 6406EU-122 CD-ROM	Pass
HP SJ4200C Scanner	Pass
HP Photo Smart P1000 Print	Pass
IOMEGA ZIP 100MB	Pass
D-Link DSB-H4/ DU-H4 HUB	Pass
MITSUMI FLL3.5 D353GUE/FUE	Pass
DEXIN A2U800A / Mouse	Pass
BCN ACK298 / Keyboard	Pass
TREK Thumb Drive SMART 64MB / Storage Device	Pass
PQI 7in1 USB Multi Slots / Flash Card Reader/Writer	Pass

Floppy Disk Controller Test	Result
Copy and Compare file between C : and A/B	Pass
Format A/B with system transfer and boot PC from floppy	Pass
Change CMOS Floppy is NONE value	Pass
SWAP FDD	Pass
Peripheral Storage Device Compatible test	Result
Fujitsu MO MCB3064SS (SCSI Type)	Pass
IOMEGA ZIP100M (Parallel Type)	Pass
IOMEGA ZIP100M (IDE Type)	Pass
LS-120 / LKM-F930-1 (IDE Type)	Pass
Compact Flash	Pass
Digital I/O Connector Test	Result
DIO Function Test	Pass
On Board I / O Function Test	Result
COM Port Send-Receive Test	Pass
CheckIt 7.0 Portable Edition Test	Pass
Disk On Module [DOM] Compatibility Test	Result
DOM-256-026P / Rev.A1k20 / IDE 40 Pin	Pass
DOM-064-426P /Rev.A2A11 / IDE 44 Pin	Pass
System Integer Application Test	Result
PCI cards integer application	Pass
Riser Card integer application	Pass
BIOS Function Test	Result
Standard CMOS Setup Test	Pass
Boot Sequence Test	Pass
APM Power manager test	Pass
ACPI Power manager test	Pass
Power On Function test	Pass
Wake Up Event Test	Pass
CMOS backup Test	Pass
Boot ROM Test	Pass
COM Address/IRQ Test	Pass
LPT Address /IRQ Test	Pass
Hardware Monitor Test	Pass
Supervisor / User Password Test	Pass
BIOS Awdflash Program Test	Pass
Performance Test – CPU Pentium 4 2.0 G , DDR266 256MB * 2	Result
LandMark Speed 2.0 – CPU	33153
LandMark Speed 2.0 – FPU	7787.69
LandMark Speed 2.0 – VIDEO	17873
WinBench 99 V1.1- CPU mark99	123
WinBench 99 V1.1- FPU winmark	6960
WinBench 99 V1.1- Business Graphic winmark99	332
WinBench 99 V1.1- High_end Graphic winmark99	1110

Final Reality V1.01 BenchMark Test – 2D image	18.48
Final Reality V1.01 BenchMark Test – 3D	6.94
Final Reality V1.01 BenchMark Test – Bus transfer	20.37
Final Reality V1.01 BenchMark Test – Overall	12.42
3D WinBenech 2000 v1.0 with DirectX7 and 1024x768x16Bits-Processor Test	2.09
Content Creation Winstone 2000 V1.0 – C.C.Winstone 2001	41.5
WinStone 99 V1.3 – High_end winstone99	48
WinStone 99 V1.3 – Business winstone99	42
Operation System Compatible Test	Result
Linux Red Hat 8.0	Pass
Windows 98SE English / Chinese version	Pass
Windows ME English / Chinese version	Pass
Windows NT workstation 4.0 English version with service pack 6	Pass
Windows NT server 4.0 English version	Pass
Windows NT server 4.0 Chinese (Simplified character) version	Pass
Windows 2000 professional English version	Pass
Windows 2000 Server Chinese (Simplified character) version	Pass
Windows XP Professional Chinese version	Pass
Windows XP Home Edition English version	Pass
DOS and DOS Utility Compatibility Testing	Pass
Utility and Driver Test	Result
Red hat Linux 8.0 hardware compatible list for VGA	Support
Red hat Linux 8.0 hardware compatible list for LAN	Support
Red hat Linux 8.0 hardware compatible list for Audio	Support
VGA for Windows 98SE (Intel [R] 82845G Graphics Controller / Driver Ver. 4.13.01.3317.)	Pass
VGA for Windows ME (Intel [R] 82845G Graphics Controller / Driver Ver. 4.13.01.3317.)	Pass
VGA for Windows NT 4.0 (Intel [R] 82845G Graphics Controller / Driver Ver. 4.03.1381.3317.)	Pass
VGA for Windows 2000P (Intel [R] 82845G Graphics Controller / Driver Ver. 6.13.1.3317)	Pass
VGA for Windows XP (Intel [R] 82845G Graphics Controller / Driver Ver. 6.13.1.3317)	Pass
LAN for Windows 98SE (Intel [R] PRO/100VE Network Connection / Driver Ver. 6.01.03.0000) (Intel [R] PRO/100+ Management Adapter / Driver Ver. 3.37.07.0000)	Pass
LAN for Windows ME (Intel [R] PRO/100VE Network Connection / Driver Ver. 6.01.03.0000) (Intel [R] PRO/100+ Management Adapter / Driver Ver. 6.01.03.0000)	Pass
LAN for Windows NT 4.0 (Intel [R] PRO/100VE Network Connection / Driver Ver. 6.01.03.0000) (Intel [R] PRO/100+ Management Adapter / Driver Ver. 6.01.03.0000)	Pass
LAN for Windows 2000P (Intel [R] PRO/100VE Network Connection / Driver Ver. 6.1.3.0) (Intel [R] PRO/100+ Management Adapter / Driver Ver. 6.1.3.0)	Pass

LAN for Windows XP (Intel [R] PRO/100VE Network Connection / Driver Ver. 6.1.3.0.) (Intel [R] PRO/100+ Management Adapter / Driver Ver. 6.1.3.0.)	Pass
Sound for Windows 98SE (Avance AC'97 Audio / Driver Ver. 5.10.4010)	Pass
Sound for Windows ME (Avance AC'97 Audio / Driver Ver. 5.10.4010)	Pass
Sound for Windows NT 4.0 (Avance AC'97 NT40 Audio Driver / Driver Ver. 4.03.00.3030)	Pass
Sound for Windows 2000P (Avance AC'97 Audio / Driver Ver. 5.10.0.4010)	Pass
Sound for Windows XP (Avance AC'97 Audio / Driver Ver. 5.10.0.4010)	Pass
LCD Monitor Function Test	Result
CRT+LCD – Dual Display Function Test	Pass
MXX150222030 / 1024*768*24bit / LVDS / 17"	Pass
Miscellaneous Test	Result
Windows 98SE Power manager test	Pass
Windows 2000 Power manager test	Pass
H/W Reset	Pass
Ext. Speaker	Pass
On board buzzer	Pass
HDD LED	Pass
Power LED	Pass
Ext. KB connector	Pass
Watchdog – reset	Pass
Watchdog – Software Programming	Pass
ATX power button	Pass
CPU FAN connector	Pass
COM1	Pass
COM2	Pass
COM2-RS-422	Pass
COM2-RS-485	Pass
COM3	Pass
COM4	Pass
COM5	Pass
COM6	Pass
LPT1	Pass
USB Ports 2.0/1.1	Pass
PS2 Keyboard / Mouse	Pass
SIR / 115K bps	Pass
Compact Flash	Pass
Mini PCI	Pass
Low Profile PCI (PCM-10590-1 Rev.A0.1)	Pass;Note ²
Cardbus / PCMCIA	Pass
TV-out /AV & S Output	Pass
LVDS Display Function Test	Pass

Summary OF Result

Note ¹ Memory type only support to DDR266.
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Note ² PCM-10590-1 REV.A0.1 is a Single-Slot PCI Riser.
