

AX6L

Àé;è¾ü;f

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# AX6L Mainboard Âé;è³/i;f

³/i; è\_00 : AX6L-1-C9710A  
;U0 Ä`ÄÄ;0 : For AX6L revision 1.xx  
Âé;è³/i;fÄÄ;0 : English, revision A  
;iÄÄ¾ ÎÛ : Oct 8, 1997

Cj 0÷ÇÉÁ 0iÎiÄ00 Êe»R×èÊè0mÁóÇæÄ00 É0K  
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## Í ÓÒqÑÁÇ€

ÌP%QÍÓ11ÛÌ%Ð

%ÐÌéÀÏÌéÍhÈ %éÉdÈ çmú»T

ÌP%XÍÓ11ÍŠB ÀŠÒa

ÍŠB ÀŠÒaÄÖÆÝ ò Èà»Rçm† Jumper Á^ ÈÏÚj (Connector) ÄÖÀ ò~»RÀŠÒaÈ` ØèB Ò~Äq  
Ñ\_ÄÖÄaÐÌ»T

ÌP%eÍÓ11AWARD BIOS

AWARD BIOS ÄÖÆÝ ò Èà»RÀf ÈeÖaÍmŠÇaÄÖÑ\_ò,,»RçY%eÛ\_Û Í'À»ÄÖçeÄ|»T

Ä Û 1A Jumper1ÍnÄŠÄ

ÄiÄÍ Jumper ÄÖÄTÄ »T

Ä Û 1B1ÈqÄ¹È÷ÝUÐÈÖè

ÄeçèÈaÈq|Ä ÄÖÄaÍ\_È÷ÝU»T

Ä Û 1C1ÛÌÄ ÄXÖóÈaÈ½

çm†Ä Äf È'ÖèÄ^ È÷ÝUÄÖÖ ÈaÖaÄoPÍ»T

# Óé;öÖ»Ã

¿Y%Æ Æ ¿Ö%ü¿f Èq;èÃÖÖé;öÖ»Ã »X



×eÄqÑ  
Àa%Q¿UYU%ÁÆÝ Ö»Ã »T



PÍÁz  
¾/Ñ 00ÁQÈã»R¿zÉú0ãÇaÀ^ÚZÁúÁX»T



×e¾f¾ü  
ÓŠ¿ Á0×uÈ÷ÝUÍ, ¿ÇÄÖ¾ Ä|»T



ÇÁÇ€  
Î¼Û È' 00ÁQÇÁÜZ»T



Î¼ö  
Î¼ÈÁ¾ ÁQÈPÌ%ÄÖ00ÁQÈÈ»T

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**APPENDIX A JUMPER ÍnÃŠĂ**

**APPENDIX B ĘqÂ¹Ê÷ÝUĐÊÖë**

**APPENDIX C ÛÏÃ ÆXŌóËàÊ½**

# ÌP³QÍÓ

## ÛÌ³Ð

AX6L Æ çYPCI/ISA ÆÆMÔtÃÔ ATX Pentium II çUØ Ä` »RÄpÄi ÈPçèÄÖÍÓ% ÌiÆ Intel 82440LX PCIset»RÄÖÍÓ% ÌiÆ È^ ÆPentium II CPU ÍnÇfÄÖ»R»pÍÄ»Wf ÖoÍæN†ÄÖÍhÈ »R ÄiÄf AGP ÓéÁeÍ†ÈÈ »SSDRAM»SULtra DMA/33»SBus master IDE çY%e USB Í†ÈÈ È Ìç»TAX6L »pÍÄ 4 È 168 pin ÄÖ DIMM (Dual in-line Memory Module) Í»Öè»RçzÓ Ím3V ÄÖ EDO Ä^ SDRAM ÄYçè»RÍæ»Æ` ØeB ÈvÐ„çzÖW 1GB»TÍ, Ð çUØ Ä` »hÄYÄÄÍ%Ö Äò L2 cach2»RÄnÆÍ, %SÖxçmÍAs Pentium II CPU card (connector SLOT1) %»T ÄÖç»RAX6L ÄéçèÄÖÆ 2M bit Flash ROM»RÄiçYÓ çÖÄiN†ÖhçmúÄÖ»pÍÄÉú% »RN Í^ Æ Ä çÌEvÄ »WTE%ÄÓ%Äç»R AX6L ÜoÄyÍÄ»ÄyDÍç DZÄÖçmú»X

### Ï] jumper ÍnÇf (Jumper-less)

AX6L Ä È »MŠB [^~fv.ÄÖÍnÇf»RTafÍÖ„Ü%»eÚhÌ%ççYÄòEäÈÖÍ ÄèçèÍ€B xÍØy»RÄpÄi ÄŠÇaÚ<Ä†As»ÄÖ÷Ö„ÄÜÄÖ EEPROM»Ö»RÍÄèÄéçèÄæÄ ÄyÄÖ% Ä`»T

### ÌP³Q% »ÄÖ÷Ö„ÄÜÄÖçUØ Ä` (Battery-less)

AX6L ÄÖCMOS ÍnŠÖ ÈaÚ<Ä†As»ÄÖ÷Ö„ÄÜÄÖ EEPROM»Ö»R»ÄaÄfÄÖ»RAX6L ÄÖ RTC Èa ÐÜx^Ö (real time clock) »ÄÖ÷Ö÷ÇÉÖ„ÄÜ»RÄnÄÖ AX6L Æ ÌP³Q% ÄÍÜ Ä` NÄÄÜÄÖçUØ Ä` »T

### Ú Ð»Ð"Ø (Suspend to Hard Drive)

ÓSçèÍ, DÍçmú»RÐ"Ø Èa»ÄRÖ÷ÇÉÄüÄÖÖ Ä ÄÖÈad»ÇÄN†Ö % Win95»Soffice ÄèÄpçÄÍ€B »W»RÄiçzÄ»ÈÍÄ Ípç ç Ý Ø »ÄÄvÄÖÄÖR»RÆçyð »ÄÄQÑ•Ä†Èè%eÚÍçèÍ'Ä»ÄÖÍÜÑè»TÄ xè Äéçè VESA ÍhÈ »ÈvÄÖPCI VGA çu (Äf AOpen S3 PV70/PT70)»RSound Blaster »È Èv ÄÖ ÇÍ ÈP çu (Äf AOpen AW35/MP56) »RRockwell »È Èv ÄÖ Modem (AOpen F56/MP56)»R»ÉúxeÄ` Í, ÇíçmúçÜxeÓSÄQ»T

# ÜÏ ¾

## Öà060 Í Û (Internal Modem Card Wake-up)

Ábçè ATX Soft Power ÄÖçñú»RÄÏèèçç YÀsÝ Ø ÄÖÄÄÖR%F »RÖxçèÖà060 Èi ÈäÄYÄöÈäËÏ  
BçÓ,,Öö»TÍ, DÍ çñúÄUËçRÄi çèÄi Öi ÜÜDaÉ`Ø ÖaiÄÜ Ø »RÄi Íæ%ÄÖÈ É"ÄsÄ »RÈ%ÄÖÄi è  
ÄÖç•ÈÏÄ»Öà060 %Äç•»RÈ`Üóçç YÄéçè%ÖËÏÄ»Öà060ç (Internal Modem Card) Äi %ÏÄÄÖ  
çñú»T È' çç YÄéçè AX6L NvË† MP56 %ÖËÏÄ»Öà060ç»RçÇÈäÈöçÏÏ] ÖçèÄ ÝSç•ÄÖÖ,,N»T

## ÏnÄŠÄöÈäD"Ø ÈäD» (RTC Wake Up Timer)

Í, Çi çñúçB È`ÖŠç ÄŠÖ,,Àç%QÇi ÈäD»»RÄTÑ ÈäD»%QÄ »RÄÏèÄ`N"ÄöÈäD"Ø »TÈ' çç YË\_  
D"Ø ÈäD»ÏnÄŠÄsÄTÇi% ÄÖË %Q%è»RÄèÈ ÄT%èÄÖË Çi ÈäÄ »TÄpÖ ×eÄñçZÖWÄ È »T

## ÄaÄSç ÄÄÄ» CPU ÝÇÜ%×`ð

ÄaÄSç ÄÄÄ»ð %QÉ ÄÖÄUÄaÄSç ÄÄÄ»ÄyÄiÄ ÄÄÄÖÈÏ%TçY%QÉ ÜÍçèÄiÄç»RÄaÄSç ÄÄÄ»ÄÖ  
%ÄQÑBÄñÈ\_ÖNÄTÄ ÄUÄaÄSÄ»»T

## 3V Ö]Ö,,BQÖ,,ð

ÄsDÄiè +5V/+12V Baby AT Äè ATX ç ÄÄÄ»Ö,,N×ÄèÜÍÖÖ%Ä»RÖ]Ö,,BQÄ ÈöÈçÄ%ÄÖÖ,,  
ð »TÖ Ä ÖaØ Èä%ç%ç%ÄÖÏ`ð »RÖ]Ö,,BQÄÖ×eÄUËçÄËÈP»RÄ N%Qç\_ÖPU %èÏÖ%  
ÏiÄéçè 3.3V Äè 2.8V»RÄpD»ðçÇÝÇÜ%ÖÖIC ÄÖÜÄÄ»RÇ ÄiÄÖ+5V/+12V Ö]Ö,,BQÄÄi  
Ï]Ä|çÜÈçÖSÄQ»AX6L çUØ Ä`ÄÖÄaÄSç ÄÄÄ»ÝÇÜ%ÖÖÏç»RÄyÄÄ.3V (Vcpuio»Schipset»S  
PBSRAM»SSDRAM) %è 2.8V (CPU Èð%ÄÖ,,Ü% Ö]Ö,,BQÄÖçñú»RÈÏÄi Ç ÄiÄÖÖ,,N×  
ÄèÜÍÖÖçÄiÄéç % Ä ÄÖÏ`ð Ä`BQÉü% »T

## CPU Ö]Ö Ä`BQ

AX6L ÄyÄiÈdÈ ÍççÄÖÖ]Ö Ä`BQÖ,,ð »RÑ CPU NÄñÈÄÄ ÖŠç ÄŠÖ,,ÄÖNÄñÈä»CPU Í†  
ÄñÈ\_ÄöÈäÇÈÄT»RÄYçSðxçèÜÍçèÍèB Í, çi ÞÏÄ»T

## CPU ÖaØ ÏüÇNÈÈÖaÈÈ

AX6L ÏÄè%ÄÇNÈÈÖaÈÈÄÖçñú»RçÄÖ% CPU Ö]Ö »TÍ, D çUØ Ä`ÄÄÄÄüççNÈÈÈÏÜj »R%Q  
Çi çç èÄ CPU ÇNÈÈ»RÄi çç%QÇi Äyçç YÏÖØ ÏüÄÖÇNÈÈÄéçè»TÍ' Ö] %ÄyÍ' Ä» (Äi Äf  
HWMON2)»R ÄÏèèÄsÇNÈÈYrÈÖÈä»RÈ\_çÄöÈÄi%çi ÞÏÄ»T

ÂtÏeÓ,,Ú%ÔaËË

AX6L ¾ñ ½Äe¾WÓ,,Ú%ÔaËËÄtÏe»RÀsË' Èi ÈaÄtÏeÄu»RÍ, Çi ÄtÏeË\_Ñ"Á Þ ÔaËËÄtÏe¾AQÓ,,  
Ú%»RÚaÆuÆ ÄpÄÍÄtÏeÓ,,Ú%ÐhÓ]¾Dç ÔeÑaÄÖË»Äe»RÇj ÄÍÍ, ÔðË»Äe»RÍ\_Ñ"Øxç¾ÄyÍ' ÀÆi  
Àf HWMON2) Ó ÄéçèÄæí, çi ÞÍÄËeËÄ»T

**FCC DoC** Õ' Ýi

AX6L çUØ Ä`Æ ¾ðÓaÍ,,Ó]Æ Ê **FCC DoC**1ÁTÏeËxÔeÑaÍ ÒiÄÖçUØ Ä`»RÁj ÄeÄsÍ]Ø ÌuÄØ  
BQÄÄÖR¾f »R¾n¾ÄÑDaËq¾B »T

# ÜÏ ¾Ð

## 1.1 ÍhÈ

¿UØ Ä`ÄÄ»	ATX
¿UØ Ä`¾¾¾	305 mm x 244 mm
CPU	Intel Pentium II ÍSÍ`ØØ
¿UÈ`Øeß	4 È 168-pin ÄØ DIMM»RÍæÄ¿ØW1GB»T
ÄðÄ È`Øeß	¾ØÄoÄ CPU ¿u¾r
ÍÓ¾ Ýi	Intel 82440LX
Üi¿cÖe	ISA x3 PCI x4 AGP x1
À ÀTÈ	2 Çí UART 16C550 ÆEvÄØ RS-232 À ÀTÈ »R¿¿ÁÍ¾Q Çí UART ¿¾¿ÍÄÈ ¿·×`Øi Ýi
¿ÇÀ È	1 Çí¿¾¿ÍÄ SPP/ECP/EPP ¿eØoÖeÑÄÄØÄYÀTÈ
Floppy ¾ÐÇÈ	1ÇíÍÉÄ»ØeØeØ Í¿ÈÏÚ¿ »R¿¿Äé¿è 720 KB»Rí.44MB Äè 2.88MB È À»ÄØ 3.5 AeØeØeØ »R¾¿60KB»Rí.2MB È À»ÄØ5.25 AeØeØeØ »T
IDE ¾ÐÇÈ	2 Çí IDE Channel ¿¿¿ÈÏ 4 Çí IDE Øað~(ÍŠØeÄe CDROM)»R¾¿ÍÄPIO mode 4»SBus master»RÄèUltra DMA/33 Ý¿ÐäÜ ØiÀ»»T
USB ¾ÐÇÈ	2 Çí USB Í¿ÈÏÚ¿ »RBIOS ¿¿¿¿ USB Bi ÈäÍ`À»¿¿Øi ÚÚ ÐäÏeÄØ AT Äe PS/2 Ú¿×¿ »T
PS/2 ÑÄÓÄ	¾ØÄø Mini-Din PS/2 ÑÄÓÄÍ¿ÈÏÚ¿ »T
Ú¿×¿¾ÐÇÈ	¾ØÄø Mini-Din PS/2 Ú¿×¿Í¿ÈÏÚ¿ »T
RTC Óað,,ÄÚ	RTC À Ä Intel PIIX4 chipset ¾Ø»RÄé¿èCR-2032 Ø¿ Ó,, ÄÚ»TÄ¿ÄX¾¿ÄøÈÓÓ,,Ñ××`»RÍ¿ÐÑÄé¿eÓ,,ÄÚ»T
BIOS	AWARD Plug-and-Play, 2M bit Flash ROM BIOS»T

Ú Ð»Ð"Ø (Suspend to Hard Drive)	¿ëBIOS %pİÄ»RÚ<Ä†ÄR¿öÄvÄÖ%ÄQÄÄÖRÄöÖeÖeØ %Ö»R%Ä %QÄÖÐ"Ø Èä¿üÄ ¿†¿i Ç %ÄQİvÇÈ»TÖ=Äe¿ØESA ÍhÈ Ø ÈvÄÖ PCI VGA ¿u»RSound Blaster ØÈvÄÖÇİÈP¿u»T
ÖaØØ Í Û (Modem Wake Up)	Í'Ó]ÉdÈ ÄÖ×^ð Íŋf»R¿¿YÜá¿ë¿•EİÄ»Äe%ÖEİÄ»ÖaØØ (Äf AOpen MP56)»RB Ä†ÈÄsÄÍÖ, ÖöðÄí ÈäÄöÈäEİB¿»T
ÍnÄSÄöÈäÐ"Ø ÈäÐ» (RTC Wake Up Timer)	È'¿¿YÍÄS%QÇíÄeÄSÄÖÈäÐ»»RB Ä†ÈÄsÍ, ÇíÈäÐ»ÄöÈäÐ"Ø »T
ÄaÄS¿ İÄÄ»YÇÜ%×^ð	ÈÄÈPİ%ÄaÄS¿ İÄÄ»YÇÜ%×^ð (Synchronous Switching Regulator)»T
Ó]Ö,,ÄÄÄ`BQ	ÄyÄİ13.3V (Vcpuio»Schipset»SPBSRAM»BDRAM) %e CPU Èð%ÄÖ,,Ú%Ö]Ó,,ÄÄÄ`BQÄÖ¿ŋú»RÈ†Äi Ç ÄiÄÖÖ,,Ñ×ÄeÜİÖÖ»R ¿zİ%Äe¿ %Ä ÄÖİ^ð Ä`BQÉú%Ä »T
CPU Ó]Ö Ä`BQ	Ñ CPU ÑBÄñÐhÓ]ÖSİŋçÄÄÖÈäÇİİ, ¿i PİÄ»T
CPU ÇÑÈÈÖaÈÈ	Ñ CPU ÇÑÈÈYrÈÖÈäİ, ¿i PİÄ»T
Ä†ÈeÖ,,Ú%ÖaÈÈ	Ñ Ä†ÈeÖ,,Ú% (5V»S12V»S3.3V Öa 2.8V) %Ä¿ÜÈqÈäİ, ¿i Pİ Ä»T

# ÜÏ ¾

## 1.2 Ú Ð»Ð"Ø (Suspend to Hard Drive)

»^Ú Ð»Ð"Ø »%Í\_Æ È\_çòÁvÁÔÁÏÈÄÄØR»RÈ`ØeB Ò Èà»RUYÓ İvÇEÜ<À†ÁöİŠÖe%Ð»TÍ^ÁuÁÏ  
İèçZÁÓç ÜpÓ,,»RN %F%QÀØB"Ø Èã»RÈ' ççYÁ»EİŁoÁ Ç ÁİŁÓ%ÁQÄÄØR»R¾Ä÷İçQWin95  
Ð"Ø ÄH' »R¾¾¾¾÷ÇÄÑ†Èİ ÈäUÍçèİ' À»»T

ÀfAXÈ'Áİ 16MB È`ØeB »RÁÖÖ %Àö%ÐÖ÷Ç€16MB ÖeÖeÄBD»Áİ Ú<À†ÁÏÈÈÈ`ØeB »T×eÄqÑ\_  
È'çİÐÑÄèçèöa VESA ÍhÈ ÄÈvÄØPCI VGA çu»RÖa Sound Blaster ÄÈvÄØÇİÈPçu%e  
APM Drive»TÑ İ^»RÁöÇaÄoPİÈ'Ü çèÄö ÄOpen PT70 VGA»ÄAW35 (ÇİÈPçu) Öa MP56  
(Öa060 +ÇİÈPçu) çY×eÁ` ÍæÄÄØÄÈvÄä»T

ÀÖçmúÁÖİmÄŠ% Ä|Äf%ç»X

1. Ð¾¼ BIOS setup»Power Management à Suspend Mode Option»RÜ Øö"Suspend to Disk"»T
2. Ð¾¼ BIOS setup»PnP/PCI Configuration à PnP OS Installed»RÜ Øö"No"»TÍ, ÄeÈ, BIOS ÁİØ ÑÄöÄ Ä^ÄŠÄÏÈè Ñ»»T
3. Ð"Ø ÈäÜ ØöÐ¾¼ DOS ÖiÄ»»RÄfAXÈ'Æ Win95 ÄèçèÄæ»R×eÄsÐ"Ø çİ İ' "Windows 95 Starting ..." ÈäÄ %F "F8"»RÜ Øö"Safe Mode Command Prompt Only"»T
4. È\_AOZVHDD.EXE Í, ÇİçÄÿİ'À»»àÖ†Ä C ÖeÖeÄÖÈèçòù %F »T
5. % Ä|%Q»XÄèçfile ÈèÖa (ØRçèÄ FAT16 ÚaÈñÄÏÈè )

×eÜ %¾çATÄ ç` ÄsİŠÖe%Äöçù%QÇİÜ ÜYÚa»RçèÁİ Ú<À†ÁÏÈÈÄÄØR%eÈ`ØeB Ò Èà»X  
C:>AOZVHDD /c /file

×e×eÄŠÈ'Æ ÁpÁİÄÆ ÄÖİ†P ÖeÖeÄBD»È\_Áİİ'½çÜ ÜYÚa»TÁİ Äf»RÄfAXÈ'ÄB2MB çU  
È`ØeB Öa 4MB ÄØ VGA È`ØeB »RÁÖÖ Í\_Ö÷Ç€Äö%Ø36MB (32MB+4MB) ÄÖİ†P ÄB  
Ð»»TÄfAXAOZVHDD Áb%Ä Í†P ÄBD»»RÈ' ççYÁèçè DOS ÄØ DEFRAG İ' À»ÄeÆ  
Win95 ÄÖ^ÖeÖeÇÄİİ'À»»%ÄİØÿİ'İŠÖe»RçYİ'½çÄÆ ÄÖİ†P ÄBD»»T

% Ä|%X»XÄèç/partiton ÈèÖa (ØRçèÄ FAT16/FAT32 ÚaÈñÄÏÈè )

Äèçè AOZVHDD ÄsİŠÖe%Äöçù%QÇİÜ ÜYÚa»RÁİ Ú<À†ÁÏÈÈÄÄØR%eÈ`ØeB Ò Èà»TÇ€Äe  
çèÍ, Çİ % Ä|%Äv»RçİÐÑç ÄsİŠÖe%ØŠÈu%QÐ ÄBD»»TÁöÇaÄoPİÈ'ÈöØççÜÄİÈ`ØeB Üİ  
çcÄÖççÈÜÄÄf»RÖŠÈuÖ %ÄÖÖeÖeÄBD»»TÁİ Äf»XÇj È' çòÁvÁİ 32MB ÄÏÈçUE`ØeB Öa  
4MB ÄØ VGA È`ØeB »RÁİ çÜÄİ ÇfÖÖ%aÉBÄ 64MB çUE`ØeB »RÁÖÖ È' ÍæÄÄèçèÖe

# Üİ 3/4

»Tİ ^ ÁuÜ %  
»X

C:>AOZVHDD /c /partition

»R%  
»T

6. ÇÁÑtÈi ÈaÁtÈ (Reboot)»T

7. Üá;èI j È,Á ÚpA» (Momentary) Suspend switch»RÄèÆ Ù Á Win95 D"Ä)çmúÁ %/ÄÖ  
»^ÖaÈÈ»%RÉ(Ç%ÄtÈD% Suspend to Hard Drive ÖiA»»RÍ ^ ÁuÈ\_Ö,ÑxD"Ý Ý ÍÆ»T

8. %f %QÄD"Ø Èã»RÄtÈI\_Ñ"ÄoÈÄAoÄ ç Áv%Á%ÄQIvÇÈ»T



Î½ö: %fÄT VGA çuòxI ÖiÆ VESA ÄÈv»RÄYçSÖRçèÄ  
Suspend to Hard Drive»T

- AOpen PV90 (Trident 9680)*
- AOpen PT60 (S3 Virge/BIOS R1.00-01)*
- AOpen PV60 (S3 Tiro64V+)*
- AOpen PT70 (S3 Virge/DX)*
- AOpen PV70 (S3 Tiro64V2/DX)*
- 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*

# ÜÏ ¾



Ï½ö: ¾ÄTÇÏÈÐ çu0xÏ Òÿ çzØRçèÃ Suspend to Hard Drive»T

- AOpen AW32*
- AOpen AW35*
- AOpen MP32*
- AOpen MP56*
- Creative SB 16 Value PnP*
- Creative SB AWE32 PnP*
- ESS 1868 PnP*

ÀfÄXË' ÄÖÇÏÈÐ çuAs Suspend to Hard Drive ÄuÏ JÄ| çÜËq¾  
ÄQ»R×élgÖÏËi Æi0uÄpÆ ÄpÄÍ¾pÏÄ APM Bi ÈäÏ' Ä»»RÄYÄŠ  
Òà¾Ä»T



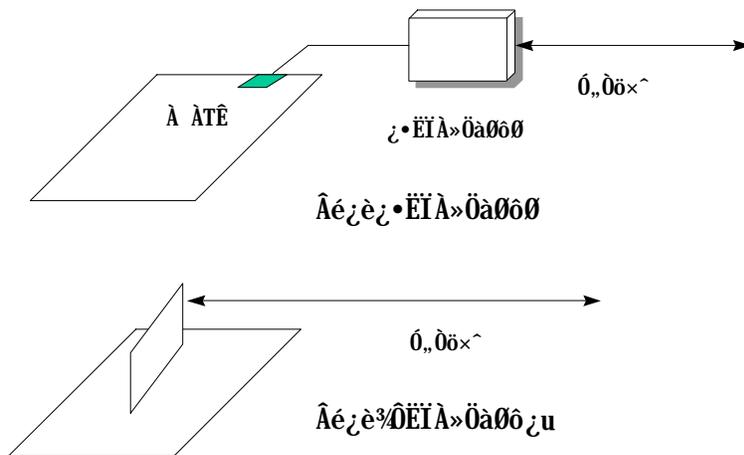
×éÄqÏ\_: USB çnÉúçòÄvÄYçÖç¾ÄÖa Suspend to Hard Drive ÈÏÄi Ïÿ»TÄfÄXË' Ï, Ï' ¾ÄYÇÄŠÄÖÏ' ÐY»R×éÐz¾  
BIOS»RIntegrated Peripherals à USB Legacy Support»T  
Ý ÈÖ USB Legacy çnÉú»T

### 1.3 0à000 Í Ù (Modem Wake Up)

ÁóÇæÀsÁÓÀìÇèÈb×ñÁÔ Modem Wake Up çUÇÈÈ ÈŠÓ ÀsÈ´Ó ÁÖÝ Ø ÁÄÓRÁaÛp¼ Ä|ÆÈÚa  
 ÆiÓ,,Ñ×ÁÔÇÑÈÈÆ ApÈÈ¼ ÜúÈa)»RÍ, Ð çUØ Á`Ù Ý^¼n¼pÍÁÐaÍèÁÔgreen PC suspend  
 mode»RÀ Í, ÁY¼AsÁóÇæÈb×ñÁÔ×uí ¼¼T

Üáçè ATX soft power On/Off»RÁóÇæçzYB ÁíÍèÀsÁÓç Ý Ø ÁÔÁÄÓR¼f (çYÁÓÓ,,Ñ×ØaÍ' çm  
 Èú¼ÁÔ suspend mode ÁY¼Æ È`çÛÝ ÍÁÁíèÓ,,Ñ×) ÀóÈaÈÍBçÓ,,Øó»RÀfÁÔÈ\_çzYÈÍÁ ÍÁ  
 Ù Ø ÒaÐaÈ´Ø ÁÔçñú»T

Í ]×ñÆ ¼ÖÈÍÁ»ÙóÆ ç·ÈÍÁ»Òa000 »RÍ¼çzY¼pÍÁModem Wake Up çñú»RÀ Æ Áéçèç·ÈÍ  
 Á»Òa000 ÁÔÈaÚZE »RE' çÍDNB Òa000 ÍSÁ Ð"Èi ÁÔÁÄÓR»TOpen ÁÔ AX6L Òa¼ÖÈÍÁ»Òa00  
 çuí¼Áè¼WÉdÈ ÁÔ×`Ø »RÁi çYÈ'Í]DNÈ Ð` ç Á Ó,,Ñ»TÁnÁÔ»RÇj È'ÑbÁéçModem Wake Up  
 çñúÁÔØó»RÁóÇæÁóPÍÈ'ÈPçè AOpen ÁÔ¼ÖÈÍÁ»Òa00çu (F56 Àè MP56)»T



## Üİ 3/4

### Äéçè%ÖËÄ»Öà06çüEä (AOpen MP56)»X

1. **F4** BIOS setup»RPower Management à Modem Wake Up»RÛ Ä Enable»T
2. **AS**ÖaË' ÁaË Ç€ÄsÐ"Ø ÈãÈ À ÄÖÚÍ çèÍ' À»»RÄYË\_Äp0~Ä »^Èi Èä»%0†Ïi %/ÄeÁbçè Suspend to Hard Drive çnú»T
3. çY soft power switch Ý ÍÄÄÏÈ»T
4. çY 4-pin ÄÖ Modem Ring-On Èa^»RÍ†ËÏ MP56 ÄÖ RING Í†ËÏÚj Öa AX6L ÄÖ WKUP Í†ËÏÚj »T
5. È\_0,,0öx^Í†ËÏÄ MP56»TÄ€Ëi»ZÍ' ÄsË' ççY0i0i Modem Ring-On ÄÖçnú»W»T

### Äéçèç•ËÏÄ»Öa060 Èä»X

1. **F4** BIOS setup»RPower Management à Modem Wake Up»RÛ Ä Enable»T
2. **AS**ÖaË' ÁaË Ç€ÄsÐ"Ø ÈãÈ À ÄÖÚÍ çèÍ' À»»RÄYË\_Äp0~Ä »^Èi Èä»%0†Ïi %/ÄeÁbçè Suspend to Hard Drive çnú»T
3. çY soft power switch Ý ÍÄÄÏÈ»T
4. È\_Öa060 ÄÖ RS232 Èa^Í†ËÏÄö COM1 Äè COM2»T
5. È\_0,,0öx^Í†ËÏÄ Öa060 »RÍ^ ÄüçÍÐ"Öa060 0,,N»»RÍ' Äs0i0iÆ:Är»Z



Í'çö: ç•ËÏÄ»Öa060 ÄÖ wake up Èe00Æ çè COM1 Äè COM2 Ç† ÍuÈÖÍ »WÖËÄ»Öa060 ÄyÆ çèÍ†ËÏ RING (Öa060 %h) Öa WKUP (çU0 Ä`%h) ÄÖÈa^Ç†Íu»T

Í'çö: Suspend to Hard Drive»SModem Wake Up ÖaAcephone ÚÍ çèÍ€B NwÈ†Äéçè»RÈ ÍÄÜ Ø ÖaÄËÍ, ÐaÉ^ÄÖÍæÄe0eÄ^% Èñ»T

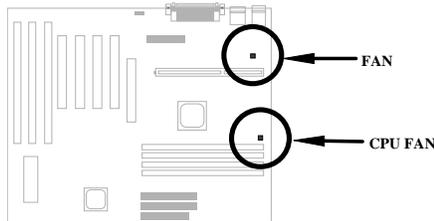


×eÄqN\_: Äéçèç•ËÏÄ»Öa060 ÄÖ06»RÖa060 ÄÖ0,,N×Í\_çÍÐNÄ`Ä ÄsÐ"ÈiÄÖÄËÖ»WÄiÄéçè%ÖËÄ»Öa060 ÄÖ06»RÍ\_ÄdÄÍÍ, ÖoÇÇÄ %W»T

### 1.4 ÄÏËèÓ,,Ú¼ÔäËË

AX6L ÄÿÄÍ%QÇíÓ,,Ú¼ÔäËËÄÏË»TN È'Ð'ÈiÓ,,Ò¼Äü»R Í, ÇíÔäËËÄÏËeÍ\_Ñ'Á Þ ÀrÔäËËÄÏËe  
ÄÖ¼ÄQÓ,,Ú¼»RÚaÄuÄ ÄpÄÍÄÏËeÓ,,Ú¼ÐhÓ] %Ð; ÖeÑäÄÖË»Äe»TCj ÄÍÍ, ÖðË»Äe»RÍ\_Ñ'Ôx;èÜÍ  
;èÍ'À» (Äf HWMON2) Ó Äé;èÄaÄ, ;i ÞÍÄËeËÄ»T Í, ÇíÔäËËÄÏËe;Z;YÔäÄ: 5V»S12V»S  
3.3V ;Y%ÄCPU Èð%üÓ,,Ú¼»TÍ, Ä Òx;èBIOS Óa HWMON2 Ä % ÖWÄÄÄ»RÍ]ÐÑÄé;èÄ Äþ  
;ÄÍSB »T

### 1.5 ÇÑËËÔäËË



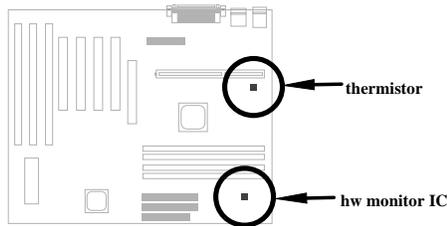
Í, Ð ;UØ Ä` %ÄÄÍÄüÇB-pin ÄÖÇÑËËËÍÚj CPUFAN Óa FAN»R%QÇiÍÇCPU ÇÑËËÄé;è»R;Ï  
%QÇiÄy;Z;èÄ Ø Íü%ÄÄÖÇÑËË»TÍ, Çí;üÄÄ Òx;èBIOS ÓaÜÍ;èÍ'À» (Äf HWMON2) ÄiÄ  
% ÖWÄÄÄ»T



xéÄqÑ: È' ;ÐÑÄé;è 3-pin ÄÖÇÑËË»RÍ, ÖðÇÑËË%ÄÞÄ  
CPU ÇÑËËÔäËË;üÄi Ö-ÄÖ SENSE ÈeÖÓ»T

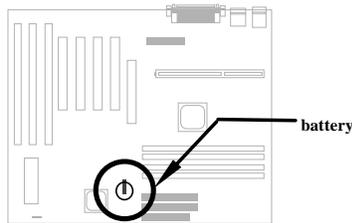
# ÜÏ ¾Ð

## 1.6 CPU Ó]ö Å`BQ



¿Ö¿UØ Ä`ÀsCPU ÄÍ¾FÍmÁÍÑBÄñÄ`BQx`ð »RÑ ÑBÄñÉÄÄ ÓŠ¿ ÄŠð„ÄÖÖaÇaÉaCPU Í¿Äñ Ñ`ÄöÉaÇÉÄT»RÄÝ¿SÖx¿ëÜ¿¿èÍ'Ä»(Äf HWMON2) Í, ¿i ÞÍÄZÜÉB»TÍ, Çi ¿müÄ` Öx¿ë BIOS Öa HWMON2 ÄiÄ`¾ ÖWÄÄÄÖ»T

## 1.7 ¾ÄÖ÷Äé¿èÖ„ÄÜ



Æ¾WBeÜÍÚ Ä`»Ä Open ÄÖ AX6L ÉD¿è¾W¿QÆaÇÖÄ`ÄÖbattery-less (¾ÄÖ÷Äé¿èÖ„ÄÜ) Ín Çf»T¿¿Ç€ ATX Ö„Ñx`¾ÄÖ¾f »RÉ'Ä`¾ÄÖ÷ÄÄÄé¿èÖ„ÄÜÍ'ÄéÖ„ÑxÍÖRTC (real time clock) Öa CMOS Setup»TÍ, ÖöÍnÇfÄÖÄÉÍSAÄ »R¿¿¿YÜñÄ`Ö„ÄÜÄdÖ„Éa»RÜ ¿¾CPU ÜhÍ%Öa CMOS Setup Í¿ð Èa»T¾ÄÖ]Æ¾W¾Ä`Äé¿èÄÄÄÖ÷Ç€»RÄöÇaÄæÍ^ÚYÄ`¾W¿QÜ Öj Ö„ÄÜ (CR-2032) »RÄi¿YÄfÄXÉ`ÑbÇ€¿èÖ„ÄÜÄÖÖö»R¾W¿¿Y¾¿¿èÈ\_¿ÄÄÖÈÖ»T

# İP³XÍÓ

## İŠB ÀŠÒà

¿ÓÍÓË\_¿YÍqÁá0¿DzÁ0¼ Å»RÖ»Ä ÀfÀ ÀŠÒàË'ÄÖÀ†İè»R×è×eÓ ÀaÑi Í, ÁáÀSà[ÁiÀŠÒà»T



×è¼f¼ü: ESD (Electrostatic Discharge) ÆËÚcÓ,,Ä Ó,,  
¾ÄÑ\_»R¿èÄ Ü€B Ó,,Ò (IC) ÄöÈvÄ Ä Ä ÚcÓ,,ÑaÚÍÄÖ  
Ö%Be»RÄnÄÖÑ"ÄeÑ]ÍSI' ØÓ»RÖeÖeØ »RÚi¿c¿u¾eÄp  
¿JÄÖÖ†¿ Ä Ä ÐaÈq»TÆ¾WÓŠÄØÚcÓ,,Ä Ó,,ÄiÑ}YrÍÖ  
¼ »R×èÜ ÀÆ¼ATÄÖÖŠÄØÈÖÆZ»X

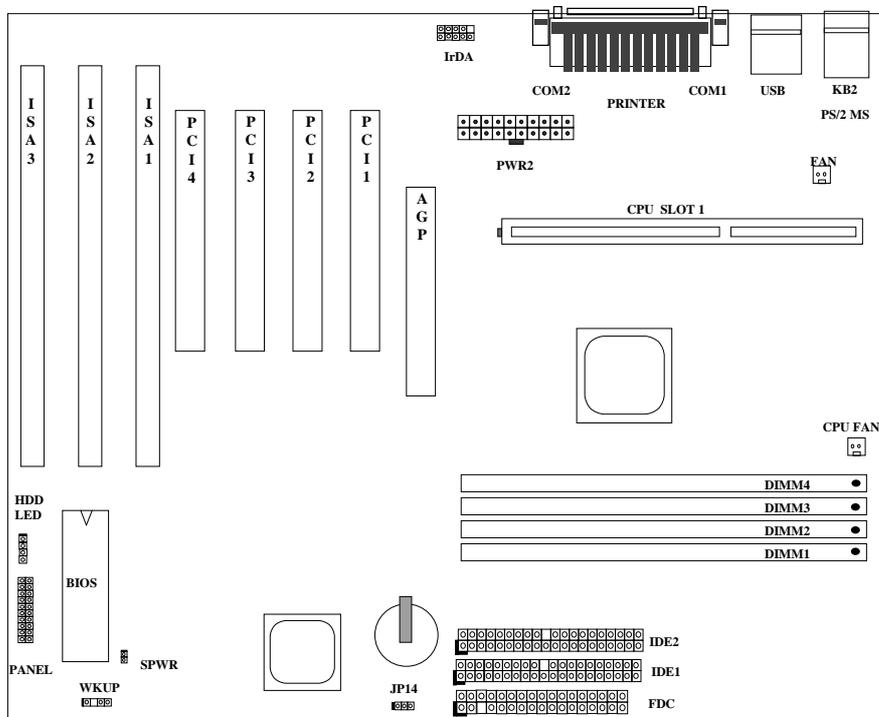
1. È¼ÄUË' ¾ŠÑáÍàÀ€Ç€D"Ä}ÀŠÒàÖ†¿ »RÄpÄy¾üÖf¾¼  
Ç€Ë\_Ö†¿ ÀöÄØÚcÓ,,¿nÖa¾¼Ä ¿i»T

2. ÀsÈ' ÀŠÒàÖ†¿ Èã»RÄæÄËË¾ÄÍËËÄr×^ÄÖ¾ü Ü »R  
¾¼Í»¿ ÄÖÖ,,¾ÖÖ†¿ À Í¼ÄÍÀs× »TÄfÄXÄdÄÍ¾üÜ »R  
×èÄé¿è¿ À ¿z¿YÄØ¾¼ ÚcÓ,,ÄÖÍÜ¿\_Ä•»RÄiÖaÄ†İèÖ†  
¿ ¾e¿UØ Ä`ÈÍPÌ»T

# İŞB ÅŠÒà

## 2.1 Jumper ÕaËİÚj (Connector) ÄÔÀ Ò~

¿Y¼Æ Æ¿UØ Ä`¼Jumper Ä^ËİÚj (connector) ÄÔË†Ò~Óé»X



# İŞB ÅŠÒà

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## **Jumpers:**

JP14:            Ì^Ê%CMOS

## **Connectors:**

PS2 MS:        PS/2 ÑàÓÁÍ†ËÏ Ú†  
KB2:            PS/2 Ûþ×]Í†ËÏ Ú†  
COM1:          COM1 Í†ËÏ Ú†  
COM2:          COM2 Í†ËÏ Ú†  
PRINTER:       Printer Í†ËÏ Ú†  
PWR2:          ATX Ó,Ñ×Í†ËÏ Ú†  
USB:            USB Í†ËÏ Ú†  
FDC:            Floppy Í†ËÏ Ú†  
IDE1:           Ìþ%QÌi IDE Í†ËÏ Ú†  
IDE2:           Ìþ%XÌi IDE Í†ËÏ Ú†  
CPU FAN:       CPU ÇÑÈÈËÏ Ú†  
FAN:            ÇÑÈÈËÏ Ú†  
IrDA:           IrDA (Æ ç•×^ ) ÈÏ Ú†  
HDD LED:       HDD LED ÈÏ Ú†  
PANEL:          Åv% ÇÈÀ`À Ûþ%eÛ` ðÓÍ†ËÏ Ú†  
SPWR:           ATX Soft-Power Switch ÈÏ Ú†  
WKUP:           Wake Up ÈÏ Ú†





# İŞB ÅŠÒà

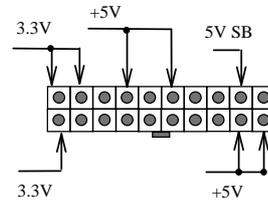
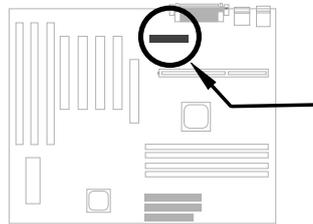
## 2.3 İ†ËİÚj (Connectors)

### 2.3.1 Ó,,Ñ×Í†Ëİ×^

ATX Ó,,Ñ×Í†Ëİ×^ ÅéçèÀf%F ÅÖ20-pin İ†ËİÚj »R×è×eÅŠË'Î»%4ÄÖ%4 ÅgÅ çÛ×eÄÖ»T



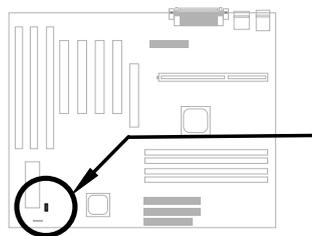
×è%ç%u: ÅsÍ†ËİÅeÅÖË%Ö,,Ñ×Í†Ëİ×^%4Åv»R×èç Ý İÅ†TeÓ,,Ñ×»T



PWR2

### 2.3.2 ATX Soft-Power Switch ËİÚj

ATX soft-power switch İ†ËİÚj Å 2-pin ÅÖ»T×èç È,, ATX Å İuÅÖÅv% ÇËÅ` %4rÅpçi Öè çöÅË “power switch” ÅÖ 4-pin İ†Ëİ×^»Rİ^ Åuİ†ËİçUÖ Å` %4rÅÖ soft-power switch İ†ËİÚj (ÖèçöÅË SPWR)»T

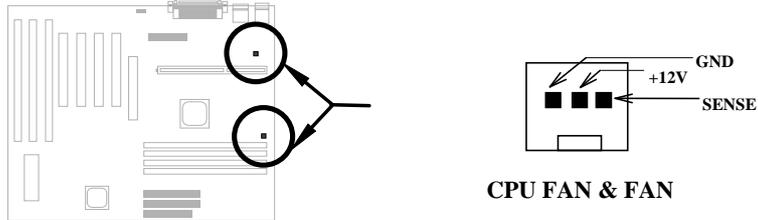


SPWR

# İŞB ÅŠÒà

## 2.3.3 ÇÑÈÈ

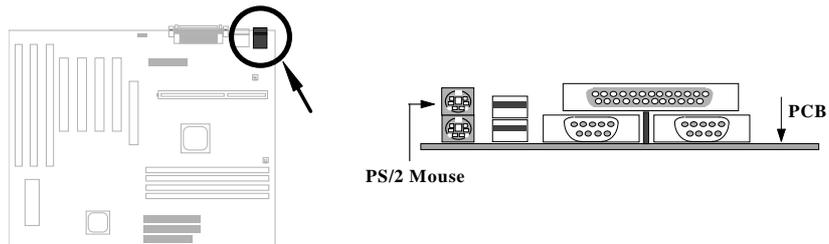
Às¿U0 Ä`¼»RÁÍ%QÇi0èçCPU FAN Òa%QÇi0èçöÆFAN ÁÔÇÑÈÈÏÛj »T



Ä Ý : Í, ÄüÇiÇÑÈÈÏÛj Í½z¿Y¼ÍÁİŞB ÓàÈÈ¿mÉú (hardware monitor)»T

## 2.3.4 PS/2 ÑàÓÀ

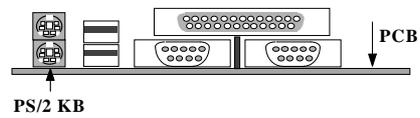
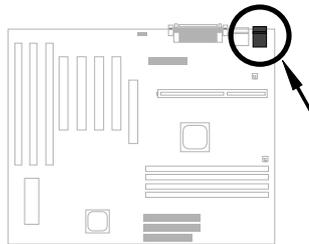
×éÍ†ÈÏ adÇiÑàÓÀÄ öèçöÆÏPS2 MSIÄÔÈÏÛj ¼¼»T



# İŞB ÅŠÒà

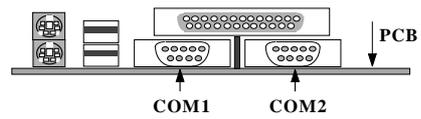
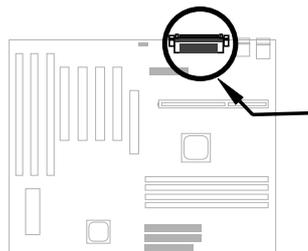
## 2.3.5 PS/2 Üp×]

×eË\_PS/2 Üp×]ËIÄ Öe\_zöÆ KB2 ÄÖ 6-pin %fÍ†ËIÜj %41»T



## 2.3.6 À ÀTÊ (COM1/COM2)

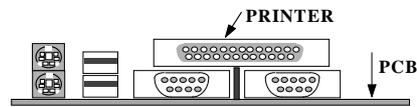
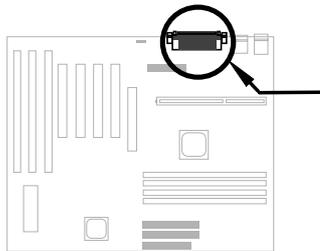
Äu% ÇËÄ` %41ÄIÄuÇi Öe\_zöÆ COM1 Öa COM2 ÄÖ 9-pin D-ÄÆËIÜj »R\_zz\_eÄIÍ†ËIÄ ÄT Ê ÑaÓÄ(serial mouse) ÄeÆ Öa000 »TÄp%41P%QÇIÄ ÀTÊ ËIÜj Öe\_zöÆ COM1»WÍP%K ÇIÄyÖe\_zöÆ COM2»T



# İŞB ÅŠÒà

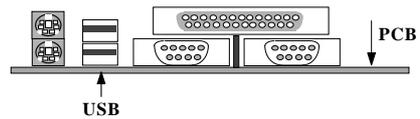
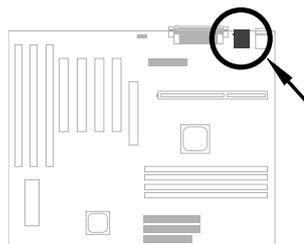
## 2.3.7 À]Ä Ø

¿UØ Ä` Äü¼ ÇÄÄ` ¼¼ÄÍ%QÇiÖe¿ö«**PRINTER** ÄÔ 25-pin D-ÄÄÜj »R¿eÄiÄŠÎ»ÄÝÄTÄÄ] Ä Ø »T



## 2.3.8 USB òaò~

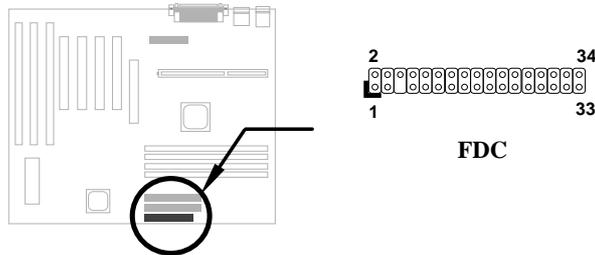
È`¿ž\_ USB òaò~Í†ÈÏÄ USB ÈÏÜj »RÍ, Ð ¿UØ Ä` ¼¼ÄÍÄü¿USB ÈÏÜj »RÖe¿öÄÈ USB»T



# İŞB ÅŠÒà

## 2.3.9 İ€ÒèØ

ÀsçUØ Ä` %hÅÍ%QÇiÖèçö#FDC Å034-pin ÈÏÛj »RççèÀi Í†ÈÏÄüç<İ€ÒèØ »T

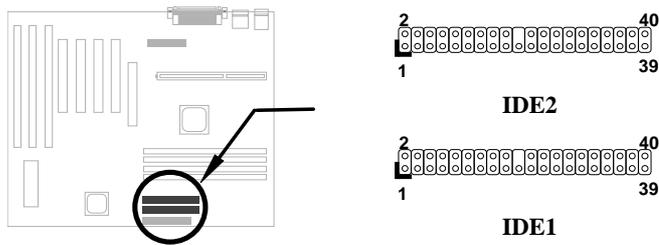


## 2.3.10 IDE İŞÖèØ Õa CD ROM

ÀsçUØ Ä` %h»RÈİÄÏüÇiÖèçö#IDE1 Å^IDE2 Å0 40-pin ÈaÈŠ»RççèÄÄ` Í†ÈÏÄüÇi IDE  
 Õa0~»RÍaAyççÍ†ÈÏçÇi IDE Õa0~»R%QÈIDE1 %d06#ÈççUÍ„ÓU(primary channel)»R  
 IDE2 %d06#ÈÄÖÍ„ÓU (secondary channel)»T

Í†ÈÏÄ` ç %QÍ„ÓUÄÖİP%Qçç<Õa0~çİĐNİn#master mode»WİP%Kçç<Õa0~çİĐNİn#  
 slave mode»Tçç %QÇiÕa0~Ä»çç#ÈİŞÖèØ Åèçç ÖèØ »T

×èË\_È` İP%Qçç<Õa0~İn#master mode ÄYÈİÄ` IDE1»RİP%Kçç<Õa0~İn#slave mode  
 Åa0aÈİÄ` IDE1»TÄfÄXÈ` ÄÍİP%çççç<ççİPçççç»R×èÄÄÄÈİÄÄ` IDE2 Å0 master %è slave  
 mode»T

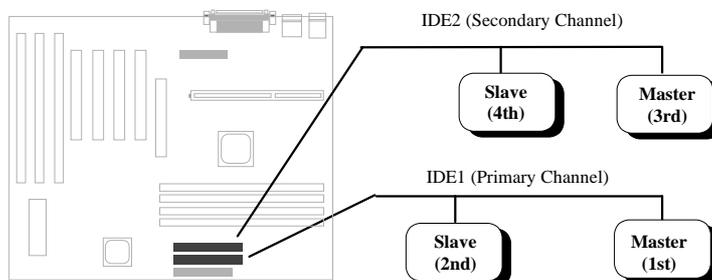


# İŞB AŞÒà



×è%ƒ%ai: IDE İhÈ ÀòPİÈà×^ÍæÄ %4/zDhÓ] 46 %×%ÁJ  
(18ÇòÀe)»R;YÁ\Ò ÈàĐaÜ %4/Ä”»T

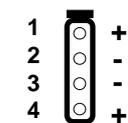
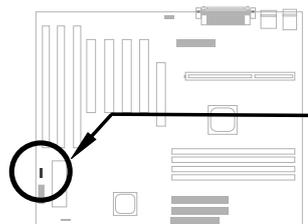
×è%ƒ%ai: ÆÉÓWÁ ÍæÄèÀÖÁYÖÖÁ•× »RÈà×^ÍæÖÑÖ-ÄÖ  
ÒàÖ-ÍæÄ€ÍnÄÄmaster mode»RÁYÁæÑi %ƒÖèÀòPİÄÖĐĐ  
ÁáAŞÖaÑ†ÒaÖ~»T



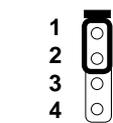
## 2.3.11 İŞÖê LED A çöÜ`

İŞÖê LED A çöÜ` ÖèçöÄÄ HDD LED»RÍ, Çi ÈaÈŞ  
çØR;èÄ Af Öè%ÄaÄÖÖ İü»RÄfAXÄi AŞÖaÄÖÖ İüÄv  
% ÇEÄ` Ä Äİ 4-pin İ†Èİ×^»R×èÄ×Èİİ»%4»TÄfAXç  
Ä 2-pin ÄÖİ†Èİ×^»R;ç;YÜ ÖèAŞİ» 1-2 Äè 3-4»R  
Ä ×èÄqÑ\_NçÄä.

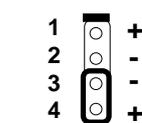
Pin	Ö»Ä
1	HDD LED
2	GND
3	GND
4	HDD LED



**HDD LED**  
4-pin İ†Èİ×^



**HDD LED**  
2-pin İ†Èİ×^Èİ  
Ä pin 1-2



**HDD LED**  
2-pin İ†Èİ×^Èİ  
Ä pin 3-4



# İŞB AŞÖa



×eÄqÑ: ÄfÄXÖ İüÇEÄ`%hÆ çlİİ†(turbo) Ä Ð†Ä^çlİİ†Ä çö  
 Û»RE' çzçYE\_ÄçèÄ Suspend Ä Ð†Ä^ÆÖÖ,,ÖiÄ» (green mode)  
 Ä çöçmÉú»T

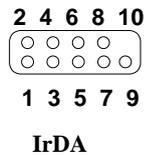
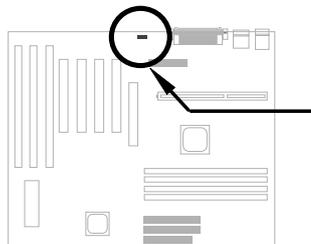
×e%ç%ü: ÄfÄXË' Äü Turbo Switch Ñ ÄQ Suspend switchÄi çè»R  
 ×e×eÄSçİÐÑÇEÄ ÄüÄÖçYÖi ÜÜI |Æ,Ä»Ä Üp (momentary  
 mode)»T ÄpÄyÄ†İèçzÉúI |Ä |Ð"Ø »RÄnÆÉÄRçYÖÑE{Ç¼ÄDz¼Ä  
 Suspend mode»T

## 2.3.13 Ä ç•×^ÐaÜ Ê (IrDA)

çÖçUØ Ä`ÄÖİp%XA ÄTÊ(serial port 2)çzçPİÄ IrDA Ä ç•×^Öi İi»TÄi Üñ IrDA  
 (Infrared Data Association) Ç çÖÆ çèHP»SCompaq»SIBMİçÜfÄi ÄÄçüÄÖ%QÇİ  
 İiÜI»RçèÄi EÜÖ†ÖSçèE ç•×^Ða×^Ö ÈÄÄÖÄöÍ\_ÖaÜIçè»TÄüÄi İEP ÄÍÖİEi ç¼»R  
 IrDA Ä`İ%ÄSÄeÄÄÄE ç•×^ÐaÜ ÄÖÖeÑa»TççEÈ`ÄÖÖ,,Ö¼ÄyİaE ç•×^ÐaÜ çmü»RçS  
 İBÄi IrDA İñS»Rİ\_ÉüE Äs%QÄSĐkÜ %Ö»R¼ÄÖ=ÇEİ†Eİ×^ÆEÖİ†Eİ»RÄj çzÄöÈÄÖa  
 İÄÈ`ÄÄÖ,,Ö¼ÄeÇi %YÖaÄ Äfİ'(PDA) ÄE¼ÄEİ†×^»SÐaÖÖÜaEñÖ ÈÄÄeÈ\_¼ç ÈvÄ %p  
 İÄ IrDA ÄÖÄJÄ Ø ÄTÄJ»TçÖçUØ Ä`çzçPİÄHPSIR (115Kbps, 1 meter)»SASK-IR  
 (56Kbps)»S Fast IR (4Mbps, 2 meters) Öa Consumer IR İçİhÈ »T

ÄŞÖaÈä»R×eÈ IrDA Ä ç•×^Öi İiÄSİ»Ä çUØ  
 Ä`ÄröeÄİrDA ÄÖÈaÈS»TÄŞÖa%ÄÄü»RE' Üóçİ  
 Ö=Ð"Èi ISZ dldv† fİÄÖÄÖE ç•×^çmü»R¼ çz  
 çÜEç¼ÄQ»T

Pin	Ö»Ä
1	+5V
3	FIRRX (FAST IR)
4	CIRRX (Consumer IR)
5	IRRX (STANDARD IR)
6	5VSB
7	GND
9	IRTX (STANDARD IR)



# İŞB ÅŠÒà

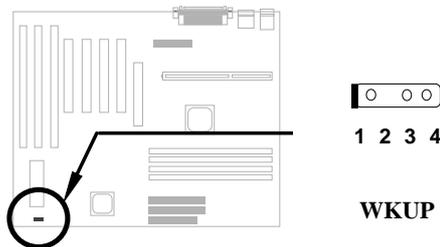
## 2.3.14 Wake-up ĖİŪj

çŒçUŒ Å` ¼ıÂıÁÍÉđÈ ×`ò İncf»Rçz¼pİÁÖà060 Í ù (Modem Ring-On) çııú»R¼ŒĖİÁ» (AOpen MP56) Ąèç•Ėİ Ą»Öà060 Á»çŒRçè»TçèĄ Ąèçè¼ŒĖİÁ»Öà06çıuĄŒŒŒ»RçÇĖĄ ¼ŒŒ-ÉİĐ`Œ„Œ»RĄİçYĄŒçæ¼ Œ ĄŒPİĖ`Ąèçè»Tçj Ė`ĖPçèĄŒ Ą AOpen MP56»RĄı×èĄèçè4-pin İ†Ėİ×`»Rİ†Ėİ MP56 ĄŒ RING ĖİŪj ŒaçUŒ Å` ¼ıĄWKUP ĖİŪj »T

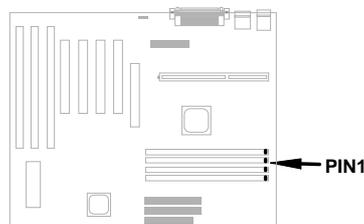
Pin	Œ»Ą
1	+5V SB
2	NC
3	RING
4	GND



İ¼çö: Ėİ¼ŒModem Ring-On ¼Ąç•»RŪŒçzŒSçèĄsĄpçĄ Ąr¼ »RĄİĄf IR wakeup Ąè voice wakeup»T



## 2.4 ÅŠÒàçUĖ`ŒèB



ĄŒçUŒ Å` Ąİ4 Ė DIMM (Dual-in-line Memory Module) İ»Œè»RççY¼pİÁ EDO (Extended Data Out) Ą SDRAM (Synchronous DRAM)»T İæĖĖ Đ„çŒŒ 1GB»T

# İŞB AŞÖa

çÖçU0 Ä` ççY³pİÄÖeÑa64/72-bit ÄÖ DIMM Öi İi»T

Äi³pİÄÄÖ SDRAM çZÄe³fÀTÉdÄä³ÜÝ »X

- ◆ ÈvD,,»XÍ ÇÈÆ 1Mx64 (8MB)»S2Mx64 (16MB)»S4Mx64 (32MB)»S8Mx64 (64MB)»S16Mx64 (128MB)»WÄiÜ ÇÈÆ 1Mx64x2 (16MB)»S2Mx64x2 (32MB)»S4Mx64x2 (64MB)»S8Mx64x2 (128MB)»T
- ◆ ÍtÄñ»X³QÉ ÖèçöÄf-12»RÍ, ç\_Ä ÄtÄ ÍtÄñ (clock cycle time) Æ 12ns»RÄi çYÄÖ SDRAM Ía³ÄÖ clock Æ 83MHz»T ç ÄÍÖèçöÆ-67»RÄj Ä ÄaASÖ ÈaDäÜ ÍaÄðçz Ä 67MHz»T
- ◆ ÄaÄ ³D (parity)»XÍ ] parity (64-bit) ÄèÄÍ parity (72-bit)»T

Äi³pİÄÄÖ EDO RAM çZÄe³fÀTÉdÄä³ÜÝ »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
- ◆ ÍtÄñ»XE DO RAM ÄÖÄtÄ ÍtÄñ (access time) Æ 60ns Äè 70ns»T
- ◆ ÄaÄ ³D (parity)»XÍ ] parity (64-bit) ÄèÄÍ parity (72-bit)»T

BIOS çZÄöÈaÈÖÍ È` Öeß ÄÖÈvD,,³eÄÄÄ»R³ÄÖ-Äéçè Jumper ÍmŠ»TÍa³ÄÖÈ` Öeß ÈvD,,Æ 1GB»T

LX ÍÖ¼ İi ç`ÉúÄéçè 3V EDO Äè SDRAM»RÄnÄÖÈ` ççYİgÄi Äéçè EDO Ä^ SDRAM»T

ÄTÇi DIMM İ»ÖèÍ½ççYÄSÖa EDO Äè SDRAM»T; YEDO Äi Ö»»RÍa³ÇaÆ 256MB»W Äi SDRAM ÄyçZÄ 128MB»T

**Total Memory Size = Size of DIMM1 + Size of DIMM2 + Size of DIMM3 + Size of DIMM4**



Ä İ : ÇÉÖWÄ 1GB ÄÖÈ` Öeß »RÖ-Äéçè double-sided buffered EDO DIMM»T

# İŞB AŞÖä

çY%ƒÀTçi ÄöPÍÄéçèÄÇDRAM İiÄi »X

DIMM Data chip	ÄTÇËbit Öàçò	Í Ü ÇË	Chip Öàçò	DIMM ç4çƒ
1M by 16	1Mx64	x1	4	8MB
1M by 16	1Mx64	x2	8	16MB
2M by 8	2Mx64	x1	8	16MB
2M by 8	2Mx64	x2	16	32MB
4M by 4	4Mx64	x1	16	32MB
16M by 4	16Mx64	x1	16	128MB
2M by 32	2Mx64	x1	2	16MB
2M by 32	2Mx64	x2	4	32MB
4M by 16	4Mx64	x1	4	32MB
4M by 16	4Mx64	x2	8	64MB
8M by 8	8Mx64	x1	8	64MB
8M by 8	8Mx64	x2	16	128MB

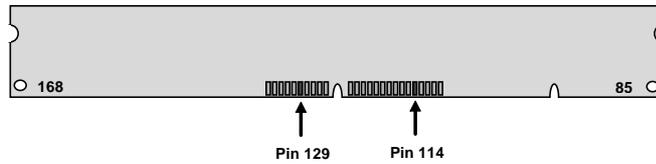
çY%ƒÀTçi ÄöPÍÄéçèÄÇDO DRAM İiÄi »X

DIMM Data chip	ÄTÇËbit Öä çò	Í Ü ÇË	Chip Öàçò	DIMM ç4çƒ
1M by 4	1Mx64	x1	16	8MB
1M by 4	1Mx64	x2	32	16MB
1M by 16	1Mx64	x1	4	8MB
1M by 16	1Mx64	x2	8	16MB
2M by 8	2Mx64	x1	8	16MB
2M by 8	2Mx64	x2	16	32MB
4M by 4	4Mx64	x1	16	32MB
4M by 4	4Mx64	x2	32	64MB
16M by 4	16Mx64	x1	16	128MB
16M by 4	16Mx64	x2	32	256MB
2M by 32	2Mx64	x1	2	16MB
2M by 32	2Mx64	x2	4	32MB
4M by 16	4Mx64	x1	4	32MB
4M by 16	4Mx64	x2	8	64MB
8M by 8	8Mx64	x1	8	64MB
8M by 8	8Mx64	x2	16	128MB

# İŞB AŞÖa



İ½ö: Aİ%QÇiÁö;Äz;YçèAiÁaÁ`È' ÄÖ DIMM Ä†ÍÖ  
 Æ Í ÇËÜöÆ Ü ÇË -- ÄfÄX DIMM Öi İi%hÄÖÄ %aiÄ  
 pin 114 Öa pin 129 ÄÍÍ†ËİÖ,,Ö ÄÖÖö»RÍ, Çi DIMM  
 İ\_çzÉúÆ Ü ÇËÄÖ»WpÄyİ\_Æ Í ÇËÄÖ»T×èËèAi\_çY%F  
 ÄÖÄ Öé»T



¼Ä ÄTçi ÖxÖ]AOpen İ ÖiÖ]ÄÖ EDO Ä^ SDRAM»X

ÈvĐ,,/Ý ÄÆ	ÖfËi	ÄÖÖ	İ Ü ÇË	Chip ÖaĐ,,
8M/EDO	Micron	MT4LCM16E5TG6	x1	8
16M/EDO	Micron	MT4LC2M8E7DJ-6	x1	4
16M/EDO	Hitachi	51W17805BJ6	x1	8
32M/EDO	Hitachi	51W17405BLTS6	x1	16
64M/EDO	Hyndai	HY51V65804 TC-60	x1	8
8M/SDRAM	SEC	KM416511220AT-G12	x1	4
8M/SDRAM	TI	TMS626162DGE M-67	x1	4
8M/SDRAM	TI	TMS626162DGE-15	x1	4
16M/SDRAM	TI	TMS626162DGE-15	x2	8
16M/SDRAM	TI	TMS626812DGE-15	x1	8
16M/SDRAM	NEC	D4516821G5-A12-7JF	x1	8
16M/SDRAM	Toshiba	TC59S1608AFT-12A	x1	8
16M/SDRAM	TI	TMS626812DGE-12A	x1	8
16M/SDRAM	TI	TMS626812DGE-12A	x1	8
16M/SDRAM	LGS	GM72V16821BT10K	x1	8
32M/SDRAM	Toshiba	TC59S1608AFT-12A	x2	16
32M/SDRAM	NEC	D4516821G5-A10-7JF	x2	16

## İŞB ÀŞÒà

ÈvD,,/Ý ÀÆ	Öİİ	ÀÄÓ	Í Ü ÇË	Chip ÓàD,,
128M/SDRAM	NEC	D4564841G5-A10-9JF	x2	16
16M/SDRAM	IBM	0316169CT3B	x2	8
16M/SDRAM	Hitachi	HM5216165TT10	x1	8
16M/SDRAM	IBM	0316809CT4B	x1	8

çÖçU0 Ä`Æ çParity check ¼ À»ÈÖİ Ê`øeB Ù Ö»TE' çİDÑÄéç72 bit DIMM (64 bit data + 8 bit parity) Âı¼İÄ parity check»RBIOS çÀöÈäÈÖÄ0 72 bit parity DIMM»R ¼Ä-İŞB İnŞ»T



İ¼ö: Parity mode Ä0¼ À»ÆÄTCİ byte ÖhçI¼QÇİ parity bit (ÄQ 9 bit)»Rİ,,ÈqÆÈÖÀaÀ ¼ À» (even parity mode)»RÄj ÄTÀÖÖx¼[ È`øeB Èä»RÄT¼Q byte + parity bit N"İb>i0yÄÄÄyÄİÈÖÖaÇİ "1"»T N ¼F¼QÄÖBÄÄ Ê`øeB İ, İ'ÆÄpÖa"1"Èä»RİŞB Äjİ¼ç parity error ÄYÖÖ»RParity mode ç`ÉúÜäİ çiİ ¼Q bit Ù Ö• (single bit error detection)»Rİ|Ä|ÀöÈäÄ çÜ»T

# İP³/eÍÓ

## Award BIOS

çÖÍÖ\_Ö»À ÀfÀ ÍnSÁİİèÈèÖà»R È' ççYÁéçè AOFash Í, Çí¼Áýİ' À»ÁÍÁ ÑçUØ  
Á` ÄÖBIOS»T



ÇÄÇÈ: ÀnÆ BIOS codeÑ"ÚYİöÄİİèÍ€İŠB ÄÖİncçÇñÁ  
ÀÍÁ Đz»RÁİ çYçİİwÈÄÄÖ BIOS ÄÄçÖçzÉúÑ"ÖaçÖÍÖ¼Đİè  
ÄÖ¼ÖÈv (ÉdÁ`Æ Chipset SetupÈÈÖà) ÁÍÁaÈİÁ»T

### 3.1 Đz¼ BIOS Setup çUØ Í

BIOS Setup È ¼QE,ÀİÁ Ä Flash ROM ÄÖİ' À»xi »RççYçèÁÍÁ Á ÄİİèÈèÖa»RÄYÈ\_  
¼ÄİÁ 128 byte ÄÖ CMOS RAM ¼¼RÁéçèÄaÀfÇÈĐz¼ BIOS Setup ¼¼Rç`ÇÈÄsĐ"  
Ø ÁúÄİİèÈ À POST (ÀöÁöİ Öİ) Èã»RÁ ¼f DEL Á Úp»RÁ\çĐz¼ AWARD BIOS  
Setup çUØ Í »T

# AWARD BIOS

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

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



Í½öKIÜ Øö "Load Setup Defaults" ¿zØ ¼Ä†ìèØŠ  
 ¿ ÍnÁSÁÖÈèÒaÇa»WÁiÜ Øö "Load Turbo Defaults"  
 ÄyzÄé¿èØ ÁðÁÖÈèÒaÇa»RÄ ¿ÏÑÈ Ò ÜÍÍ ÁÖÁ†ìÈ  
 ÌiÁi»T

ÄsÏvÇÈ¼f¼ ÄÍ¼QÇiÁ ¿`À »RÄØUE'ÄfÄ È\_¼é¿iÈèÌØÄ Ò ðÍ¼h»RÄfÄ Á Á ÍnŠ»R¿Y  
 ¼eÄfÄ È,¼QÇiÏvÇÈÌØÄ ¿¼¼QÇiÏvÇÈ»T

á â à ß »XÄ¿è¼ ÄgÜp»R¿¿È\_¼é¿iÈèÌØÄ È ÇnÁ ÄÖÜ ðÍ¼h»T

»XÄ Í, ÇiÏvÁi Üp¿¿YÄ BøBý¿öÄÖYtÄü»T

»XÄ ÄÖÜpÄ ¿öÜ ð"ÄvÄtÜa»T

»XÄ ÄÖÜpÄ ¿öÜ ð"ÍnŠÏvÇÈ»T

»XÄ ÄÖÜpÄ ¿öÜ Ä ÄÖÄÄÈð¼ÄÖÜ Í »T

Íæ¼fÇÈ¼QÄ ÄyÆ Ó ÄiÜ ðÍ¿¿ÄÖÜt¼ð»T

# AWARD BIOS

## 3.2 Standard CMOS Setup

Ù Øö "Standard CMOS Setup" ÍñŠÏvÇÈ»R¿z¿YÙ ØöÁÏeÄÖÈ ¿ÖÍñŠ»RÁfÙ %4%  
ÍÛ»SEÄD»%eÖeÖeØ ÁÄÖRÄÖÍñŠÇâ»TÄe¿eÄæ¿Áb¿e% ÁgÛpÈ\_¿e¿ÏÈeÍØÄ È ÇñÄ ÁÖÙ  
DÏ%4ñ»RÄRÄe¿ [ ] Äe [ ] Á ÛpÍñŠÛ DÍÄÖÈeÖaÇâ»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					Base Memory : 640 K Extended Memory: 15360 K Other Memory : 384 K Total Memory : 16384 K				
Drive B : None									
Video : EGA/VGA									
Halt On : All Errors									
ESC : Quit			á â à ß : Select Item						
F10 : Save & Exit Setup			(Shift) F2 : Change Color						

### Standard CMOS à Date

ÀfÄXÈ·ÑbÇÈÍñŠ% ÍÛ»R¿z¿YÄb¿e% ÁgÛpÈ\_¿e¿ÏÈeÍØÄDate ÈeÖaÍŠ»RÄRÄ %4 [ ]  
Äe [ ] ÍñŠ¿öÄvÄÖ% ÍÛ»T% ÍÛÄÖÈeÖaÈ Ä»ÆÈ% »S% Ä^ Ä»T

### Standard CMOS à Time

ÀfÄXÈ·ÑbÇÈÍñŠSEÄD»»R¿z¿YÄb¿e% ÁgÛpÈ\_¿e¿ÏÈeÍØÄTIME ÈeÖaÍŠ»RÄRÄ %4 [ ]  
Äe [PGDN] ÍñŠ¿öÄvÄÖEÄD»»TEÄD»ÄÖÈeÖaÈ Ä»ÆÈE»S%ÜÄ^ Ä »RÆ ¿Y4 %fEÄ% Ä»Ä  
¿ö»T%Q¿ÖÍñŠÄÈEÄD»Ä^ % ÍÛ»RÄTÄÖÇÄÑ†D"Ø Ä\ %ÄD=ÄRÇÄÑ†ÍñŠ»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	ÀÓÙ ÐÏ çÏ ÌÑŠÀÏÈÈÀÏ ¼P ÌÁÁÖ IDE ÌŠÖÈÈÈÖÀ»RÀÏ ÀfÈvÐ, (Size)»SÖÈÈÏ ÖÏ(Cylinder)»SÖÈÛj ÖÏ(Head)»SÖŠÖàÛ% (pre-compensation) ÀÖÈpÁ) Cylinder Çà»SÖÈÛj ç ÈÁÈÈé(Landing Zone) ÀÖ Cylinder Çà»SÖÈÈÈÖà (Sector) Ìç»TÑ È'È_ÈÈÖàÇà ÌÑÈ Auto Èà»RBIOS ÑÑÀŠÀÏÈÈÈ À Ð"Ø ÀÖÁÖÏ ÖÏ (POST) Èà»RÀÖÈÈÈÖÏ ÌŠÖÏÖÈÖÈØ ÀÖ Type»RÁÝÀS Standard BIOS Setup ¼¼ByçöçÏ ÁÏ»TÇj ÈÖÏ ¼¼Á ÌŠÖÈÈÖÏ type ÀÈÑbÀÖÀ ÌÑŠ ÈÈÖàÇà»R×ÈÌÑÈUser»TÀfÁXÁÏÈÁÝçÖÈÏÌÁÏSÀ»ÖÈÖÈØ »R×ÈÈ_Type ÌÑÈ None»T
User	
None	
1	
2	
...	
45	

IDE CDROM Í½È ÀÖÈÈÈÖÏ ÀÖ»T



Ì½çö: È' çz Áb çè çÛ Ìv ÇÈÄÖ "IDE HDD Auto Detection" Û ÐÏÁÏÀÖÈÈÈÖÏ ÁÏÀŠÖàÄÖ IDE ÌŠÖÈÏÈ 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	ÀÈçÈ Logical Block Address (LBA) ÖÏÀ»ÐáÈvØ Èàç¼P ÌÁÐh Ó] 528MB ÀÖÏŠÖÈ»TçöÁvçÁÏ ¼¼hÀÖDE ÌŠÖÈ¼¼ÁyÁÏà LBA ÐáÈvÖÏÀ»RÁpÛ<À†ÈvÐ,Á»ÐhÓ] 528MB»TÀfÁXÁÈçÈÀÖÏŠÖÈ¼¼ ÍbÈ À»¼¼ÈLBA On »RÏ_¼¼ÈçÈLBA Off ÀÖ¼¼ À»ÁÏÈÏÈà»T
Normal	
LBA	
Large	

# 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, ÇiÙ ÐĪ çzèĀi ù ØøÍ€0èĀŌY ĀÆ»R ×èĪŌEā% ĀgŪpĀø Drive A Āè  
Drive B ÍS»RĀ █████ Āè █████ ù ØøŌaÍ€Ā»ŌèØ ÆŌĪBĀŌEèŌaĀj  
ç»RĀpĪnĀSÇāĀfçĀ»T

## Standard CMOS à Video

### Video

EGA/VGA  
CGA40  
CGA80  
Mono

ĀŌŪ ÐĪ çzĪnĀS Āi Āé çè ĀŌBý çö çu ĀÆŌR »R Èè Ōa ŌS ĪnÇā Æ  
VGA/EGA»T çèĀ çðĀvĀŌÇi%YŌ„Ō¼ĀæĀq¼ĀŌĪhÈ ÆVGA»RĀi  
çYÍ, ÇiÙ ÐĪĪi çXĀdĀÍ%ĒŌ çèĪS»T

## Standard CMOS à Halt On

### Halt On

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

ĀŌŪ ÐĪ çzĒĒĀ ĀĪĪèĒ Ā ĀøĀŌĪ Ōi (POST) Èā»R ĀfĒŌĪ Ā ù Ō•  
Æ ĀpÇĒĒ% ŌSĀQ»TĒèŌaŌSĪnÇāÆĀ All Errors»RĀ çðĀĪĪèç`ÇĒĒŌ  
Ī Ā ù Ō•ĀĀf»RĀj NĒĒ% ŌSĀQ»T



# AWARD BIOS

## BIOS Features à External Cache

<b>External Cache</b>	ÀÓÙ ÐÌ ¿Í ÑŠÀÏÈÀÉ¿ÈÏ%XD¿ÁðÀ È`ØeB (¿òÁvÆPBSRAM
Enabled	ÁðÀ È`ØeB )»R¿Y¿IÁðÓ„0%ÁÓÈ À ÈÏ%TÀ È ÍÑŠÑÏ ÒTÀÏÈ
Disabled	ÀÓÏ¿Áñ»RÁi ¿YÁðBÏÈ`È`ÈèÒàÍñÆ Enable»RÈ%ÁUÁÏÈÏ, ¿ç%ÁÇ
	ÁŠÁÓÁÆf%ÍñÆ Disable»T

## BIOS Features à Power-On Self-Test

<b>Quick Power-on Self-test</b>	ÀÓÙ ÐÌ ¿ò ¿Í ÑŠÀÏÈÈ Ò ]Æ ÁáÏ Òi ÐÌ ¿ò»R¿Y¿IÁðÀðÁóÏ Òi
Enable	(POST) ÁÓÏ`Áá»TÈèÒaÓŠÍñÇaÆ Enabled»T
Disabled	

## BIOS Features à Boot Sequence

<b>Boot Sequence</b>	ÀÓÙ ÐÌ ¿Á ÁŠÀÏÈÈÐ"Ø ÈaÁÒÑÏÏ ^ ÐÐÁa»TÏŠÒeÁÓÝeÁ` ×i (ID) Àf
A,C,SCSI	%f Ái ¿ò»X
C,A,SCSI	C: Primary master
C,CDROM,A	D: Primary slave
CDROM,C,A	E: Secondary master
D,A,SCSI	F: Secondary slave
E,A,SCSI	LS: LS120
F,A,SCSI	Zip: IOMEGA ZIP Drive
SCSI,A,C	
SCSI,C,A	
C only	
LS/ZIP,C	

## BIOS Features à Swap Floppy Drive

<b>Swap Floppy Drive</b>	ÀÓÙ ÐÌ ¿¿Y%ÏÍÁÍÈÀ»ØeØeØ ÀÒÀ Ò~»TÁiÁf»RCj ÁÍÁü¿ÍÈÀ»Øe
Enabled	ØeØ (A»RB) »RÈ` ¿¿YÁ ÁŠÏ%Q¿¿ÆÈØeØeØ B»RÏP%X¿¿ÆÈØeØe
Disabled	Ø A»T

## BIOS Features à Boot-up NumLock Status





# AWARD BIOS

## BIOS Features à Video BIOS Shadow

<b>Video BIOS Shadow</b>	Ài Ûñ VGA BIOS Shadow Æ È ÒyçöçuÄÖBIOS Ò Èà×aõ†Às
Enabled	DRAM È` Øeß %RçççIÁðÄñÈÄÖÈ À ÈPÌ%RÄñÈ DRAM ÄÖ
Disabled	À†Ä Í†Äñ% ROM ÚóÄð»TÈÈÖaÍñŠÇaÆEnabled»T

- 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

<b>C800-CBFF Shadow</b>	Í, ÄáÀ Á" Æ È` Øeß Ä` ÈuÍÓÜi ççççuÄéçèÄÖ»TÀfÄXÙ Øö
Enabled	Enabled»RÄñÈÈÑ`È_Üi ççççuÄÖROM Code ×aõ†%Qç Ä çUE`
Disabled	Øeß (DRAM) ÈéÈ %RÄÓÄøÍ_ÖóÆÈShadow»RççççWÄ Ò Áð
	ÄÖÍŠÌ' Í†ÄñTÇJ È' %Ä^ Ñ»Üi ççççROM Code ÄÖÄ Ä"Ò Èa»R
	çÈ ÈeÖaÍñÆ Enabled»R% Ò ÈúÄ` ÝiÓ Æ^ Ä ÄiÄÍÄÖOM
	Code»RÄ È Ð` È` Øeß »T



ÄqÑ\_ : F000 Ä^ E000 Ä Ä"Æ È^Ä Ä` ÈuÍÓ BIOS  
Code Ó Æ%Äçè»T

# AWARD BIOS

## 3.4 Chipset Features Setup

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

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

Auto Configuration: Enabled	AGP Aperture Size (MB) :64
DRAM Speed Selection :60 ns	***** Jumpless Setup *****
MA Wait State :Slow	System Frequency Default: Mhz
EDO RAS# To CAS# Delay :2	CPU Clock Frequency :66.8 Mhz
EDO RAS# Precharge Time :3	CPU Clock Ratio :3.5
EDO DRAM Read Burst :x222	
EDO DRAM Write Burst :x222	
SDRAM(CAS Lat/RAS-to-CAS):2/2	
SDRAM RAS Precharge Time :2T	
DRAM Loading :Normal	
DRAM ECC Function :Disabled	
CPU-to-PCI IDE Posting :Enabled	
Video BIOS Cacheable :Disabled	
Video RAM Cacheable :Enabled	
8-bit I/O Recovery Time :4	ESC: Quit á à à ß : Select Item
16-bit I/O Recovery Time :1	F1 : Help PU/PD/+/- : Modify
Memory Hole At 15M-16M :Disabled	F5 : Old Values (Shift) F2 : Color
Passive Release :Disabled	F6 : Load Setup Defaults
Delayed Transaction :Disabled	F7 : Load Turbo Defaults



ÅqÑ : ÅsÁ Böz À ÍnÅŠÅv»R×è×eÅŠÈ'Æ ÅpÓ Í, Åá  
 ĐÍ çòÅÖÍnÅŠÅÓç ÛRÒè»RÅpÅy%44ØRÑ ÅÖÍnÅŠÈ'Å ]Å|  
 Î%ãÌèÅÖÈ À Í†Åñ»R%eÇaÑ"0%BeÅ†ÌèÅÖÝÇÅŠÅ»T

# AWARD BIOS

## Chipset Features à Auto Configuration

<b>Auto Configuration</b>	ÍnÃSÁÓÙ ÐÌ»RÁÍÈÑÁæ00 CPU ÄÔ Type Ä^ Timing Äi ÇÄ
Enabled	Ñ†×i Øý DRAM Ä^ Cache ÄÖÇá»TÄfÄXÑb ÇEÄö %ÍnÃS
Disabled	DRAM Timing»R×ê¿ Ä È ÄÓÐÍÍnÃS»T

## Chipset Features à DRAM Speed Selection

<b>DRAM Speed Selection</b>	ÄÓÙ ÐÌ¿¿ÍnÃS DRAM timing ÄÈ 50ns Äè 60ns»T
50 ns	
60 ns	

## Chipset Features à MA Wait State

<b>MA Wait State</b>	Èi ¿èÄèÄ È %QÇiMA (DRAM memory address) Ì¿Ä÷ÄÈ
Slow	ÔR»TÔSÍnÃÓÍnÃSÄ Slow»RÄfÄXÇÈ ÄöÇÄ (chip ÖàÐ„Ö Äy)
Fast	Äè DRAM Í†ÄnÖ ÔTÄÖÖ»R¿¿ÍnÃÈ Fast»T

## Chipset Features à EDO RAS# to CAS# Delay

<b>EDO RAS# to CAS# Delay</b>	¿èÄíÍnÃS RAS (row address strobe) Öa CAS (column address strobe) ÈeÖÖÐ»ÄÖÍ¿Ä÷ÄÈÖR»T
2	
3	

## Chipset Features à EDO RAS# Precharge Time

<b>EDO RAS# Precharge Time</b>	¿èÄíÍnÃS EDO RAS ÈeÖÖÄÖ Precharge Èäd» (¿Y clock Çf Öà)»IPrecharge ÄÈ RAS BÄÖxÈäAQÄvÄÖÑáÍaÈäd»»T
3	
4	

# AWARD BIOS

## Chipset Features à EDO DRAM Read Burst

<p><b>EDO DRAM Read Burst</b></p> <p>x333</p> <p>x222</p>	<p>Read Burst ÀÒÑ_ÀpÆ CPU BÄÄ ò ÈaÈa»Rj`Èvzi %QÇiÀ Á`Èe00»RA DRAM È0060ŠÄŠÄ0À Á`ÀgCPU Èvzi 4 ÇiÍ† p`À0È`0eß ò Èa»T0ŠÍnÇaÆx222»RÆ Á ÌÐ»SÍß»R%èÌP 4 ÇiÈ`0eß ò Èa0÷Èa 2 clock»R0Rj`èÄ Í†ÄnÆ 60ns Ä0 EDO DRAM»Tx Ä0ÇaÄ Á^ Á ÌP%QÇimemory cycle Ä0Èa Ð»»T</p>
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## Chipset Features à EDO DRAM Write Burst

<p><b>EDO DRAM Write Burst</b></p> <p>x333</p> <p>x222</p>	<p>Write Burst ÀÒÑ_ÀpÆ CPU È0060ŠÄŠÄ0À Á`0xzi 4 ÇiÍ† p`À0È`0eß ò Èa»RA ç`Èvzi ÌP%QÇiÀ Á`ÍÐRAM»T0ŠÍn ÇaÆ x222»RÆ Á ÌÐ»SÍß»R%èÌP4 ÇiÈ`0eß ò Èa0÷Èa2 clock»R0Rj`èÄ Í†ÄnÆ 60ns Ä0 EDO DRAM»Tx Ä0ÇaÄ Á^ Á ÌP%QÇimemory cycle Ä0ÈaÐ»»T</p>
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## Chipset Features à SDRAM(CAS Lat/RAS-to-CAS)

<p><b>SDRAM(CAS Lat/RAS-to-CAS)</b></p> <p>2/2</p> <p>3/3</p>	<p>À0Ù ÐÍçzímŠ SDRAM CAS Latency Á^RAS 0 CAS Ä0 ÌjÁ÷ÈaÐ»»TÍ, ÁáÍmŠÇaçz0%Be SDRAM Ä0È À ÄÄÈP»R0Š ÍnÇaÆ 2 clocks»RÀfÄXÄŠ0aÄu»BDRAMÄÍ%ÆÈvÄ0È» Áe»R×eÈ_2/2 Á Æ 3/3»T</p>
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## Chipset Features à SDRAM RAS Precharge Time

<p><b>SDRAM RAS Prechatge Time</b></p> <p>2T</p> <p>3T</p>	<p>ç`èÄí ÍmŠ SDRAM RAS Èe00Ä0 Precharge ÈaÐ» (çY ÇaÆ Çf0a)»IPrecharge Æ RAS BÄ0xÈaAQAvÄ0NÁÍaÈa Ð»»R0ŠÍnÇaÆ 3 clocks»T</p>
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# AWARD BIOS

## Chipset Features à DRAM Loading

<b>DRAM Loading</b> Normal Heavy	Ń Ę'İ, İ' ĀĦĕ%4# ĀóYÇĀŠĀŌĒĀÇİ»R×ēŪāĦı%Q%DRAM ĀŌ chip Ōā»TÇj chip Ōā%Ā 64»R×ēĒ_İ, ÇİŪ ĐĪİnĒĒHeavy»T
----------------------------------------	-------------------------------------------------------------------------------------------------------



İ½ö: 64 ĵ^Ē %QÇİ ĒĒĀİ Çā»RĀİĒĒĵ^ÇĒĒ' ĐĒĒ, chip  
Ōā%Ā ĀyĒā»RĪ\_ĵzĵŌİİŌĀŪİ, ÇİŪ ĐĪİnĒĒ Heavy»T

## Chipset Features à DRAM ECC Function

<b>DRAM ECC Function</b> Enabled Disabled	ĵĒĀİ Ēİ ĵĒĒĒ Ē Ē DRAM ECC ĵĦŪ»T
-------------------------------------------------	---------------------------------

## Chipset Features à CPU-to-PCI IDE Posting

<b>CPU-to-PCI IDE Posting</b> Enabled Disabled	ĵĒĀİ Ēİ ĵĒĒĀ Ē Ē CPU Ā PCI IDE ĀŌ×Š×ĐĒĒ (FIFO buffer)»TCPU ŌxĀö IDE ĀŌŌ ĒāNĵ ĀĦĀsĀŌ FIFO %Ō»RĀR ĀāĀĀŌx%Ĥ HDD»TĀĦĀXĒ'İ, İ' ĵ Ā %4#ĒĒĒĒĀŌİ'ĐY»RĵzĵYŌŪ Ōİ'Y ĒŌĀŌĵĦŪ»T
------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Chipset Features à Video BIOS Cacheable

<b>Video BIOS Cacheable</b> Enabled Disabled	ĀŌŪ ĐĪĵB Ō%Ōİ BIOS Ā×ĒİĒ,,ĀđĀ Ē`ŌēB Ēİ Ēā»RĵĪİĦĪĦ İĒĀŌĒ Ā İĦĀñ»T
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## Chipset Features à Video RAM Cacheable

<b>Video RAM Cacheable</b> Enabled Disabled	İ, ÇİŪ ĐĪĵzĵĒĀİĀđĀ Video RAM A000 Ōā B000»T
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# AWARD BIOS

## Chipset Features à 8 Bit I/O Recovery Time

<u>8 Bit I/O Recovery Time</u>	
1	ÀÍ%QÁa0 ÜÜÄÖ/O ÎÓ% »RÀsÈ À ÁÓ%QÇ1/O Ācç` Āu»RŌ÷Ç€ %QÇiĪpÇ ÈaD»»R% ÉúĀRP•P È À %f%QÇ/O Ācç` »TçÈĀ çòĀvĀŌ CPU Ā^ĪŌ% ĪiĪ'Ē_ /O ĀŌĪSĪ`ĪĪñçĪĀŌ»RĀeĒ,Ī, ĀaÜÜĀĀŌ ISA ĪñāŌ÷Ç€çĪĀŌĪpÇ ÈaD»»TĀŌŪ ĐĪçzB È`Ā ĀŠÑ ISA çuĀĒ 8-bit Èa»R/O Ācç` ĀoŪĪĪŌĀĪĪeĀiŌ÷Ç€ĀŌĪp Ç ÈaD»»TĀfĀXĒ`Ī,Ī'ĀiĀŠŌaĀŌ16-bit ISA çuĀĪ%ĀĒEvĀŌ Ē»Āe»RçzŌiĪŌĀĪĀ /O ĪpÇ ÈaD»»TBIOS ŌŠĪñçĀĀĒ 4 ISA clocks»TĀfĀXĒ_ĒeŌaçĀĪñĒĒENA Èa»RĪŌ% Īiñ'ĀŌÈaŪ % 3.5 ĀŌĀĪĪeÈaĒ»T
2	
3	
4	
5	
6	
7	
8	
NA	

## Chipset Features à 16 Bit I/O Recovery Time

<u>16 Bit I/O Recovery Time</u>	
1	ĀŌŪ ĐĪçzĪñŠ ISA çuĀĒ16-bit Èa»R/O Ācç` ĀoŪĪĪŌĀĪĪe ĀiŌ÷Ç€ĀŌĪpÇ ÈaD»»TĀfĀXĒ`Ī,Ī'ĀiĀŠŌaĀŌ16-bit ISA çu ĀĪ%ĀĒEvĀŌĒ»Āe»RçzŌiĪŌĀĪĀ /O ĪpÇ ÈaD»»TBIOS ŌŠĪñ çĀĀĒ 1 ISA clocks»TĀfĀXĒ_ĒeŌaçĀĪñĒĒENA Èa»RĪŌ% Īiñ' ĀŌÈaŪ % 3.5 ĀŌĀĪĪeÈaĒ»T
2	
3	
4	
NA	

## Chipset Features à Memory Hole At 15M-16M

<u>Memory Hole At 15M-16M</u>	
Enabled	ĀŌŪ ĐĪçzĀ` ÉuĀĪĒ`ŌeB ÈeĒ ĪŌĀ ĀŠĀŌ ISA çuĀĒçè»RçYŪñ Ā`Ē`ŌeB ĀŌ»P»TĪŌ% ĪiçzĒ,,ĀŌĒeĒ ĒĪĀĀ×ĒĪçĒ ISA bus ĐaŪ ŌĪĀĪĀŌŌ ÈaĀ^Ōe×i »TĪ,,Ēq»RĀŌĒeĒ Ē`Ā`ÉuĪŌŌ çu Ō`Ē`Āéçè»T
Disabled	

# AWARD BIOS

## Chipset Features à Passive Release

<b>Passive Release</b> Enabled Disabled	ÀÓÙ ÐĪçz È' ÈÈÀ PIIx4 ÎÓ% Īi (Intel PCI to ISA) ÀÓ ĪbÈàÐáÓÓçnú»TÀÓçnúÈ ĪbÁéçèÀsÀĪèó(Ī ISA çUDñÈà ÆÈ½çĀĪÛ »TÀfĀXÈ' ÀÓ ISA çuĀĪ¼¼ÈÈVĀÓÈ»Áè»RççYÓÛ ÒiçyĪñĀŠĀÈ È »T
-----------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------

## Chipset Features à Delayed Transaction

<b>Delayed Transaction</b> Enabled Disabled	ÀÓÙ ÐĪçz È' ÈÈÀ PIIx4 ÎÓ% Īi (Intel PCI to ISA bridge) ÀÓĀĪÛ ç Ā çnú»TçèĀ PCIĀÓÛ ÈàÐáÛ Ñ% ISA bus Áð»R ĀfĀXÈ' ÀÓ ISA çuĀĪ¼¼ÈÈVĀÓÈ»Áè»RççYĪñĀŠĀÓçnúß PCIĀÓÐáÛ Ò ÈàĪÛ »T
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## Chipset Features à AGP Aperture Size (MB)

<b>AGP Aperture Size (MB)</b> 4 8 16 32 64 128 256	Ī, ÇĪÐĪççèĀĪĀ^ ĀŠAGP Ò ÈàÐáÓÓÈéÈ ĀÓ¼¼»T
-------------------------------------------------------------------------	-----------------------------------------

## Chipset Features à Pentium II microcodes

<b>Pentium II microcodes</b> Enabled Disabled	ÀÓ microcode Æ çèĀĪÇñçÛCPU ĀÓ bug»RÈ(ÈaĀðPĪÈ' Û 0ö Enabled»T¼¼) Çj È' ÁàÈ ĀĪ Ò ÈĀĀÓĪĪñ»RççYĀi Ò' Û 0ö Disabled»T
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# AWARD BIOS

## Power Management à PM Controlled by APM

<b>PM Controlled by</b> <b>APM</b> Yes No	ÀfÁXÙ Øö "Max Saving"»RĪ_çzYB Âĭĕ³pĪĀDzçÚ„Ñ×0ø Ī' (APM) çġú»RçĪĒ(Æó„0øĪ' çġú»TĀiÀf»XĒĒ% CPU %0 Ī»ĒäĒuÓSÁQ»T
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## Power Management à Video Off After

<b>Video Off After</b> N/A Doze Standby Suspend	ÀÓÙ DĪçzĪġĪŠBççö00ÑĀsÀ 0øÆó„0iÀ»%çÝ ĪÆYÓ »T
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## Power Management à Doze Mode

<b>Doze Mode</b> Disabled 1 Min 2 Min 4 Min 8 Min 12 Min 20 Min 30 Min 40 Min 1 Hour	ÀÓÙ DĪçzB Ē ĪġĪŠĀĭĒeDz%0eÉ%0iÀ»Ä0ĒäD»TĀsÀ00iÀ» %ç »ICPU Ä0ÓSÁQĒäĒuÑBó0T»TçĒĀ ÂĭĒeÆ ĀsĪ„Ó„ÄÆ0R %ç»RĀiçYE0Ī Ā ç Ā ĒäAQĒä»RĪ'Ä'çúÁj Ā ĪpĀ çÜĒqÄ0R %ç »TĀĭĒeÆ Üáçĕ0äĭ ĪRQ Ēe00ĀiĒ0Ī Æ»Ēä»T
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# AWARD BIOS

## Power Management à Power Button Override

<b>Power Button Override</b> Enabled Disabled	Í, Æ ACPI %ÄÖÍhÈ %Á%Q»TN Ù 0Enabled Èa»RÁv% ÇÈ Á` %hÄÖsoft power switch ¿¿Y¿eÁiÈÈÄ Ä¿ìeD"0 »SÖaÈÈ (Suspend) ÄèÝ 0 »T ÀsD"0 ÄÖÄÄÖR%Ä »RCj Á %Äswitch»R ¿SÈäD»%ÄÄ 4 Æ »RÄ¿ìeÄ\N"D%Ä Suspend ÖiÀ»»WÇj Á %Ä ÄÖÈäD»DhÓ] 4 Æ »R Ä¿ìeÄ\N"Y 0 »TÖŠÍnÄÖÄÄÖR%Ä Æ <b>Disabled»R</b> soft power switch ¿`Éú¿eÁiD"Y 0 »RÄdÄÍ Suspend»RÄi¿Y%ÄÄÄÍ 4 Æ PÜÄÖÇÇÄ »T
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## Power Management à RTC Wake Up Timer

<b>RTC Wake Up Timer</b> Enabled Disabled	RTC WakeUp Timer ¿¿YB È`Ä ÄŠ%QÇiÉdÄŠÄÖ% ÎÈä D»»RÄ¿ìeN"ÄsÍ, ÇiÈäD»ÄöÈäD"0 »T Í, Çi% ÎÜ /ÈäD»Æ Às" WakeUp Date (of Month)" %è "WakeUp Time (hh:mm:ss)" Ù DÍ%Ä ÄŠÄÖ»T
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## Power Management à WakeUp Date (of Month)

<b>WakeUp Date (of Month)</b> 0 1 ..... 31	È¿Äi "RTC WakeUp Timer" Ù DÍÄé¿è»R¿eÄiÄ ÄŠÄTÇi% %ÄÖÈä¿ %Q%è»TÄiÀ¿15 Î¿_¿_Ä ÄTÇi% ÄÖÄÖ5 ÖÖ»RÄnÈ 0 Äy ¿_Ä ÄT%Q%è»T
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## Power Management à WakeUp Time (hh:mm:ss)

<b>WakeUp Time (hh:mm:ss)</b> hh:mm:ss	È¿Äi "RTC WakeUp Timer" Ù DÍÄé¿è»R¿eÄiÄ ÄŠÄöÈäD" 0 ÄÖÈäD»»TÄpÈ À»ÆÈhh:mm:ss»R×eÄqN_Äp%ÄÄfÈäÄÖÄ ¿ö %Ä À»ÆÈ 1 Ä 24»T
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# AWARD BIOS

## 3.6 PNP/PCI Configuration Setup

PNP/PCI Configuration Setup ıB È İmŞAİİe%ÄÖ ISA Ā^ PCI İnfā»TÄfĀXĀsıU  
 Û İ %Äİ Öö “PNP/PCI Configuration Setup” Đİıò»RĀj NĀsÜYÖ %ĀıBıçöĀf%ıvĈE»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 : Legacy ISA	Used MEM base addr : N/A
IRQ 4 assigned to : Legacy ISA	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 ā 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

<b>PnP OS Installed</b>	İ, Ęp RĀİİeAsÈ Ā POST Èā»RŪĖ İBĀi ÜYİ»Āj ç(PnP) ĀÖ
Yes	İnfāİ, ĀÖ BIOS»TÄfĀXĒ ĀeıçĀyĀİ PnP çmüĀÖAQŊ•Āİİe
No	(Āf Windows 95)»Rİ_ıçıYĒ_İ, Çİ Û ĐİİmEıes»BIOS İ_
	NĪmŞÜYİ»Āj çèĀÖçmüĀİ Èİ Èāİnfā»RĀf VGA/IDE Āe
	SCSI İıÜİ çcıu»T

# AWARD BIOS

## PNP/PCI Configuration à Resources Controlled By

<p><b>Resources Controlled by</b></p> <p>Auto</p> <p>Manual</p>	<p>È_ÀÓÙ ÐÍÍnÆ Manual»Rçzß ÁéçèÄæÆ ISA Á^ PCI ÍnÍà          %JÁ` Á ÁŠÁi Õ-ÀÔIRQ Á^ DAM»TÀfÁXÍnÆ Auto»RÍ_ÑÈi          ÈäÀöÈäÍnŠçnú»T</p>
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## PNP/PCI Configuration à Reset Configuration Data

<p><b>Reset Configuration Data</b></p> <p>Enabled</p> <p>Disabled</p>	<p>ÀfÁXÁi Á ÁŠÁÔIRQ ÁeÁÏèÇÁÑ†#ÔtÁuÍ, ççÆ×PÁÔÈ»Áe»R          Í_çÈ_ÀÓÙ ÐÍÍnÆ Enabled»RB ÁÏèÇÁÑ†#ÔtÁYÁ ÁŠÑ†          ÀÔ 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><b>IRQ 3</b></p> <p>Legacy ISA</p> <p>PCI/ISA PnP</p>	<p>ÀfÁXÈ`Ái ÁŠÔaÁÔISA çuÁdÁÍ PnP çnú»RÍ_Ô:ÇÈÁ ÁŠIRQ          Ái %pÍÁçÁÁÔçnú»TÍ, ÁáÙ ÐÍ çzß È`ÁæÁáÁ ÁŠ IRQ ÝÓ          Legacy ISA çuÁ^ PCI/ISA PnP çuÁéçè»TÑ È`Á ÁŠÆç %Q          IRQ Æ Legacy ISA Èä, ÁÏèÑÍ,,ÁØ PnP BIOS È_Ái ÍnÁÔ          IRQ Á` ÈuÝÓ%Š ÁŠ ÔaÁÔISA çuÁéçè»TÈè Ôa ÓŠ ÍnÇa Æ          PCI/ISA PnP»R×èÁçÑ_ÁÍÁáPCI çu (Ô ÚÚÁÆÁÔPCIçue½ç)          ÁY%ÁÔ:ÇÈÁéçè IRQ»RÍ_çZ` 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\_ÏÑËÏ "Used MEM Length" ÑÏ\_òÁéè»TÀfAX  
 È\_ÁiÀŠÒaÄ0ISA çuAdAÍ PnP çmú»RÍ\_çÏÑÁ ÁŠÈ`øeB  
 ÈvD,,Ái%pIÁ\_ÄÄ0çmú»RÁiÀÓÙ ÑÏ\_ÁyçÄ ÁŠÍbÁ`ÉuÄÖÈ`øe  
 B ÁBÐ»D"Á}A Á"»T

## PNP/PCI Configuration à Used MEM Length

Used MEM Length
8K
16K
32K
64K

ÀfAXÈ\_ÁiÀŠÒaÄ0ISA çuAdAÍ PnP çmú»RÍ\_çÏÑÁ ÁŠÈ`  
 øeB ÈvD,,Ái%pIÁ\_ÄÄ0çmú»TÀÓÙ ÑÏ\_çIÁŠÁi\_Ö\_çÈÈ`øeB  
 ÈvD,,»RÁYÍ,,Á0 PnP BIOS È\_È`øeB ÁBÐ»Á`ÉuÍÓÁiÀŠÒa  
 ISA çuÁéè»T

# AWARD BIOS

## 3.7 Load Setup Defaults

ÀÓÙ ðÏçè, BIOS ROM %D %IæAi ØRÄÖÍñŠÇa»T%QÉ ÁéçèÄæ×éAbçèÀÓÙ ðÏØ %QŠ ÍñÇa»RÍ, ÁaÓŠÍñÇaÑ'Ö%BeÄiÁÍÄÖ Setup ðÏçò»RÉ%WÖeÑaÄÖ CMOS ÍñŠ»TÁfAXÉ' ÄÖÄÍeÀŠÖað ÈÄÈvð,,ÄÖÈ` ØeB »RÁÍ Ûi çcÖè%ñ'»ÖÛi çççu»RÁóÇæÄoPÍÈ' ÁéçèÄÖðÍÍñ ŠS»T

ÀÓÙ ðÏÄÝ%Ä'Ä'È, È ÍæÀŠç ÄÖÄÍeÍñŠ»RÁi çYÇj ÄÍeÍ, çç%ÄÇÄŠÄÖÄÄf»RÈ' ççYçè %ÄÈÄÄÖ% Ä»Às "BIOS Features Setup" Ä^"Chipset Features Setup" Û ðÏ%RÍñŠ ò ÖTÄ^ ò ÝÇÄŠÄÖÍñŠ»T

## 3.8 Load Turbo Defaults

ÀÓÙ ðÏçð %ÄfÄ BIOS ROM %D ÈÄÈPì%ÄÖÖŠÍñÇa»TÍ, Áað %ÄÖÖŠÍñÇaÑ'Ö%BeÄi ÁÍÄÖ Setup ðÏçò»RÉ%WÖeÑaÄÖ CMOS ÍñŠçYç•»TÈÄÈPì%ÄÖÍñŠÇaÖ ÄÍeÄiÄçç Èú%È ÍæÄeÄÖÍñŠÇa»RÁfAXÉ'ÄÖÈ` ØeB Èvð,,%Ä%Ä»R%ÄdÁÍÄŠðaÄöÄyÛi çççu»RÍ\_çç çYÄiÖ' ÄÖðÍÍñŠ»T

È' %ççYçè%ÄÈÄÄÖ% Ä»Às "BIOS Features Setup" Ä^"Chipset Features Setup" Û ðÏ%ÄÍñŠÈeÖaÇa»RÄ ÄÍeÛ È, Á ÄeÄÖÈ Ä ÈPì%T%ÄÖ]È' Ççç ÜRðeÄiÁÍÄÖÙ ðÏçñú»R ÀñÈÈÄÍÍñŠÇaÄæÍÖ% ÌiÄ^ ÚÍçè×uÍ %Äa»RççZÍ'ÈÄ 3% Ä 10% ÄÖÈ Ä ÈPì%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

<b>IDE Primary Master PIO</b> Auto Mode 1 Mode 2 Mode 3 Mode 4	ÀÓÙ ÐĬçłĪŃŠÀŠòÀs IDE Í†ĒĪ00%ĤĀŌ IDE ĨŠ0eçYÀ Òò PIO ÒiÀ»ĀĪĐàÙ Ò Èà»TPIO ÒiÀ»çĶ ĀŠĨŠ0eĀŌ0 ÈàĐàÙ Ĩ†Ī%ŔĀĪĶ mode 0 ĀŌ0 ÈàĐàÙ 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»TĒĒ0aŌŠĪŕçĀĒĒ Auto »ŔĀĶĀXĀŌĪŃŠ ŃĀĒĨŠ0e%Ŕç»Rççç YĒ_ĐàÙ Ĩ%ç Y%ĪĒĒ% Ā»çĀŃ†xĪ0ç»T
-------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

 ĀqŃ : xēĒ\_Ē' ĀŌĪP%Qç< IDE ĨŠ0eĪ†ĒĪĀsPrimary IDE ĀŌ master Ī.,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

<b>IDE Primary Master UDMA</b> Auto Disabled	ĀĶĀXĀŠòÀsĀsIDE Í†ĒĪ00%ĤĀŌ IDE ĨŠ0eĀĪ%ŔĪĀ UDMA Òi Ā»»RççĒ_ĒĒ0aĪŃĒĒ Auto»RçççĒĒĒĒ Ultra DMA/33 ĒĀĪĐà Û ÒiÀ»»T
----------------------------------------------------	-------------------------------------------------------------------------------------------------------------

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

<b>On-Chip Primary PCI IDE</b> Enabled Disabled	ÀÓÙ ÐĬçłĪŃŠĀĒĒ È Ĩ†ĒĪĀs primary IDE Í†ĒĪ00%ĤĀŌ DE ĨŃĀ»T
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# AWARD BIOS

## Integrated Peripherals à Onboard Serial Port 1 Integrated Peripherals à Onboard Serial Port 2

<b>Onboard Serial Port 1</b>	ÀÓÙ ðĬ;ZÁ ĀŠ;UØ Ä`%41Ä0À ÀTÍ†ÈĪ00À Á"Á^%4Īp»T0ŠĪn
Auto	ÇãÆÊ Auto»T
3F8/IRQ4	
2F8/IRQ3	
3E8/IRQ4	
2E8/IRQ3	
Disabled	



ÄqÑ. : ÄfÄXË· ÄĪÄé;è0 0 ;u»R×eÄŠ%4ĪpÀ Á"Öa  
Äp;ÄÄ0ĪnĪàÄY%4Æ×D»T

## Integrated Peripherals à Onboard IR Controller

<b>Onboard IR Controller</b>	Ëi;èÄeÄ È %0ÄoÄ0Æ ;×^ËËÄ 00»T
Enabled	
Disabled	

## Integrated Peripherals à IR Address Selection

<b>IR Address Selection</b>	Í, ÇıÛ ðĬ;èÄıÛ 0ö IR ËËÄ 00Ä0À Á"»T
2E0H	
2E8H	
2F8H	
3E0H	
3E8H	
3F8H	

# AWARD BIOS

## Integrated Peripherals à IR Mode

<b>IR Mode</b>
ASKIR
IrDA

ÀÓÙ ðĪ ĵĵĲ YÁ ĀŠÀ ÀTĪ†ĒĪĒ (serial port2) ĀŌŌi Ā»TĪrDA  
 ĀŌŌeĒāzĵĵĲ HPSIR Ōa FIR»RWin95 %ĀŌŌi ĒāĪ' Ā»ĒĒŌŌ  
 %ĀāĀŌŌŌ% »RĀŌĒā%ŌĪĀ ĵŪ×eĀŌŌi Ā»»T

- **ASKIR** - ĀfĀXĀsŌ,Ō%ĀŌ via IrDA Ī†ĒĪŌŌ%Ī %ŠĀŠŌa%WE ĵ•×^ĒĪ ĀĒŌŌ (IrDA) »RĪ\_ĵĵĲ YĀéĵĵĲĒĀŌŪ ðĪ»TĪ, ŌŌĪĒŠĵĵĲĒāĒĒĀ ÀTĒeĒĀŌŌW56K ĀzĒd»T
- **HPSIR** - ĀfĀXĀsŌ,Ō%ĀŌ via IrDA Ī†ĒĪŌŌ%Ī %ŠĀŠŌa%WE ĵ•×^ĒĪ ĀĒŌŌ (IrDA) »RĪ\_ĵĵĲ YĀéĵĵĲĒĀŌŪ ðĪ»TĪ, ŌŌĪĒŠĵĵĲĒāĒĒĀ ÀTĒeĒĀŌŌW15K ĀzĒd»T
- **FIR** - ĀfĀXĀsŌ,Ō%ĀŌ via IrDA Ī†ĒĪŌŌ%Ī %ŠĀŠŌa%WE ĵ•×^ĒĪ ĀĒŌŌ (IrDA) »R Ī\_ĵĵĲ YĀéĵĵĲĒĀŌŪ ðĪ»TĪ, ŌŌĪĒŠĵĵĲĒāĒĒĀ ÀTĒeĒĀŌŌW 4M ĀzĒd»T

## Integrated Peripherals à IR IRQ Selection

<b>IR IRQ Selection</b>
3
4
10
11

Ī, ĴĪŪ ðĪ ĵĵĲ YÁ ĀŠ IR ĎāŪ Ē ĀŌ IRQ»T



ĀqŃ : ĀfĀXĒ' ĀĪĀéĵĵĲĒŌ Ō ĵu»R×ē×eĀŠ IRQ ĀdĀĪĒ  
 ×Ď»T

# AWARD BIOS

## Integrated Peripherals à FIR Mode Use DMA

<b>FIR Mode Use DMA</b>
Disabled
0
1
3

Í, ÇİÙ ĐĬŁŁYÁ ĀŠ Fast IR ĐáÙ Ê ĀŌ DMA Í,ÓU»T



ĂqÑ : ĂfĂXĒ·ĂÍĂéŁèÇĬĒĐŁu»R×ê×eĂŠ IRQ ĀdĂÍĤ  
×Đ»T

## Integrated Peripherals à Onboard Parallel Port

<b>Onboard Parallel Port</b>
3BC/IRQ7
378/IRQ7
278/IRQ7
Disabled

Í, ÇİÙ ĐĬŁŁYĒĒĂ ¼ŌĂoŁÇĂ Ê ĀŌĂ Á"Ōa¼Ĭp»T



ĂqÑ : ĂfĂXĒ·ĂÍĂéŁèĂýŁÇĂ Ê ĀŌ L/O Łu»R×ê×eĂŠĂp  
À Á"Ōa IRQ ĀdĂÍĤ×Đ»T

## Integrated Peripherals à Parallel Port Mode

<b>Parallel Port Mode</b>
SPP
EPP
ECP
ECP + EPP

ĂŌĐĬŁŁŁB Ê Ā ĀŠĂYĂTĒ ŁYĂ ŌđŌĂQŌiĂ»ĂiĐáÙ Ō Êa»T  
ÊēŌaŌSĬnÇĂĒ Normal , ¼nĬ\_Ē SPP (Stand Parallel  
Port) ŌiĂ»RĒĒ IBM AT Ā^ PS/2 ĒĒĒŌiĂ»RŁ¼ŌĬĂYĂT  
Ê ĀsĬ ĀgŌiĂ»¼f ŁYŁŪĒqĬĬĂnŌĂQ»EPP (Enhanced  
Parallel Port) ŌiĂ»R¼ŌĬĂYĂTĒ ĀsŪ ĀgŌiĂ»¼f ŁY  
Ĭa¼ĬĬĂnŌĂQ»TECP (Extended Parallel Port) Ōi  
Ă»R¼ ĬaĒĬĬĂnĂ ĀđĂŌŪ ĀgĂYĂTĒ ŌĂQ»RĒ ŁĒMA Ā^  
RLE (Run Length Encoded) ŪĬj Ā^ ŌēŪĬj ĀŌ¼ Ā»ĂiĐáÙ  
Ō Êa»T



# AWARD BIOS

## 3.13 Load EEPROM Default

È¼¼W"Load Setup Default" Ōa "Load Turbo Default" %Á¿•»RÈ' %¼¼YÈ\_Àó%ÁŌIÑŠ ÇàÀ†¼ EEPROM %¼¼RÄYÁb¿èÀŌÙ ĐÍÇÄÑ†Ō %¼¼T

## 3.14 Save EEPROM Default

ÀŌÙ ĐÍ¿È\_È'Àó%ÁŌIÑŠÇàÀ†¼ EEPROM %¼¼R¼ ÄuÇJ CMOS Ō ÈàÙ ¿¼ÄeÈ'ÄeËŌ ÄfÀ Ç ¿ ÍÑŠÈà»R¿¿üá¿¼¼Ç'ÄŌ "Load EEPROM DEFAULT" ÇÄÑ†Ō %¼¼T

## 3.15 Exit without Saving

Ü Đ" Setup %¼¼¿èÍ'À»»RÀ %¼¼ÑÚ<À†Á Á Ō¼ÄŌ CMOS Çà»TÀfÄXÈ'ÇÈÙ<À†Ñ†ÄŌIÑŠ Çà»R×è¼¼ÇÈÄ¿èÀŌÙ ĐÍ»T

## 3.16 NCR SCSI BIOS and Drivers

NCR 53C810 SCSI BIOS %¼¼ŌàÈŌÈÀsÀóÀàÄŌÄŌÈ'È'ŌeB ÍŌ¼¼¼¼RÑ ÄÄÄ†IèBIOS Äé¿ŌTÇÈÄ¿èÄ'¼¼ÄŌNCR BIOS»È'¿IDÑ¿ ÄsÄ†Iè¼¼RÄSŌa¼¼¼¼NCR 53C810 SCSI ÈÈÄ ¿u»T

ÄiÄIÄSŌaÄ Ä†Iè¼¼ÄŌ SCSI Íñà»RÍ¼¼E Ō=ÇÈÍÈB Bi ÈäÍ'À»»NCR SCSI BIOS ¿¼× ÈÍÄs DOS %¼¼¼¼IÄ SCSI ÍŠÀ»ŌeŌeŌ »RWindows %¼¼ OS/2»T¼¼¼¼YÁb¿è NCR 53C810 SCSI ÈÈÄ ¿uÄiÄ ÄŌIÈÄ»ŌeŌeŌ Bi ÈäÍ'À»»R¿YDOS È À»¼¼ SCO UNIX È À»ÄiÄé¿èÍÈÄ»ŌeŌeŌ »IDOS È À»ÄŌBi ÈäÍ'À»¼¼ÄÄ SCSI Íñà»RÈ'¿¼¼Y¿èÄs DOS»R Windows NT»RNovell NetWare %¼¼ OS/2»TÄi SCO UNIX È À»ÄŌBi ÈäÍ'À»¼¼ÄÄ SCSI Íñà»R¿¼¼èÄ SCO UNIX»TÍ, ÄaBi ÈäÍ'À»¼¼ ¿èÄ×ÈI BIOS Äi¼¼IÄÄŌÈÈÈÙŌÈÈÄ»T

ÇÈÄ¿èBi ÈäÍ'À»»RÈ'¿IDÑÈ\_Í, ÄaÍ'À»ÄSŌaÄ Ä†IèIŠÀ»ŌeŌeŌ %¼¼¼¼RÄY¿SÈ\_¼¼¼¼IÄ È' ÄŌÄ†IèIÑŠÜa¼¼¼¼TÄŌÄ ŌiÍiÄSŌa¼¼ Ä|»R×èÈ-Í, ÄaBi ÈäÍ'À»ÄiÄ ÄŌ README ÜaÈñ %¼¼ÄŌŌ»Ä »T

# AWARD BIOS

## 3.17 BIOS Flash Utility

YÁOÁO UØ Á Í½E ÈBIOS Á Às%QÔo0oÆEPROM ÁOÈ`ØeB %RÑ Ò=Ç€Á Ñ†BIOS  
ÁOÈaÇi»R¿iDNÁe¿èÀ EPROM Û\_Û ØØ»RÁi¿Y%QÉ Áe¿èÀaYÍ]Á|ÁoÀ Á ÑBIOS»T  
ÁiÑ†%Q¿\_ÁO¿UØ Á`%SÍ%Q¿Á ¿Flash ROM ÁiÛ<Á† BIOS»RÁpÛ`ÚZAsÁ Áe¿èÀæ¿^Ç€  
Í'Ó] %ÁyÍ'Á»»RÁ\¿ZÁoÀ Á Ñ†Ñ†ÁÁÁO BIOS»RÁUÈq%Á\»T

Á Ñ† BIOS ÁO¿oÁOAsÁ Í½ÁeÑ†ÁO¿mú»RÁe%pÍÁ%QÁ¿ÁÇÈ%hÑ†ÈÛ¿i ÁOÍŠB »TÈ¿ZÁe  
¿è BIOS Û\_Û Í'Á»ÁiÁ Ñ† BIOS ÁOÁÁ¿O»RÇ€Á È, ÍaÑ†ÁO BIOS ÚaÈñOaÛ\_Û Í'Á»»R  
×eÆ/ÙÈ' ÁOØx0aÈi»RÁeÀa%v¿YD¿/ÁoÇaaÁOØ ÈØ (<http://www.aopen.com.tw>) %  
Ø (download)»TÛ\_Û Áv×e×eÁŠÈ' ÁiÁ È, ÁOBIOS ÚaÈñE ¿Û×eÁOÁÁ¿O»R%QÉ ÁiØ»»R  
È¿¿YÈ, ÚaÈñÁh0oÁiÁaÛp»TÁiÀp>X¿j ÚaÁhÆP5TR110.BIN»RÍ\_¿\_Á Í, ÆAP5T ¿U  
Ø Á`ÁOBIOS»RÁpÁÁ¿OÆ 1.10»T

Áo ÇæÀQ Í½Áe %WÁü Çi %Áy Í' Á» »XCHECKSUM.EXE %è AOpen Û\_Û Í' Á»  
AOFLASH.EXE»TÁe¿è%Á|×eÈÈÀi¿Y%Á ÁOÁSa[»X

[CHECKSUM.EXE]

Í, Çi %ÁyÍ' Á»¿¿YÚÈÈ' ×eØ' %F Ø ÁO BIOS ÚaÈñ chechsum Æ Áp¿Û×e»T

- ×eÈ À CHECKSUM Biosfile.bin  
Biosfile.bin Á ÁOÆ BIOS ÚaÈñÁOÁh0o(Áf AP5TR110.BIN)»T
- Í' Á»ÑBý¿ö "Checksum is ssss"»T
- ×e% Ø Ç %ÁXÀsAOpen Ø ÈOÁè BBS %hÁOchecksum "sss"»RÆ:Æ:Æ Áp¿Û×e»T  
ÁfÁX%¿Û×eÁOØo»R×e%BE À Û\_Û ÁOÈeÁQ»RÁYÇÁÑ†%F Ø %QÁO»T

[AOFLASH.EXE]

È À CHECKSUM Í]Ø•Áo»RÁ\¿¿YÁe¿èAOFLASH.EXE ÁiÛ\_Û Ñ†ÁÁÁO BIOS %Wt  
Í, ÇiÛ\_Û Í' Á»Ñ¿ ÚaÁi¿UØ Á`%e Super/Ultra I/O IC ÁOÁHØO»R¿Y×eÁ BIOS ÚaÈñE  
¿Û×eÁO»T×eÁqÑ\_»XÛ\_Û ÁOÁÁÁu»RÇBIOS È\_Ñ†bÛeØmØ»T

- ¿è A ØeØe¿Y DOS Ð"Ø % Ð"Ø »RÁY¿S×e%BE À Áf ØoÈ` ØeB ØoÍ' Í' Á» (Áf  
HIMEM»SEMM386»SQEMM386, ...)»T
- ×eÈ À AOFLASH Biosfile.bin  
Biosfile.bin Á ÁOÆ BIOS ÚaÈñÁOÁh0o(Áf AP5TR110.BIN)»T

# AWARD BIOS

3. ÀsÒ ¼Ñ†ÃÔ BIOS ÚãËñÃú»RÏ' À»ÑÊ÷Ê' Æ ÁpÇÈË\_ÜÜÄÄÄÔ BIOS À†Ã ÔéÔé¾¾R×é Û Øö "Y" È\_ÀpÀ†Æ "BIOS.OLD"»T
4. Ú<À†ÜÜÄÄ BIOS ÁÓÏÄÄú»R×éÄ ¼f"Y" Ð"Ä}ÐzÀ Û\_Û »T
5. ÀsÛ\_Û ÓÏÏ' ¾¾RÛÝÓ Ñ"Byö¾QÀ "FLASHING" ÄÔÈéÈÄ (Û\_Û ¾¾)»RÄÓÈä¾uðF¾¾ çzÝ Ø »T
6. Às "FLASHING" ÈéÈÄÈ ç¼Äú»R×éÝ ÍÄ,,Ñ×ÄÝÇÄÑ†Ð"Ø »T
7. Ð"Ø ÄúÄ ¼f "DEL" ÜpÐ¾¼ BIOS Setup ÝvÇÈ»T
8. ÇÄÑ†Ü ÄŠ "BIOS SETUP DEFAULT" Û ÐÏ»RÈ\_Ä†ÈËÍÑŠÄsÍæÝÇÄŠÄÔÄÄÖR»WÄè ÄæÈ¾¾ççY×iØýÄÄÇ ç ÄÖÍÑŠÇâ»T
9. Û Øö "Save & Exit"»RÄ ÄÓÏ\_¼ç¼mzÄÄÈi »Z



ÞÍÁz: ×é¾¾ÇÈÄsÛ\_Û ÓÏÏ' ¾¾ (Ï\_Æ Ñ ÜÝÓ ¾¾Byö "FLASHING" Èä) Ý Ø »T ÀfÄXÄdÄÍÛ\_Û ÁÓÄÄÏ\_Ý Ø »RÄ† ÏèÈ\_Ï|Ä|ÇÄÑ†ÈiÈä»RÈ' Ï\_ÏÐÑÄ ÍÄ BIOS Flash ROM ¾¾T



Ï¼ö: È' ¾¾ççYÄæ¼qÀaÖaÄÖÏ' Áá»R È\_ÜÜÄÄÄÔ BIOS "BIOS.OLD" ÖxÄo»T

# Ä Ü A

## Jumper ÍnÄŠÄ

### Ü Øö CPU ÚhÌ%

Í, Ð çUØ Ä`Æ ÈPçèÌ] jumper ÍnÇf»TÈù%QÄÖ jumper Æ Clear CMOS»RÍ, çzçYçèÄ Áè È`È\`iÄÖÈ»Äf%Æ»T

Ü Øö CPU ÚhÌ%ÄÖ% Ä|Æ :

**BOIS Setup à Chipset Features Setup à CPU Clock Frequency**  
(çÉúÄÖÍnÄŠÇäÄÍ 66, 68.5, 75 ða 83.3 MHz)

**BOIS Setup à Chipset Features Setup à CPU Clock Ratio**  
(çÉúÄÖÍnÄŠÇäÄÍ 1.5x, 2x, 2.5x, 3x, 3.5x, 4x, 4.5x, 5x, 5.5x, 6x, 6.5x, 7x, 7.5x, ða 8x)

INTEL Pentium II	CPU %ÖÍ»ÚhÌ%	ÇÙÚh %	ç•Úh
Klamath 233	233MHz =	3.5x	66MHz
Klamath 266	266MHz =	4x	66MHz
Klamath 300	300MHz =	4.5x	66MHz
Klamath 333	333MHz =	5x	66MHz



ÞÍÁz: çY%hDäÄTçi çòÄvçÄÇÈ%h%ŠÆÍ „ÄÖ CPU»RÄí ÖŠÍn ÇäÆ Pentium II 233mhz»TÄpçÄÄÖÍnÄŠÇäÆ Ä`ÉuÄè%Ö Í»Í ÖÿçèÄÖ»RÄéçèÍ, ÄáÍnÄŠçÉúN“Ó È`ÄÖÄ†ìeÍ(ÄÄ Ñ}Èq»T



# Ä Ü B

## ËqÂ1/Ê÷ÝUDÊÒë

Q: ÀfÀ Êé%Ú1SZ`d1ÄÄ¿ÖP

A: AOpen ¿U0 Ä`¿U0 Ä`Ä@BIOS ÄÄ¿ÖÄ Ä Ð"0 Èä POST (Power-On Self Test) Ä Ä »RÍ„ÊqÑ¿Y R À.Ð"Új »X

AP53/AX53 R3.80 Oct.22.1996

BIOS revision

Q: ÀfÀ Êé%Ú¿U0 Ä`ÄÖÄÄ¿ÖP

A: AOpen ¿U0 Ä`ÄÖÄÄ¿ÖÄ ¿Yppppp-x Öé¿öÄ PCB%41»RÍ„ÊqÑÄÍ%QÇ¿¿iÄü¿•ÈöÄÝ ¿SÄ Ä PC Slot Ä Ä »Rppppp¿\_Ä AOpen %0Í»Ä0 project ¿\_00»R× ÄÈÄÄ¿0¿\_00»T

MB Rev 1

AX6L  
97801-1  
48.87861.011

Q: %ÊÖ Æ MMX»Y

A: MMX Æ Ñi%Q¿\_Intel Pentium PP/MT (P55C) %ePentium II (Klamath) CPUÄ0Í Ä ÄyÄ ¿` (single line multiple instruction) Ä0Í\_»RMMX %ÄÄ ¿` ÄsÄyÍTB ÚÍ¿è%4hÉd Ä` ÄÍÉP(Äf 3D ¿üß 0%0Í»SD ÇÍÉD»SÍ ÊeÑPÍ0a0~)»TÄyÍTB ÚÍ¿èÍ'Ä»Çj Äé¿èMMX Ä ¿` È\_¿z%4ÍeÄ Í×%4AQEPÉú»TÄ0 ðAOpen ¿U0 Ä` %4hÄÍÄ0%0Ü 0„Ñ×%4pÍÄP55C»R ÄÝ%40÷ÇÉÉÈ %ÄÍ0% Äi%4pÍÄ MMX CPU Äj ¿zÄé¿èÄ0%Q¿\_ñú»T

# ËqÂ1/Ë÷YUDÊ0ë

**Q: Pentium II (Klamath) ÀsÊ À ÈbÉú%hÁIÀy%ÄÖÄ Ì×P**

A: ÁóÇæË Ñ†%Qç\_ÄÖCPU ÈÍÁÍÈÍ%W4 ò »RçY%FÄÖÏ ÒiÏIÄXÏ!ÄeË'ÈIÄÈÈeÀi»T

DRAM : 64MB EDO or SDRAM

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
PP/MT-200	AP5T/AX5T	Intel 430TX	48.3	21.9
PP/MT-233	AP5T/AX5T	Intel 430TX	50.5	23.6
Pentium II 200	AX6F	Intel 440FX	45.3	24.1
Pentium II 233	AX6F	Intel 440FX	48.4	26.5
Pentium II 266	AX6F	Intel 440FX	50.8	28.2
Pentium II 266	AX6L	Intel 440LX	54.5	30.8

çèçY%41ÄÖÄ È ÁóÇæçççYÏ, Ì' »RÀsBusiness Winstone97 ÄÖÏ ÒiÏIÄX%»R Klamath-233 % Èp PP/MT-233 ÄYÄdÄIÄy%ÄÈÄ` »WÄ Às High-End Winstone97 Ä, ÄÍÒ Û-ÌÄÄÖÄ Ì'»TÍ, ççççç ÈÄÈÈ Klamath ÈSÜZÖSÖüÄÖÈú% ò Àe»RÖRÄi çèÄiÈÍÓe ÄeÍSÌ'»T

**Q: %ÈÖ Æ IWTTIU, T19Uvt}r.r}z, €1, vT, €w ...~zÆ»Y**

A: U, T1Æ %QÖðÑ†ÄÖIWTTIÍhÈ Ò'YiÖeÑá»RÑ†ÖeÑáÍhÄSÍUç 10†Ïiç 19ÄfçU0 Ä` :lAsçí×e U, T1ÖeÍÓi9], x, 1:1Èä»RçÌDÑIÖÈ!Ø ÌuÄÖÖ(Ü »RÄpÍ ÒiÍh×uÄÈIEHTWc1BFDB»TçU0 Ä` %ÄIU, TÍ Òi% ÄäIeIWTTIÍ ÒiÄ çIÄ<Y »RÄfÄXçU0 Ä` Í,,Ó]IU, TÍ Òi»RÍ\_ç\_Ä çU Ø Ä` ÄÖIV^ ZÜ ÈxÄUÈqÄT»RÄiçYÈ' çççççèç à Á × ÄÖØ Ìu19Äj Ä`Æ çèÈaAQÄÖØ Ìüç çz»TÄò ðIR` fvçççU0 Ä` IRi GF@RaFH@RaFe@Ri Fe@Ri G]ÍÍ%SÍ,,Ó]IU, TÍ Òi»R%f ÖeÄj ÄÈIU, T1ÖeÍÓÖäçÖ»X



## ĚqĀ1/Ě÷YUDĚ0ë

**Q: Ě0 Ě Bus Master IDE (DMA mode)P**

A: ĚĀĚĀPIO (Programmable I/O)IDE0÷ĚCPUĀ ÁfĀĪY IDEġ Ī»Ā0Ě Ā ĚĀĀQ»Rġn  
 ĀRĪġĀ÷0 Ě ĚĀĀQĀĀĀĀ»TĒĒĪ ĚCPUĀ0%ĀQġ0»ĚBus Master IDE0a0~ġĀ»ĒĪĀ†  
 Ā Ě`0eB 0 Ěe»R%40÷0xġCPU»RġSġĀĚCPUÓSĀQĀ^ Ě`0eB 0ĒE0a0~ĚĀĀ0 ĚĀĚĀ  
 ĚvĀĀĚĀĚĀ »T%40] Bus Master IDE0÷ĚBus Master IDEĚi ĚĀĪ`Ā»Ā`Bus Master  
 IDEĪŠ0eĀi %ĪĀ% ġġÜĚĚĀĀQ»T

**Q: Ě0 Ě Ultra DMA/33»Y**

A: Ī, Ě %Q00ñĀ0ĪhĚ »Rġ0Ā0ĀsĀ ĪDE ĪŠ0eĀ0ĚĀÜ Ī%»RĚĀĪĚ%ĀPIO Mode ĚĀĚġĚ  
 IDE ĚĒĀ ĀY00%Āh×Ī(Rising edge) ĀĪĚĀÜ 0 ĚĀ»RĚĀĪĚ%ĀPIO Mode 4 ĪyġĀĀĚĀĚġĚ%h×Ī^  
 %f×Ī(Falling edge) »RĀĀ00 ĚĚĀÜ Ī%Ě PIO Mode 4 ĒĚ DMA Mode 2 Ā0ĀüĚ»R  
 (16.6MB/S x 2 = 33MB/S) »T  
 %fĀ ĀTġi IDE PIO Ā^ DMA Mode%ĀĚĀÜ Ī%»RĀn IDE ĚĪĒĒĒĒĒ 16 bit»RĀĪĀTĀ0ĚĀ  
 Ü Ě 2 byte»T

Mode	Clock per 33MHz PCI	Clock count	Cycle time	Data Transfer rate
PIO mode 0	30ns	20	600ns	(1/600ns) x 2byte = 3.3MB/s
PIO mode 1	30ns	13	383ns	(1/383ns) x 2byte = 5.2MB/s
PIO mode 2	30ns	8	240ns	(1/240ns) x 2byte = 8.3MB/s
PIO mode 3	30ns	6	180ns	(1/180ns) x 2byte = 11.1MB/s
PIO mode 4	30ns	4	120ns	(1/120ns) x 2byte = 16.6MB/s
DMA mode 0	30ns	16	480ns	(1/480ns) x 2byte = 4.16MB/s
DMA mode 1	30ns	5	150ns	(1/150ns) x 2byte = 13.3MB/s
DMA mode 2	30ns	4	120ns	(1/120ns) x 2byte = 16.6MB/s
DMA/33	30ns	4	120ns	(1/120ns) x 2byte x2 = 33MB/s

## ĚqĀ1/Ě÷YUDĚ0ë

**Q: Ultra DMA/33 ĀŌI†ĀñĀfĀ PÆ ĀpŌ÷ÇĚĚdĚ Bi ĚĀĪ' Ā» (Driver)P**

A: DMA/33Ō÷ÇĚĚdĀ`ĀŌBi ĚĀĪ' Ā(Driver)»RĚ' ççYçè Intel ĀŌ PIIX4 Driver ĀeÑ†ĀĀ Win95 Memphis»TçòĀVĪbĪ òiŌ]ĀŌĐ,,Ī½ĀŠŌèç^ĀĪQuantum Fireball ST1.6A»RĀp Ī òiŌòòĀf%ç »X

Model	OS/Driver	Mode	Winbench97 Disk Winmark (Business)	Winbench97 Disk Winmark (High End)
Quantum Fireball 1.2G	Windows 95 OSR2	PIO mode 4	717	2150
Quantum Fireball 1.2G	Windows 95 OSR2 + INTEL PIIX4 driver	DMA mode 2	822	3050
Quantum ST1.6A	Windows 95 OSR2	PIO mode 4	853	2630
Quantum ST1.6A	Windows 95 OSR2 + INTEL PIIX4 driver	DMA/33	1040	4020

**Q: ĚŌ Ě ACPI (Advanced Configuration & Power Interface) Ā^ OnNow»Y**

A: ACPI Ě 1997(PC97) ĀŌ%QŌòÑ†ĀŌŌ,,Ñ×ŌòĪ' ĪhĚ »RĀpçòĀŌĀsĀ Đz%QĀSŌxçĚĀQŃ•Ā† Īè(OS)ĀiŌqĤŌŌ,,Ñ×Āi%ĀĪ'Ō]ĐĀĪè Green PC BIOS»RĚŌWĀ ĀŌçòĀŌ Chipset Āè Ultra I/O ĪŌ%Ō÷Ī½ĀèŌèÑĀ%ĐĚ (Standard Register Interface) ĪŌĀQŃ•Ā†Īè (Āf Win98)»RĀYçZ%ĀĀQŃ•Ā†ĪèĪ ĪhY ĪĚĀ^ Ā Īp%ĀĀĪŌ%Ō,,Ñ×%Āçmú»RĪ,ÑbĀ|Ě ĀĪŪZ ŌĪŪYĪ»Āj çèPnP %Ā%ĐĚ (Register Interface)»T

ACPI ĪhĀŠĀèçèĪ]Ě,Ā»Ō,,Ñ×Ā Ū(Momentary Soft Power Switch) ĀiĚĚĀ çèŌ,,Ñ× ĀĚĀf%ĀĪĀ»RĀñĀŌçĪĐÑĀs ATX Form Factor ĚĪĀi Momentary Soft Power Switch ĀŌĀèçè%ç%ĚúŌ BýĀpĚĚĀX»TACPI ĪĀĀ)%Ō%QĚ Ō,,Ō½ĀèçèĀĀĀŌĪ»ç çĚúĚ çèççPūĀ» Ō,,Ō½(Notebook) ĀiĀĪĀ ĀiĀiĀŌŌtÑb "OnNow"»TĪ, çmú%ŌĪmĚĚĀ%ĀĀĀ ĀĀi%QĀŌY Ō ĀvĀŌ%ĀQĪvÇĚ»RĀi%ççĚĀĪ ĚĀĐ»ĪçĀ÷Ě,,Đ"Ō ĚiĚĀ(Bootup)»RĐz% Win95»RĪ^ ĀŪ Đz% Winword»TĀèçèTX ĪŌ% ĀĀŌ ð AOpen AX5T»RĀj %ĀĪĀACPI çmú»T

## ËqÂ1/Æ÷ÝUDÊÒë

**Q: ÆËÏ Æ LDCM (LAN Desktop Client Manager)»Y**

A: LDCM Æ Intel ËÛB%Î½Äë(Ñ Ý ^ ÇεζD`ÄÖÍ€B »RÂpζoÄÖAsÚÉÁf%«ζ„%ÖÍ»ÄÖÖ ò Öo Ì´%YÇ (Network Administrator) ÖaN` %eÖoÌ´ Client Ö÷ (ÄεζèÄæ) ÄÖÄÍèè Ñ»T LDCMζÌDÑÉÍÄi DMI BIOS Äεζè»RÂpÓ AOpen ζUØ Ä`Ä»ÆDMI BIOS»Rζ`Æ`ζÖ %Ä%LDCM Í€B Äi%«R%40] LDCM Ða%pIÄ ATI VGA %e Intel Network ζu, ÀRζI%4n ÂpÚÍζèÄ Û %«ÄáÚ Öi»R%QÉ ÈrÈ<ÄεζèÄæByÍ ^ ÄdÄÍζÌÇÉAyζZÜ Äi ÚäDcDCM»T

**Q: ÆËÏ Æ ADM (Advanced Desktop Manager)P**

A: Í, Æ Acer Ý, ÈÄÖÍ€B »RζÄÝ Ä Intel LDCM»RÄ ÄÍ%QÄáÄ Ð»ADM %4ζ`ζèÄ Û %«ÄaÖ ò Ú Öi»RζÄÄæÄaζζèÄ ÄÍèÄÄÖRÄÖÊÖÍ »RÄf CPU ÇÑÈÈÖÖÍ »RÄÍèè„ÚÆÖ Î %e CPU Ö]Ö Ä`BQ»T

Features	ADM 2.1	LDCM 3.0
VGA card	%4ÇÇ	ζ`ÄÍ ATI
Network card	%4ÇÇ	ζ`ÄÍ Intel
Support DMI BIOS 2.0	Yes	Yes
Support Win95	Yes	Yes
Support Win NT	No (ADM 3.0 È_Ñ%p ÎÄ)	Yes
Real-Time CPU/Memory Utilization Monitoring	Yes	No
Multi-Machine Monitoring on One Screen	Yes	No
Remote Management Protocol	ÖeÑá SNMP protocol	Intel È^ ζèRAP protocol
Standard SNMP Trap	Yes (ÄÄÖζζèÄ ÖeÑá Í€B Äf HP Open View)	No
Remote File Transfer	No	Yes

×èÄq\_»RADM 2.0 ÐaÖRζèÄ AX6F/AX5T-3/AP5T-3»RÄí AX6L ÄεζèÄÖÆ ζÍ%QÖö HW Monitor IC»BADM 2.1 Ä`Æ È^ Æ%pIÄX6L ÄiD`Í, ÄÖ`TÄ ÄsζÖ%4iζf ζÈ %ÄÄv»R ADM 2.1 ÚöÄsD`Í, Ñ %«RÍæÑTÖ ÈxèÈ`%ÜÄq\_ÄöÇæÄÖÖ ÉÖ»T

