

AX5T

User's Guide

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AX5T Mainboard Âéçè³üçf

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çiÄÄ¼ ÎÛ K1September 4, 1997

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ÍÓÒqÑÁÇ€

İP%QÍÓ11Üİ%Đ
%ĐİeÄİİeÍhÈ %eÉdÈ çnú.

İP%KÍÓ11İŠB ÅŠòà
İŠB ÅŠòàÄÖÆÝ ò Èà»RçnÄJumper Å^EİÚj (Connector) ÄÖÀ ò~»RÅŠòàÈ`øe
B Ò÷ÄqÑ_ÄÖÄaĐÍ»T

İP%eÍÓ11AWARD BIOS
AWARD BIOS ÄÖÆÝ ò Èà»RÄf ÈeÖaÍnÄŠÇaÄÖÑ_ò,,»RçY%eÜ_Ü İ'A»ÄÖçèÄ|»T

Ä Û 1A Jumper1ÍnÄŠÄ
ÄiÄÍ Jumper ÄÖÄTÄ »T

Ä Û 1B1ÈqÄ¹Æ÷YUĐÈÖe
ÄeçèÈeÈq[Ä ÄÖÄsÍ_È÷YU»T

Ä Û 1C1ÜİÄ ÅXÖóÈaÈ½
çnÄjÄ Äf È' ÖeÄ^ È÷YUÄÖÖ ÈaÖaÄöĐÍ»T

Óé¿öÕ»Ã

¿Y%Æ Æ ¿Õ%ü¿f ÈqèÄÖÓé¿öÕ»Ã »X



×èÄqÑ_
Àa%Q¿UYU%ÁÆÝ Ö»Ã »T



ÞÍÁz
¾ÄÑ ØøÁQÈä»R¿zÉúØäÇaÀ^ÚZÁúÄX»T



×è%f%ü
ÓŠ¿ ÄØ×uÈ÷YUÏ, ¿çÄÖ% Ä|»T



ÇÁÇÈ
Î½Û È' ØøÁQÇÁÜZ»T



Î½ö
Î½ÈÄ¾ ÄQÈÞÏ%ÄÖØøÁQÈÈ“»T

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APPENDIX B ĚqÂ¼Ê÷ÝUĐÊÒë

APPENDIX C ÛÏĂ ĀXŌóĚàÊ½

ÏP³QÍÓ

ÛÌ³Ð

AX5T Æ çYPCI/ISA ÆÆHÖtÄÖ ATX Pentium® çUØ Ä` »RÄpËPçè»Mtel 82430TX PCiset ÎÖ% Ìi»SUltra I/O ÆËÄ ØÓ»RçS%ÖÄoÄÖPCI IDE ÆËÄ ØÓç»PÍÄ PIO mode 4»S Bus Master Ä^ Ultra DMA/33 ÐaÜ ÖiÄ»»RÖ ÈaÐaÜ Ì%çZÖW 33MB/s»T ÄÖç•çUØ Ä` %h Uó%ÖÄ(onboard) ççLÄðÄÏÈÈÍSÌ` ÈPÉúÄÖ 256KB Äè 512KB ÄÖ PBSRAM (pipelined-burst SRAM) ÄðÄ È` ØèB »RÄY%PÍÄÈ 72 pin ÄÖ SIMM Ì»ÖèÄ^2 È 168 pin ÄÖ DIMM Ì»Öè»RçZ»ÖÍm EDO Ä^ SDRAM ÄaÈäÄYçè»RÄpÍæ%Æ` ØèB ÈvÐ„çZÖW 256MB»TÄÖç•»AX5T ÄèçèÄÖÆ 2M bit Flash ROM»RÖ çÜÄiÑ†Öh çnúÄÖ%PÍÄÉú% »R Ñ Ì^ Æ Ä çLÈvÄ »T

AX5T Ä`ç`ÄçWçYçF Ìi ÇiÇÄÇÄÖÉdÄä»X

Ú Ð»Ð"Ø (Suspend to Hard Drive)

ÓSçèAX5T Í, ÐÌ çnú»RÐ"Ø Èä»ÄRÖçÇÈÄüÄÖÖ Ä ÄÖÈaÐ»ÇÄÑ†Ø % Win95»Soffice Äè ÄpçÄíÈB %»RÄi çZÄxÈIÄ ÌpÇ ç Ý Ø %ÄÄvÄÖÄR»RÆçyØ %ÄAQÑ•ÄÏè%eÛÌçèì` Ä» ÄÖÍÜÑè»TÄ xèÄèçè VESA ÍhÈ ÆÈvÄÖPCI VGA çu (Äf AOpen S3 PV60/PT60)»R Sound Blaster ÆÈvÄÖÇÍÈPçu (Äf AOpen AW35/MP56)»RRockwell ÆÈvÄÖ Modem (AOpen F56/MP56)»R% ÈúB Suspend to Hard Drive çÜxèÖSÄQ»T

ÖaØØ Í Û (Internal Modem Card Wake-up)

ÄbçèATX Soft Power ÄÖçnú (çZÍ'Ó]ÍÈB ÄèÛp×]Ð"Ý PC)»R ÄÏèççYÄs Ý Ø ÄÖÄÈ ÖRçF »RÖççèÖaØØ Èi ÈaÄYÄoÈaÈiBçÖ„Øo»TÍ, ÐÌ çnúÄUÈçPRAi çèÄi Öi ÚÜÐaÈ` Ø ÖaIÄ Û Ø »RÄi Íæ%ÄÖÆ É"ÄsÄ »RÈ%ÄWðÄI èÄÖç•ÈIÄ»ÖaØØ %Äç•»RÈ' ÚóççYÄèçè%ÖÈIÄ» ÖaØØ (Internal Modem Card) Äi %PÍÄÄÖçnú»TÈ' ççYÄèçè AX5T ÑvÈ MP56 %Ö ÈIÄ»ÖaØØ »RçÇÈäÈççÖÍ]ÖçèÄ ÝSç•ÄÖÖ„Ñx»T

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ÍmŠÀoÈaD"Ø ÈaD» (RTC Wake Up Timer)

Í, Çi çmúçzB È' ÓŠç ÁŠò,À€%QÇiÈaD»»RÂTN ÈaD»%QÂ »RÂÏeÁ\Ñ"ÀoÈaD"Ø »TÈ' çz çYÈ_Ø"Ø ÈaD»ÍmŠÀsÂTÇi% ÄÖË %Q%»RÂeÆ ÂT%eÄÖË ÇiÈaÄ »TÂpØ »eÄñçZÓWÄ È»T

ÀaASç ÎÄÄ» CPU ÝÇÚ%ç^ò

Û Î^x^ÄaÝÇÚ%ç^ò Ó çòÄvÄÖ AMD K6»SCyrix M2 %0xÆÑ À€%M»RÀ AX5T-3 %ÄÏ^ Á çè%Wç ÎÄÄ» CPU ÝÇÚ%ç^ò »RçYÄ`ÉuçZÉuÄÖ%aEBÖ`ÄaÏÓNç%Qç_ÄÖPU»TÄaASç ÎÄÄ»ò %QÉ ÄÖÄUÄaASç ÎÄÄ»À»ÄÍÄ ÈÄÄÖËËÏ%»RçY%QÉ ÚÍçèÄÍÄç»RÄaASç ÎÄÄ»ÄÖ%ÄQÑBÄñÆ 36°C»RÄÍÄUÄaASÄ»Æ57°C»T

3VÓ]Ó,,ÆÄ` BQÓ,,ò

AX5T-3 %ÖÄÏ 3.3V (Chipset»SPBSRAM»SSDRAM) %è 2.8/2.9/3.2V (CPU core) Ó] Ó,,ÆÄ` BQÓ,,ò »RçzçYÄØ% ç À Ï^ò Ñ_ç»RÄ` BQÄÏeÄ\Ä ÑjÑÏ»T

CPU Ó]Ö Ä` BQ

Ñ CPU ÑBÄñÈÄÄ 55°C Èa»RCPUÍçÄñÈ_ÀoÈaÇÈÄT»RÄÝçSçè BIOS Äè ADM (Advanced Desktop Manager»RÝ Ä Intel ÄÖ LDCM) Ï, çi ÞÍÄ»T

CPU ÇÑÈÈÖÄÈÈ

AX5T Î`Äè%WçÑÈÈÖÄÈÈÄÖçmú»RçZÄØ% CPU Ó]Ö »TÍ' Ó] BIOS ÄèçÄyÏ' Ä» (ÄiÄf ADM)»R ÄÏeÄsÇÑÈÈYrÈÖÈa»RÈ_çZÄoÈaÏ'ççi ÞÍÄ»T

ÄÏeÖ,,Ú%ÖÄÈÈ

AX5T %mÏ'Äè%WÖ,Ú%ÖÄÈÈÄÏe»RÄSÈ`ÈiÈaÄÏeÄu»RÍ, ÇiÄÏeÈ_Ñ`Ä Þ ÖÄÈÈÄÏe%ÄQÓ,,Ú%»RÚÄÄuÆ ÄpÄÍÄÏeÖ,,Ú%ÞhÓ] %Dç ÖeÑaÄÖÈ»Äè»RÇj ÄÍÍ, ÖeÈ»Äè»RÍ_ÑÖxÇC ÎÇÛÈØÖÄè ADM Ó ÄèçèÄaÏ, çi ÞÍÄZèÈÄ»T

FCC DoC Ö` Ýi

AX5T çUØ Ä`Æ %ÖÖÄÍ,,Ó]Æ È FCC DoC ÁTÏeÈxÖeÑÄÏ ÒiÄÖçUØ Ä` »RÄj ÄèÄsÏ]Ø ÎùÄÖBQÄÄÖR%ç »R%Ä%ÄÑ`ÄèçÄYB »T

1.1 ÍhÈ

¿UØ Ä`ÄÄ»	ATX
¿UØ Ä`¾¾¾¾	305 mm x 244 mm
CPU	ÄéèÌßÀi Socket 7 ÍhÈ ÄØCPU»R¿M¿ Intel Pentium P54C»SPP/MT MMX (P55C)»SAMD K5/K6»RÄ`Cyrix 6x86/M2»T
¿UE`Øeß	FPR (Fast Page Mode) Äè EDO (Extended Data Output) 72-pin SIMMx4»R¿Y¾168-pin SDRAM Äè EDO DIMMx2»RÈvD„Íæ¾¿¿YÛi ¿cÄ 256MB»T
ÁðÄ È`Øeß	¾ØÄò 512KB PDSRAM»T
ÍÓ¾ Ìi	Intel 82430TX PCiset
Ûi ¿cÖè	ISA x4 ¾e PCI x4
À ÀTÈ	2¿í UART 16C550 ÆÈvÄØ RS-232 À ÀTÈ
ÄYÀTÈ	1¿í¾ÍÄ SPP/ECP/EPP ¾eØòØèÑÄÄØÄYÀTÈ
Floppy ¾ØÇÈ	1¿í ÍÉÄ»ØèØèØ Í¿ÈÛ¿ »R¿zÄé¿è 720 KB»Rl.44MB Äè 2.88MB È À»ÄØ 3.5 ÄèØèØèØ »R¾ß60KB»Rl.2MB È À»ÄØ 5.25 ÄèØèØèØ »T
IDE ¾ØÇÈ	2 ¿í IDE Channel ¿Í¿ÈÛ 4 ¿í IDE ØàØ~(Hard Disk Äè CDROM)»R¾ÍÄPIO mode 4»Bus maste»RÄèUltra DMA/33 Í¿DaÛ ØiÄ»»T
USB ¾ØÇÈ	2 ¿í USB Í¿ÈÛ¿ »RBIOS ¿ÍÄ¿ USB Bi ÈÄÍ`À»¿¿i ÚÚDaÛ È ÄØ AT Äè PS/2 Ûp×] »T
PS/2 ÑÄÓÄ	¾ØÄò Mini-Din PS/2 ÑÄÓÄÍ¿ÈÛ¿ »T
Ûp×] ¾ØÇÈ	¾ØÄò Mini-Din PS/2 Ûp×] Í¿ÈÛ¿ »T
RTC ¾e Ó„ÄÚ	RTC À Ä Intel PIIX4 chipset ¾Ø»RÄé¿èCR-2032 Øj Ó„ÄÚ»T
BIOS	AWARD Plug-and-Play ÚYÍ»ÚY¿èFlash ROM BIOS»T

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Ú Ð»Ð"Ø (Suspend to Hard Drive)	¿ëBIOS %pIÄ»RÚ<Ä†ÄR¿ðÄVÄÖ%ÄQÄÄÖRAöÖéÖeØ %Ö»R%Ä %QÄÄÖ"Ø Èä¿ùÄ ¿†¿i Ç %ÄAQIvÇÈ»TÖ÷Äé¿ESA ÍhÈ Äö ÈvÄÖ PCI VGA ¿u»RSound Blaster ÄöÈvÄÖÇIÈP¿u»T
ÖaØöØ Í Û (Modem Wake Up)	Í'Ó]ÉdÈ ÄÖ×^Ö ÍnÇf»R¿¿¿YÜä¿é¿•ÈIÄ»Äe%ÖÈIÄ»ÖaØöØ (Äf AOpen MP56)»RB Ä†ÈèÄsÄÍÖ,,ÖöÐÄi ÈaØöÈaÈIÈ¿¿»T
ÍnÄŠÄöÈäÐ"Ø ÈäÐ» (RTC Wake Up Timer)	¿¿YÍÄŠ%QÇiÄeÄŠÄÖÈäÐ»»RB Ä†ÈèÄsÄÍ, Çi ÈäÐ»ÄöÈäÐ"Ø »T
ÄaÄS¿ ÍÄÄ»YÇÜ½×^Ö	ÈÄÈPÍ%ÄaÄS¿ ÍÄÄ»YÇÜ½×^Ö (Synchronous Switching Regulator)»T
Ó]Ö,,ÄÄ`BQ	3.3V 10A %è 2.8V/2.9/3.2V (CPU core) 15A Ó]Ö,,ÄÄ`BQÖ,, Ö »T
CPU Ó]Ö Ä`BQ	Ñ CPU ÑBÄñÐhÓ]55°C ÈäI, ¿i ÞIÄ»T
CPU ÇÑÈÈÖaÈÈ	Ñ CPU ÇÑÈÈYrÈÖÈäI, ¿i ÞIÄ»T
Ä†ÈèÖ,,Ü½ÖaÈÈ	Ñ Ä†ÈèÖ,,Ü½ (5V»S12V»S3.3V Öa 2.8V) %½ ÜÈÈÈäI, ¿i ÞIÄ»T

1.2 Ü Đ»Đ”Ø (Suspend to Hard Drive)

Suspend to Hard Drive İ_Æ Ę_ç òÁvÁÖÁİİēÄÄDR»RĒ` ØēB Ò Èà»RUYÓ İvÇĒÜ<À†ÁöİŠ
 Öē%Ö»Tİ^ ÁüÁİİēçzÁÖç ÜpÖ,»RN %f%QAÖB”Ø Èà»RĒ` çzYÁ×ĒİÁoÁ Ç ÁıÁÖ%ÁQÁÄDR»R
 %Äİçİ Win95 Đ”Ø ÄĦ’ »R%ÄÄÄÇÄNİēİ ÈaÜİçēİ’ Á»»T

ÀfÄXĒ’ Áı 16MB Ę` ØēB »RÁÖÖ %Äö%ÖÇ€16MB ÖēÖēÄBD»ÁıÜ<À†ÁİİēĘ` ØēB »T×ē
 ÄqŃ_Ē’ çİĐNÄēçèÖa VESA İhĒ ÄĒĒVÄÖPCI VGA çu»RÖa Sound Blaster ÄĒĒVÄÖÇİ
 ĒĐçu%Ä APM Driver»TŃ İ^ »RÁöÇæÄöĐİĒ’ Ü çèÄò ØAOpen PT70 VGA»RAW35 (Çİ
 ĒĐçu) Öa MP56 (ÖàØöØ +ÇİĒĐçu) çY×eÁ` ÍæÄēÄÖÄĒĒVÄä»T

1. **Đz/4** BIOS setup»RPower Management à Suspend Mode Option»RÜ Øö
 “Suspend to Disk”»T
2. **Đz/4** BIOS setup»RPNP/PCI Configuration à PnP OS Installed»RÜ Øö "No"»T
 Í, ÄeĒ, BIOS ÁİØ NÄöa Á^ ÁŠÁİİēØ N»»T
3. **Đ”Ø** ÈaÜ ØöĐz/4 DOS Öi Á»»RÀfÄXĒ’Æ Win95 ÄēçèÄæ»R×eÄsĐ”Ø çİ İ’
 "Windows 95 Starting ..." ÈÄÄ %f "F8"»RÜ Øö "Command Prompt Mode"»T
4. **Ē Ä** AOZVHDD %Äýİ’ Á»»RAsİŠÖē%Äöçü%QÇİ ÜİİēĒē»RĀpçòÄÖAsÜ<À†Áİİē
 ÄÄDR»æĒ` ØēB Ò Èà»T×eÜ %ÄfATÁ ç` »X
 C:>AOZVHDD /c /partition /M:mmm
 mmm ç_Ä Ē’ ÁaĒ ÄÖ partition %Äf»RÁöÇæÄöĐİĒ’ Á` ÉuÄÄĒ ÄÖÄBD»Ē_ÁıĒ`
 ØēB Üi Öhçè»TÄi Äf»RÀfÄXĒ’ ÖŞÇfĒ_ÁıNÄ4M Ę` ØēB + 4M VGA»RÁÖÖ
 ×eÄö%ÖÄ` Éu68 MB»T
 ÀfÄXĒ’ ÁÖÜaĒĒÄİİēÄĒ FAT32»R×eÄēçèpartition %Ä Ä»»T
5. **çİ%QÖö%Ä** Ä|AsİŠÖē%Äöçü%QÇİ Ü ÜYÜä»RçèÁıÜ<À†ÁİİēÄÄDR»æĒ` ØēB Ò Èà»T×e
 Ü %ÄfATÁ ç` »X
 C:>AOZVHDD /c /file
 ×e×eÄŠĒ’ ÁıÄÄĒ ÄÖİ†p ÄBD»Ē_Áıİ½çÜ ÜYÜä»TÄi Äf»RÀfÄXĒ’ Áı16MB Ę`
 ØēB »RÁÖÖ İ_Ö-Ç€16MB + VGA Ę` ØēB ÄÖİ†p ÄBD»TÄfÄXAOZVHDD Äp
 %Ä İ†p ÄBD»RĒ` çzÄēçè DOS ÄÖ DEFRAG İ’ Á»ÄēÆ Win95 ÄÖ` ÖēÖē
 ÇÄİİ’ Á»»%ÄıØyİ’ İŠÖē»RçYİ½çİ†p ÄBD»»T

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6. ÇÄÑÏÈi ÈäÄÏÈ (Reboot)»T
7. ÜäçëÏ]Æ,Ä ÜpÄ» (Momentary) Suspend switch»RË(Ç/ÄÏÈDz/ Suspend to Hard Drive mode»RÏ^ÄüÈ_Ó„Ñ»D”Ý Ý ÍÆ»T
8. %f%QÀ0D”0 Èä»RÄÏÈÈ_ÀöÈäAoÄ ç Äv%A%ÄQÏvÇÈ»T



Î¼ö: %fÄT VGA çu0xÎ ÒiÆ VESA ÆÈv»RÄÝçS0RçèÄ Suspend to Hard Drive»T

- AOpen PV90 (Trident 9680)
- AOpen PT60 (S3 Virge/BIOS R1.00-01)
- AOpen PV60 (S3 Tiro64V+)
- ProLink Trident GD-5440
- ProLink Cirrus GD-5430
- ProLink Cirrus GD-5446
- ATI Mach 64 GX
- ATI 3D RAGE II
- Diamond Stealth64D (S3 868)
- Diamond Stealth64V (S3 968)
- KuoWei ET-6000



Î¼ö: %fÄT ÇÍÈP çu0xÎ Òiçz0RçèÄ Suspend to Hard Drive»T

- AOpen AW32
- AOpen MP32
- Creative SB 16 Value PnP
- Creative SB AWE32 PnP
- ESS 1868 PnP

ÀfÄXÈ·Ä0ÇÍÈP çuÀs Suspend to Hard Drive ÄüÏ]Ä|çÜÈq%Ä ÄQ»R«èÜäÆüÄpÆ Äp%pÏÄ APM Bi ÈäÏ' À»»RÄÝÀS0ä%A»T



×êÄqÑ_ : USB çmÉúÁYçÖçc³ÜÖa Suspend to Hard Drive Ê‡
 Ài Î Öi»TÀfAXÈ' Í, Ì' ¼¼ÇÁSÌ' ÐY×eÐz¼ BIOS»Rntegrated
 Peripherals à USB Legacy Support»TÝ ËÖ USB Legacy çm
 Éú»T

×êÄqÑ_ : Intel Bus Master IDE Bi ÊäÏ' À»ÁYçÖçc³ÜÖa
 Suspend to Hard Drive Ê‡Ài Î Öi»TÀfAXÈ' Í, Ì' ¼¼ÇÁSÌ'
 ÐY»R×eÏÖ½(Uninstall) Intel Bus Master IDE Bi ÊäÏ' À»»T



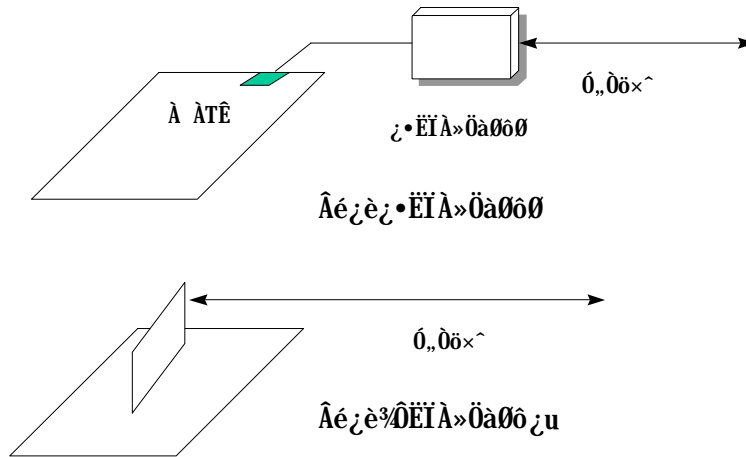
×ê¼f¼u: ÁÍ¼QÁáÜÜØ ÌùÁéçèÁeÁŠÁ ÜpÀ»Ð"Ý (toggle
 mode) Turbo switch»RÀfAXÈ' ÁüçÁÑ ÁQ Suspend switch»R
 ×ê×eÁŠçÌÐÑÇÈÁ ÁüÀÖçYÖi ÜÚÍ]Æ,À»Á Üp (momentary
 mode)»TÁpÁyÁ‡ÌèçzÉúÍ]Á|Ð"Ø »RÀnÆÉARçYÖNÈ{Ç¼ÁDz
 ¼ Suspend mode»T

1.3 ÖàØöØ Í Ù (Modem Wake Up)

ÁoÇæAsÀÓÁiÇÈb×ñÁÖ Modem Wake Up çUÇ€Æ ÊŠÓ ÀsÉ^Ó ÁÖÝ Ø ÄÄRÁaÜp¼ Ä|
 ÆÉÚaÆuÓ,,Ñ×ÁÖÇÑÈÈÆ ÁpÈÈ¼ ÜúÈä)»RÍ, Ð çUØ À`Ù Í^¼n¼pÍÁÐaÌèÁÖgreen PC
 suspend mode»RÀ Í, ÁY¼AsÁoÇæÈb×ñÁÖ×uÍ ¼¼»T

Ûáçè ATX soft power On/Off»RÁóÇæçzYB Á‡èAsÁÓç Ý Ø ÁÖÄÄR¼Æ (çYÁÓÓ,,Ñ×Øö
 Ì' çmÉú³ÁÖ suspend mode ÁY¼¼Æ É^çÜÝ ÍÆÁ‡èÓ,,Ñ×)»RÁóÈaÈÍBçÓ,,Øö»RÀfÁOÉ_çz
 çYÈÍÁ ÍÁÜ Ø ÓaÐáÉ^Ø ÁÖçmÉú»TÍ]×ñÆ ¼ÖÈÍÁ»ÜóÆ ç•ÈÍÁ»ÓaØöØ »RÍ¼çzY¼pÍÁ
 Modem Wake Up çmÉú»RÀ Æ Áéçèç•ÈÍÁ»ÓaØöØ ÁÖÈaÜZÆ »RÈ' çÌÐÑB ÓaØöØ ÍSÁ
 Ð"Èi ÁÖÄÄR»TAOpen ÁÖ AX5T/AX58 Óa¼ÖÈÍÁ»ÓaØöçuÍ¼Áe¼WédÈ ÁÖ×^Ó (È^ Ábçí
 ×ê¼¼»RÁi çYÈ' Í]ÐÑÈ Ð` ç À Ó,,Ñ×»TÀÀÓRCj È'ÑbÁéçModem Wake Up çmÉúÁÖØö»R
 ÁoÇæÁoPÍÈ' Èpçè AOpen ÁÖ¼ÖÈÍÁ»ÓaØöçu (F56 Àè MP56)»T

ÜÏ 3/4



Âéçèç%ÖËÏÀ»Öà060 çuËä (AOpen MP56)»X

1. **Dz/4** BIOS setup»RPower Management à Modem Wake Up»RÛ Á Enable»T
2. **ÀSòàË' ÁaË Ç€ÀsD'0 ÈaÈ À ÄÖÛÏçèÏ' À»»RÁYË_Áp0~Á »^Ëi Èa»%0†Ïi%4ÄeÁbçè**
Suspend to Hard Drive çñú»T
3. çY soft power switch Ý ÍÄÏÏè»T
4. çY 4-pin ÄÖ Modem Ring-On Èa×^»RÍ†ËÏ MP56 ÄÖRING Í†ËÏÛj Õa AX5T/AX58
ÄÖ WKUP Í†ËÏÛj »T
5. **Ë_Ó„òö×^ Í†ËÏÀ MP56»TÄ€Ëi »Z' ÀsË' ççY0i0i Modem Ring-On ÄÖçñú%4»T**

Âéçèç•ËÏÀ»Öà060 Èa»X

1. **Dz/4** BIOS setup»RPower Management à Modem Wake Up»RÛ Á Enable»T
2. **ÀSòàË' ÁaË Ç€ÀsD'0 ÈaÈ À ÄÖÛÏçèÏ' À»»RÁYË_Áp0~Á »^Ëi Èa»%0†Ïi%4ÄeÁbçè**
Suspend to Hard Drive çñú»T
3. çY soft power switch Ý ÍÄÏÏè»T
4. **Ë_Öà060 ÄÖRS232 Èa×^ Í†ËÏÀö COM1 Äè COM2»T**
5. **Ë_Ó„òö×^ Í†ËÏÀ Öà060 »RÍ^ ÁúçÏD'Öà060 Ó„Ñ»»RÍ' Às0i0i Æ:Ár»Z**



Í½ö: ç•ËÏÀ»Ôà060 ÄÖ wake up Êe00Æ çë COM1 Àè COM2 Ç†
 ÍuEÖÏ »WÖËÏÀ»Ôà060 ÄyÆ çëÍ†ËÏ RING (Ôà060 ¾h) Ôa
 WKUP (çU0 Ä`¾h) ÄÖËà^Ç†Íu»T

Í½ö: Suspend to Hard Drive»SModem Wake Up ÔaAcephone ÚÍ
 çëÍ€B ÑwË†Àeçè»RÆ ÝÄÜ Ø ÔaAAÏ, ÐaÉ^ÄÖÏæè0èÄ^¾ Èñ»T



×èÄqÑ_ : Àeçèç•ËÏÀ»Ôà060 ÄÖö»RÖa060 ÄÖÖ,,Ñ×Í_çÏÐÑÀ`À
 ÀsÐ"Ëi ÄÖÄÖÖB»WÍ Àeçè%ÖËÏÀ»Ôà060 ÄÖö»Ë_ÄdÄÍÍ, ÖöÇÇÄ
 ¾W»T

1.4 Ä†Ïè0,,Ú½ÖäËË

AX5T ÄyÄÍ¾QÇiÓ,,Ú½ÖäËËÄ†Ïè»TN È`Ð"ËiÓ,,0½Äu»R Í, Çi ÔäËËÄ†ÏèÍ_Ñ`À Ð ÀrÔäËË
 Ä†ÏèÄÖ¾ÄQÖ,,Ú½»RÚaAuÆ ÄpÄÍÄ†Ïè0,,Ú½ÐhÓ]¾Dç ÖeÑaÄÖË»Àe»RCj ÄÍÍ, ÖöË»Àe»RÍ_
 Ñ`0xçè PC ÍÇÛ€00Àè ADM (Advanced Desktop Manager) Ó ÀeçèÄæÏ, çi ÐÍÁZÈe
 ÈÄ»T Í, Çi ÔäËËÄ†ÏèççY0äÆ- 5V»S12V»S3.3V çY¾CPU Èð¾uÀeçèÄÖ 2.8V»TÍ, Æ
 Òxçè BIOS Ôa ADM Ä ¾ ÓWÄÄÖ»RÍ]ÐÑÀeçèÄ ÄpçÄÍŠB »T

Çj ÑbÀeçèÄ†Ïè0,,Ú½ÖäËË»X

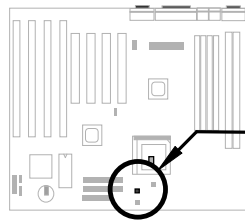
1. Ðz¾ BIOS setup »RIntegrated Peripherals à System Voltage (ÀQ ÄÍ
 12V/5V/3.3V Ôa 2.8V Í, Íi Öö)»RÜ Ä Monitor»T
2. ÀŠÖa ADM»T



×èÄqÑ_ : çèÄ ÍŠB ¾hÄÖÇÇÄ »RCPU Èð¾uÓ,,Ú½Às 2.8V
 çYç•ÄÖË»Äf»RÆ Í]Ä|ÔäËËÄÖ»T

ÜÏ ¼Ð

1.5 CPU ÇÑÈÊÏÀÈÈ



3-pin ÄÖÇÑÈÊÏÀÈÈ 00% Èú¼ÏÄ
SENSE Èe00

ÇÈÄéçè CPU ÇÑÈÊÏÀÈÈ¼nú»RÇ0ç ÇÈÈ_ÇÑÈÊÏÀÈÈ 3-pin ÄÖÏÀÈÈÏ¼ FAN2»RÄÝÀŠ0à ADM (Advanced Desktop Manager»RÝ À Intel ÄÖ LDCM)»T

Í, Çí¼núÈ Òxçè BIOS 0à ADM ÄìÄ ¼ ÖWÄÄ0»RÍ]ÐÑÄéçèÄ Ä¼ÄÏŠB »T

Çj ÑbÄéçèCPU ÇÑÈÊÏÀÈÈ¼nú»X

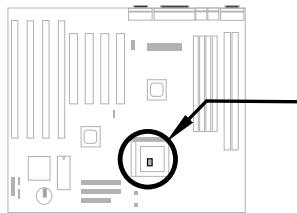
1. Ð¼¼ BIOS setup»RIntegrated Peripherals à CPU FAN»RÛ Ä Monitor»T
2. ÄŠ0àADM»T



×èÄqÑ_ : È' ç]ÐÑÄéçè 3-pin ÄÖÇÑÈÊ»RÍ, 00ÇÑÈÊ%¼ÏÄ CPU ÇÑÈÊÏÀÈÈ¼núÄì0=ÄÖ SENSE Èe00»T

×èÄqÑ_ : çèÄ ÝŠB ¼hÄÖÇÇÄ »Rç ÄÏ AX5T-3.1 ÄèçYÄú ÄÖÄÄç0¼ÏÄ CPU ÇÑÈÊÏÀÈÈ¼nú»TAX5T-3 ÄÝ]Ä¼¼ÏÄ»T

1.6 CPU ÓJÖ Å`BQ



¿Ö¿U0 Å`ÀsCPU ÁÍ¿ÍmÁÑBÁñÁ`BQ×`Ö »RÑ NBÁñEÁÁ55°C Èã»RCPU Í¿ÁñÑ`Áó ÈãÇÈÁTÁÝ¿S BIOS Ñ`Í, ¿i PÍÁZÜ€e»TÁfÄXÉ`ÁÍÁSÖà ADM (Advanced Desktop Manager»RÝ À Intel LDCM)»RADM ¿ÁÑ`Í, ¿i PÍÁZ»T

¿Ö¿mú¿/Ö-ÍŠB ÍmŠ»RBIOS Àe ADM Ñ`ÁóÈãEÖÍ »TÀ ×e¿ È À ¿fÁTÁSà[»X

1. D¿¿ BIOS setup»Rntegrated Peripherals à CPU Thermal (Temp.)»RÙ Â Monitor»T
2. ÀŠÖàADM»T

İP³XÍÓ

İŞB ÀŠÒà

¿ÓÍÓË_¿YÍqÁá0¿DzÁ0¼ À»»RÖ»Á ÀfÀ ÀŠÒàË'ÄÖÀ¿ìè»R×è×eÓ ÀaÑi Í, ÁáÀSà[ÁiÀŠÒà»T



×è¼f¼ü: ESD (Electrostatic Discharge) ÆËÚcÓ,,Á Ó,,
¾ÁÑ_»R¿èÁ Ü€B Ó,,Ò (IC) ÁöÈvÁ Á Á ÚcÓ,,ÑaÚÍÁÖ
Ö%Be»RÀnÁÖÑ"ÁeÑ]ÍSÌ' ØÓ»RÖeÖeØ »RÛi¿c¿u¾eÁp
¿]ÁÖÖ¿¿ Á Á ÐaÈq»TÆ¾WÓŠÁØÚcÓ,,Á Ó,,ÁiÑ}ÝrÍÖ
¾ »R×èÜ ÀÆ¼ATÁÖÓŠÁØÈÖÆZ»X

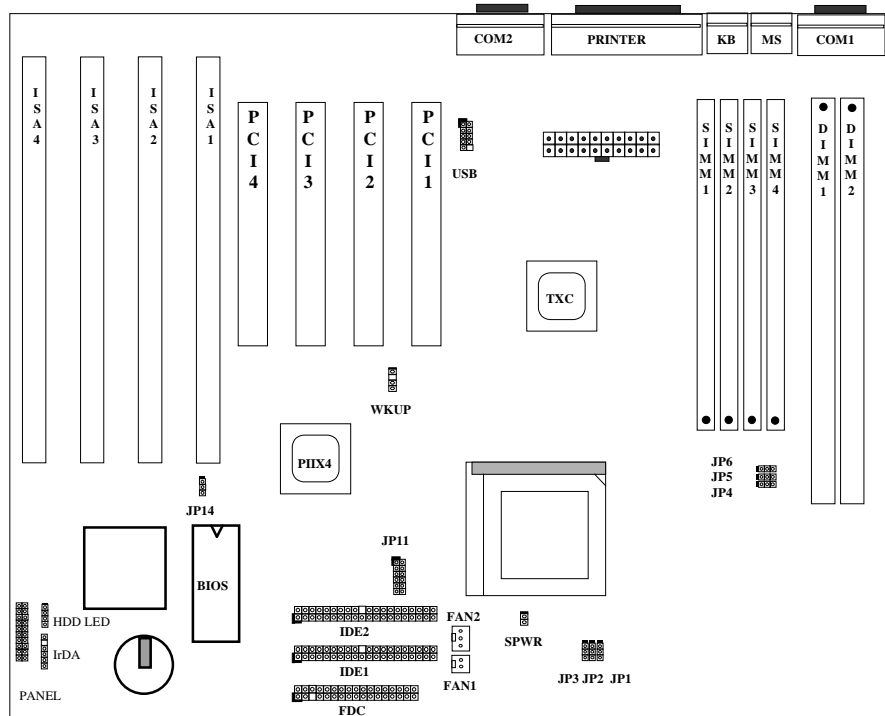
1. È¼ÁUË' ¾ŠÑÁíàÀ€Ç€D"Á}ÀŠÒàÖ¿¿ »RÁpÁy¾üÖf¾½
Ç€Ë_Ö¿¿ ÀöÁØÚcÓ,,¿nÒa¾¾Á ¿i»T

2. ÀsË' ÀŠÒàÖ¿¿ Èã»RíæÀ€Ër¾hÁÍËËÄr×^ÁÖ¾ü Ü »R
¾¼Í»¿ ÁÖÖ,,¾Ö¿¿ À Í¼ÁÍÀs× »TÀfÁXÁdÁÍ¾üÜ »R
×èÁe¿è¿ À ¿z¿YÁØ¾¼ ÚcÓ,,ÁÖÍÜ¿_Á•»RÁiÖaÁ¿ìèÖ¿
¿ ¾e¿UØ Á`ÈÍPÌ»T

İŞB ÅŠÒà

2.1 Jumper ÒaËİÚj (Connector) ÅÔÀ Ò~

¿Y%¢ Æ¿UØ Ä` ¼Jumper Å^ ÈİÚj (connector) ÅÔË:Ò~ Óé»X



Jumpers:

- JP1,JP2,JP3: CPU ¼Í»ÇÛÛh
- JP4,JP5,JP6: CPU ¿.Í»Ûhİ%¿.Ûh
- JP11: CPU Èð%àÓ.,Û½(Vcore)
- JP14: İ^È%CMOS

İŞB ÅŠÒà

ËÏÛj (Connectors):

PS2 MS:	PS/2 ÑàÓÁÍ†ËÏ Ûj
KB2:	PS/2 Ûþ×JÍ†ËÏ Ûj
COM1:	COM1 Í†ËÏ Ûj
COM2:	COM2 Í†ËÏ Ûj
PRINTER:	ÀJÀ Ø Í†ËÏ Ûj
PWR2:	ATX Ó,Ñ×Í†ËÏ Ûj
USB:	USB Í†ËÏ Ûj
FDC:	Floppy Í†ËÏ Ûj
IDE1:	ÌÐ×QÌiIDE Í†ËÏ Ûj
IDE2:	ÌÐ×XÌiIDE Í†ËÏ Ûj
FAN1:	CPU ÇÑÈÈËÏ Ûj (2-pin)
FAN2:	CPU ÇÑÈÈËÏ Ûj (3-pin»R:z#pÎÃÇÑÈÈÒàÈÈçnú)
WKUP:	IR & MODEM wake-up ËÏ Ûj
IrDA:	IrDA (Æ ç•×^) ËÏ Ûj
HDD LED:	HDD LED ËÏ Ûj
PANEL:	Åv¼ ÇÈÀ`À Ûþ¼eÛ` ÒÓÍ†ËÏ Ûj

İŞB ÅŠÒà

2.2 Jumper

Åi Üñ Jumper İ_Æ Ñ ÅéçèÄæÇÈÈÄ çUØ Ä`Æ Äp Èi ÈäÄeÝ ÍÆÆĐ Đİ çñÉú Èä»R çİĐÑ×i ØyÄÖÀ Ò~»Tumper İ., ÈqÆ Í %QÄèAyÇi ĐÜÄüÄÖĐ ×Äİf Ömİ»Ås%Q ÈäÄ ÄüÄÖÈäÈŠ%r»R×i ØyÄÖ%Ä»Æ È_Đ ×Äİf ÖmÖ ÑaÇÈÅŠÖ~ÄÖÖ"Äpin) ÅÄÄ×İ»Ät Äj çz»TçÖİ½Å•çi ÖİÈäÄÖ Jumper»RÄ»İnçùÅsİæÈqçèÈèİæÄè%aÄÖÄÈÖR»RÅs×i ØyÄv×èÈäçİ×eÖ' È' %Š çç ç ÜRÖèÄpÑ_Ö.,»T

ÅsÖ ÖöÄÖçUØ Ä`%r»Rİ., ÈqÑ"Äİ çİ ÄüÄÖİä×^ÖèçöÄ İP%QÖ(pin1)Ä Ä »TÑ Äö ÇæÖ»Äü Jumper İñÅs 1-2 ÄÖÄ Ò~Èä»RÑ_Äpİ_Æ Ä È_Đ ×Äİf ÖmÖ Đ) İ» Ås pin1 Ä^ pin2 ÄÖÄ Ò~%r»RÈ_Äpİ+Èİ(İ^Ö) Ås%Q Èp»TÄfÄXÄö ÇæÖ»Äü Jumper Open Èä»RÑ_ÄpÆ Ä È_Đ ×Äİf ÖmİÖĐ"»WÄ Äö ÇæÖ»Äü Jumper Short Èä»RÑ_ÄpÆ Ä È_Đ ×Äİf Ömİ»%r»RÄéÄpİ^Ö »T



Open



Short



Jumper set at 1-2



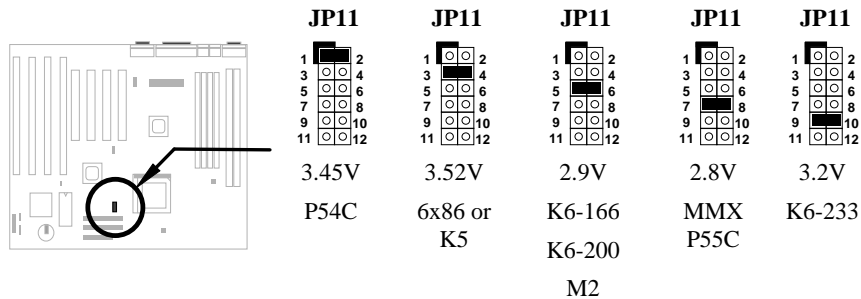
Jumper set at 2-3

İŞB AŞÖa

2.2.1 İnÅŞ CPU Ö,,Ü½

JP11	CPU Èð%ñÖ,,Ü½(Vcore)
1-2	3.45V (Intel P54C)
3-4	3.52V (Cyrilx or AMD K5)
5-6	2.9V (AMD K6-166/200 or Cyrilx M2)
7-8	2.8V (MMX P55C)
9-10	3.2V (AMD K6-233)
11-12	2.5V/2.2V/2.0V (Reserved)

Åé:èÄa:z:YÁb:è JP11 xıØy CPU Èð%ñÖ,,Ü½ (Vcore)»T:Ö zıUØ Ä`As:zi ÖiEa`RVE_Vcore xıØy ÅE zıØR zè INTEL Pentium P54C ÅÖ 3.45V»RÄf ÅX È' Å Åé zè Åp zÄ Ý ÅEÄÖ CPU»RÄf INTEL PP/MT MMX (P55C) »S AMD K5/K6 Åè Cyrilx 6x86/M2»RÄy»è»eÖ' Åp Ö,,Ü½hÈ Åú»RÈèAi zÄÄ xıØy zı ÅİBÄÖÈð%ñÖ,,Ü½»T



PİAz: ÄfÅXÈ' Åé:èÄÖ CPU Å Intel PP/MT-233 Åè AMD K6-200/233»R»èÅé:è Ö %ÄÖ CPU ÇNÈÈ»RÄY»eÖ' ÅpÇNÈÈ(air flow) ÖxÖ] YÇÚ»ÄİÖ % »TÄfÅXÈ' İ|Ä|İBÄiİ, Åá CPU ÄÖİİÖ Ö»ÄU»RÄfİè:zÉú N"İ, zç%ÄÇSÄÖİ' ðY»T



İ½ö: İ Ö,,Ü½CPU ÄÖ I/O Ö,,Ü½Vcpuio (CPU I/O Voltage) İ:Ä Èð%ñ Ö,,Ü½ Vcore»RÄ Å Ö Ä Ü Ö,,Ü½CPU ÄiÄz (Äf PP/MT MMX»SAMD K6 Åè Cyrilx 6x86L/M2)»RVcpuio Öa Vcore ÄY%ÄÅ»RVcpuio%Äi İ:Ä Vio (PBSRAM %e Chipset Voltage)»T:Ö:UØ Ä`ÄyÄÍÉdÈ x` Ö »R:z:z:YÄöÈäÈÖİ zı İ Ö,,Ü½ÄèÜ Ö,,Ü½CPU»T

İ½ö: JP11 ÄÖ pin 11-12 Å Ä`ÉuİÖN†%Qz CPU zèÄÖ»RİÄÄİ:zÉúÄÖ ÖaÇaÜÍÄÈ 2.1V»T:öÄvÄÖÖaÇaÄ" zÖÄSÈn»RÄi zYÄé:è pin 11-12 Äv»R

İŞB AŞÖa

ÄöPİç ÖuÈ-È' ÄÖÖxÖaÈiÄèçè%eçèÖ,,Ä Đ,,Ö]»T

CPU	Ö,,Ü½ ÄÈ	JP11	Vcore	Vio	Vcpuio
INTEL P54C	Í Ö,,Ü½	1-2	3.45V	3.45V	Vcore
INTEL MMX P55C	Ü Ö,,Ü½	7-8	2.8V	3.45V	Vio
AMD K5	Í Ö,,Ü½	3-4	3.52V	3.45V	Vcore
AMD K6-166/200	Ü Ö,,Ü½	5-6	2.9V	3.45V	Vio
AMD K6-233	Ü Ö,,Ü½	9-10	3.2V	3.45V	Vio
Cyrix 6x86	Í Ö,,Ü½	3-4	3.52V	3.45V	Vcore
Cyrix 6x86L	Ü Ö,,Ü½	7-8	2.8V	3.45V	Vio
Cyrix M2	Ü Ö,,Ü½	5-6	2.9V	3.45V	Vio



»è%ç%ai: %hÄ Äi ÄTÄÖÈ çöÄvçÄÇÈ%hÈqÄ½ CPU ÄÖİnÄŞçâ»TÄnÄÈ%½
 ÜpÄİN†ÄÖ CPU ÈÜçi»RÄi çYçÜ»eÄÖİnÄŞ»èÈèÄi CPU Ö†Èi Äi İ½Äè
 ÄÖİhÈ »T

2.2.2 Ü Öö CPU Ühİ%

JP3	JP2	JP1	CPU ÇÜÜh¼
1-2	1-2	1-2	1.5x (3.5x)
1-2	1-2	2-3	2x
1-2	2-3	2-3	2.5x (1.75x)
1-2	2-3	1-2	3x
2-3	1-2	2-3	4x
2-3	2-3	2-3	4.5x
2-3	2-3	1-2	5x
2-3	1-2	1-2	5.5x

Intel Pentium»SCyrix 6x86/M2 %è
 AMD K5/K6 CPU Í½È İncfAAAyÄİ
 %Äa%Öİ»Ühİ%(core frequency) Ä^
 ç•İ»Ühİ%(bus clock) ÄÖ»T %ÖÜhİçÄ
 ç•Üh ÇÖ%h %Qçİ ÇÜÜh¼ İ%FFI %è
JP2 Äj çèÄi Ü ÖöÇÜÜh¼»R»èÄqñ**JP3**
 È Ä` ÈuİÖÈ_ Äi ÄÇCPU ÄèçèÄÖ»T



»èÄqñ: JP3 È Ä` ÈuİÖÈ_ Äi ÄÖ CPU ÄèçèÄÖ»RÖ Ä çöÄvçÄÇÈ%hÄÖ CPU
 Äi Äç»RÈ ÄBÈİÄÖPin»RÄi çYÈİÄs 1-2 Äè 2-3 İ½ÄİÖi ÄdÄİ ç Ä Ö»e»TÄ
 ÄfÄXÈ' İ, İ' ç Ä %ÄÇÄSÄÖİ' ĐY»R»èÖi İöÈ_ ÄpİÖÈ½ (Open)»T

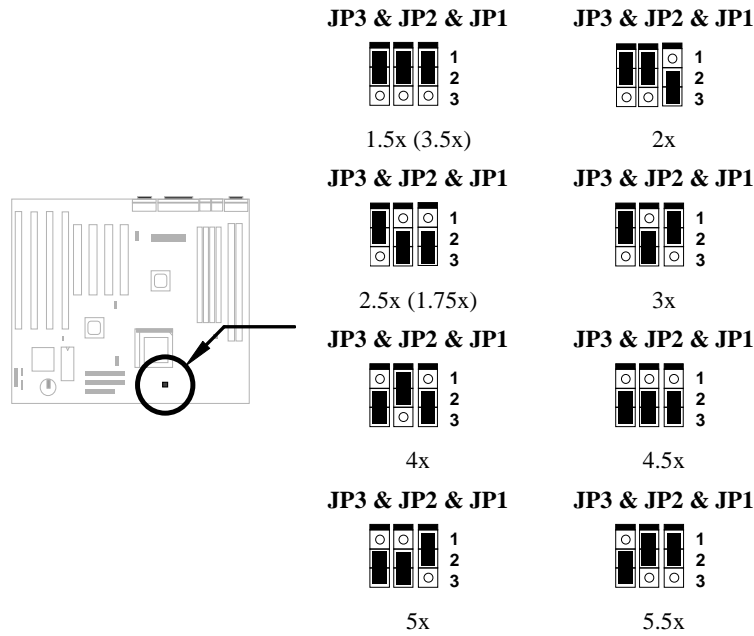
İŞB AŞÖa



×êÄqÑ : Intel PP/MT MMX 233MHz Æ Âéçè1.5x ÄÖİnÄŞÄİÑ ÄQ3.5x
ÇÜÜhçè»RÄİ AMD PR166 ÄyÆ Âéçè 2.5x ÄÖİnÄŞÄİÑ ÄQ 1.75x ÇÜÜh
çè»T

İŞB ÅŠÒà

ç•İ»ÙhÌ% (core frequency) = ÇÙÚh¾ x ç•İ»ÙhÌ% (bus clock)



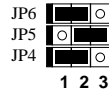
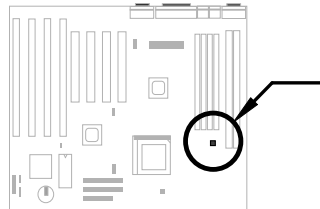
JP4	JP5	JP6	CPU ç•İ»ÙhÌ%
1-2	2-3	1-2	60MHz
2-3	2-3	1-2	66MHz
2-3	1-2	1-2	75MHz
1-2	1-2	2-3	83.3MHz

JP6, JP4 ç• JP5 ç•ÀÍÙ 06 CPU ç•İ»ÙhÌ% (bus clock)»RÁj ÙhÌ%½ çç00À0Ù çj ÙhÌ%»Rç•İ»ÙhÌ%»QÉ ÙÌ06ç•Ùh»T

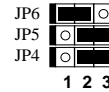
JP4 & JP5 & JP6

JP4 & JP5 & JP6

İŞB AŞÖa

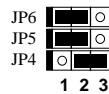


60MHz



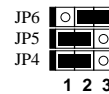
66MHz

JP4 & JP5 & JP6



75MHz

JP4 & JP5 & JP6



83.3MHz



ĐİÁz: INTEL TX İÓ% İyĐa%pİĀĀ 60/66MHz CPU İ•
 Úh»R75/83.3MHz AÓİnÁSĀjĀ`ÉuĀe%Óİ»İ Öi İè»RİnÁS
 ĀĀ 75/83.3 MHz Đh İi TX İÓ% İy%pİĀĀÓİhÉ »R İzÉuN`
 İj ÇĀN}EqĒ`ĀÓĀİİè»T



×è%f%ı: İÖĀ È ĐaĀT İi İdĀv İÇĒ%h%ĐĀH`ĀÓ CPU»TĀn
 ĀĒ%ĀİpĀİN`ĀÓ CPU ÉÚ İi »RĀi İY İÜ×eĀÓİnÁS×èĒèĀi
 CPU ÖİİİİİİİĀĒĀÓİhÉ »T



×è%f%ı: Cyrix 6x86 P200+ Āé İè75MHz İ•Úh»RĀT İi Āp
 İnÁS İdĀÖĀsĀREĀ Cyrix P200+ ĀÓĀé İèĀæ»TĀ ×èĀqN`»R
 İnÁSĀĀ 75MHz İzÉuN`İj ÇĀN}EqĒ`ĀÓĀİİè»T

INTEL Pentium	CPU %Óİ» Úhİ%o	ÇÜÚh %	İ•Úh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
P54C 90	90MHz =	1.5x	60MHz	1-2 & 1-2 & 1-2	1-2 & 2-3 & 1-2
P54C 100	100MHz =	1.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2
P54C 120	120MHz =	2x	60MHz	2-3 & 1-2 & 1-2	1-2 & 2-3 & 1-2
P54C 133	133MHz =	2x	66MHz	2-3 & 1-2 & 1-2	2-3 & 2-3 & 1-2
P54C 150	150MHz =	2.5x	60MHz	2-3 & 2-3 & 1-2	1-2 & 2-3 & 1-2
P54C 166	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
P54C 200	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2

İŞB AŞÖa

INTEL Pentium MMX	CPU ¼Öİ» Úhİ%o	ÇÜÚh ¼	ç•Úh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
PP/MT 150	150MHz =	2.5x	60MHz	2-3 & 2-3 & 1-2	1-2 & 2-3 & 1-2
PP/MT 166	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PP/MT 200	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PP/MT 233	233MHz =	3.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2

Cyrix 6x86 & 6x86L	CPU ¼Öİ» Úhİ%o	ÇÜÚh ¼	ç•Úh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
P150+	120MHz =	2x	60MHz	2-3 & 1-2 & 1-2	1-2 & 2-3 & 1-2
P166+	133MHz =	2x	66MHz	2-3 & 1-2 & 1-2	2-3 & 2-3 & 1-2
P200+	150MHz =	2x	75MHz	2-3 & 1-2 & 1-2	2-3 & 1-2 & 1-2

Cyrix M2	CPU ¼Öİ» Úhİ%o	ÇÜÚh ¼	ç•Úh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
MX-PR166	150MHz =	2.5x	60MHz	2-3 & 2-3 & 1-2	1-2 & 2-3 & 1-2
MX-PR200	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
MX-PR233	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2
MX-PR266	233MHz =	3.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2

AMD K5	CPU ¼Öİ» Úhİ%o	ÇÜÚh ¼	ç•Úh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
PR90	90MHz =	1.5x	60MHz	1-2 & 1-2 & 1-2	1-2 & 2-3 & 1-2
PR100	100MHz =	1.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2
PR120	90MHz =	1.5x	60MHz	1-2 & 1-2 & 1-2	1-2 & 2-3 & 1-2
PR133	100MHz =	1.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2
PR166	116MHz =	1.75x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2

AMD K6	CPU ¼Öİ» Úhİ%o	ÇÜÚh ¼	ç•Úh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
PR2-166	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PR2-200	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PR2-233	233MHz =	3.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2

İŞB AŞÖa



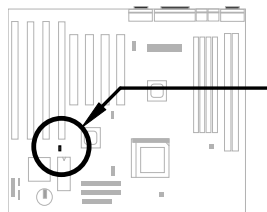
×eÄqÑ: Cyrix 6x86/M2 Ä^ AMD K5 CPU Æ Äéçè P-rating»RÁQÆÖa
 Intel P54C Í†Äñ% Ö ÈaÄÖÈeAiÄ Öè»RÁp%ÖI»ÜhI%ÄpÓ ÄY%ÄBAi Öè
 çöAsç•ÄÖ P-rating»TÄi Äf»XCyrix P166+ Äp%ÖÜhÆ 133MHz»RÄ ÈP
 ÉúÆ İçÄ P54C 166MHz»WÄi AMD PR133Äp%ÖÜhÆ100MHz»RÄ ÈP
 ÉúÆ İçÄ P54C 133MHz»T

×eÄqÑ: INTEL TX İÓ% ÄY%ÄpİÄ 50/55Mhz ÄÖç•Üh»RÄi çYçÖçUÖ
 Ä`%ÄÉúÄéçè INTEL P54C 75MHz»SCyrix P120+»SP133+ Ä^ AMD
 PR75 İçCPU»T

2.2.3 İ^Ê½CMOS

JP14	İ^Ê½CMOS
1-2	çÜÈçÈ»Äf (ÖŞİm)
2-3	İ^Ê½CMOS

ÀfÄXÈ' ÄeÊ` Äi İñÄSAÖÄièÈ\ xi Èa»RçİDNç ÈIÄBE
 İñÈIC>D»Rİ^ È'ÄYÇÄİñT^` dIÄÖİñÄŞÇaÄü»Rç•Éú
 ÇÄñ†D"Ö »T



JP14




çÜÈçÈ»Äf (ÖŞİm)

JP14



İ^Ê½CMOS

×eÄa%ÄTÄSÄ[İ^Ê½CMOS»X

1. ×eÄSÖ,Ö'ÄÖÖ,Ñ×ŞY ÈÖ
2. Äpçi JP14 ÄiÄsÄÖÄ Ö~»RÈ_D ×ÄİfÖñÄ %fÄi»RÄ È^Ä-3 Ö"Ä %Ä»T
3. %QÑÄüÈeÄD»Äü»RÄ %fD ×ÄİfÖñÄñ†È^ ÄoÄ 1-2 Ö"Ä %Ä»RÄ İpÄÄÇ ÄiÄÖÄÄÖR»T
4. ÇÄñ†çİD"Ö,Ö'ÄÖ,Ñ×»T
5. ÄfÄXñbçÈİñÄŞñ†ÄÖÄièÈ\ xi »RçzÄsÄièÈÈi ÈaÈa»RÄ %f  ÜpDz% BIOS Setup İvÇÈ%ÄRÄÄ ÄŞñ†ÄÖÈ\ xi »T

İŞB AŞÖà

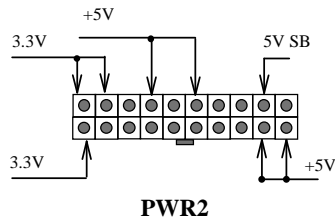
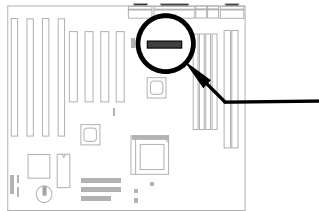
2.3 İ†ËİÚj (Connectors)

2.3.1 Ó,Ñ×Í†Ëİ×^

ATX Ó,Ñ×Í†ËİÚj 20-pin İ†ËİÚj »R×ê×eÄŞE'Î»%ÄÖ% ÄgE çÜxeÄÖ»T



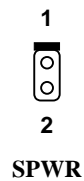
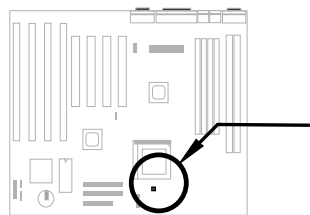
×e%ç%u: AsÍ†ËİÄeÄÖE'Ö,Ñ×Í†Ëİ×^%ÄÄv»R×êç Ý İ†ËİÚjÓ,Ñ×?



2.3.2 ATX Soft-Power Switch

ATX soft-power switch İ†ËİÚj 2-pin ÄÖ»T×êç È, ATX Ö İüÄÖÄv% ÇEÄ` %ÄÄpçi Öe çöÄE "power switch" ÄÖ 4-pin İ†Ëİ×^»Rİ^ Äüİ†ËİÚjUÖ Ä` %ÄÄ soft-power switch İ†ËİÚj (ÖeçöÄE SPWR)»T

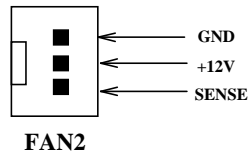
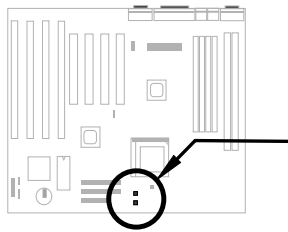
SPWR ÖŞİn%ÄE çeÄ ÄİeÄÖD7Y Ö »RÄ ÄfÄXE'D'Ei BIOS setup %ÄÄ "Power Bottom Override" Ü Dİ»Rİ, Çi switch %ÄÜçeÄİËİÄE suspend switch»TİÑ Ä %Ä4 Ä DÜçY%ÄÄRÄ D»RÄİeİ_N'Y Ö »WÄpÄyÄ\N'Dz%Ä suspend ÖiÄ»TÖiİİE»Äe×eÈeÖm3.5 "Power Management Setup"»T



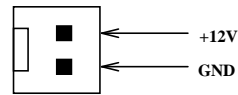
İŞB AŞÖa

2.3.3 CPU ÇNĖĖ

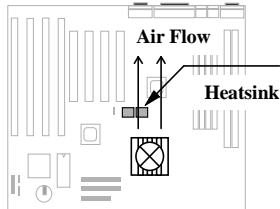
ÀsçU0 Ä`¼»RÁÍ¼QÇiöeFAN1 Ä0 2-pin ÇNĖĖİÜj »RÖa¼QÇiöeçFAN2 Ä0 3-pin ÇNĖĖİÜj »B-pin ÇNĖĖİÜj Äy¼W¼QÇiSENSE 0"Ä »RÉúĖ çèÁi¼pİÁÇNĖĖÖaĖĖçm Ėú»T



FAN2



FAN1

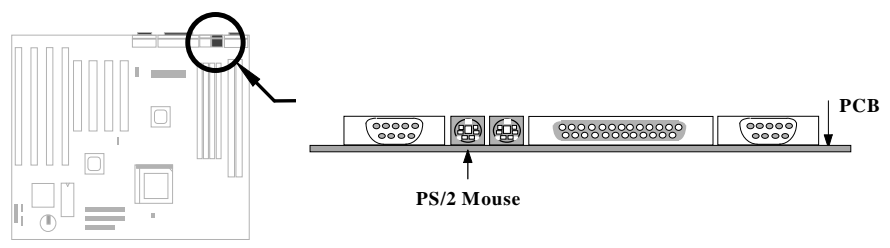


AŞÖaCPUÇNĖĖçeİİÖ ¼ Ėã»R×è×e0' ÄpÇNĖĖ(air flow) Öx0]YÇÜ¼ÄİÖ ¼ »RçYÖèÄ^ ĖÁÍÇPU Äi İ¼çÄÖİİÖ Ė-ÝU

İŞB ÅŠÒà

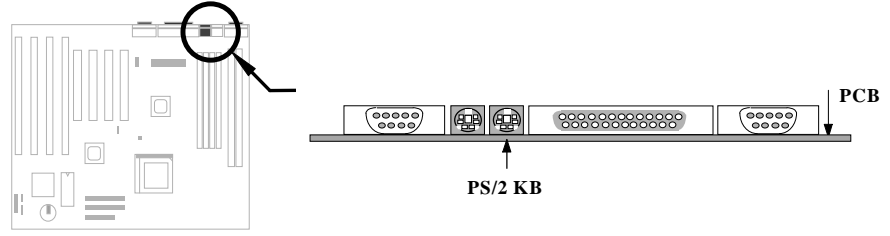
2.3.4 PS/2 ÑàÓÁ

×eİİ ad@CİÑàÓÇZÀ`ÈE(PS/2 mouse bracket) Å Öe;öÆEIP2 MSİÄ0İG>fzİEaÈS%h»RÂÝ
È_PS/2 ÑàÓÁÈİÄ İtÈİÚj %h»T



2.3.5 PS/2 Ûp×]

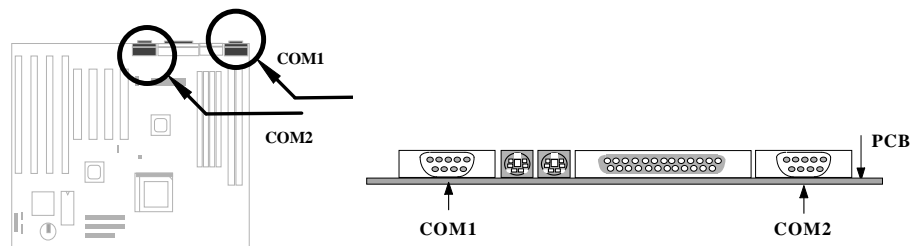
×eÈ_PS/2 ÈİÄ Öe;öÆE KB2 ÄÖ 6-pin Ä0%İtÈİÚj %h»T



İŞB AŞÖa

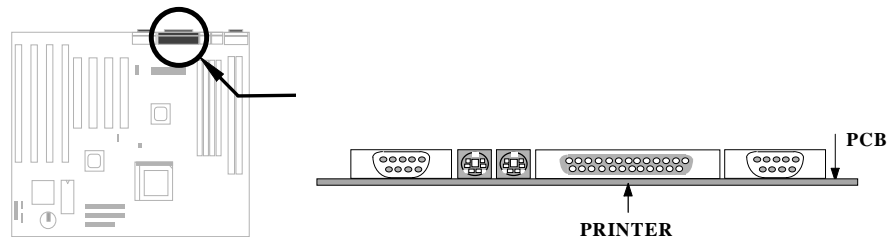
2.3.6 À ÀTÊ (COM1/COM2)

Àu% ÇËÄ` %1ÀÍÄüÇi ÖeöÄE COM1 Öa COM2 ÄÖ 9-pin D-ÄEËÜj »RçzçèÄi Í+ËÏÄ AT È ÑaÓÄ(serial mouse) ÄeE Öa000 »TÄp%ÄP%QÇiÄ ÀTÊ ÈÏÜj ÖeöÄE COM1»WLP%X ÇiÄyÖeöÄE COM2»T



2.3.7 À]Ä Ø

çUØ Ä` Äu% ÇËÄ` %1ÀÍ%QÇi ÖeöÄE PRINTER ÄÖ 25-pin D-ÄEËÜj »RçèÄi ÀŞÏ»ÄYÄTÄÄ] Ä Ø »T

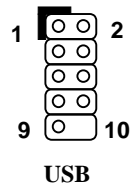
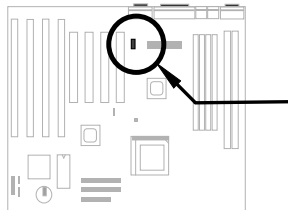


İŞB ÅŠÒà

2.3.8 USB òàò~

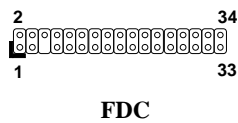
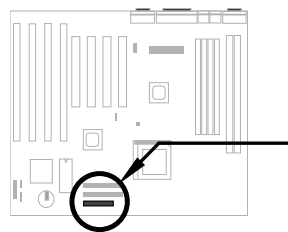
È´¿ÌDÑÁé¿è USB ÇZÄ` (bracket)
 ÁíÍ†ËÏ USB òàò~»R×éË_ËÏ×^ËÏÄ
 öè¿öÆË USB ÄÖËaÊŠÁj ¿»T

Pin	Ö»Ä	Pin	Ö»Ä
1	V0	2	V1
3	D0-	4	D1-
5	D0+	6	D1+
7	GND	8	GND
9	NC	10	NC



2.3.9 Í€òèø

Às¿Uø Ä`¾hÁÍ¾QÇ¿öè¿öÆË FDC Ä034-pin ËÏÛj »R¿¿èÁíÍ†ËÏÄ¿Í€òèø »T

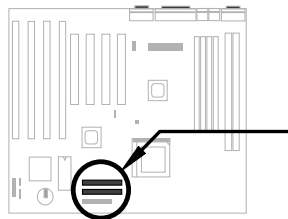


2.3.10 IDE İŞÖêØ Õa CD ROM

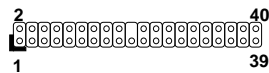
ÀsçUØ Ä`%4»RÊİAİAuÇiÖeçöAIDE1 Ä^IDE2 ÄÖ 40-pin ÈaÈŠ»Rçz#4Á` Í†ÈİÄüÇi
 IDE ðað~»RÍaAyçzÍ†ÈİçÇi IDE ðað~»R%QÉIDE1 %d0óÆçUI„ÓU (primary
 channel)»RIDE2 %d0óÆÄÖÍ„ÓU (secondary channel)»T

Í†ÈİÄ ç %QÍ„ÓUÄÖİP%Qç<ðað~çİDNİnÆ master mode»WİP%Xç<ðað~çİDNİnÆ
 slave mode»Tç %QÇiðað~Ä»zÆİSÖêØ Äèç ÖêØ »T

×èÈ_È`İP%Qç<ðað~İnÆ master mode ÄYÈİÄ IDE1»RİP%Xç<ðað~İnÆ slave
 mode ÄaÖaÈİÄ IDE1»TÄfÄXÈ`ÄİİP%eç<%èİPçç<»R×èÄaÄÈİÄÄ IDE2 ÄÖ master
 %è slave mode»T



IDE2

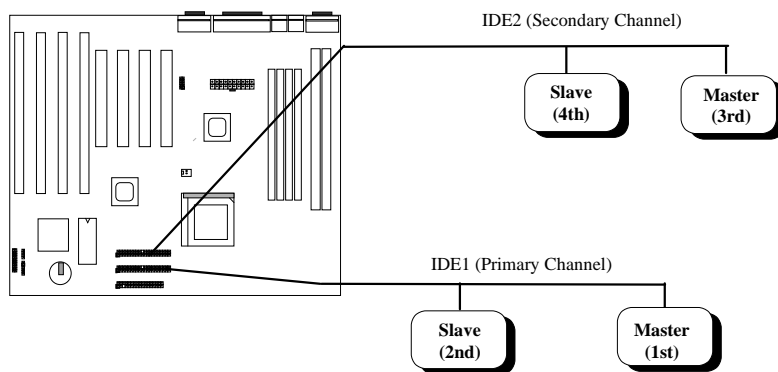


IDE1



×è%f%u: IDE İhÈ ÄðPİÈa×`İaÄ %4çzDhÓ] 46 %x%Ü
 (18ÇöAe)»RçYÄ\Ò ÈaDaÜ %4Ä»T

×è%f%u: ÆÈÖWÄ İaÈeÄÖÄYÖÖÄ•x »RÈa×`İaÖNÖ÷ÄÖÖa
 ð~İaÄÈİnÄÄ master mode»RÄYÄaÑi %fÖeÄðPİÄÖDDÄa
 ÄŞÖaÑ†ðað~»T

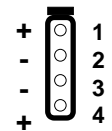
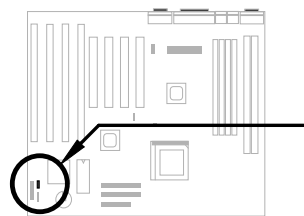


İŞB AŞÖa

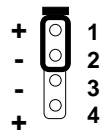
2.3.11 İŞÖe LED A çöÜ`

İŞÖe LED A çöÜ` ÖeçöAA HDD LED»RÍ, Çi ÈaÈŞ çØRçeÄ Äf Öö%ÄÄÄÖÖ İü»RÄfÄXÄi AŞÖaÄÖÖ İüÄv % ÇÈÄ` Ä ÄI 4-pin İtÈI×`»R×eÄ×ÈI»%41»TÄfÄXç Ä 2-pin ÄÖI×ÈI×`»RççYÜ ÖöÄŞI» 1-2 Äe 3-4»R Ä ×eÄqÑ`ÑçÄä.

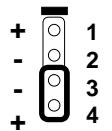
Pin	Ö»Ä
1	HDD LED
2	GND
3	GND
4	HDD LED



HDD LED
4-pin İtÈI×`



HDD LED
2-pin İtÈI×`ÈI
Ä pin 1-2

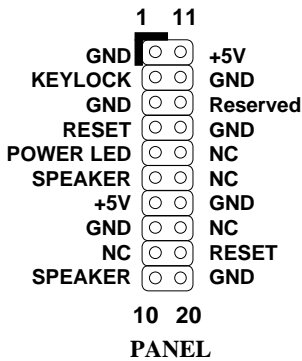


HDD LED
2-pin İtÈI×`ÈI
Ä pin 3-4

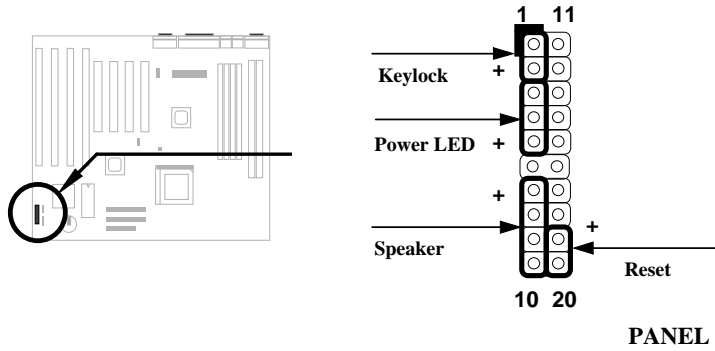
2.3.12 Äv% ÇÈÄ` ÈI Új

Äv % ÇÈÄ` ÈI Új AE 20-pin Èa ÈŞ »R Öe çö ÄÄ PANEL»TÄÖÈa×ÈI Új çÄtÈIÓ,,Ñ× (power) LED Ä çöÜ` »RÜp×]Ü(keylock)»R suspend Ä Dt»RÄö Ó,,ÖiÄ» (green) LED Ä çöÜ` »RÇÄÑtD"Ø (reset) Ä Dt»RÍüç` (speaker) İç»TÈ` ççYÄæç|ÖeÄiÄŞ Öä»T

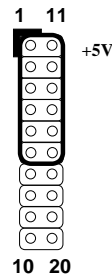
ÄiÄaØ İüÄ Èeçè 5-pin İtÈI×`Äi İtÈIÜp×]Ü Öa Ó,,Ñ× LED Ä çöÜ` »RÄÈI, ÄüliÈaÈŞÄ ÅöWÄÖ»R Äi çYÄeçè%41%4ÄÄÄIÈ÷YU»T



İŞB ÅŠÒà



ÀfÅXØ ÎùÅvÇÈÄ` ç^Å BC>fzè1 ÅÖÍ†ÈÏ
 ×~»RÈ' çzYÅæz|ÓéÅ0¼ Å»ÅiÅŠÒà»R×ê
 ×eÅŠÍ†ÈÏ×^ÅÖÆ ×^Æ Í†ÈÏÅ 1<Fg1ÅÖ
 Å 0~»T



PANEL



×èÄqÑ_ : ÀfÅXØ ÎùÇÈÄ` ¾hÆ çlÍ†(turbo) Å Ð†Å^çlÍ†Å çöÛ` »R
 È' çzYÈ_¾ÅçèÄ Suspend Å Ð†Å^Æó„Öi Å» (green mode) Å çö
 çnÈú»T



×ê¾f¾u: ÀfÅXÈ' Åü Turbo Switch Ñ ÅQ Suspend switchÅÍ çè»R
 ×ê×eÅŠçlÐÑÇÈÄ ÅüÅÖ;YÖi ÚÚÍ]Æ,Å»Å Úp (momentary
 mode)»T ÅpÅyÅ†lèçzÈúÍ]Ä|Ð"Ø »RÅnÆÈARçYÖÑÈ{Ç¼ÅÐz¾
 Suspend mode»T

İŞB ÅŠÒà

2.3.13 Å ×^ĐàÙ Ê (IrDA)

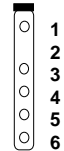
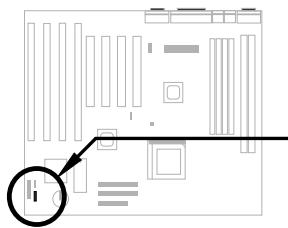
¿Œ¿UŒ Å`ÀŒİP»XÀ ÀTÊ(serial port 2)¿Œİİ IrDA Å ×^Œİİ»TÀİ Ũ IrDA (Infrared Data Association) Ç ¿ŒË ¿ËHP»SCompaq»SIBMİ¿ŒfÀİ Å¿ùÀŒ%QÇİ İYİŒ»R¿ËÀİËŒŒŒŒ¿ËË ¿×^Đà×^Œ ÈàÀŒÀŒİ_ŒaŒİ¿Ë»TÀùÀİİËP ÀİŒİ¿İ¿Œ»R IrDA Å\Í%ÀSÀËÀÀË ¿×^ĐaŒ ÀŒŒËŒa»T¿ÇËË`ÀŒŒ,,Œ%ÁYİàË ¿×^ĐaŒ ¿Œù»R¿S İBÀİ IrDA İŒÀS»Rİ_ÈùË ÀS%QÀSĐKŒ ¿Œ»R%ŒŒ=ÇËİ†Ëİ×^%ËŒİ†Ëİ»RÀj ¿ŒŒÈàŒa İÁË`ÀŒŒ,,Œ%ÀËÇİ%YŒàÀ Áfİ` (PDA) Ë%Ëİ†×^»TĐàŒŒŒàËÈŒ ÈàÀËË_%¿ ÈvÀ %Œ İÀ IrDA ÀŒÀJÀ Œ ÀTÀj»R¿Œ¿UŒ Å`È%Œ%Œİİ IrDA (115Kbps, 1 meter) ÍhË ¿×»R ¿ %Œİİ ASK-IR (19.2Kbps) ÍhË »T

ÅŠÒàË»R»ËË IrDA Å ×^Œİİ»ÀSİ»À ¿UŒ
 Å`%ŒŒËÀİ IrDA ÀŒËàËS»TÀSŒàÀŒ»R¿İŒ»Đ"Ëİ
 SZ d1dv† f1%ŒÀŒË ¿×^¿Œù»R%¿¿ŒË¿
 ÁQ»T

Pin	Œ»À
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX
6	+3.3V



×ËÁqŒ_: IrDA ÈİËà(enabled)Àù»R¿UŒ Å`ÀŒİP»XÀ
 ÀTÊ (COM2)»Rİ_¿ËùÀRİbÀp¿ÀİŒİàËË¿Ë»T



IrDA

2.3.14 Wake-up ĖİŪj

ŷŌŷUŦ Å`%4ıÄŷÄİÉdÈ x`ð İncf»Rŷz»pİÄModem Ring-On ŷmü»R»ŌĖİÄ» (AOpen MP56) Äèŷ•ĖİÄ»ŌaŦŦŦ Ä»ŷŦR ŷè»TŷèÄ Äèŷè»ŌĖİÄ»ŌaŦŦŷuÄŦŦŦ»RŷÇĖÄ»4Ŧ-ÉİĐ`Ŧ„Ŧ»»R Äi ŷYÄŦÇæ% Ŧ ÄŦĐİĖ`Äèŷè»TÇj Ė`ÄèŷèÄŦÆ` AOpen MP56»R»èÄèŷè4-pin İ†Ėİx`»Rİ†Ėİ MP56 ÄŦ RING ĖİŪj ŌaŷUŦ Å`%4ıÄŦWKUP ĖİŪj »T

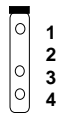
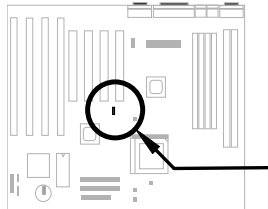
Pin	Ŧ»Ä
1	+5V SB
2	NC
3	RING
4	GND



xèÄqŦ: Wake-Up ĖİŪj Ŧa Modem Ring-On ŷmü»R ŷi»èĖ^Äb»»T



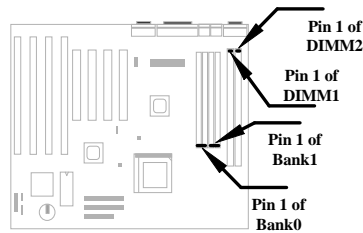
İ½ö: Ė½»WModem Ring-On »Äŷ»RŪŦŷŦSŷèÄsÄpŷÄ Är»»RÄi Äf IR wakeup Äè voice wakeup»T



WKUP

İŞB AŞÖa

2.4 AŞÖa çUÊ` Øeß



ÀÓçUØ Ä` Á†4 Èa SIMM Î»Öë (Single-in-line Memory Module)»RçzY#PİÄ 72 pin ÄÖ FPM Äè EDO Ê` Øeß »WÄ^2 ÈaDIMM Î»Öë(Dual-in-line Memory Module)»RçzY#PİÄ 168 pin ÄÖ SDRAM Ê` Øeß »TÜqÈv D.,ÍæÀyçzYÜi çCÄ 256 MB»T

çÖçUØ Ä` Äi çPİÄÄÖSIMM çZæçF ATÖaDİÉdÄäçYÝ »X

- ◆ ÈvD.,»XÍ ÇÈÆ 1Mx32 (4MB)»S4Mx32 (16MB)»S16Mx32 (64MB)»WÄiÜ ÇÈÆ 1Mx32x2 (8MB)»S4Mx32x2 (32MB)»S16Mx32x2 (128MB)»T
- ◆ Í†Äñ»XÄ†Ä Í†ÄñÆ 60ns Äè 70ns»Th ç_Ä çbÄÖÇ†çWçÄÖç »RÄis ç_Ä "second (E)"»R60ns Äj 60 ÇiçbÄÖÇ†çWçÄçQç »T
- ◆ Ý ÄÆ»XFPM (Fast Page Mode) Äè EDO (Extended Data Output)»T
- ◆ ÄaÄ çD (parity)»XÍ] parity (32 bit) ÄèÄÍ parity (36 bit)»T

Ç Äyçç»RççUØ Ä` Äi ÍççfÄÖDIMM DäçPİÄ 64 bit ÄÖSDRAM»X

- ◆ ÈvD.,»XÍ ÇÈÆ 1Mx64 (8MB)»S2Mx64 (16MB)»S4Mx64 (32MB)»S8Mx64 (64MB)»S16Mx64 (128MB)»WÄiÜ ÇÈÆ 1Mx64x2 (16MB)»S2Mx64x2 (32MB)»S4Mx64x2 (64MB)»S8Mx64x2 (128MB)»S16Mx64x2 (256MB)»T
- ◆ Í†Äñ»XçQÉ ÖèçöÄf-12»RÄj Ä Ä†Ä Í†ÄñÆ12ns»Tç ÄÍÖèçöÆ-67»RÄj Ä ÄaÄSÖ ÈaDäÜ ÍæÄçZÄ 67MHz»T
- ◆ ÄaÄ çD (parity)»XÍ] parity (64 bit)

çëÄ Pentium Ä^ Pentium Pro İçÉBÄÖ CPU bus ÄÈ 64 bit»RÄi çYÊ` Øeß çİDÑÇİ ÄÄ 64 Ä çD»RççÉúß Ä†èçÜÈçQçSÄQç»TÄi2 È 72-pin SIMM ÄÖ ÈaDñÄÈaöVÄñÄ_Æ 64 Ä çD»RÄnÄÖÈ_çUØ Ä` ççÄÖ Èa SIMM Î»ÖëçUÄÄ 2 İiÊ` Øeß— Bank0 Ä^ Bank1»TÄT Çi Bank Äi AŞÖaÄÖ SIMM çİÖ=ÄyÄÍÆÄaÄÖÈvD.,çÄÄÄ»çÉúçÜÈçQçSÄQç»RÄ Ä ÄüçÄa ÈvD.,çÄÄÄ»ÄÖ SIMM çèÄsçÄaÄÖ Bank çç»RÆ çzYçÖÍçMÖ»TÄi ÄjBank0 çzYÆ 60ns EDO»RÄi Bank1 çzYÆ 70ns FPM»TÄsÍ, ÖöÈ»Äfç »RçÄaBank ÑÄÄñiçç ÄaÄÖ DRAM ÍñSçÄaÄÖÈèÖa»RçÖÄ†èYÄÄ İÖç İiÍhÈ ÄÖÇÇÄ »RçİÖ=çÉÄèçÄöçD

İŞB AŞÖa

70ns FPM AÖ DRAM ¼ÉúÓSAQ»TÀfAXÈ·ÁaÈ ÓWÁ Ò ÁeAÖAİİeİİİAn»RÁyAöPÍÁéçè
60ns EDO AÖ DRAM»T



PÍÁz: çUÖ Á`%ŠĚ_ memory timing ÓŠİnÆçzÚ Ē, İaÁeĒ À ĒP
İ%ÄÖ 60ns»TÁİ 70ns çY%ÄÖ SIMM YÁÁ İhÈ ÇÇÁ »Rç`ÉúÁéçè
Asç·ÚhÆ 60MHz AÖ CPU»T



İ½ö: EDO DRAM AÖİnçf:öAÖAsÁ İ×Ē ØeB BÄÄÖEPI%»R¾½
ÓÍĐaİeAÖ FPM (fast page mode)»RN Ö=Ç€ pre-charge (çcÖ,,)
Ēa»RçİĐNÇ€ tri-states (Ē{Ç¾¼Üp) Ū çİÖ"Á AÖEeÖÖ»REDO
DRAM AÖÜ çİÖ"Á »RN"p•p Ö Á Ç ÁİAÖEeÖÖQA×Á İ, Ēa¾f
¾Çİ memory ÁİÁ cycleÆ% »RÁp¾AQÄ ĒENçY Á pipe-line
ĒaAQ»RÁYçzÚj İ^¾Çİ clock»T

BIOS çAöĒeĒÖİ Ē` ØeB AÖEvD,,%eAA»»R¾¼Ö=Áéçè Jumper İmŠ»TĒ' ççYÁéçèçè À
¾fÁTÄÖSIMM Á^DIMM»RçY¾¼AaAÖİiAi ¾Ä»»RÄŠÖaİSBANK0/BANK1 Áe DIMM İ»
Öe¾¾»RA Ē AmĒİÖ¾ İiAÖÇÇÁ »Rİa¾ÄÖĒ` ØeB EvD,,¾ççDhÓ]256MB»T

SIMM1	SIMM2	Subtotal of Bank0
None	None	0MB
4MB	4MB	8MB
8MB	8MB	16MB
16MB	16MB	32MB
32MB	32MB	64MB
64MB	64MB	128MB
128MB	128MB	256MB

SIMM3	SIMM4	Subtotal of Bank1
None	None	0MB
4MB	4MB	8MB
8MB	8MB	16MB
16MB	16MB	32MB
32MB	32MB	64MB
64MB	64MB	128MB
128MB	128MB	256MB

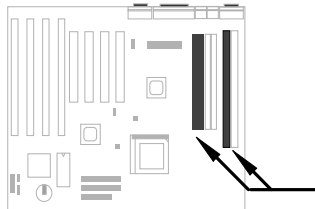
DIMM1	Size of DIMM1
None	0MB
8MB	8MB
16MB	16MB
32MB	32MB
64MB	64MB
128MB	128MB
256MB	256MB

DIMM2	Size of DIMM2
None	0MB
8MB	8MB
16MB	16MB
32MB	32MB
64MB	64MB
128MB	128MB
256MB	256MB

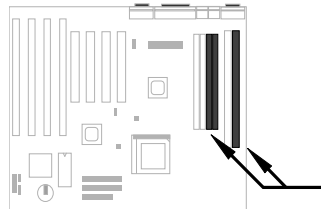
İŞB AŞÖà

**Total Memory Size = Subtotal of Bank0 + Subtotal of Bank1
+ Size of DIMM1 + Size of DIMM2**

Ó Ā Ü ÇĒĀÖĒ` 0ēB 0i İi çĀİ%QÇiÇĀ »RĪ, D çU0 Ā` ç`%pĪĀç`Ē RAS# ĀY00 (Row address latch, ĒĒĀ Ē` 0ēB ç)»RĀT%QÇRAS# ĀY00ç`%pĪĀ%QĒĒDRAM 0i İi»RĪ|Ā| ĀQĀā»TĪĪ Ā00»XĀfĀX Bank0 ĀĒÜ ÇĒ0i İi»RDIMM1 çİDNĀB%çĀi»TĀfĀX DIMM1 ĀĒ Ü ÇĒ0i İi»RBank0 çİDNĀB%çĀi»WBank1 %e DIMM2 %nĀyĀĪĀa0āçĈĀ »T



Bank0 0ā DIMM1 ç`ÉúĀİ%Q YpĒ Ü ÇĒ 0i İi»R ç%Q YpçİDNĀB%çĀi»T



Bank1 0ā DIMM2 ç`ÉúĀİ%Q YpĒ Ü ÇĒ 0i İi»R ç%Q YpçİDNĀB%çĀi»T

%fĀ ççY0ēPŪĀ0Ā İ`N»R×eĀqŃ_»RBank0 İp%QÇĒ%eDIMM1 İp%QÇĒĒ ĀéçèĀ0ĀĀ0 RAS0#»TĒ` ççYĀéçēĪ ÇĒ SIMM Ā Bank0»RĪ ÇĒDIMM Ā DIMM1»RĀ Ē ç`Āİ%Q ÇİÜ ÇĒ0i İi ççY0~Ā Bank0 Āè DIMM1»T

	Bank0 1st side	Bank0 2nd side	Bank1 1st side	Bank1 2nd side	DIMM1 1st side	DIMM1 2nd side	DIMM2 1st side	DIMM2 2nd side
RAS0#	X					X		
RAS1#		X			X			
RAS2#			X					X
RAS3#				X			X	



×e%f%ü: Āa%Q Bank %0Ā0SIMM çİDNĒĒĒa%QĀĒĒ»%e%ç%ç»T
×e%f%ü: Āİ%QĀāÜÜĀ0 DIMM ĀéçèĀ0Ē EDO Āè FPM Ē` 0ē IC»Rç`ÉúĀéçè 5V Ā00„Ū%»RĀi çSĪ|Ī|Ī»%çç0çU0 Ā` Ā0 DIMM Ī»0ē%0»R×eĀéçēĒçÜ 3.3V Ā0 SDRAM DIMM»T



Ī`çö: ĀfĀXĒ` Āİ 3V EDO DIMM»RTXĪ0% Ē ĀİççÉú%pĪĀ»R Ā Ē ĀnĒĒĪ, 0ò DIMM 0 Ās%ç%ç%ç»Rçç0Āvç0çU0 Ā` ĒāĪ 0i 0] Micron MT4LC2M8E7DJ-6»T

İŞB AŞÖa



PIÁz: xê%BE_ SIMM %e SDRAM DIMM İgAiAaEãAé;è»RE½
 AUË' AÍ Éú Èv Áî 5V Ó,, Ú½(5V Tolerance) ÄÖ SDRAM (Äf
 Samsung or TI)»TÄnÆE FPM/EDO %AQÄ 5V Ó,, Ú½»RÄ Æ
 SDRAM Äé;è3.3VÓ,, Ú½»RÄfÄXİg;èÄÖÖ»Eñİmİ' İÜ%ÖÄ†İeÜö
 Éú;ÜÈqÓSAQ»RÄ Ä İÜ%fÄi»RSDRAM 3.3V ÄÖÜ %QÖ"Ä ;zÉú
 N"İb 5V FPM/EDO ÄÖÜ ;iÄYÖÖÜ_Ñİ»T

ÄI%QÇİÄöÇÄÇEÄÖSDRAM ÈëÖa — CAS Latency Time»R;ÄÄİÜZ' Ä EDO ÄÖ CAS
 Access Time»RÄ Æ ;Yclock state ÄÖÖaD,, ÇfÖü»T%f Ä ÆE;Ö;UØ Ä` İ Öi Ó] ÄÖ
 SDRAM»R ÄfÄXÉ' Äé;èSDRAM İ, İ' %ÄÇÄSİ' Dÿ»R×eÄöBIOS "Chipset Features
 Setup" %¾»RÄ Ä CAS Latency Time ÆE 3 clocks»T

Ö†Éİ	ÄÄÖ	ÄöPİ%Ä CAS Latency Time	Æ Äp;ZÈvÁî Äé ;è 5V (5V Tolerance)
Samsung	KM416511220AT-G12	2	Yes
NEC	D4S16162G5-A12-7JF	2	No
Hitachi	HM5216805TT10	2	No
TI	TMX626812DGE-12	2	Yes
TI	TMS626812DGE-15	3	Yes
TI	TMS626162DGE-15	3	Yes
TI	TMS626162DGE-M67	3	Yes

ÄnÆN%Q;_ÄÖİÖ% İi%e;UØ Ä` Éä;Wmemory buffer (ÆÖhÄöİ†Än»RÄpEÜEaÉú%` Ö È†
 (driving capability)»Tİ, ÄeÈ, İiÖa SIMM/DIMM Èa»RDRAM IC Öa;öBöÈ, %b%ÄÇÄÇE»T
 ;zÈ% BIOS İ|JÄ|ÉÖİ ;i ;Ü×eÄÖIC Öa;ö»RE' ;İDÑÄöÄ ÇfÖü»TÜLİ ÄÖ% Ä|Æ»XDAÄé;è
 IC Öa;%Ä 24 Ü ÄÖ SIMM»R%e IC Öa;%Ä 16 Ü ÄÖ DIMM»T

İŞB ÅŠÒà



ĐÍÁz: xè%4Ç€Áé;èZTÖàÿÄ CEÛ ÄÖdZ^^»RbHÓ]1CE1Û 1ZT1ÄÖ dZ^^1ÖY%eİÖ% İıİhÈ »R;ZÉúÖàÇaÄİè%4XÇÅŠ»T

ĐÍÁz: Û İ^ INTEL TX İÖ% İı;Z%pİÄ x4 SDRAM IC»RÄ Àn ÇİÖ È=ÝU (loading)»RÄöĐİÉ' %4Ç€Áé;èİ, Öö SDRAM»T



İ½ö: SIMM/DIMM ZT1Öà;Z;Y;è%4ÄTÄi %4ÇfÖüÈ, ;i»X

B?1Äé;è 1M by 4 bit DRAM chip ÄÖ 32 bit non-parity SIMM»RÄpZTÖàÄÈ132/4=8 chips»T

C?1Äé;è 1M by 4 bit DRAM chip ÄÖ 36 bit parity SIMM, ÄpZT ÖàÄÈ136/4=9 chips»T

D?1Äé;è 1M by 4 bit %è 1M by 1 bit DRAM chip ÄÖ 36 bit parity SIMM»RÄp ZT1ÖàÄÈ18 data chips(8= 32/4) ;1%h 4 parity chips(4=4/1)»RÜqAQ12 chips»T

E?1Äé;è 1M by 16 bit SDRAM ÄÖ 64 bit DIMM»RÄpZTÖàÄÈ 64/16=4 chips»T

%Ä ÄT;ı ÄöĐİÄÖSIMM %è DIMM %ÄİıÄi »X

SIMM Data chip	SIMM Parity chip	ÄTÇÈbit Öà;ò	İ Ü ÇÈ	Chip Öà;ò	SIMM %4%4f	È ÄpÄöĐİ
1M by 4	None	1Mx32	x1	8	4MB	Yes
1M by 4	None	1Mx32	x2	16	8MB	Yes
1M by 4	1M by 1	1Mx36	x1	12	4MB	Yes
1M by 4	1M by 4	1Mx36	x1	9	4MB	Yes
1M by 4	1M by 4	1Mx36	x2	18	8MB	Yes
1M by 16	None	1Mx32	x1	2	4MB	Yes
1M by 16	None	1Mx32	x2	4	8MB	Yes
1M by 16	1M by 4	1Mx36	x1	3	4MB	Yes
1M by 16	1M by 4	1Mx36	x2	6	8MB	Yes
4M by 4	None	4Mx32	x1	8	16MB	Yes
4M by 4	None	4Mx32	x2	16	32MB	Yes
4M by 4	4M by 1	4Mx36	x1	12	16MB	Yes
4M by 4	4M by 1	4Mx36	x2	24	32MB	Yes

İŞB ÅŠÒà

SIMM Data chip	SIMM Parity chip	ÅTÇË bit Òàçò	Í Û ÇË	Chip Òàçò	SIMM %f	Æ ÁpÀòPÍ
16M by 4	None	16Mx32	x1	8	64MB	Yes»RÀ çÖÏ Òi»T
16M by 4	None	16Mx32	x2	16	128MB	Yes»RÀ çÖÏ Òi»T
16M by 4	16M by 4	16Mx36	x1	9	64MB	Yes»RÀ çÖÏ Òi»T
16M by 4	16M by 4	16Mx36	x2	18	128MB	Yes»RÀ çÖÏ Òi»T

DIMM Data chip	ÅTÇË bit Òàçò	Í Û ÇË	Chip Òàçò	DIMM %f	Æ ÁpÀòPÍ
1M by 16	1Mx64	x1	4	8MB	Yes
1M by 16	1Mx64	x2	8	16MB	Yes
2M by 8	2Mx64	x1	8	16MB	Yes
2M by 8	2Mx64	x2	16	32MB	Yes
2M by 32	2Mx64	x1	2	16MB	Yes»RÀ çÖÏ Òi»T
2M by 32	2Mx64	x2	4	32MB	Yes»RÀ çÖÏ Òi»T
4M by 16	4Mx64	x1	4	32MB	Yes»RÀ çÖÏ Òi»T
4M by 16	4Mx64	x2	8	64MB	Yes»RÀ çÖÏ Òi»T
8M by 8	8Mx64	x1	8	64MB	Yes»RÀ çÖÏ Òi»T
8M by 8	8Mx64	x2	16	128MB	Yes»RÀ çÖÏ Òi»T



DÍÁz: Åéçè16M by 4 bit chip (64M bit ÅóÍ_) %Å64MB SIMM çòÁvAsçÇË%hÅY%4%ÅDÓ^»RÅYçSçÖÏÙòxçè AOpen Í ÒiÍ»Å ç Û Å»B Ýi. Å Æ Intel ÍnçfÍÓ% ÍiÈä%ŠAi Ó' Ås%Ó»R%QçÓÁpD.,Í½ ÅÅÖ Åóçæñ"0ÅÅðçlçYÍ Òi»T×éÅqñ_Åéçè16M by 1 bit chip (16M bit ÅóÍ_) %Å64MB SIMM DñÓ] 24 Û IC»RÉ{ÉaÅòPÍ%½ ÇÉÅéçè»T



Í½ ö: 8 bit = 1 byte»B2 bit = 4 byte»TSIMM %f %fÆ çY data byte (%fDóÁÍÍ]parity) ÅÖÖàçòççfòü»RÅi ÀfÅéçè1M by 4 bit chip ÅÖ Í ÇË SIMM ÅÊ1Mx32 bit, Åj 1M x 4 byte= 4MB»TÅfÅXÆ Û ÇË SIMM»Rç^ÇÇÖ2 Åj çz»RÀf 8MB»T

İP³/eÍÓ

Award BIOS

çÓÍÖ_Ö»Á ÀfÀ ÍnÁŠÁİİèÈèÖà»R È' ççYÁéçè AOFIash ççÁçİ'À»ÁÍÁ ÑçUØ Á`ÄÖ
BIOS»T



ÇÁÇÈ: ÀnÆBIOS codeÑ“ÚYİõÄİİèİçİŞB ÄÖİnÇççnÁ
ÁÍÁ Đz»RÁİ çYçİİwÈèÄÖ BIOS ÄÄçÖçzÉúÑ“ÖaçÖÍÖ%Đİè
ÄÖ%ÖÈv (ÉdÁ`Æ Chipset SetupÈèÖà) ÁÍÁaÈİÁ»T

3.1 Đz¼ BIOS Setup çUÙ Í

BIOS Setup ÈçQÆ,ÀfÁ Flash ROM ÄÖİ'À»»RççYçèÁÍÁ Á ÄİèÈèÖaÄYÈ çÄÄÁ
128 byte ÄÖ CMOS RAM çÖ»RÁèçèÄaAfççĐz¼ BIOS Setup çç»Rç`ÇÈAsĐ"Ø ÁúÄİ
İèÈ À POST (ÀóÁóİ Öİ) Èä»RÁ ççDEL Á Üp»RÁj ççz¼ AWARD BIOS Setup çU
Ù Í »T

AWARD BIOS

ROM PCI/ISA BIOS (XXXXXXXX)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION SETUP LOAD SETUP DEFAULTS LOAD TURBO DEFAULTS	INTEGRATED PERIPHERALS PASSWORD SETTING IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
ESC : Quit	á â à ß : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Description of each function	



Î½öKIÙ 06 "Load Setup Defaults" çz0 %4ÄÏË0Š
 ç ÍnŠÄ0Èè0aÇa»WaiÙ 06 "Load Turbo Defaults"
 ÄyzÄèè0 ÁðÄ0Èè0aÇa»RA çÏÑÈ ò ÜÍ Á0ÄÏË
 ÌÏAi»T

ÄsÏvÇÈ%F% ÄÍ%QÇiÄ ç`À »RÄzDUE'ÄfÄ È_%èziÈèl0Ä ù DÏ%41»RAfÄ Á Á ÍmŠ»RçY
 %eÄfÄ È,%QÇiÏvÇÈl0Ä çÍ%QÇiÏvÇÈ»T

á â à ß »XÄbçè% ÄgÜp»RçzÈ_%èziÈèl0Ä È ÇnÄ Ä0Ü DÏ%41»T

»XÄ Í, ÇiÏÏAi ÜpçzçYÄ BøBýçöÄ0YTAü»T

»XÄ Ä0ÜpÄ çöÜ D"ÄvÄtÜa»T

»XÄ Ä0ÜpÄ çöÜ D"ÍnŠÏvÇÈ»T

»XÄ Ä0ÜpÄ çöÜ Ä Ä0ÄÄÄeDz%4Ä0Ü Í »T

Íæ%F ÇÈ%QA ÄyÈ ó ÄiÜ DÏçöÄ0ÜÏ%4D»T

AWARD BIOS

3.2 Standard CMOS Setup

Ù Øö "Standard CMOS Setup" ÍñŠÏvÇÈ»R;Z;YÙ ØöÁÏeÄÖÈ ;ÖÍñŠ»RÄfÜ ¼¼¼
ÎÛ»SEÄD»%eÖéÖeØ ÁÄÖRÄÖÍñŠÇâ»TÄé;èÄæ;ZÁb;è% ÄgÛpÈ_ %é;ÏÈeÏÖÄ È ÇñÁ ÄÖÛ
DÏ¼¼»RÄRÄé; Äè Äè Ä ÜpÍñŠÛ DÏÄÖÈeÖäÇâ»T

ROM PCI/ISA BIOS (XXXXXXXX)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Wed. Mar 6 1996	
Time (hh:mm:ss) : 00:00:00	
HARD DISK	TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTORS MODE
Primary Master	: Auto 0 0 0 0 0 0 AUTO
Primary Slave	: Auto 0 0 0 0 0 0 AUTO
Secondary Master	: Auto 0 0 0 0 0 0 AUTO
Secondary Slave	: Auto 0 0 0 0 0 0 AUTO
Drive A	: 1.44M, 3.5 in
Drive B	: None
Video	: EGA/VGA
Halt On	: All Errors
Base Memory : 640 K	
Extended Memory: 15360 K	
Other Memory : 384 K	
Total Memory : 16384 K	
ESC	: Quit á â à ß : Select Item
F10	: Save & Exit Setup (Shift) F2 : Change Color

Standard CMOS à Date

ÀfÄXÈ'ÑbÇÈÍñŠ% ÎÛ»R;Z;YÁb;è% ÄgÛpÈ_ %é;ÏÈeÏÖÄDate ÈeÖäÍŠ»RÄRÄ ¼¼¼
Äè Äè ÍñŠ;öÄvÄÖ% ÎÛ»T% ÎÖÄÖÈeÖäÈ Ä»ÄÈ% »S% Ä^ Ä»T

Standard CMOS à Time

ÀfÄXÈ'ÑbÇÈÍñŠEÄD»»R;Z;YÁb;è% ÄgÛpÈ_ %é;ÏÈeÏÖÄTIME ÈeÖäÍŠ»RÄRÄ ¼¼¼
Äè [PGDN] ÍñŠ;öÄvÄÖEÄD»»TEÄD»ÄÖÈeÖäÈ Ä»ÄÈÄ»S%ÄÄ^ Ä »R/E ;Y4 ¼fÈÄ% Ä»Ä
;ö»T%Q;ÖÍñŠÄEÄD»Ä^ ¼ ÎÛ»RÄTÄÖÇÄÑ'D"Ø Ä\¼Ä=ÄRÇÄÑÍñŠ»T

AWARD BIOS

- Standard CMOS à Primary Master à Type
- Standard CMOS à Primary Slave à Type
- Standard CMOS à Secondary Master à Type
- Standard CMOS à Secondary Slave à Type

Type	
Auto	ÀÒÙ ÐÏçíñŠÀñèÁì ¼ííÁÁØ IDE ÌŠÒèÈèÒà»RÀfÈvÐ,,(Size)»S
User	Ôé Æñ Òà(Cylinder) »S Ôé Új Òà(Head) »S ÓŠ Òà Ú%(pre-
None	compensation) ÁÒÈpÁ) Cylinder Çà»SÔéÚj ç ÈÁÈé(Landing
1	Zone) ÁÒ Cylinder Çà»SÔéÈÈÒà (Sector) Ìç»Tñ È'È_ÈèÒàÇà
2	ÍñÈ Auto Èà»RBIOS Ñ'ÀsÁñèÈ À Ð"Ø ÀóÁóÍ Òì (POST)
...	Èà»RÀóÈàÈÒÍ ÌŠÒì ÔéÔèØ ÁÒ Type»RÁÝÀs Standard BIOS
45	Setup ¼¼Ëýçöçì Áì»TÇj ÈÒÍ ¼¼Á ÌŠÒèÁÏtype ÀèÑbÀóÀ ÍñŠ
	ÈèÒàÇà»R×èÍñÈUser»TÀfÁXÁñèÁÝç ÔÈñíÁíSÀ»ÔéÔèØ »R×è
	È_ Type ÍñÈ None»T
	IDE CDROM Í¼Æ ÀóÈàÈÒÍ ÁÒ»T



Í¼çö : È' çz Áb çè çU Ìv ÇÈÁÒ "IDE HDD Auto
Detection" Û ÐÏÁíÀóÈàÈÒÍ ÁíÁŠÒàÁÒ IDE ÌŠÒèÍh
È »T

- Standard CMOS à Primary Master à Mode
- Standard CMOS à Primary Slave à Mode
- Standard CMOS à Secondary Master à Mode
- Standard CMOS à Secondary Slave à Mode

Mode	
Auto	Âéçè Logical Block Address (LBA) Òì Á»ÐáÈvØ Èàç¼ííÁÐh
Normal	Ó] 528MB ÁÒÍŠÒè»TçðÁvçÁÍ ¼¼ñÁÒDE ÌŠÒè¼¼ÁyÁýÍà LBA
LBA	ÐáÈvØì Á»»RÁpÚ<ÀfÈvÐ,,Á»ÐhÓ]528MB»TÀfÁXÁéçèÁÒÍŠÒè»Š
Large	ÍbÈ Á»¼¼ÆLBA On »RÌ_¼¼ÉúçèLBA Off ÁÒ¼¼ Á»ÁíÈì Èà»T

AWARD BIOS

Standard CMOS à Drive A Standard CMOS à Drive B

Drive A

None
360KB 5.25"
1.2MB 5.25"
720KB 3.5"
1.44MB 3.5"
2.88MB 3.5"

Í, Çí Û ðĪ ççèÁi Û ØöÍ€0èÁÖÝ ÁÆ»R ×eİ0Èä% ÅgÛpÄö Drive A Æè
Drive B ÍS»RÁ [] Àè [] Û Øö0aÍ€À»0èØ ÆİBÁ0Èè0aÁj
ç»RÂpÍÁŠÇaÁfçÄ»T

Standard CMOS à Video

Video

EGA/VGA
CGA40
CGA80
Mono

À0 Û ðĪ ççInÁŠ Ái Áé çè Á0Bý çö çu ÁÆ0R »R Èè 0a 0Š ÍnÇa ÆÈ
VGA/EGA»T çèÁ çòÁvÁ0Çi%Y0„0%Á æEqÁ!Á0ÍhÈ ÆÈ/GA»RÁ0
Û ðĪÍi çXÁdÁÍ%È0 çèÍS»T

Standard CMOS à Halt On

Halt On

No Errors
All Errors
All, But Keyboard
All, But Diskette
All, But Disk/Key

À0 Û ðĪ ççÈÈÁ ÁİÈÈ À À0Á0Í 0i (POST) Èä»R ÁfÈ0Í Á Û 0•
Æ ÁpÇÈÈÈ% 0SÁQ»T Èè0a0ŠÍnÇa ÆÈ All Errors»RÁ çòÁİÈèç`ÇÈÈ0
Í Á Û 0•ÁÆÁf»RÁj ÑÈÈ% 0SÁQ»T

AWARD BIOS

3.3 BIOS Features Setup

ÀfjÅÀs;UÙ Í ¼¼ 00"BIOS Features Setup" ðÏ;ò»RÁj ÑÀsÜÝÓ ¼¼By;öÀf¼fÏvÇÈ»X

ROM PCI/ISA BIOS (XXXXXXXX)
 BIOS FEATURES SETUP
 AWARD SOFTWARE, INC.

Virus Warning : Disabled	Video BIOS Shadow : Enabled
External Cache : Enabled	C8000-CBFFF Shadow : Disabled
Quick Power On Self Test : Enabled	CC000-CFFFF Shadow : Disabled
Boot Sequence : A,C,SCSI	D0000-D3FFF Shadow : Disabled
Swap Floppy Drive : Disabled	D4000-D7FFF Shadow : Disabled
Boot Up Floppy Seek : Disabled	D8000-DBFFF Shadow : Disabled
Boot Up NumLock Status : ON	DC000-DFFFF Shadow : Disabled
Boot Up System Speed : High	
Typematic Rate Setting : Disabled	ESC: Quit áâàÛ : Select Item
Typematic Rate (Chars/Sec) : 6	F1 : Help PU/PD/+- : Modify
Typematic Delay (Msec) : 250	F5 : Old Values (Shift) F2 : Color
Security Option : Setup	F6 : Load Setup Defaults
PCI/VGA Palette Snoop : Disabled	F7 : Load Turbo Defaults
OS Select for DRAM > 64MB : Non-OS/2	

BIOS Features à Virus Warning

Virus Warning	ÀOÙ ðÏ;ÏÁÑŠÓ,,0¼EwEÀ0Á%¼¼»RÀ`BQİŠ0èÀ0Ð"0 ÈéÆ, (Boot Sector) ¼¼¼ÍèÀ (Partition Table) ¼¼¼ ÈwEÀZè¼¼TÀfÈ_Èè0áÍnÈÈ
Enabled	Enable»RÀ ;ö0,,0¼AsD"0 ÓÏÏ'¼¼»RÁfAÍ0 ÈaÖx¼¼İŠ0èD"0 ÈéÆ,»R
Disabled	ÀÏèÁj ÑÈÈ¼ ÓSÁQ»RÁYÑÀsÜÝÓ ¼¼;Ï Ì'Ï;¼¼fÀ0PÍÁZè00»TA0Èè»R
	xè;èÈ»È.Ì'À»Áp;Ï È÷YUÁiÀs»T

! WARNING !
 Disk Boot Sector is to be modified
 Type "Y" to accept write, or "N" to abort write
 Award Software, Inc.

AWARD BIOS

BIOS Features à Boot-up Floppy Seek

Boot-up Floppy Seek Enabled Disabled	È_ÀÓÈÈÒàÍnÈ Enable»BIOS N'ÀsD"Ø ÈàIØÈàÍ€À»ØéØeØ ÀÓ ØéÙj ÈIÑ(I ^ (Seek) ÀÓÈÈÀÁQ»TÈÈÒàÓŠÍŕÇaÈ Disabled , N'Í%Ø] Í, Çíçnú»T
---	--

BIOS Features à Boot-up NumLock Status

Boot-up NumLock Status On Off	ÀÓÙ DÍçZÍnŠÙp×] %hÀÓÒàÀ.Ùi çcÙpÀéçèØiÀ»TÈ_ÈÈÒàÇaÍnÈ On»RÀ çöçß ÒàÀ.Ùi çcÙpÙúÈÈÒàÀ.Ù %fÀÁDR»TÀfAXÍnÈOff»R ÁyÀsD"Ø ÀúDàÈúÀéçèÏyØéÈÈÀ çnú»TÈÈÒàÓŠÍŕÇaÈ On»T
--	--

BIOS Features à Boot-up System Speed

Boot-up System Speed High Low	È' ççYÙ ØóÀÏÈÈÀÓÈ À ÍÁnÈ High ÀèLow»TÈÈÒàÓŠÍŕÇaÈ High»T
--	--

BIOS Features à Typematic Rate Setting

Typematic Rate Setting Enabled Disabled	ÀÓÙ DÍçZÍnŠÀèÀ È Ùp×] Øi ÚÚÇÀ×àØgÚÓÀØçnú»TÈ_ÀÓÈÈÒàÍn ÈÈEnabled»RÀÏÈÁj çZÈIÀ Ùp×] Øi ÚÚÍbÇÀ×àØgÚÓÀØÈÈÀÁQ»T
--	--

AWARD BIOS

BIOS Features à Typematic Rate

Typematic Rate	ÀÓÙ ðÿçíñšçá×àôgúôúþ× áóí†á»RÈëÒàÇaÆÊ6»S»S10»S12»S15»S20»S24»S30 Ýç»TÁ†èóŠínçæËÁTÆ 30 ÇíÀ.º0»T
6	
8	
10	
12	
15	
20	
24	
30	

BIOS Features à Typematic Delay

Typematic Delay	ÀÓÙ ðÿçíñšçá×àôgúôúþ× ÍbÇÁ×àôgúôúþ»RÀ.º0BýçòÀsÚÝÓ¼¹ÀÓËÄ»Èþ»RÁÍ250»R250»R500»R750 Á^1000 ms»TÓŠínÇáÆ 250 ms »T
250	
500	
750	
1000	

BIOS Features à Security Option

Security Option	ÀÓÙ ðÿçíñšçá×àôgúôúþ× »RÚñÁ\ç] %Yç00xÈÜB%»SAí0i ÀoÁéçèÈ'ÀÓÙ,0»TÀfÁXÍñÆ System»RÀ çòÁTAÓÇÁÑ†Èi ÈaÁ†ìèÈa»RÍ'Á"ÇÈÁUÙ %È\×i »Tççç•»RÐz¼BIOS Setup Í'À»Èa»R¼ñÇÈÁUÙ %È\×i »TÀfÁXÍñÆSetup»RÐñÑ'ÁsÐz¼ BIOS Setup Í'À»Èa»RÇÈÁUÙ %¼È\×i »TÀfÇÈÁ È È\×i çñÉú»R×èÙ 00çUÙ Í ÁÓ "Password Setting" ðÿçíñšçá×àôgúôúþ»R¼ÇÈÙ %çç À ò Èa»RÁ %F<Enter>ÙþÁç ç»T
Setup	
System	

BIOS Features à PCI/VGA Palette Snoop

PCI/VGA Palette Snoop	ÀÓÙ ðÿçíñšçá×àôgúôúþ× (Palette Snooping) ÍbÀ† Á ÈaÁ` Á ÁŠÚç»R¼AoÚÍç Á ÁY00çYÚñÁ\»B»B»TÀfÁXÈ`RÇÍ Ûi ççòè¼¹ÀŠÍ»Áü¼ Åa0á×iÀü× À Á"ÀÓÙi çççÁi Àf»XMPÉGçuÀè 0%0ÍÈÑÈ0çu)»RçzÈ_Ù ðÿçíñšçá×àôgúôúþ»RÓŠÁ0Ùi çççu»B»P»T
Enabled	
Disabled	

AWARD BIOS

BIOS Features à OS Select for DRAM > 64MB

OS Select for DRAM > 64MB	ÀfÄXÈ´ Áéçè OS/2 ÁQÑ·Áîè»RÁÝçSÈ´ ØeB ÈvD„Dh64MB»R çË_ÈeÖaÇaÍnÈ OS/2»RÁpÁy×eÛ Non-OS/2»T
OS/2	
Non-OS/2	

BIOS Features à Video BIOS Shadow

Video BIOS Shadow	Ái Ûñ VGA BIOS Shadow Æ È_ßýçöçuÁÖBIOS ò ÈaÁ ÁÁAs DRAM È´ ØeB %»RççIÁöÁîèÁÖÈ Á ÈPì%»RAnÈ DRAM ÁÖ ÀfÁ ÍÁñ% ROM ÚöÁð»TÈeÖaÍnŠÇaÈEnabled»T
Enabled	
Disabled	

BIOS Features à C800-CBFF Shadow

BIOS Features à CC00-CFFF Shadow

BIOS Features à D000-D3FF Shadow

BIOS Features à D400-D7FF Shadow

BIOS Features à D800-DBFF Shadow

BIOS Features à DC00-DFFF Shadow

C800-CBFF Shadow	Í, ÁaÀ Á´Æ È´ ØeB Á´ ÈuÍÓÛi çççuÁéçèÁÖ»TÀfÄXÙ Øö Enabled»RÁîèÑÈ_Ûi çççuÁÖROM Code ×aÖ*»Qç Á çUE` ØeB (DRAM) ÈéÈ %»RÁÖÁöÍ_ÖöÈShadow»RççÓWÁ ò Áð ÁÖÍSì´ ÍÁñTCj È´ %Á^Ñ»Ûi çççROM Code ÁÖÁ Á´Ò Èa»R çË_ÈeÖaÍnÈ Enabled»R% ò ÈuÁ´ ÝiÓ Æ^ Á ÁiÁÁÖROM Code, À È Ð´ È´ ØeB »T
Enabled	
Disabled	



ÄqÑ_ : F000 Á^ E000 À Á´Æ È´Á Á´ ÈuÍÓ BIOS
Code Ó Æ´Áçè»T

AWARD BIOS

3.4 Chipset Features Setup

"Chipset Features Setup" $\text{Æ}\text{E}\text{z}\text{U}\text{0}\ \text{À}\ \text{À}\text{O}\text{I}\text{O}\% \text{I}\text{i}\text{Æ}\text{Y}\ \text{z}\text{m}\text{u}\text{I}\text{n}\text{Å}\text{S}\text{»}\text{R}\text{I}, \text{Á}\text{á}\text{z}\text{m}\text{u}\text{I}, \text{È}\text{q}\text{O}\text{a}\text{O}, \text{O}\% \text{À}\text{O}\text{È}\ \text{À}\ \text{È}\text{P}\text{È}\text{ú}\text{À}\text{I}\text{Y}\ \text{»}\text{T}$

ROM PCI/ISA BIOS (XXXXXXXX)
 CHIPSET FEATURES SETUP
 AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	
DRAM Timing	: 60 ns	
DRAM Leadoff Timing	: 10/6/3/3	
DRAM Read Burst (EDO/FP)	: x222/x333	
DRAM Write Burst Timing	: x222	
Fast EDO Lead Off	: Disabled	
Refresh RAS# Assertion	: 5 Clks	
DRAM Page Idle Timer	: 2 Clks	
DRAM Enhanced Paging	: Enabled	
Fast MA to RAS# Delay	: 2 Clks	
SDRAM(CAS Lat/RAS-to-CAS)	: 3/3	
SDRAM Speculative Read	: Disabled	
System BIOS Cacheable	: Enabled	
Video BIOS Cacheable	: Enabled	
8 Bit I/O Recovery Time	: 4	
16 Bit I/O Recovery Time	: 1	
Memory Hole At 15M-16M	: Disabled	ESC: Quit á à à ß : Select Item
PCI Passive Release	: Disabled	F1 : Help PU/PD/+/- : Modify
PCI Delayed Transaction	: Disabled	F5 : Old Values (Shift) F2 : Color
Mem. Drive Str.(MA/RAS)	: 16mA/16mA	F6 : Load Setup Defaults
		F7 : Load Turbo Defaults



ÅqÑ : ÀsÁ Böz À ÍnÅŠÁv»R×è×eÅŠÈ'Æ ÁpÓ Í, Áá
 ĐÍçòÀOÍnÅSAÓç ÜRÖè»RÁpÁy%ÄDRÑ ÅOÍnÅŠÈ¹Ä|
 Í¹%aIèÀOÈ À Í‡Ån»R³eÇaÑ"Ö%BeÅ‡IèÀOYÇASÄ»T

AWARD BIOS

Chipset Features à Auto Configuration

<p>Auto Configuration Enabled Disabled</p>	<p>ÍnŠĂÓÙ Đİ»RÀİİēNĀa00 CPU ÄŦ Type Ä^ Timing Äi ÇÄ NĦ×i 0ÿ DRAM Ä^ Cache ÄŦÇa»TÄfÄXNĦbÇ€Ä6%İnÄŠ DRAM Timing»R×ê¿ Ä È ÄŦĐİİnÄŠ»T</p>
---	--

Chipset Features à DRAM Timing

<p>DRAM Timing 60 ns 70 ns</p>	<p>ÄŦÙ Đİ¿zİnÄŠ DRAM timing ÄÈ 60ns Äè70ns»T</p>
---	--



ĐİÄz:ÈēŦaŦŠİnÇaÄÈ60ns»R¿zB È`ŦeB Ú È, İæÄèÄŦ
È Ä ÈPÄX»T Ä NĦ»Q¿_İŦ% İiÄŦİİÄnŦ Äđ»R70ns
SIMM ¿^ÄŦĐİ¿èÄ 60MHz ÄŦCPU»RÄfÄXÄé¿èÄs
66MHz ÄŦ CPU ¿zÈúN"ÄéÄİèİ½¿ç¼ÄÇÄŠÄŦÈ»
Äè»T

Chipset Features à DRAM Leadoff Timing

<p>DRAM Leadoff Timing 11/7/3/4 10/6/3/3 11/7/4/4 10/6/4/3</p>	<p>Äi Üñ Leadoff Ä ÄŦÈ burst read/write ÄŦİP»QÇi memory cycle ÄŦÈäĐ»»R¿Yclock ÄŦŦäĐ„ÇfŦü»TÄaŦ ¼1»RÄŦÙ ĐİĐä ÈúÈÈÄ page miss read/write leadoff timing»RÄ^ RAS precharge ¼è RAS to CAS delay ÄŦÈäĐ»»TŦŦİnÇaÄÈ 10/6/3/3»RÄpN_ÄÈ10-x-x-x DRAM page miss read ¼è 6- x-x-x-x DRAM page miss write»RÄİÄİ 3 clock ÄŦ RAS precharge ¼è 3 clock ÄŦ RAS to CAS delay»T</p>
---	---

AWARD BIOS

Chipset Features à DRAM Read Burst (EDO/FP)

<p>DRAM Read Burst (EDO/FP) x444/x444 x333/x444 x222/x333</p>	<p>Read Burst ÀÕÑ_ÀpÆ CPU BÄÄ ò ÈàÈà»R¿^Èv¿i %QÇíÀ Á^ÈeÓÓ»RÀ DRAM Èò060ŠÄŠÄÖÀ Á^ÀgCPU Èv¿i 4 ÇíÍ† p ÄÖÊ`0eß ò Èà»TÓŠÍrÇàÆx222/x333»RÆ Á ÌÐ»SÌÐ»R %eÌÐ 4 ÇíÊ`0eß ò ÈàÖ÷Èà 2 clock (EDO) Àè 3 clock (FPM)»RØR¿eÄ Í†ÄñÆ 60ns EDO Àè FPM (Fast Page Mode) ÄÖDRAM»Tx ÄÖÇàÑ^UYÏö DRAM Lead-off timing ÍñŠÄíÌÄ»RÒ ÁðÄÖDRAM ¿^Ö÷0 Ý^ÄÖÈaÐ»»T</p>
---	--

Chipset Features à DRAM Write Burst Timing

<p>DRAM Write Burst Timing x444 x333 x222</p>	<p>Write Burst ÄÕÑ_ÀpÆ CPU Èò060ŠÄŠÄÖÀ Á^Öx¿i 4 ÇíÍ† p ÄÖÊ`0eß ò Èà»RÀ ¿^Èv¿i ÌÐ»QÇíÀ Á^ÍÖDRAM»TÀÖÖÍ ¿öÍñŠÍP2»SÌÐ»R%eÌÐ 4ÀÖBaÈv0 ÈaÖ÷ÇÈÄÖ clock Öa»R EDO Á^ FPM DRAM ÄdÄÍÈ†ÌÄ»Tx ÄÖÇàÑ^UYÏö DRAM Lead-off timing ÄÖÍñŠÄíÌÄ»RÒ ÁðÄÖDRAM ¿^Ö÷0 Ý^ÄÖ Í¿Ä÷ÈaÐ»»T</p>
---	--

Chipset Features à Fast EDO Lead Off

<p>Fast EDO Lead Off Enabled Disabled</p>	<p>ÀÓÛ ðÍ¿¿YÍñŠÖ ÁðÄÖ EDO read timing»R¿z¿j Ý^ 1 Çí clock»TÄfÄXÄŠÖa%W¿ Ä FPM DRAM»R¿ÌÐÑÈ_ÈèÖaÇÁÍñ ÆÈ Disabled»T</p>
--	---

Chipset Features à Refresh RAS# Assertion

<p>Refresh RAS# Assertion 5 Clks 4 Clks</p>	<p>ÀÓÛ ðÍ¿¿ÈÈÄ refresh ÈäÄÖ RAS clock Öa»T</p>
--	--

AWARD BIOS

Chipset Features à DRAM Page Idle Timer

DRAM Page Idle Timer 2 Clks 4 Clks 6 Clks 8 Clks	ÀÓÙ ÆÏçíñŠ CPU idle Áû»RDRAM page window çÏÐÑ ÏçÁ÷Ïi Çi clock %Ý ÍÆ»T
---	--

Chipset Features à DRAM Enhance Paging

DRAM Enhance Paging Enabled Disabled	ÍñŠÀÓÙ ÆÏçíñú»RçzÁé TX ÍÓ% ÉdÅŠÀÓ% Ä ØÄçzÉúÔ Á DRAM page window çÏÐÑ»T
---	---

Chipset Features à SDRAM(CAS Lat/RAS-to-CAS)

SDRAM(CAS Lat/RAS-to-CAS) 2/2 3/3	ÀÓÙ ÆÏçíñŠ SDRAM CAS Latency Å^RAS Ó CAS ÅÖ ÏçÁ÷Èä»»TÍ, ÅáÍñŠÇâçzÓ%Be SDRAM ÅÖÈ À ÅÆÈ»RÓŠ ÍñÇáÆÈ 2 clocks»RÀfÁXÅŠÒaÁû»BDRAMÁÍ%4%ÆÈvÅÖÈ» Áè»R×èÈ_2/2 Á ÆÈ 3/3»T
--	---

Chipset Features à SDRAM Speculative Read

SDRAM Speculative Read Enabled Disabled	ÀÓÙ ÆÏçíñ %ð SDRAM BÅÅ Leadoff Timing ÅÖÏçÁ÷Èä Ð»»TSDRAMçzÈÍÁ Òa CPUÈÈuÅaÅS»RçyÈ÷ÈÖÈä»»41 ÅÖÏÏ Û »RçYÍ÷ÈÆÈ` ØeB ÅÖÀ+Á ÈPÌ%TÀfÁXÁÍ%QÇi çY%4-LÅÖMM ÀŠÒaÀsÁñèè»41»RçÏÐÑÈ_ÈèÒaÇáÍÆÈDisabled»T
--	--

AWARD BIOS

Chipset Features à Memory Hole At 15M-16M

Memory Hole At 15M-16M Enabled Disabled	ÀÓÙ ÐĬçZÀ` ÈuÀĬÈ` Øeß ÈeÈ İÓÁ ĄŠÁÓ İSA çuÁéçè»RçYŪñ Á`È` Øeß Ąb»D»TİÓ% İiçZÈ„AÓÈÈ ÈİĀĀ×ÈĬçè İSA bus ĐaŪ ÓĬĀİĀÖĐ ÈaĀ^ ðè×i »Tİ„Èq»RÀÓÈÈ Ą Ą` ÈuİŪÓ çu Ó Ą^ Ąéçè»T
--	---

Chipset Features à PCI Passive Release

PCI Passive Release Enabled Disabled	ÀÓÙ ÐĬçZB È`ÈÈĀ PIIx4 İÓ% İi (Intel PCI Ø Èİ İSA) ĀÖ İbÈäĐaŪŪçmú»TĀŪçmúÈ İbĀéçèĀsĀĬèŪĬĀ İSA çUDñÈä ĀÈ ½çĀİŪ »TĀfĀXÈ`ĀŪ İSA çuĀİ %/ĄÈvĀŪÈ»Āè»RççYŪŪ ŪiçYİĀŠĀèĀ È »T
---	---

Chipset Features à PCI Delayed Transaction

PCI Delayed Transaction Enabled Disabled	ÀÓÙ ÐĬçZB È`ÈÈĀ PIIx4 İÓ% İi (Intel PCIØ Èİ İSA) ĀŪĀİ Ū ç Ą çmú»TçĒ PCIĀŪŪ ÈaĐaŪ Ñ% İSA bus Āđ»RĀfĀX È`ĀŪ İSA çuÑĀİ %/ĄÈvĀŪÈ»Āè»RççYİĀŠĀŪçmúß PCI ĀŪĐaŪ ð ÈaĀİŪ »T
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Chipset Features à Mem. Drive Str. (MA/RAS)

Mem. Drive Str. (MA/RAS) 10mA/10mA 10mA/16mA 16mA/10mA 16mA/16mA	ÀÓÙ ÐĬçZBi ÈäÈ` Øeß Ā Ā`Ā^ ÈeŪŪ çi ĀŪİĀñ»TĀŪççĀĀŪİ È` ç Ą éçèð %fĀŪŪççĀ»R% Ū ÈvĀ B È` Øeß Ū %»R%ççZŪŠ ĀŪÈ` Øeß ŪaĀ†ŪŪŪ»Ū ĄeÑŪĀĀŪÈ»ĀèĬ, çç»T
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AWARD BIOS

Power Management à PM Controlled by APM

PM Controlled by APM	ÀfAXÙ 00 "Max Saving"»RĪ_zz YB ĀĪĒ%pĪĀBzDz0,,Ñ×00
Yes	Ī' (APM) zġū»RzĪĒ(Ā0,,00Ī' zġū»TĀi Āf»XĒĒ% CPU %0
No	Ī»EāĒūÓSĀQ»T

Power Management à Video Off Method

Video Off Method	ÀÓÙ DĪ_zz YĪnĀŠBýzö00Y ĪĀYÓ Ā0% Ā »T Blank Screen
Blank Screen	Ñ* Ē_ Bý zö 0 Èà Ú< Ā† Ās Bý zö 0ā Ā† 00 %4»T Āi V/H
V/H SYNC+Blank	SYNC+Blank %0Īm BIOS ĒĒĀ VSYNC Ā^ HSYNC Ēe
DPMS	00 »T ĀÓ zġūĒ Āā Ēū ŪĪ zè Ās DPMS (Display Power Management Standard) ĪôĀ»Ā0Býzö00»RĀi VGA zġu%4çĒ Ēū%pĪĀ»T

Power Management à Video Off After

Video Off After	ÀÓÙ DĪ_zz YĪnĀŠBýzö00ÑĀsĀ 00Ā0,,0iĀ»%4Y ĪĀYÓ »T
N/A	
Doze	
Standby	
Suspend	

AWARD BIOS

Power Management à Doze Mode

<u>Doze Mode</u>	ÀÓÙ ÑÍ;ß È' ÍñŠÀñÈèDz%ÙèÉ%Ùi À»ÀÖEàD»»TÀsÀÓÙi À» %f»CPU ÀÓÓSAQÈaÈùN'BoÔT»RE' ççYÀ ÅŠThrottle Duty Cycle" ÀÔÙhÌ%»T;èÅ ÀñÈÈ ÀsÍ„Ó„ÅÄÖR%»RÅi çYÈÖÏ Å ç À ÈaAQÈa»RÍ'N'çùAj Å ÍpÅ çÜEqÅÄÖR%f»TÀñÈÈÈ Üaçè Öaï IRQ ÈeÖÖAi ÈÖÏ Æ»Èa»T
Disabled	
1 Min	
2 Min	
4 Min	
8 Min	
12 Min	
20 Min	
30 Min	
40 Min	
1 Hour	

Power Management à Standby Mode

<u>Standby Mode</u>	ÀÓÙ ÑÍ;ß È' ÍñŠÀñÈèDz%Ùi À»ÀÖEàD»»TÀsÀÓÙi À» %f»RÑÈi Èa CPU ÀÓÓSAQÈaÈùBoÔT»RÍ'SÖeÖaÈÈBAA ÈaAQ»R ÜYÓ Ý ÍÅÍççñú»T;èÅ ÀñÈÈ ÀsÍ„Ó„ÅÄÖR%»RÅi çYÈÖÏ Å ç À ÈaAQÈa»RÍ'N'çùAj Å ÍpÅ çÜEqÅÄÖR%f»TÀñÈÈÈ Üa çèÖaï IRQ ÈeÖÖAi ÈÖÏ Æ»Èa»T
Disabled	
1 Min	
2 Min	
4 Min	
8 Min	
12 Min	
20 Min	
30 Min	
40 Min	
1 Hour	

AWARD BIOS

Power Management à Suspend Mode Option

<p>Suspend Mode Option</p> <p>Power On Suspend</p> <p>Suspend to Hard Drive</p>	<p>çÖÄÏeI'Äe%AT%Å00suspend ÒiÀ»RÄeE'É À Å0,,0øI' çÏú»TÑ ÄÏeDz% Power On Suspend Å0,,0iÀ»Ea»RDa ÌeÄ0 Green PC ÑBoÄÄ0aEa%ÅÄR»RCPU EäEuEE% OS Üú»RÄiÄIÄ0In'a%ni'Ä Í»T%40]ÄÏeN'A`À Í,,0,,ÄÄR»R çYÄ\0a000 »SÜp×]»SÄeNa0ÄEÖI`Ä Å»EaEa»RçYÄEÄ%h1Ä IpÄ çÜEç0iÀ»%»Tççç»R0äi IRQ Ä0»Ea»ççYB ÄÏe 0äEE0iÀ»Ä ÄoçÜEç0iÀ»»T Suspend to Hard Drive ççY Äs0äEäY 0 Äv»RE ÄÏeÄÄR»RE`0eB Ä^ÜY0 0%0IÏçÜçÄ† ÄsIŠ0e%»RÑ Ó,,ÑçÄÑ†D`EiEa»RÄÏeI`N'A ÄoÄ E'Ç ç %ÄQÄ0ÄÄR%»TE' çIÖ÷ÄeççAOZVHDD %ççèI'Ä»ÄiÄ`Éu IŠ0eÄB»»T</p>
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Power Management à Throttle Duty Cycle

<p>Throttle Duty Cycle</p> <p>12.5 %</p> <p>25.0 %</p> <p>37.5 %</p> <p>50.0 %</p> <p>62.5 %</p> <p>75.0 %</p> <p>87.5 %</p>	<p>Clock Throttling Ä`Ä Ñ CPU Dz%0eE%ÄeIçÄ÷ÄÄRÈa»R ççYIÄS%QÇi0aÇa»RE CPU ÈaEu0SÜuÜhI%ÇEÄT»TÄa0 %Ä»CPU ÈaEuÄY%ÄN'TbÄ Á »RÄiÄf%QÇi166Mhz Ä0 CPU»R Ü Í^ Dz%0eE%ÄeIçÄ÷ÄÄR%»RÄpÈaEuDxIÜ%Ä0 Ä 0açÜEç 0iÀ» ÅÄaÄ0 30ns`IÍ0% IiI,,ÉqNÄSIÜI½çç%QÇi STPCLK (EE% ÄapÜ) Ä0Ee00»RçYÄ %CPU EÄÄ È,,ÇfEa00I½ççÄ0Èa Èu»TÑ ÄÏeÄsçÜEç0iÀ»Ea»R CPU ÄTE çZÄÄ 66M Ä0Èa Èu»RÄfÄXÇEÄTEaEuÜhI%Ä0%»RCPU DaEuEÄÄ ÄT33M Ä0 ÈaEu»RÍ, ÈaÇi%4DÄNÇEÄT CPU È Ä ÍÄÄ»R%ÄN'I %0 CPU Ä0Äe0,,»T</p>
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Power Management à VGA Active Monitor

<p>VGA Activity Monitor</p> <p>Enabled</p> <p>Disabled</p>	<p>Ä0Ü DÏçZËÖI VGA Býç000ÄsÅ0,,ÄÄRÈaÄ0ÈaÄQ»T</p>
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AWARD BIOS

Power Management à Power Bottom Override

Power Bottom Override Disabled Enabled	Í, Æ ACPI %ÄÖÍhÈ %Á%Q»TN Ò 0Enabled Èã»RÁv% ÇÈ Ä` %hÄÖsoft power switch çzYçèÁíÈÈÄ ÄñèD"0 »SÖaÈÈ (Suspend) ÄèÝ 0 »T ÀsD"0 ÄÖÄÖDR%f»RCj Á %switch»RçS ÈãD»%0Ä 4 Æ »RÄñÈÄ\N"Đz% Suspend ÖiÀ»»WÇj Á %fÄÖ ÈãD»Dh Ó] 4 Æ »R ÄñÈÄ\N"Ý 0 »T ÓŠ ÍnÄÖÄÈÖR %f Æ Disabled »Rsoft power switch ç`ÉúçèÁíD"Ý 0 »RÄdÄÍ Suspend»RÄi çY%AdÄÍ 4 Æ PÜÄÖÇÇÄ »T
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Power Management à RTC WakeUp Timer

RTC WakeUp Timer Disabled Enabled	RTC WakeUp Timer çzYB È'Ä ÄŠ%QÇiÉdÄŠÄÖ% ÎÜÈã D»»RÄñÈÄ\N"ÄsÍ, ÇiÈãD»ÄöÈãD"0 »T Í, Çi% ÎÜ /ÈãD»Æ Às " WakeUp Date (of Month)" %e "WakeUp Time (hh:mm:ss)" Û ĐÍ%Ä ÄŠÄÖ»T
--	--

Power Management à WakeUp Date (of Month)

Date (of Month) Alarm 0 1 2 30 31	ÈñÄi "RTC WakeUp Timer" Û ĐÍÄéçè»RçèÄíÄ ÄŠÄÖÄÇi% % ÄÖÄç %Q%e»TÍmÄ Äyç_Ä ÄT%Q%e»T
--	---

Power Management à Wake Up Time (hh:mm:ss)

Time (hh:mm:ss) Alarm 07:00:00 .. : .. : ..	ÈñÄi "RTC WakeUp Timer" Û ĐÍÄéçè»RçèÄíÄ ÄŠÄöÈãD"0 ÄÖÈãD»TÄpÈ À»ÆÈ hh:mm:ss»R×èÄqñ_Äp%ç%çfÈãÄÖÄ çö% À»ÆÈ 1 Ä 24»T
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AWARD BIOS

Power Management à IRQ 8 Clock Event

IRQ 8 Clock Event	ÀÓÙ ðĬçĭŃŠĀĭĕÀšĀó,ŌiÀ»%ƒ »RŌāĭ IRQ8 (RTC) ĀŌ
Enabled	Ē»Ēā»TOS2 ŃŌ IRQ8 (RTC)»ĀŠĪŪ»RĀfĀXĪŃQ8
Disabled	ĀŌçĭŃ»RĀšOS2 ĀQŃ•Āĭĕ»RçĕŪĪ]Ā Đ»%ŠĪŃŠĀĕĀŌ
	Āó,ŌiÀ»%»T

Power Management à IRQ [3-7,9-15],NMI

IRQ [3-7,9-15],NMI	ĀĭĕÀšĀó,ŌiÀ»Ēā»RçĭĭáçĕĀŌÙ ðĬĒŌĪ IRQ Ī,Ō Ā^NMI
Enabled	»ĀĭpĒ ĀpĀĪç Ā Ē»Ēā»TĒ_ĀŌÙ ðĬĪŃĒ Enabled»RĀfĒ,Ī,,
Disabled	Ō »ĒŌĪ Ā ç Ā Ē»Ēā»RĀĵ ŃĪ Ū Āĭĕ»RĀŸB ĀĭĕĀ ĀoçŪ
	ĒqŌĪĀ»»T

- Power Management à Primary IDE 0
- Power Management à Primary IDE 1
- Power Management à Secondary IDE 0
- Power Management à Secondary IDE 1
- Power Management à Floppy Disk
- Power Management à Serial Port
- Power Management à Parallel Port

Primary IDE 0	Ī, ĀáŪ ðĬçĭŃŠĀĕĀ Ē ĪŃĀĒŌĪ çĭŃ»TŃ ĀĭĕÀš IDEĪŃ
Enabled	Ī»RĪĕŌĕŌ »RĀŸĀTĒ »RĀáĀTĒ ĀšĀó,,ĀĀŌR»ĀŌĒ»ĒāĒ»Āĕ»T
Disabled	ĀfĀXĪ, ĀāĪŃĀĪbĒŌĪ Ā ĀĪBĀŌxĀĕ I/O ĐāŪ ĀŌĒĀĀQ»RĪ_Ń»
	Ē,,ŌāĒĒŌĪĀ»Ā ĀoçŪĒĒqŌĪĀ»»T

AWARD BIOS

3.6 PNP/PCI Configuration Setup

PNP/PCI Configuration Setup ıB È İmŠAİİe%ÄÖ ISA Å^ PCI İmİa»TÅfÅXÅsıU
 Û İ %Äİ Öö “PNP/PCI Configuration Setup” Đİıò»RÅj NÅsÜYÖ %ıBıçöÅfıfİvÇÈ»X

ROM PCI/ISA BIOS (XXXXXXXX)
 PNP/PCI CONFIGURATION SETUP
 AWARD SOFTWARE, INC.

PnP OS Installed : No	PCI IDE IRQ Map To : PCI-Auto
Resources Controlled By : Manual	Primary IDE INT# : A
Reset Configuration Data : Disabled	Secondary IDE INT# : B
IRQ 3 assigned to : PCI/ISA PnP	Used MEM base addr : N/A
IRQ 4 assigned to : PCI/ISA PnP	Used MEM Length : 8K
IRQ 5 assigned to : PCI/ISA PnP	
IRQ 7 assigned to : PCI/ISA PnP	
IRQ 9 assigned to : PCI/ISA PnP	
IRQ 10 assigned to : PCI/ISA PnP	
IRQ 11 assigned to : PCI/ISA PnP	
IRQ 12 assigned to : PCI/ISA PnP	
IRQ 14 assigned to : PCI/ISA PnP	
IRQ 15 assigned to : PCI/ISA PnP	
DMA 0 assigned to : PCI/ISA PnP	
DMA 1 assigned to : PCI/ISA PnP	ESC: Quit á à à ß : Select Item
DMA 3 assigned to : PCI/ISA PnP	F1 : Help PU/PD/+/- : Modify
DMA 5 assigned to : PCI/ISA PnP	F5 : Old Values (Shift) F2 : Color
DMA 6 assigned to : PCI/ISA PnP	F6 : Load Setup Defaults
DMA 7 assigned to : PCI/ISA PnP	F7 : Load Turbo Defaults

PNP/PCI Configuration à PnP OS Installed

PnP OS Installed	İ, ÈqRÅİİeÅsÈ À POST Èa»RNVÈ İBAi ÜYİ»Aj ç(PnP) ÅÖ
Yes	İmİaİ, ÅÖ BIOS»TÅfÅXÈ ÅéıçÅıPnP çıúÅÖAQÑ•Åİİe
No	(Åf Windows 95)»Rİ çıYÈ İ, Çi Ü ĐİİmÈYes»BIOS İ_
	NİmŠÜYİ»Aj çèÅÖçıúÅi Èi Èa İmİa»RÅf VGA/IDE Åè
	SCSI İıİi çıçıu»T

AWARD BIOS

PNP/PCI Configuration à Resources Controlled By

<p>Resources Controlled by</p> <p>Auto</p> <p>Manual</p>	<p>È_ÀÓÙ ÐÍÎñÊ Manual»RçB` ÂéçèÄæÆ ISA ^ PCI Íñíà %JÁ` Á ÁŠÁi Ò-ÀÔIRQ Á^ DAM»TÀfÁXÍñÊ Auto»RÎ_Ñ`Èi ÈäÀöÈäÍñŠçñú»T</p>
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PNP/PCI Configuration à Reset Configuration Data

<p>Reset Configuration Data</p> <p>Enabled</p> <p>Disabled</p>	<p>ÀfÁXÁi Á ÁŠÁÔIRQ ÁèÁñèçÁñ†#ÔtÁuÍ, ççÆ×PÁÔÈ»Áè»R Î_çÈ_ÀÓÙ ÐÍÎñÊ Enabled»RB ÁñèçÁñ†#ÔtÁYÁ ÁŠÑ† ÁÔ IRQ»T</p>
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- PNP/PCI Configuration à IRQ3 (COM2)
- PNP/PCI Configuration à IRQ4 (COM1)
- PNP/PCI Configuration à IRQ5 (Network/Sound or Others)
- PNP/PCI Configuration à IRQ7 (Printer or Others)
- PNP/PCI Configuration à IRQ9 (Video or Others)
- PNP/PCI Configuration à IRQ10 (SCSI or Others)
- PNP/PCI Configuration à IRQ11 (SCSI or Others)
- PNP/PCI Configuration à IRQ12 (PS/2 Mouse)
- PNP/PCI Configuration à IRQ14 (IDE1)
- PNP/PCI Configuration à IRQ15 (IDE2)

<p>IRQ 3</p> <p>Legacy ISA</p> <p>PCI/ISA PnP</p>	<p>ÀfÁXÈ`Ái ÁŠÓàÁÔISA çuÁdÁÍ PnP çñú»RÎ_Ô:çÈÁ ÁŠIRQ Ái %PÍÁçÁÁÔçñú»TÍ, ÁáÜ ÐÍ çB È`ÁæÁáÁ ÁŠ IRQ ÝÓ Legacy ISA çuÁ^ PCI/ISA PnP çuÁéçè»TÑ È`Á ÁŠÆç %Q IRQ ÆÊ Legacy ISA Èä, ÁñèÑÍ, ÁØ PnP BIOS È_Ái ÍñÁÔ IRQ Á` ÈuÝÓ%Š ÁŠ Óà ÁÔISA çuÁéçè»T Èè Óa ÓŠ ÍñÇá ÆÊ PCI/ISA PnP»R×èÁçÑ_ÁÍÁáPCI çu (0 ÚÚÁÆÁÔPCIçñú½ç •) ÁY%ÁÔ:çÈÁéçè IRQ»RÎ_çÁ` ÈuÍÓISA çuÁéçè»T</p>
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AWARD BIOS

PCI Slot	Location 1 (pin A6)	Location 2 (pin B7)	Location 3 (pin A7)	Location 4 (pin B8)
Slot 1	INTA	INTB	INTC	INTD
Slot 2	INTB	INTC	INTD	INTA
Slot 3	INTC	INTD	INTA	INTB
Slot 4	INTD	INTA	INTB	INTC
Slot 5 (if any)	INTD	INTA	INTB	INTC

PNP/PCI Configuration à Used MEM Base Addr

Used MEM base addr
N/A
C800
CC00
D000
D400
D800
DC00

ÀÓÙ ÑÏ ÌÐÑËÏÀi "Used MEM Length" ÑÏ òÀéè»TÀfAX
 È`ÀiÀŠ0àÀ0ISA çuÀdÀÍ PnP çñú»RÏ_çÌÐÑÀ ĀŠÈ`øèB
 ÈvÐ„Ài%PÍÀçÀÀ0çñú»RÀiÀÓÙ ÑÏËyçÀ ĀŠÍbÀ`ÉuÀ0È`øèB
 B ĀBÐ»D"ĀĀ Ā"»T

PNP/PCI Configuration à Used MEM Length

Used MEM Length
8K
16K
32K
64K

ÀfAXÈ`ÀiÀŠ0àÀ0ISA çuÀdÀÍ PnP çñú»RÏ_çÌÐÑÀ ĀŠÈ`
 øèB ÈvÐ„Ài%PÍÀçÀÀ0çñú»TÀÓÙ ÑÏçíñŠÀi 0=çèÈ`øèB
 ÈvÐ„»RĀYÍ„Ā0 PnP BIOS È_È`øèB ĀBÐ»Ā`ÉuÍ0ÀiÀŠ0à
 ISA çuÀéè»T

AWARD BIOS

- Integrated Peripherals à IDE Primary Master PIO
- Integrated Peripherals à IDE Primary Slave PIO
- Integrated Peripherals à IDE Secondary Master PIO
- Integrated Peripherals à IDE Secondary Slave PIO

IDE Primary Master PIO	ÀÓÙ ÐĪ¿ĪŃŠÀŠòÀs IDE Í†ĒĪ00%ĤĀŌIDE ĨŠ0e¿YÀ Òò PIO ÒiÀ»ĀĪĐàÛ ò Èà»TPIO ÒiÀ»¿Ī ĀŠĨŠ0eĀŌ0 ÈàĐàÛ Ĩ†Ī%ŔĀĪĤ mode 0 ĀŌ0 ÈàĐàÛ Ĩ%ĒĒ 3.3MB/s»Rmode 1 ĒĒ 5.2MB/s»Rmode 2 ĒĒ 8.3MB/s»Rmode 3 ĒĒ 11.1MB/s ĀĪ mode 4 ĒĒ 16.6MB/s»TĒĒ0aŌŠĪŤĀĒĒ Auto »ŔĀĤĀXĀŌĪŃŠ ŃĒĒĨŠ0e%ŤĤ»Ŕ¿¿YĒ_ĐàÛ Ĩ%ŤY%ĪĒĒ% Ā»ÇĀŃ†xiŌ%»T
Auto	
Mode 1	
Mode 2	
Mode 3	
Mode 4	



ĀqŃ_ : »eĒ_Ē_ĀŌĪŔ%ŤĤ <IDEĨŠ0eĪ†ĒĪĀsPrimary IDE ĀŌmaster Ĩ,,ŌU%Ĥ»T

- Integrated Peripherals à IDE Primary Master UDMA
- Integrated Peripherals à IDE Primary Slave UDMA
- Integrated Peripherals à IDE Secondary Master UDMA
- Integrated Peripherals à IDE Secondary Slave UDMA

IDE Primary Master UDMA	ĀĤĀXĀŠòÀsIDE Í†ĒĪ00%ĤĀŌIDE ĨŠ0eĀĪ%ŤĪĀ UDMA Òi Ā»»Ŕ¿¿Ē_ĒĒ0aĪŃĒĒ Auto»Ŕ¿YĒĪĒĀUltra DMA/33 ĒĀĪĐà Û ÒiÀ»»T
Auto	
Disabled	

- Integrated Peripherals à On-Chip Primary PCI IDE
- Integrated Peripherals à On-Chip Secondary PCI IDE

On-Chip Primary PCI IDE	ÀÓÙ ÐĪ¿ĪŃŠĀĒĒ È Ĩ†ĒĪĀs primary IDE Í†ĒĪ00%ĤĀŌDE ĨŃĀ»T
Enabled	
Disabled	

AWARD BIOS

Integrated Peripherals à Onboard UART 1 Integrated Peripherals à Onboard UART 2

Onboard UART 1 Auto 3F8/IRQ4 2F8/IRQ3 3E8/IRQ4 2E8/IRQ3 Disabled	ÀÓÙ ðĪ;ZÁ ĀŠ;UØ Ä`%4hÄ0À ÀTÍ†Ēİ00À Á"Á^%4İp»T0Šİn ÇãÆĒ Auto»T
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ÄqN̄ : ÄfÄXĒ·ÄİÄé;è0 0 çu»R×e×eÄŠ%4İpÀ Á"Öa
Äp;ÄÄÖİnİäÄY%4Æ×D»T

Integrated Peripherals à Onboard UART 2 Mode

Onboard UART 2 Mode Standard HPSIR ASKIR	ÀÓÙ ðĪ;Z;YÄ ĀŠÀ ÀTÍ†ĒİĒ (serial port2) ÄÖöiÄ»»T%40] Ç€; İmŠ "Onboard UART 2" ÄÖ;mfú»T
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- Standard - İmŠ serial port 2 ÄÖ00ÄQÆ;ÜĒq0iÄ»»TÄÓÙ ðĪ;mf Ēë0a0ŠİnÇã»T
- HPSIR - ÄfÄXÄsÓ,,0%ÄÖ via IrDA İ†Ēİ00%4h %ŠÄŠ0a%4WE ç·x^ĒİÄÆ00
(IrDA) »RĪ;ç;YÄé;èÄÓÙ ðĪ»RĪ, 00İmŠ;ç;DäĒvÀ ÀTĒeĒÄÖW115K ÄzĒd»T
- ASKIR - ÄfÄXÄsÓ,,0%ÄÖ via IrDA İ†Ēİ00%4h %ŠÄŠ0a%4WE ç·x^ĒİÄÆ00
(IrDA) »RĪ;ç;YÄé;èÄÓÙ ðĪ»RĪ, 00İmŠ;ç;DäĒvÀ ÀTĒeĒÄÖW19.2K ÄzĒd»T

AWARD BIOS

Integrated Peripherals à IR Duplex Mode

IR Duplex Mode	ÀÓÙ ðĪ;B È ĪnŠ IR Ī,ÈeÀÓÙ %ŒiÀ»TN È È_ÈeŒaĪn
Full	Æ Full Èa»R%ŒĪmR Ī,Èe;YÜ ÀgŒiÀ»Ī,Èe»TÀfĀXĪnÆ
Half	Èa»RðÀÈú;YĪ ÀgŒiÀ»Ī,Èe»T



ÀqÑ : ÀÓÙ ðĪðÀÈúÀs Onboard UART 2 ModeÀŒÈë
Œa%Æ Standard Èa»R%ÈúÈi Èa IR ĪnŠ;nmÈú»T

Integrated Peripherals à Onboard Parallel Port

Onboard Parallel Port	ÀÓÙ ðĪ;ÈÈÀ ;UŒ Ä` %ĪÀŒŒYÀTÈ À Á`%e%Œp%ŒÇÈ»T
3BC/IRQ7	
378/IRQ7	
278/IRQ7	
Disabled	



ÀqÑ »XÀfĀXÈ' Àe;èÀŒ I/O ;u;nÄ ĪĪ%ŒÇiĀYÀTÈ »R
xêxASÀe;èÀŒA Á"Œa IRQ %ŒN"ŒaŒ Ä` %ĪÀŒŒYÀT
È Æ»P»T

Integrated Peripherals à Parallel Port Mode

Parallel Port Mode	ÀŒðĪ;Œ;B È Á ĀŠĀYÀTÈ ;YÀ ŒðŒŒAQŒiÀ»ĀĪðAu Œ Èa»T
Normal	ÈeŒaŒŠĪnÇaÆ Normal , %nĪ_Æ SPP (Stand Parallel
SPP	Port) ŒiÀ»»RÆIBM AT Á^PS/2 ÆÈvŒiÀ»»R;ç%ŒĪnYÀT
EPP 1.7 + SPP	È ÀsĪ ÀgŒiÀ»%f ;Y;ÛÈqĪ;ĀnŒŒAQ»EPP (Enhanced
EPP 1.9 + SPP	Parallel Port) ŒiÀ»»R%ŒĪnYÀTÈ ÀsÜ ÀgŒiÀ»%f ;Y
ECP	Īæ%ĪĪnŒŒAQ»TECP (Extended Parallel Port) Œi
EPP 1.7 + ECP	À»»R% ĪæĀĪ;ĀnĀ ÁðÀŒŒ ÀgĀYÀTÈ ŒŒAQ»RÆ ðMA Ā^
EPP 1.9 + ECP	RLE (Run Length Encoded) ŒŒj Ā^ ÒeŒŒj ĀŒ% À»ĀĪðAu
	Œ Èa»TEPP1.7 Ā^EPP1.9 Æ Á %ĪaĀŒŒĪ,ÈeĀ ĀŠ»T

AWARD BIOS

Integrated Peripherals à ECP Mode Use DMA

<u>ECP Mode Use DMA</u>
3
1

ÀÓÙ ðĪçB È'À ĀŠ ECP ŌiÀ»ÄŌAYÀTÈ ĀiĀéçèÄŌDMA Ī,,
ŌU»TÈèŌaŌŠĪnÇaÆE3»T

- Integrated Peripherals à System Voltage +12V
- Integrated Peripherals à System Voltage +5V
- Integrated Peripherals à VIO Voltage +3.3V
- Integrated Peripherals à CPU Core Voltage +2.8V
- Integrated Peripherals à CPU Thermal (Temp.)
- Integrated Peripherals à CPU FAN

<u>System Voltage +12V</u>
Ignore
Monitor

ççèĀiÈiÈaĪŠB ŌaÈÈçnū»T



Ä Ī : çèĀ ĪŠB çÄŌÇÇĀ »RCPU ÈðçŌŌ,ŪçÆ 2.8V
çYç•ÄŌŌŌĪĪ|çĀĪĪĪ, ðĪçnÈú»T

AWARD BIOS

3.10 Password Setting

È\>í ÍmŠ¿zŭñÁ\¿l%Y¿ŰŰxËÛB%»SÀiŰiÀŏÂé¿eË' ÁŰŰ,,Ű%»TÀfÀXÍmŠÀ€Ë\>í »RÂ¿ÏeÑ«
ÀsÂTÀŰŰ"Ű ÀèĐz%¿ BIOS%¿¿èÍ'À»Èã»R¿i Ì' %QÇíÍ¿¿öÏBŰŰ»RÇ€ÀUË' Û %¿¿Û×eÄŰË\>
>í »T

ÍmŠË\>í »X

1. ÀsÍ¿¿öÏBŰŰ%¿»RÛp%¿Íæÿ8 ÇíÀ.%ŰÄŰË\>í »RË' Ái Ûp%¿ÄŰÀ.%ŰÄsÛYŰ %¿¿¿~Ñ¿i
Ì' ÀaŰŰ»T
2. Ûp%¿Ë\>í Áû ×eÁ Enter Ûp»T
3. ÈÏÏŰ%¿dÑ¿i Ì' Í¿¿öÏBŰŰ»R×eÀRÛp%¿%QÀŰË\>í »R¿Y×eŰ' È\>í ÄŰ¿Û×eÄ»Enter
Ûp»RÁj ÑÁ×ÈÏÀŰÀ ¿UÏvÇË»T

ÀfÀXÇ€Á È %¿ÍmŠÄŰË\>í »R×eÀs¿i Ì' Û %¿Ë\>í ÄŰÏ¿¿öÏBŰŰÄû»RÄ×ÈÏEnter Ûp»R
ÏvÇË%¿¿Í_Ñ¿i Ì' %QÇíÈeÄÁÄDUË' È\>í %ŠÍbÂ È »T

3.11 IDE HDD Auto Detection

ÀŰ¿nëú¿¿¿YÀŏÈãÈŰÏ IDE ÍŠŰeÄŰÄŰŰ»RÂÝË_ÈŰÏ Á ÄŰÈeŰaÇaĐaÂ "Standard
CMOS Setup" ÄŰ "Hard Disk" Û ĐÍ%¿»TÁÍÁa IDE ÍŠŰe¿¿¿ÍÁÿÏiÄŰÈeŰaÍmŠ»RÁf
ÀXË' ÄŰÍŠŰe%¿¿ŰR¿eÍ, ÁaÀŏÈãÈŰÏ Á ÄŰÈeŰaÇa»R×eÛ N %¿¿Ç€Áe¿¿¿Ça»RÂÝĐz%¿
"Standard CMOS Setup" Û ĐÍ%¿¿Ûp%¿¿Û×eÄŰÈeŰaÇa»T

AWARD BIOS

3.12 Save & Exit Setup

ÀÓÙ ÐÏÑÀSÈ'Ü Ð" Setup %κζεϊ'À»Áv»RÀöÊäÚ<À†ÀìÀÍÀÖ CMOS Çà»T

3.13 Exit without Saving

Ü Ð" Setup %κζεϊ'À»RÀ ¼ÑÚ<À†Á Á Ó|ÀÖ CMOS Çà»TÀfÀXÈ'ÇÉÚ<À†Ñ†ÀÖÍÑŠ Çà»R×è¼ÇÉÀéζèÀÓÙ ÐÏ»T

3.14 NCR SCSI BIOS and Drivers

NCR 53C810 SCSI BIOS %QÖaÉq0€AsAbÀaÀÖÀðÈ'È`0eB ÍÓ%¼»RÑ ÀÁÀÏÈBIOS
Àéζè¼ÇÉÀéζèÀ'¼hÀÖNCR BIOS»RÈ'ζÌÐÑζ ÀsÀÏÈ¼¼RÀŠÖa¼Q¼NCR 53C810 SCSI
ÈÈÀ ζu»T

ÀìÀÍÀŠÖaÀ ÀÏÈ¼¼ÀÖ SCSI Íñà»RÍ½E Ò=ÇÉÍ€B Bi ÈäÏ'À»»NCR SCSI BIOS ζÄ×
ÈÏÀs DOS ¼f¼pÍÀ SCSI ÍŠÀ»ÖeÖe0 »RWindows ¼e OS/2»T¼uζζYÁbζè NCR
53C810 SCSI ÈÈÀ ζuÀìÀ ÀÖÍ€À»ÖeÖe0 Bi ÈäÏ'À»»RζYDOS È À»¼e SCO UNIX È
À»ÀìÀéζèÍ€À»ÖeÖe0 »IDOS È À»ÀÖBi ÈäÏ'À»¼ÁÁ SCSI Íñà»RÈ'ζζYζèÀsDOS»R
Windows NT»RNovell NetWare ¼e OS/2»TÀì SCO UNIX È À»ÀÖBi ÈäÏ'À»¼ÁÁ SCSI
Íñà»RζζèÀ SCO UNIX»TÍ, ÁáBi ÈäÏ'À»¼ ζèÄ×ÈÏBIOS Àì¼pÍÀÀÖÈÈÉúÚóÈÈÀ»T

ÇÉÀéζèBi ÈäÏ'À»»RÈ'ζÌÐÑÈ_Í, ÁáÏ'À»ÀŠÖaÀ ÀÏÈÍŠÀ»ÖeÖe0 ¼¼RÀÝζSÈ_¼ÁζÌÀ È'
ÀÖÀÏÈÍñÀŠÚá¼¼TÀöÀ òìÍìÀŠÖa¼¼À|»R×èÆ-Í, ÁáBi ÈäÏ'À»ÀìÀ ÀÖ README ÚáÈñ
¼¼ÀÖÖ»À »T

AWARD BIOS

2. ×ēĒ Ā
 C:> AOFLASH Biosfile.bin
 Biosfile.bin Ā ĀŌÆ BIOS ūāĒñĀŌĀĤŌó(Āf AP5TR110.BIN)»T
3. ĀsŌ %ŹŅ†ĀŌ BIOS ūāĒñĀū»RĪ' Ā»ŅĒ÷Ē'Æ ĀpÇĒĒ_ŪŪĀĀĀŌ BIOS Ā†Ā ŌēŌē%Ź»R×ē
 Ū Ōō "Y" Ē_ĀpĀ†ÆĒ "BIOS.OLD"»T
4. Ū<Ā†ŪŪĀĀ BIOS ĀŌĪĀĀū»R×ēĀ %Ź"Y" Đ"Ā}ĐzĀ Ū_Ū »T
5. ĀsŪ_Ū ŌĪĪ' %Ź»RŪYŌ Ņ"Byĳö%ŹĀ "FLASHING" ĀŌĒēĒĀ (Ū_Ū %Ź)»RĀŌĒēĀ%ŹŌf%Ź
 ĳZŸ Ō »T
6. Ās "FLASHING" ĒēĒĀĒ ĳĪĀū»R×ēŸ ĪĀŌ,,Ņ×ĀŸÇĀŅ†Đ"Ō »T
7. Đ"Ō ĀūĀ %Ź "DEL" ŪpĐzĪ BIOS Setup ĪvÇĒ»T
8. ÇĀŅ†Ū ĀŠ "BIOS SETUP DEFAULT" Ū ĐĪ»RĒ_Ā†ĪēĪŅŠĀsĪæŸÇĀŠĀŌĀĐŌR»WĀē
 ĀæĒ' %ŹzĳY×ĪŌŸĀĀÇ ĳ ĀŌĪŅŠÇĀ»T
9. Ū Ōō "Save & Exit"»RĀ ĀŌĪ_ %ŹĳŅzĀĒĒi»Z



ĐĪĀz: ×ē%ŹÇĒsŪ_Ū ŌĪĪ' %Ź(Ī_Æ Ņ ŪYŌ %ŹByĳö
 "FLASHING" Ēā) Ÿ Ō »T ĀfĀXĀdĀĪŪ_Ū ĀŌĀĀĪ_Ÿ Ō »RĀ†
 ĪēĒ_ĪĪĪ|ÇĀŅ†ĒiĒē»RĒ' Ī_ĳĪĐŅĀ ĪĀ BIOS Flash ROM
 %ŹŪT



ĪĪö: Ē' %ŹzĳYĀæĪqĀaŌāĀŌĪ' Āā»R Ē_ŪŪĀĀĀŌ BIOS
 "BIOS.OLD" ŌxĀŌ»T

Ä Ü A

Jumper ÍnÃŠÄ

ÍnÃŠ CPU Ó, Ú½

JP11	CPU Èð%ñÓ, Ú½ (Vcore)
1-2	3.45V (Intel P54C)
3-4	3.52V (Cyrix or AMD K5)
5-6	2.9V (AMD K6-166/200 or Cyrix M2)
7-8	2.8V (MMX P55C)
9-10	3.2V (AMD K6-233)
11-12	2.5V/2.2V/2.0V (Reserved)



ÞÍÁz: ÀfÃXÈ' Áéçè Intel PP/MT-233 Àè AMD K6-200/233»R«éÁéçè ò %ÄÖ CPU ÇÑÈÈ»RÁÝ×eÖ' ÁþÇÑ»»(air flow)ÖxÓ]ÝÇÚ½ÄÌÖ % »TÁfÃX È' Ý]Ä|ÌBÁi Í, Áá CPU ÁÖÌÌÖ Ö÷ÁU»RÁ±ÌèçzÉuÑ"Í, çç%ÄÇÁŠÌ' ÐY»T ÆÈ%ÄRÈè K6 ÁÖÁéçèÄ»RÁóÇæ%ñÈ_ÚYÈèÄsÖ ÈÖ%hÌ½ÁèÁÍÝ Í, % ÇÈ ÁÖÖ Èe»T



Í½ö: Í Ó, Ú½CPU ÁÖ I/O Ó, Ú½Vcpuio (CPU I/O Voltage) ÝçÄ Èð%ñ Ó, Ú½Vcore»RÀ Æ Ó Ä Ü Ó, Ú½CPU»RÁfPP/MT MMX (P55C)»SAMD K6 Áè Cyrix 6x86L/M2 Ái Á»Rvcpuio Óa Vcore ÁÝ%ÄÆÁ»Rvcpuio %é Ái ÝçÄ Vio (PBSRAM%èChipset Voltage)»RçÖçUØ Ä ÁýÁÍÉðÈ ×^Ö ççYÁóÈèÈÖÌ Í Ó, Ú½ÁèÜ Ó, Ú½CPU»T

Í½ö: JP11 pin 11-12 Æ Ä`ÉuÍÖÑ+Qç_ CPU ÁéçèÄÖ»RÍæçzÉuÄÖÖaÇá ÆÈ 2.1V»TçòÁvÁÖÖaÇáÄ"çÖÁŠÈñ»RÁi çYÁóÇáÄöPÍÈ' ÁsÁéçè pin 11-12 Áv»Rç ÖuÈ÷È' ÁÖÖxØèi Áèçè%èçèÖ, Ä Ð, Ó]»T

Jumper ĪnĀŠĀ

CPU	Ó, Ū, Ū½	JP11	Vcore	Vio	Vcpuio
INTEL P54C	Ī Ó, Ū½	1-2	3.45V	3.45V	Vcore
INTEL MMX P55C	Ū Ó, Ū½	7-8	2.8V	3.45V	Vio
AMD K5	Ī Ó, Ū½	3-4	3.52V	3.45V	Vcore
AMD K6-166/200	Ū Ó, Ū½	5-6	2.9V	3.45V	Vio
AMD K6-233	Ū Ó, Ū½	9-10	3.2V	3.45V	Vio
Cyrix 6x86	Ī Ó, Ū½	3-4	3.52V	3.45V	Vcore
Cyrix 6x86L	Ū Ó, Ū½	7-8	2.8V	3.45V	Vio
Cyrix M2	Ū Ó, Ū½	5-6	2.9V	3.45V	Vio

Ū Øö CPU ŪhĪ%

JP3	JP2	JP1	CPU ÇŪŪh¼	JP4	JP5	JP6	CPU ç•Ī»ŪhĪ%
1-2	1-2	1-2	1.5x (3.5x)	1-2	2-3	1-2	60MHz
1-2	1-2	2-3	2x	2-3	2-3	1-2	66MHz
1-2	2-3	2-3	2.5x (1.75x)	2-3	1-2	1-2	75MHz
1-2	2-3	1-2	3x	1-2	1-2	2-3	83.3MHz
2-3	1-2	2-3	4x				
2-3	2-3	2-3	4.5x				
2-3	2-3	1-2	5x				
2-3	1-2	1-2	5.5x				



×eĀqÑ: Intel PP/MT MMX 233MHz Ā Āéçè 1.5x ĀŌĪnĀŠĀĪÑ ĀQ 3.5x ÇŪŪhçè»RĀĪ AMD PR166 Ā Āéçè 2.5x ĀŌĪnĀŠĀĪÑ ĀQ 1.75x ÇŪŪhçè»T



ÞĪÁz: INTEL TX ĪŌ% ĪÿĐa%pĪĪĀ 60/66MHz CPU ç•Ūh»R 75/83.3MHz ĀŌ Īn ĀŠ Āj Ā Ēu Āè %Ō Ī» Ī Ōÿ çè »R Īn ĀŠ ĀĀ 75/83.3MHz %Đhçĭ TX ĪŌ% Īÿ%pĪĪĀŌĪhÈ »RçzĒuÑ»Þj ÇĀÑ) ĒqĒ ĀŌĀ†Īè»T



ÞĪÁz: Cyrix 6x86 P200+ Āéçè 75MHz ç•Ūh»RĀTçĭ ĀpĪnĀŠçĭŌ ĀŌĀsĀRĒĀ Cyrix P200+ ĀŌĀéçèĀ»R×eĀqÑ ĪnĀŠĀĀ 75MHz»Rçz ĒuÑ»Þj ÇĀÑ) ĒqĒ ĀŌĀ†Īè»T

Jumper ĪnĀŠĀ

INTEL Pentium	CPU ʒĀĪ» ŪhĪ%	ĶŪh¼	Ķ•Ūh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
P54C 90	90MHz =	1.5x	60MHz	1-2 & 1-2 & 1-2	1-2 & 2-3 & 1-2
P54C 100	100MHz =	1.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2
P54C 120	120MHz =	2x	60MHz	2-3 & 1-2 & 1-2	1-2 & 2-3 & 1-2
P54C 133	133MHz =	2x	66MHz	2-3 & 1-2 & 1-2	2-3 & 2-3 & 1-2
P54C 150	150MHz =	2.5x	60MHz	2-3 & 2-3 & 1-2	1-2 & 2-3 & 1-2
P54C 166	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
P54C 200	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2

INTEL Pentium MMX	CPU ʒĀĪ» ŪhĪ%	ĶŪh¼	Ķ•Ūh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
PP/MT 150	150MHz =	2.5x	60MHz	2-3 & 2-3 & 1-2	1-2 & 2-3 & 1-2
PP/MT 166	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PP/MT 200	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PP/MT 233	233MHz =	3.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2

Cyrix 6x86 & 6x86L	CPU ʒĀĪ» ŪhĪ%	ĶŪh¼	Ķ•Ūh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
P150+	120MHz =	2x	60MHz	2-3 & 1-2 & 1-2	1-2 & 2-3 & 1-2
P166+	133MHz =	2x	66MHz	2-3 & 1-2 & 1-2	2-3 & 2-3 & 1-2
P200+	150MHz =	2x	75MHz	2-3 & 1-2 & 1-2	2-3 & 1-2 & 1-2

Cyrix M2	CPU ʒĀĪ» ŪhĪ%	ĶŪh¼	Ķ•Ūh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
MX-PR166	150MHz =	2.5x	60MHz	2-3 & 2-3 & 1-2	1-2 & 2-3 & 1-2
MX-PR200	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
MX-PR233	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2
MX-PR266	233MHz =	3.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2

AMD K5	CPU ʒĀĪ» ŪhĪ%	ĶŪh¼	Ķ•Ūh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
PR90	90MHz =	1.5x	60MHz	1-2 & 1-2 & 1-2	1-2 & 2-3 & 1-2
PR100	100MHz =	1.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2
PR120	90MHz =	1.5x	60MHz	1-2 & 1-2 & 1-2	1-2 & 2-3 & 1-2
PR133	100MHz =	1.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2
PR166	116MHz =	1.75x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2

Jumper ĪnĂŠĂ

AMD K6	CPU ƆŃĪ» ŪhĪ%	ĈŪh%	ċ•Ūh	JP1 & JP2 & JP3	JP4 & JP5 & JP6
PR2-166	166MHz =	2.5x	66MHz	2-3 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PR2-200	200MHz =	3x	66MHz	1-2 & 2-3 & 1-2	2-3 & 2-3 & 1-2
PR2-233	233MHz =	3.5x	66MHz	1-2 & 1-2 & 1-2	2-3 & 2-3 & 1-2

Ī ^ Ĕ 1/2 CMOS

JP14	Ī ^ Ĕ 1/2 CMOS
1-2	ċŪĕĕ»Ăf (ŎŠĪn)
2-3	Ī ^ Ĕ 1/2 CMOS

Ä Ü B

ËqÂ½Ë÷ÝUÐÊÖë

bMÄfÀ Êé%ÚBIOSIÄÄ;ÖP

RMÄOpen ¿UØ Ä` ¿UØ Ä` ÄÖIOS ÄÄ;ÖÄ Ä Ð"Ø Èä POST (Power-On Self Test) Ä
Ä »RÍ„ËqN¿Y R Ä.D"Új »X

AP53/AX53 R3.80 Oct.22.1996

BIOS revision

bMÄfÀ Êé%Ú¿UØ Ä` ÄÖÄÄ;Ö

RMÄOpen ¿UØ Ä` ÄÖÄÄ;ÖË ¿Yppppp-x Öë¿öÄ PCB%Ä»RÍ„ËqNÄÍ%QÇ¿¿iÄü¿•ÈöÄÝ
¿SÄ Ä PC Slot Ä Ä »Rppppp ¿_Ä AOpen %ÖÍ»ÄÖ project ¿_ÖÖ»Rx ÆÄÄ;Ö¿_
ÖÖ»T

MB verison -1
(AP5T-1)

95152-1
AP5T MB
48.87901.011

bMÆÄ Äö ðIAOpen ¿UØ Ä` ÄdÄÍÄðÄI9Cache:È` Øëß ÄÖÜi ¿cÖP

RMN Taf ÄÖÍ¿ÄnNf ÄöÈä»RÄÖ ÄÖ¿UØ Ä` %Äó ÄYÖÖEad»È19z-zEx:ÄÖÍ¿f%Ä ¿LÄ<Ý
ÖaxäÜ »RÄT%QÈ ÄYÖÖx^19.rtv:1%ÖÍ¿ ÄIÜ Ä»Ö=ÄT%Äi Ö»RÄé¿èÄÄ È` Øëß Üi ¿c
Í»ÖëÍ¿fÈä»RÍ»Öë¿ÖÄÇÈ_ÖäÇaIC•DÉ†1%ÄÄIÜ »RÄi ¿èÄ %üÄ 19x, huvÉwÉxv.:ÄÄÄ Äö
ÄðÄ È` Øëß 19aSdcR^:ÄÖÄYÖÖx^%dÈ_ÄIÜ 1B•CÉ†»R%Q¿ÖÄðÄ ÖiIiÄ^ Í»ÖëßöÖ Äë

ËqÂ¹/Ë÷ÝUDÊÒë

Q: ¿ÊÒ Æ CPU Ó]Ö Á` BQThermal Protection)?

A: CPU Í†ÄnDgÊÄÏÏÖ Ê÷ÝUDgÇÄÇ€»RÀfÄXÄé¿eÄaAdÄÍ¿Ü×eÀSÖCPU ÇÑËË»RÄUËq ÄÍ¿ËUÍÖÄÄ CPU Ó]Ö ¿Y×eÄÍè¿ÄÇÄS»TAOpen N†¿Q¿_ÄÖ¿UØ Ä` ÄyÄCPU Ó] Ö Á` BQÖ,Ö »RNCPU DhÓ]¿QÖSÄSÑGÄnË5 Äñ C.)»RÄÍèN`AoËÄÇÉÄT CPU Í† ÄñÄY¿SÍ`Ó]ÚÍ¿èÍ`À»(Äf ADM»Advanced Desktop Manager) Ì¿¿çDÍÄÄYÖÖ»T

BHÆÄ Äò ðR` fv€¿UØ Ä` ÄsTafÏ»ÖeÝpÄÍÄ Äy¿ÄÖ,Èv»Y

RH ÄsN†ÄÖ¿Q¿_1Taf »RÖ,Ñ×BöÄÄNf ÄÍ Nf ÇÄÇ€Ä×i ÝU»T¿èÖh¿IÖ,ÈvÖaD,ÄÍ ÇÉÄTÉÄÍ†@ ÈÄÖ,Ñ×ÄÍTaf1ÄÖÖ,Ü¿ÖÄÄ¿g, }rxv1.zffjv@ÄÇÄSÖ,Ñ×ÖÖÇÍ:»R¿¿ÄË, ÄÍèÄ ÝÇ ÄS»TÆÄÖ»RÄò ðR` fv€¿UØ ¿ Ä†ÄT¿Ä¿UØ Ä` ÖÄ¿Ë¿¿¿ÄñfÄyÄÖÖ,Èv»RÖh¿IÍñy ÄÄ¿Ö»RÄ ¿ÄÄÄÍèÄ ¿IYÇÄS»T

Q: ÄÊÄ Äò ðR` fv€¿UØ Ä` Äé¿èÍñyÖ,ÖèI 9Electrolytic) Ö,ÈvÄÍ ¿ÄÄé¿èÄk× (Tantalum) Ö,ÈvP

A: Ö,ÖèÖ,ÈvÄ× ÄaÖÖÄDÖ¿eÖÍÈÍÄÑ¿¿T¿QÉ ÄÍÖ»Äk× Ö,ÈvÄÖÄ× ¿ Ö,ÖèÖ,Èv Ä€»RÄ Ö È Ä DbÄ× Ü`Ä`ÄÖÖ,ÖèÖ,Èv¿ Äk× Ö,ÈvÇÄÄ»TÍæÄÇ AOpen ¿UØ Ä` CPU ÈaÆ Äé¿è100uF ÄÖÄk× Ö,ÈvÄÍ ÇÉÄTICPU Ö,Ü¿ÖÄÄ¿ (voltage ripple)»RÄ N†ÄÖÄsÍ_Ä DÄÄ¿mÖËÜ¿i 1000uF N¿ÄTESR (Equivalent Serial Resistor) ÄÖÖ, ÖèÖ,Èv»RÄp ESR ÄÊ 0.15 ohm»RÄÍÄk× Ö,Èv¿ÄÍ Ç€D.7 ohm»T¿Y¿Æ ¿öÄvÄò ð R` fv€ÄÄé¿èÄÖÖ,ÈvÍhÈ »X

Äk× 19Tantalum)»X

SPRAGUE 100uF,
ÄDÖ 595D107X06R3C2T,
Íæ¿ ESR : 0.7 ÖöÄ¿ (25 Äñ 100KHz)

Ö,ÖèI9Electrolytic)»X

SANYO 1000uF,
ÄDÖ 16MV100CG,
Íæ¿ ESR : 0.15 ÖöÄ¿ (20 Äñ 100KHz)

ÄaÈä»RÐgÄyÖ,ÈvÄY¿¿¿_Ä CPU Ö,Ü¿¿QÄSÄ Ä€»RÉ`¿ÜPjÍÍÄsÖ,ÈvÄÖÄ Ö~ (layout)»T¿ Ö Ö ×eÄÖ¿Ä Ä|ÆÄé¿èÜ`Ä†Ä»¿öÄ¿ÖÄ×ÈÍ D, CPU Ö,Ü¿»RN Í`»R¿Q É Äé¿èÄaÄöY ÈÍÄ Í,Öa»TAOpen ÄyÍ,Í»Ä ÄÖ¿ Ü Í¿Intel»SAMD ¿e Cyrix ÄÖÍn ÇfÍh×u»RÄY¿SÍ,Ö]Intel»SAMD ¿e Cyrix ÄÖÖ`Ýi»T

ËqÂ¹/Ê÷ÝUDÊÒë

Q: %ÊÕ Æ MMX»Y

A: MMXÆ Ñt%Q¿_Intel Pentium PP/MT (P55C) %ePentium II (Klamath) CPUÄÖÍ À ÀyÁ ¿` (single line multiple instruction) ÁoÍ_»BMMX %ÁÁ ¿` ÀsÀyÎTB ÚÍ¿e%hÉdÁ` ÁÍÊP (Äf3D¿ùB Ö%ÖÍ»S3DÇÍÊP»SÍ ÊeÑPÍÖa0~)»TÀyÎTB ÚÍ¿eÍ'À»Cj Áe¿MMXÁ ¿` Ê¿¿¿ÍEÁ Í×¼ÁQÊPÉú»TÁð ðAOpen ¿UØ Ä` %hÁÍÁö%ØÜ Ö,Ñ×%pÍP55C»RÂY%¼ Ö÷ÇÊÉÈ %ÁÍÖ% Ái %pÍÁ MMX CPU Áj ¿ZÁe¿eÀÖ%Q¿nú»T

Q: SDRAM DIMM ¿Z^ FPM/EDO SIMM ÁÝ¿eÐö?

A: FPM/EDO ÐÑs 5V Ú Ói %f Áe¿e»ISRDRAM ÐÑs 3.3V %f Áe¿e»T¿ðÁvÁÖ¿UØ Ä` Ín Çf¿ZÁEáÍ'Áe%¼Aa0,Ñ×ÍÖ DIMM Ä^ SIMM»RÄ Ö ÈaÐnMÈa(Data Bus)Æ Í†ËÍAs%Q ÊpÁÖ»RAXAsÍ^ÖaÉaÐ»%f »BIMM Ä^ DIMM ¿ZÁi ÁðÁe¿e»RÄ As0aÇi% Á ÍÜÁe¿eÄü»R SDRAM ÄÖ 3.3V Ö ÈaÜ %40"Ä (Data Input Line) Ê_Íb5V FPM/EDO Ö ÈaÜ ¿i Ö" Ä (Data Output Line) Ái ÑÊpRÄnÁÖáöÇaÑ¿¿ÊÜÜa DIMM Ä^ SIMM Ái ÁðÁe¿e»T%¼ ÓJÁÍ%QÁi ¿•»RÇj Ê' Áe¿e»ÄÖDRAM¿Z¿YÈvÁi 5VÖ,Ú%¼5V Tolerance)»RÄf TI Áe Samsung ¿Zs 3.3V Ö,Ñ×ÓSÁQ%f ÈÍÁ5V Êe00Èa»R%¿¿ZÁi ÁðÁe¿e»T

Manufacturer	Model	Suggested CAS Latency Time	5V Tolerance
Samsung	KM416511220AT-G12	2	Yes
NEC	D4S16162G5-A12-7JF	2	No
Hitachi	HM5216805TT10	2	No
Fujitsu	81117822A-100FN	2	No
TI	TMX626812DGE-12	2	Yes
TI	TMS626812DGE-15	3	Yes
TI	TMS626162DGE-15	3	Yes
TI	TMS626162DGE-M67	3	Yes

Q: Ç %QÁaSDRAM Às AP5T/AX5T %hÍ ÖiÓP

A: ÁÍ%QÇiÁoÇÇeÁÖÊe0aÑÖ%Be SDRAM ÄÖÍ†Án»RÍ_Æ CAS Latency Time»T¿¿ÁÝ À EDO ÄÖ CAS Access Time»RÄ Ê ¿Yclock state ÆÇfÐ,Í À »TINTEL TX chipset %pÍÁ 2 Áe 3 clock ÄÖ CAS Latency Time»R¿ZÆ ÁÍ%QÁaSDRAM ÍJ Á|Às INTEL TX chipset %hÁe¿e2 clock»T¿ðÁv AOpen Í ÖiÓJÄÖ SDRAM Àf%¼ »R ÄfAXË'Í,Ì' SDRAM ÁÍ%¼ÇÁSi' ÐY»R×eÐ%¼ BIOS setup --> Chipset Features --> SDRAM(CAS Lat/RAS-to-CAS)»RÊ_2/2 Á ÀÁ 3/3»RÑ_Áj 3 clock ÄÖ CAS Latency»T

ËqÂ¹/Ë÷ÝUDÊÒë

bHÇ Ôòlav€z~ÏÓ% ÄÖ;ñúÒ Àè»Y

RM%ÄaIÓ% ÄÖEÉúÈÏÄAsÄ ÄiÄe¿èUcR^ %eÄi %pIÄÄÖUcR^ lez~æx»T%f Ä Æ ¿òÄv
 ÎÓ% ÄÖL.vrutlz~æx»REIÇiÖaÄ.¿_Ä Í†P BÄIEIÄÖÖ ÈaÄi Ö÷ÄÖITaf IT}, t|IÖa¿ò»RE' ¿zÆ-
 ¿i 1Z€v)1Yi 1<1VU` 1Ä^1dZd1FFHBI<1VU` 1ÄÖI¿ÄnÈ¿/Äy»RÄi gi 1<1dUcR^ Ä^ ei 1<
 dUcR^ Äsav€z~ÄÖIÓ% %¿»RÄi Ä Ì' ÄÖ¿ñúÒ Àè»RÄ ×eÄqÑ_1 RaFHI ÄÝ¿/¿pIÄ
 dUcR^ »T

P5 Chipset	Model	PBSRAM	FPM	EDO	SDRAM
Intel 430FX	AP5C/P	3-1-1-1	7-3-3-3	7-2-2-2	NA
Intel 430VX	AP5VM/ AP5V	3-1-1-1	6-3-3-3	6-2-2-2	7-1-1-1
Intel 430HX	AP53/ AP5K/ AX53	3-1-1-1	6-3-3-3	5-2-2-2	NA
Intel 430TX	AP5T/ AX5T	3-1-1-1	6-3-3-3	5-2-2-2	5-1-1-1
SIS 5571	AP57	3-1-1-1	5-3-3-3	4/5-2-2-2	(6/7-1-1-1)
SIS 5582	AP58/ AX58	3-1-1-1	5-3-3-3	4/5-2-2-2	6/7-1-1-1

Q: Intel TX chipset ÄsÊ` ØèB ÄÖEÉúÈÏÄÄÄ Ä ÄZ?

A: ¿fÄTE TX+SDRAM»SVX+SDRAM»STX+EDO»SHX+EDO %e VX+EDO ÄÖ%
 Ò Ä »T

- CPU : Pentium PP/MT (P55C) 200MHz
- DRAM : 16MB EDO or SDRAM
- HDD : Quantum Fireball 1280AT
- VGA : AOpen PV60 S3 Trio64V+ 800x600x256 Small font
- OS : Windows 95 OSR2

Chipset	Model	DRAM	Timing	Winstone96
Intel 430VX	AP5VM	EDO	6-2-2-2	86.1
Intel 430HX	AP53/AP5K	EDO	5-2-2-2	86.8
Intel 430TX	AP5T/AX5T	EDO	5-2-2-2	87.3
Intel 430VX	AP5VM/AP5V	SDRAM	6-1-1-1	86.6
Intel 430TX	AP5T/AX5T	SDRAM	5-1-1-1	87.7

Q: AMD K6 %e Cyrix M2 ÄsÍÄñ%ÄÄÄ Ä ÄZ?

ËqÂ1/Ë÷YUÐËÖë

A: ¼fÄ Æ¾/ÀaCPU Às Intel TX Chipset ¾hÄÖÏ ÒiÏÄX

DRAM : 64MB EDO
 HDD : Quantum Fireball 1280AT
 VGA : Matrox Millennium VGA, 4MB, 1024x768 24bit, 85Hz.
 OS : Windows 95 4.00.950

CPU	MB	Chipset	Winstone97 Business	Winstone97 High-End
M2- 150 (60MHz x 2.5)	AP5T/AX5T	Intel 430TX	48	20.1
PP/MT-200	AP5T/AX5T	Intel 430TX	48.3	21.9
PP/MT-233	AP5T/AX5T	Intel 430TX	50.5	23.6
K6 PR2-200	AP5T/AX5T	Intel 430TX	50.3	22
* K6 PR2-210 (83.3MHz x 2.5)	AP5T	Intel 430TX	51.2	23
K6 PR2-233	AP5T/AX5T	Intel 430TX	51.7	23.6
* K6 PR2-250 (83.3MHz x 3)	AP5T	Intel 430TX	54	24.8

Ë' ¼zYÄqñ_Ä K6-233 Às Business Winstone97 ¾ PP/MT-233 À€»RÄ High-End graphic Winstone97 ¾Æ ÆbÀa»T ¼z¼•ÄfÄXË' Ë_ K6 Ðh Úh Àö250M (83.3MHz*3)»R¼ÄÄ ¼XÆ ¼óÄvÍaÄöÄösocket -7 ÄÏÈ»T

ËqÂ¹/Ê÷ÝUDÊÒë

Q: AMD K6 Às Quake ¼hÄ Ì'ÀfÀ ?

A: ¿ÖÏ ÒiE ¼QÀ AOpen ÄÖÄS¼ÇÄoPÍÄÖ»T

Ï ÒiÏ'Áá:

1. Ê À quake.exe -nosound -nonet > -nocdaudio
2. Start a new game»RÁé¿è+' ÜpÄ ¼Í Ì»»RÁé status bars È ¿¼»T
3. Ä '~' Äé console ¿i Ì'»RÖgvid_mode 0' Äé¿è 320x200 resolution»RÜp¼ 'timedemo demo2'»T
4. ÀRÄ ¼f'enter' Äû»R¿üÄ Ä '~' Äé console È ¿¼»T
5. Äs 'vid_mode 12' ¼fÇÄxäÏ Òi»T

DRAM : 64MB EDO

HDD : Quantum Fireball 1280AT

VGA : Matrox Millennium VGA, 4MB.

OS : Windows 95 4.00.950 boot into safe mode

CPU	MB	Chipset	vid_mode 0 320x200 (FPS)	vid_mode 12 640x480 (FPS)
P54C-150	AP5T/AX5T	Intel 430TX	33.5	13.2
P54C-200	AP5T/AX5T	Intel 430TX	40.5	15.4
PP/MT-200	AP5T/AX5T	Intel 430TX	44.3	16.2
PP/MT-233	AP5T/AX5T	Intel 430TX	47.8	16.9
K6 PR2-200	AP5T/AX5T	Intel 430TX	34.9	13.3
* K6 PR2-210 (83.3MHz x 2.5)	AP5T	Intel 430TX	36.5	14.6
K6 PR2-233	AP5T/AX5T	Intel 430TX	38.6	14.1
* K6 PR2-250 (83.3MHz x 3)	AP5T	Intel 430TX	41.4	16.0

ÁöÇe¼ÄÖÖUQuake È ÁpÄÍÉdá` ÄËIntel CPU ÈÏ¼WxíÖý»RÄ ¿e¼hÇ'Ï Òi»K6 Ä ¿XÄs Quake ¼fÈ À Ò ÖT»T

ËqÂ½Ë÷ÝUÐÊÒë

-Âþ¿] Á00a0~

? PCI Bridge

? PCI Card (or PCI Universal Serial Devices)

-ÏŠ0ëËËÄ çu

Standard Dual PCI IDE Controller

Primary IDE Controller

Secondary IDE Controller

PCI Bridge»X

Í, Çí 0à 0~ ç_ Ä Intel PIIx4(82371AB) chipset %0 Ä0 ACPI çmÉú »T Win98(Memphis) 0ŠÇfÑ%pIÄ ACPI çmú»RÀfÄXË' Ì' ÀsÑbÁüË÷00Ë Ê½»RË' ççë AOpen Homepage %f0 TX.EXE Ì' À»»RË Ä ÁüÀf%f »X

-ÏŠ0ëËËÄ çu

Intel 82371AB PCI Bus Master IDE Controller Primary IDE Controller

Secondary IDE Controller

-ÄÏË0a0~

Intel 82371AB PCI to ISA Bridge

Intel 82371AB Power Management Controller

Intel 82439TX Pentium(r) Processor to PCI Bridge

PCI Card (or PCI Universal Serial Devices)»X

ÀfÄXË' Äéçè Win95 OSR 2.0 (ßýçö "PCI Universal Serial Devices")»RË' ççë Microsoft Äè È' Á0 Äè ÚÍ Êí Ä È, USBSUPP.EXE Äí ÀŠ 0à Microsoft USB supplement»RÀŠ0àÁ0ÄÄü×éË Ä AOpen Ä0 TX.EXE»RÀfÄ0Äy"0a0~0øì' Ç " %0 Ñçí Ì' %fÀT0a0~»T

-Universal Serial Bus Controller

Intel 824371AB PCI to USB Universal Host Controller USB Root Hub

ÈqÀ¹/È÷YUĐÈÒë

ÀfÀXÈ' Àéçè Win95 OSR 2.1»Rç^ÁÍ TX.EXE Ò÷Ç€ÀŠÒà»T

ÀfÀXÈ' Àéçè Win95 retail ÁÁ (.950 Àè .950A»RByçö"PCI Card")»RçòÁv Microsoft
ÁYçÒÍ¹/ÁèÁi ØRÁÒ¹/áÈBUSB ÁÒ¼ Á»»RWin98 ÚÍÒiÑ'ÒèÁ^ »T

Standard Dual PCI IDE Controller»X

Í.Æ Win95 ¼Á' Ýè PIIX4(82371AB) ¼ÒÁÒ IDE controller (Win98 ÚÍÒiÑ'Òè
Á^)»TçòÁvÈ' çzàò AOpen Homepage ¼FÒ ¼pÍÁBus Mastering ¼è Ultra DMA/33
ÁÒ driver»RASÒàÁúÁf¼F»X

-iŠÒèÈÈÁ çu

- Intel 82371AB PCI Bus Master IDE Controller
- Primary Bus Master IDE Controller
- Secondary Bus Master IDE Controller

¼hç' Ú Í^Æ Ás430TX ¼hÈ À Win95 ÁÒ¼fÍÚÑè (ÁiçS Win98 ÚÍÒiÑ'ÒèÁ^)»RAf
ÁXÈ' ¼Á' Í, ÇiÈ÷00 AP5T/AX5T ¼ÍÚÚççYçÚÈqÓSAQ¼Á¹ÁÍÈ÷YU»T

Q: Às TX chipset ¼hÁŠÒàWin95 ÁúÁfÀ È È½''0a0~0øÍ'Ç '' ¼ÒÁÒÈ÷00?

A: Ú Í^ ¼Á' ÑÍ, ÇiÈ÷00 TX çUØ Á` ¼ÍÚÚççYçÚÈqÓSAQ¼Á¹ÁÍÈ÷YU»RÀ Æ ÁoÇaaÁÁ
ÍÁyÁaÈ È È½È÷00ÁÒÇ€ÁU»TÆ¼MB ÁéçèÁæ¼ Á`»BAOpen driver team Áú»MÍi Çi
ÁaÍÚÍ, Èz¼WQÇi'Á» TX.EXE»RÚó0úÁèçè»RaaÈa¼ÇÇÁ AOpen AP5T/AX5T»R
ç À TX çUØ Á` Æ çz»RBSÁ àòçè¼FÒ ¼èÁ ÁÁ»TÀfÀXÈ' ÍúBSÍ, Çi'Í' Á»»R¼æÍ, Çi
mail ÚÚÚÚÁoÇæ driver team Áj çz»T

Q: ¼ÈÒ Æ ATX Soft Power On/Off Á^ Momentary Switch?

A: ATXÍhÈ ¼ÁÒÍÈB ÈiÈa(Soft Power On) Æ Ñ çUÓ,Ñ×Ý ÍÆa»RÉuÍ¹Áè¼QÇiÁ÷Ác
Ó,ÆE (Standby Current) ¼Á¼QÉdÈ Áo0 »RçèÁ ÍçÁ÷Í Ú Ó,0¼¼ÁÁç (Wake Up
Event)»T¼ Áf0»Æ ç×^Í Ú »SÓa000 Í Ú ÁèÙèÇiÍ Ú »T¼QÉ Ái0»»RÍæÚÍ ÁÓIS
Ì'Æ Í¹ÁèÍççiÓ,,ÆEÁÓ,Ñ×¼ÍÁÁo0 »RÁÒÍ]Æ,Á»Ó,Ñ×Ð"Ý (Momentary Switch)
ççèÓ,Ñ×ÁèÚÍ00ÁÓÍÈB Ó,Ñ×ÈÈÁ Ò÷ (Soft Power Control Pin) Ð"ÈiÁèÝ ÍÆçUÇÈ
Ó,Ñ×»TÁò ðAOpen¼ATXçUØ Á` Á»¼pÍÁMomentary Ð"Ý çSAX5T/AX58/AX6L
Æ ÍrçfÁÍÒa000 Í Ú ¼Áçmú (Modem Wake Up)»T ÍÈB Ý Ø (Soft Power Off)
ÁyÆ Á çèÍÈB Ý ÍÆB Ø0»RWin95ÁÒ0áÈÈ (Shutdown) çmúççYçèÁiÚaÍ È'ÁÒçU
Ø Á` Æ Áp¼pÍÁÍÈB Ý Ø çmú»TÁò ðAOpen çUØ Á` ¼AX5T/AX58/AX6F/AX6L
Æ ¼pÍÁÍÈB Ý Ø ¼Áçmú»T

