

İP³XÍÓ İŞB ÀŠÒà

çÖÍÓË_çYÎqÁáÔçDzÄÔ¼ Å»RÖ»Ä ÀfÀ ÀŠÒàË' ÄÔÄ†İè»R<è×eÓ ÂæÑíÍ, ÁáÂSa[ÂíÀŠÒà»T



×è¼f¼i: ESD (Electrostatic Discharge) ÆËÚcÓ,,Ä Ó,
¼ÄÑ_»RçèÄ Ù€B Ó,,Ò (IC) ÅöÈvÄ Ä Ä ÚcÓ,,ÑaÚÍÄÔ
Ö%Be»RÄnÄÓÑ"ÄeÑjÍSì' ØÓ»RÔèÔèØ »RÜi çcu%æÂp
çJÄÔÔ†ç Ä Ä ÐaÈq»TÆ¼WÓŠÄØÚcÓ,,Ä Ó,,ÄíÑ}ÝrÎÓ
¼ »R<èÛ ÄÆ¼fÄTÄÔÔÓŠÄØËÓÆZ»X

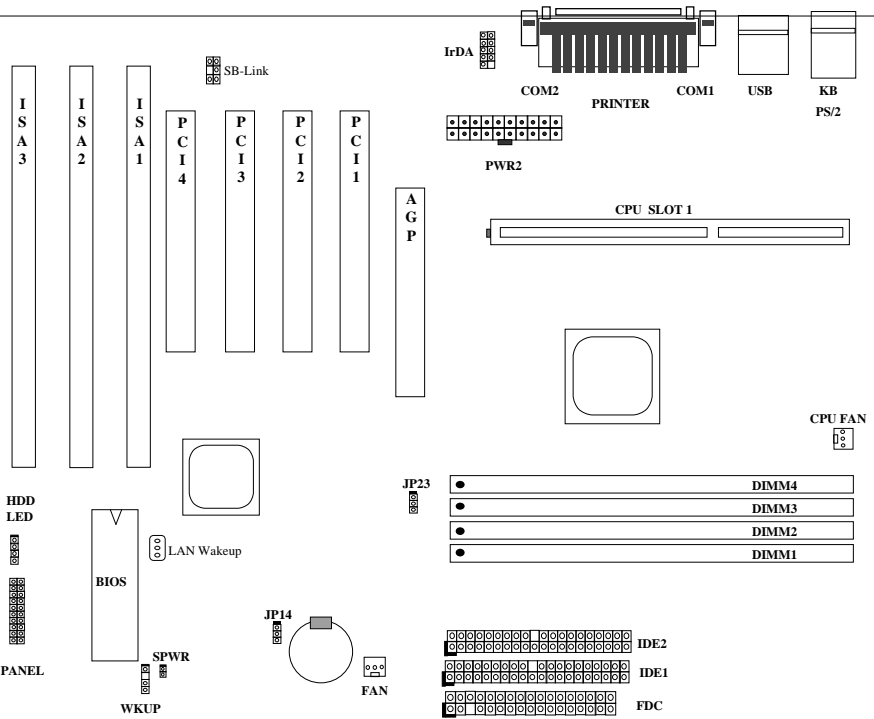
1. Ê¼ÄUË' ¼ŠÑáÍaÀ€Ç€Ð"Ä}ÀŠÒaÓ†ç »RÄpÄy¼uðf¼½
Ç€Ë_Ó†ç ÀöÄØÚcÓ,,çnÒa¼¼Ä çí»T

2. ÀsË' ÀŠÒaÓ†ç Èã»RÆæÆËr¼hÄÍËËÄr×^ÄÔ¼i Ú »R
¼¼Í»ç ÄÔÔ,,¼Ô†ç Ä Í¼ÄÍÀs× »TÄfÄXÄdÄÍ¼iÚ »R
×èÄéçèç Ä çZçYÄØ¼ ÚcÓ,,ÄÔÎÚç_Ä•»RÄíÔaÄ†İèÓ†
ç ¼æçUØ Ä`ËËpË»T

İŞB ÅŠÒà

2.1 Jumper ÕaËİÚj ÄÔÀ Ò~

¿Y%Æ¿UØ Ä`%h Jumper Ä^ËİÚj (connector) ÄÔË‡Ò~Óé»X



İŞB ÅŠ0à

Jumpers:

JP14: İ^Ê½CMOS
JP23: AGP Turbo

ËİÚj:

PS2: PS/2 ÑàÓÀËİÚj
KB: PS/2 Ûp×JËİÚj
COM1: COM1 ËİÚj
COM2: COM2 ËİÚj
PRINTER: ÀJÄ Ø ËİÚj
PWR2: ATX Ó„Ñ×ËİÚj
USB: USB ËİÚj
FDC: Floppy Í†ËİÚj
IDE1: İĐ%Qİİ IDE Í†ËİÚj
IDE2: İĐ%Xİİ IDE Í†ËİÚj
CPUFAN: CPU ÇÑÈÈËİÚj
FAN: Ø İàÇÑÈÈËİÚj
IrDA: IrDA (Æ ĺ•×^) Í†ËİÚj
HDD LED: HDD LED Í†ËİÚj
PANEL: Åv¼ ÇËÄ`Å ÛpÖaÛ`ÖÓÍ†ËİÚj
SPWR: ATX Soft-Power Switch ËİÚj
MODEM-WKUP: Modem Wake Up ËİÚj
LAN-WKUP: Lan Wake Up ËİÚj
SB-LINK: Creative PCI ÇİÈĐĸuËİÚj

İŞB AŞÖa

2.2 Jumpers

İ, D ÇUØ Ä`Æ ÈP;èİ] jumper İncf»RÊu%QÄÖ jumper Æ İ^Ê½CMOS»RÄp;UÇ€Æ ÇèÄ ÄeÊ`È\iÄÖÈaÇİ»T

2.2.1 Ü Â CPU Úhİ%

İ, D ÇUØ Ä`ÇZÇYÄöÈaÊÖİ CPU Ó,,Ú½»RÄYÇSÇZÇYB È`Äs CMOS setup ¼¼İnÄŞ CPU Úhİ%»RÄİİ]DÑÄeÇèÄ jumper»TÇİÇ•»R³nÇZÇYİ`Ó]¼¼Äýİ`Ä»»RÊ_ÇÜxeÄÖ CPU Ò Èe È`Ü Â EEPROM ¼¼TÄfÄÖ¼QÄİ»RÖf¼Q CMOS Ü Ç¼¼WRE`İ_¼¼èÖü¼nÇÄİn CPU Ó,, Ú½ÄaÇi¼WEİÜ »R³n¼¼ÇİÄÈÇhÄÖÇİD"Ó,,Ò¼Ø İnÜaİ CPU ÖöÝ ¼¼WTAİİ, ¼nÆ ¼QÉ ÈP Çèİ] jumper İncfÄÖ Pentium ÇUØ Ä`ÇUÇ€ÄÖÈ÷YU»T

İnÄŞ CPU Úhİ%ÄÖ% Ä|Æ »X

BOIS Setup à Chipset Features Setup à CPU Clock Frequency

(ÇZÈÜÄÖİnÄŞÇaÄİ 66»S68.5»S75»S83.3»S100»S103»S112 Öa 133.3 MHz)

BOIS Setup à Chipset Features Setup à CPU Clock Ratio

(ÇZÈÜÄÖİnÄŞÇaÄİ 1.5x»S2x»S2.5x»S3x»S3.5x»S4x»S4.5x»S5x»S5.5x»S6x»S6.5x»S7x»S7.5x Öa 8x)

CPU ¼Qİ»Úhİ% = ÇÜÚh¼ x Ç•Úh

INTEL Pentium II	CPU ¼Qİ»Úhİ%	ÇÜÚh¼	Ç•Úh
Pentium II - 233	233MHz =	3.5x	66MHz
Pentium II - 266	266MHz =	4x	66MHz
Pentium II - 300	300MHz =	4.5x	66MHz
Pentium II - 333	333MHz =	5x	66MHz
Pentium II - 350	350MHz=	3.5x	100MHz
Pentium II - 400	400MHz=	4x	100MHz
Pentium II - 450	450MHz=	4.5x	100MHz



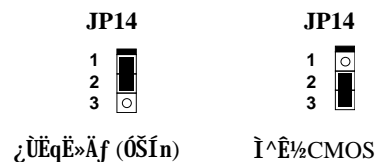
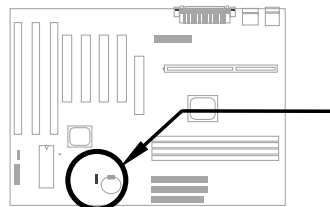
PİAz: INTEL 440BX İÖ% İİİaÊÄÇZ¼pİÄ 100MHz CPU Ç• Úh»R103»S112 Öa 133.3MHz DaÄe¼Qİ»İ ÖİÇè»Tİ, ÄaİnÄŞÇa¼Ş DhÇi BX İÖ% İİÄÖİhÈ »R ÇZÈÜ"Ö ÄİİeİÖÄÄÑ}Èq»T

2.2.2 İnAŞ CPU Ö,Ü½

çÖçU0 Ä`¼İİ Pentium II VID çnEü»RçzÀöÊäÊÖİ CPU Èð%ü0,,Ü½»Rİp×uİ Às 1.3V Ä 3.5V ¼ÄD»»T

2.2.3 İ^Ê½CMOS

JP14	İ^Ê½CMOS	ÀfÄXÈ' ÁeÊ`Äi İnAŞAÖÄİèÈ\×iÈä»RçİDÑç È_1[aBE İnÆEİC>DRI^Ê¼AYÇÄİnΠ^` d1AÖİnAŞÇaÄü»R¼ÉuÇÄ N†D"Ø »T
1-2	çÜÊqÈ»Äf (ÖŞİn)	
2-3	İ^Ê½CMOS	



İ^Ê½CMOS ÄÖİ' Áá:

1. Ý ÍÄÄİèÖ,,Ñ×»T
2. ÄöÊÖ PWR2 ¼hÄÖ ATX Ö,,Ñ××^»T
3. Äpçi JP14 Äi ÀsAÖÄ Ö~»RÈ_D ×ÄİfÖmÄ ¼fÄİ»RÄ È^Ä 2-3 Ö"À ¼h»T
4. ¼QÑ"ÄüÈäD»Äü»RÄ ¼fD ×ÄİfÖmÇÄN†È^ÄoÄ 1-2 Ö"À ¼h»RÄ İpÄÄÇ ÄiÄÖÄÄÖR»T
5. È_ ATX Ö,,Ñ××^ÈİÄo PWR2»T
6. ÇÄN†çİD"Ö,,Ö¼Ö,,Ñ×»T
7. ÀfÄXNbÇEİnAŞN†ÄÖÄİèÈ\×i»RçzÀsÄİèÈiÈäÈä»RÄ ¼f [DEL] ÜpDz¼ BIOS Setup İvÇÈ¼¼RÄÄ ÄSÑ†ÄÖÈ\×i»T



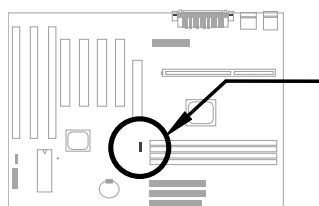
İ½ö: ÀfÄXÈ' ÄÖÄİèÈÄnÆEİÜhÄiÑ ÈÖÄeİ|Ä|D"Ø »RçzçYİ^Ê½ CMOS»RB ÄİèÈÄoÄ ÖŞİnÄÖÄÄÖR»T

İ½ö: È¼ÄÄÉçè JP14 ¼Äç»R È' ¼nçzçYçè <Home> ÜpÄİİ^Ê½ CMOS»T¼ Ä|Æ Ä Ä <Home> Üpİ^ÄüD"ÈiÖ,,Ñ×D"Ý »Rİ, ÖäÄİèÈ_ N"ÄöÈäÈ_ CPU İnÆE Pentium II 233MHz»TÈİ¼fÄİ»RÈ' çzÄRÄÄö ÖöÄÆ Äf»RBz¼ BIOS Setup İnAŞ CPU Ühİ¼»T

İŞB ÅŠ0à

2.2.4 AGP Turbo

JP23	AGP Turbo	AGP ÅŒİhÈ İæËÄzÀö 66Mhz clock»TÇj ÁüÍ, Çí jumper İnaÆE Enabled»RçzË{Â ÂpŒa CPU ç•ÜhÀa ÅS»RÀ Í, Œ ÊİçzËüÑ“ÀnĐhçİ İhÈ »RÀíÂéÄ‡İèl½ç ¾ÄÇÄŒÄf»T
1-2	Disabled (default)	
2-3	Enabled	



JP23



Disabled (default)

JP23



Enabled



ĐİÁz: Çjç•Üh¾Ä 66MHz»RÁüÍ, Çí jumper İnaÆE Enabled çzËüÑ“İŒÄÄ‡İeÑ}Èq»T

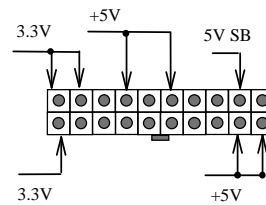
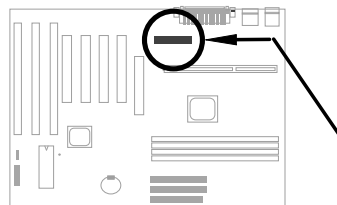
2.3 İ†ËİÚj

2.3.1 Ó„Ń×İ†Ëİ×^

ATX Ó„Ń×ÅeÚÍ00Æ ÅeçèÀf%ÄÖ 20-pin İ†ËİÚj »R×e×eÅŠË‘ İ»%ÄÖ% ÅgÆ çÛ×eÄÖ»T



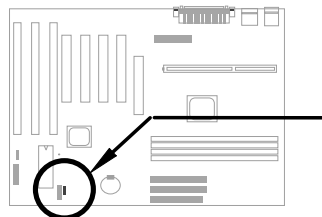
×e%ç%â: Åsİ†ËİÅeÄöÊ¼Ö„Ń×İ†Ëİ×^%ÄÅv»R×eç Ý
İÄ†İeÓ„Ń×»T



PWR2

2.3.2 ATX Soft-Power Switch ËİÚj

ATX soft-power switch İ†ËİÚjÆ 2-pin ÄÖ»T×eç Ë„ ATX Ø İuÄÖÅv% ÇËÄ`%Äpçiöe
çöÆ “power switch” ÄÖ 4-pin İ†Ëİ×^»Rİ^Åuİ†ËİçUØ Ä`%ÄÖ soft-power switch İ†
ËİÚj (öeçöÆ SPWR)»T

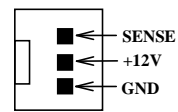
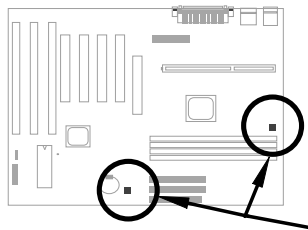


SPWR

İŞB AŞÖà

2.3.3 ÇNÈÊ

ÀsçUØ Ä`%h»RAİ%ÇÇiÖêö CPU FAN òa%ÇÇiÖêöÆ FAN ÄÖÇNÈÈİÜj»T



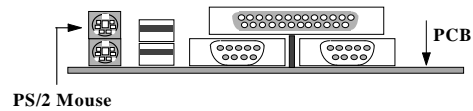
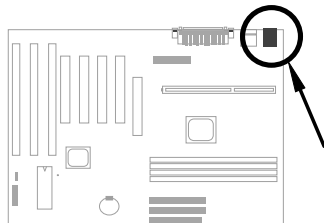
CPU FAN



Ä İ : İ, ÂüÇiÇNÈÈİÜj İ½ççY%pİÄİŞB òaÈÈçmÉú (hardware monitor)»T

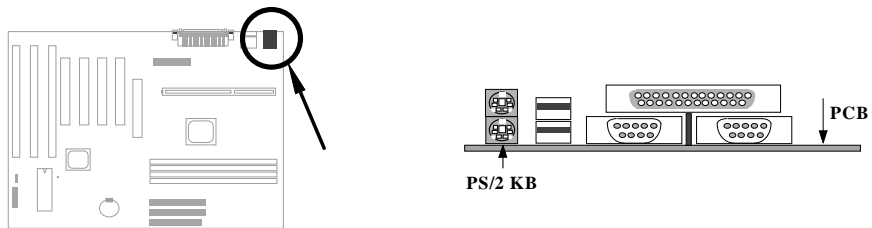
2.3.4 PS/2 NàÓÄ

×eİ†Èİ PS/2NàÓÄ òêöÆPS2 MSÄÖÈİÜj½h»T



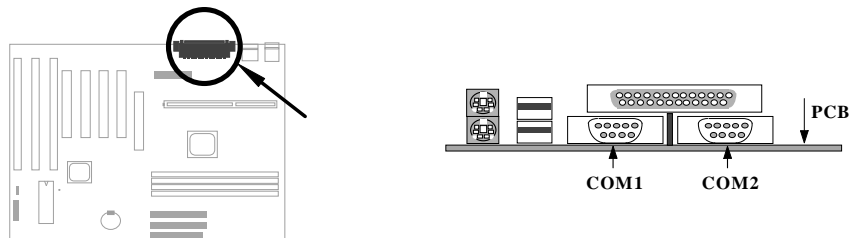
2.3.5 PS/2 Üp×]

×eË_ PS/2 Üp×]ËÏÄ Òë¿öÆ KB ÄÔÍ†ËÏÚ¿ %4»T



2.3.6 À ÀTÊ (COM1/COM2)

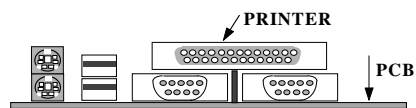
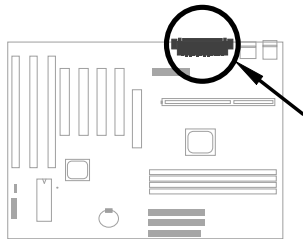
Äü% ÇËÄ` %4ÄÍÄüÇ¿öÆ COM1 Òa COM2 ÄÔ 9-pin D-ÄÆËÏÚ¿ »R¿z¿eÄÍÍ†ËÏÄ ÄT
Ë ÑaÓÄ(serial mouse) ÄeÆ Öa060 »TÄp%4ÄP%QÇ¿Ä ÄTÊ ËÏÚ¿öÆ COM1»WÄP%K
Ç¿ÄyöÆ COM2»T



İŞB ÅŠÒà

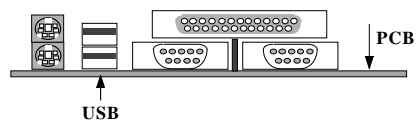
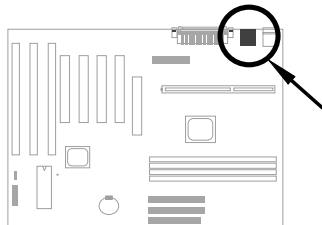
2.3.7 À]Ä Ø

¿UØ Ä`Åû¼ ÇÈÄ`¼hÄÍ¼QÇiÖêöÆE PRINTER ÄÔ 25-pin D-ÄÆIÜj»R¿eÄiÄŠI»ÄYÀTÀ»Ä]
Ä Ø »T



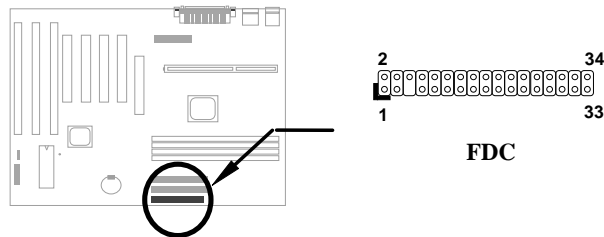
2.3.8 USB òàÒ~

È`¿zÈ_ USB òàÒ~Í†ÈIÄ USB ÈIÜj»RÍ, Ð ¿UØ Ä`¼hÄÍÄüÇi USB ÈIÜj»RÖêöÆE
USB»T



2.3.9 İ€ôêø

ÀsçUø Ä`%hAİ%QÇiöêçöÆ FDC Äô 34-pin ÈİÚj»RçzçèÄİİ†ÈİÄüç<İ€ôêø »T

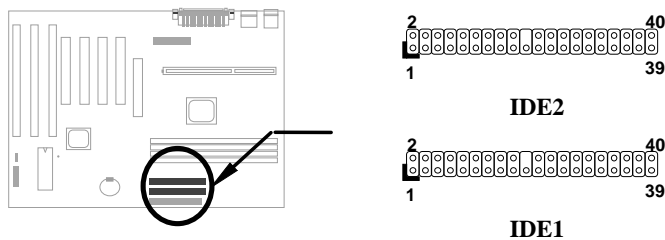


2.3.10 IDE İŠôêø Őa CDROM

ÀsçUø Ä`%h»Æ†AİÄüÇiöêçöÆ IDE1 Ä^ IDE2 Äô 40-pin ÈaÈŠ»Rçz%ŪÄ`İ†ÈİÄüÇi IDE ŐaŐ~»RİæAyçzİ†Èİç“Çi IDE ŐaŐ~»R%QÉ IDE1 %dŐöÆçUİ„ŪU (primary channel)»R IDE2 %dŐöÆÈÄŐİ„ŪU (secondary channel)»T

İ†ÈİÄ ç %Qİ„ŪUÄŐİP%Qç<ŐaŐ~çİĐŇİnÆ master mode»WİP%Kç<ŐaŐ~çİĐŇİnÆ slave mode»Tç %QÇiŐaŐ~Ä»çzÆİŠŐêø Äèç Őêø »T

×èÈ_È'İP%Qç<ŐaŐ~İnÆ master mode ÄYÈİÄ IDE1»RİP%Kç<ŐaŐ~İnÆ slave mode ÄaŐaÈİÄ IDE1»TÄfÄXÈ'ÄİİP%çç<%èİPç“ç<»R×èÄaÄaÈİÄÄ IDE2 Äô master %è slave mode»T

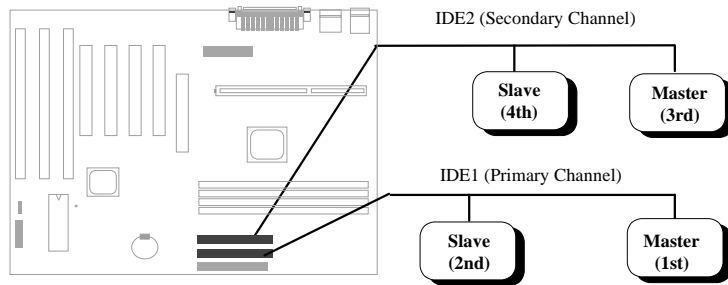


İŞB ÅŠ0à



×ē¼ƒ¼: IDE İhĒ ÅðİĒà×ˆİāĀ ¼¼zDhÓ] 46 ¼¼¼
(18ÇoĀe)»RıYÁ\Ŧ ĒàĐaŦ ¼¼Ā”»T

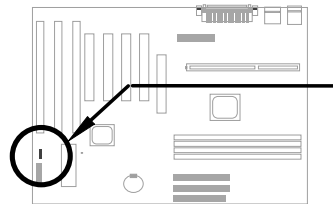
×ē¼ƒ¼: ÅĒÓWĀ İāĀēĀŦAYŦŦŦĀ•× »RĒà×ˆİāŦNŦ÷ĀŦ
ŦaŦ~İāĀēİnĀĀ master mode»RıYĀāNı ¼¼ŦēĀŦİĀŦŦŦ
ĀāĀŦŦāNıŦŦaŦ~»T



2.3.11 İŞŦē LED Ā ıŦŦ`

İŞŦē LED Ā ıŦŦ` ŦēıŦĀĀ HDD LED»Rı, ÇıĒāĒŞıZ
ŦRıēĀ ĀfŦŦ¼¼ĀāŦŦ İŦ»RıfĀXĀıĀŦŦāĀŦŦ İŦĀv¼ ÇĒ
Ā`Ā Āİ 4-pin İŦİİ×ˆ»RıēĀ×Ēİİ»¼¼TĀfĀXıĀ 2-pin
ĀŦİŦİİ×ˆ»RıZıYŦ ŦŦĀŦİ» 1-2 Āē 3-4»RĀ ×ēĀqNıNı
Āā»T

Pin	Description
1	HDD LED
2	GND
3	GND
4	HDD LED



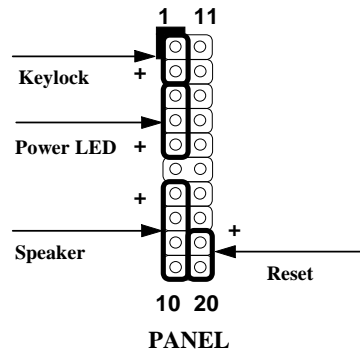
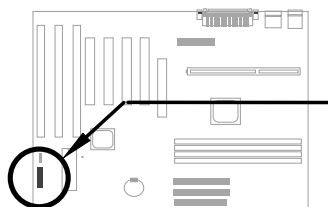
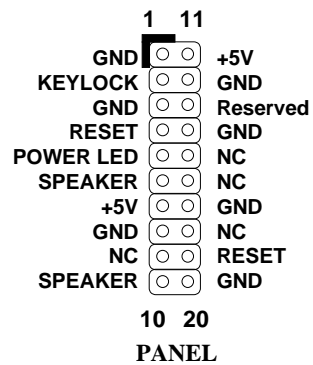
1 +
2 -
3 -
4 +
HDD LED
4-pin İŦİİ×ˆ

1 +
2 -
3 -
4 +
HDD LED
2-pin İŦİİ×ˆ
ĒİĀ pin 1-2

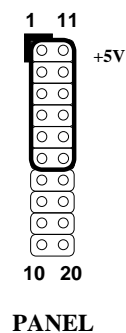
1 +
2 -
3 -
4 +
HDD LED
2-pin İŦİİ×ˆ
ĒİĀ pin 3-4

2.3.12 Åv¼ ÇĖÄ`ĖİŲj

Åv ¼ ÇĖ Ä` Ėİ Ųj ÅĖ 20-pin Ėà ĖŠ »R ŖĖ ĺö ÅĀ
PANEL»TÅŖĖÄ»ĖİŲj ĺZĪ†ĖİŖŖ,Ŗ» (power) LED
 Å ĺöŲ»RŲp»]Ų (keylock)»RĶÄŖ†D"Ŗ (reset) Å
 D†»RĪŲj' (speaker) Īĺ»TĖ' ĺZĶYÄæĺ|ŖĖÄĪÄŠŖ»T
 ÄĪÄáŖ ĪùÄ ÄĖĺĖ 5-pin Ī†Ėİ»^ÄĪĪ†ĖİŲp»]Ų Ŗa
 ŖŖ,Ŗ» LED Å ĺöŲ»RnÄĖĪ, ÄüĪĪĖàĖŠÄ ÅŖŖWŖ»R
 ÄĪĶYÄĖĺĖ»n¼ÄŖ"ÄĪĖ÷YU»T



ÄfÄXŖ ĪùÄvÇĖÄ` ĺ^Ä 12-pin1ÄŖĪ†Ėİ
 »^»RĖ' ĺZĶYÄæĺ|ŖĖÄŖ¼ Ä»ÄĪÄŠŖ»R»Ė»e
 ÄŠĪ†Ėİ»^ÄŖÄ »^ÄĖ Ī†ĖİÄ 1+5V1ÄŖÄ
 Ŗ~»T



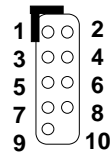
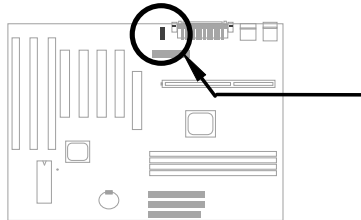
İŞB ÅŠ0à

2.3.13 Å Ć×^ĐáÛ Ê (IrDA)

ĆŃĆUŦ Ä`ÄŦİĐ%ÅÄ ÄTÊ (serial port 2) Ćz%ĐİÄ IrDA Å Ć×^Ŧİİ»TÄİ Ûñ IrDA (Infrared Data Association) Ć ĆŦE Ćë HP»SCompaq»SİBM İĆŦfÄİÄÄĆüÄŦ%QÇİ İİŦİ»RĆëÄİËŦŦŦŦSĆëE Ć×^Đá×^Ŧ ÈÄÄŦÄŦİ ŦaŦİĆè»TÄüÄİİËP ÄİŦİËİ Ćİ%»R IrDA Ä`İ%ÄSÄeÄÄE Ć×^ĐáÛ ÄŦŦeÑa»TĆ`ÇEË`ÄŦŦ,,Ŧ%ÄŦİÄE Ć×^ĐáÛ ĆnËü»RĆS İBÄİ IrDA İnÄS»Rİ ÊüÊ Äs%QÄŠĐkŦ %Ŧ»R%ŦŦ÷ÇEİ†Ëİ×%ÄEİ†Ëİ»RÄj ĆzÄŦÊaŦa İÄÊ`ÄŦŦ,,Ŧ%ÄeÇİ%ÄŦaÄ Äfİ` (PDA) ÄŦ%Äİ†×^»SĐaŦŦŦaËnŦ ÈÄÄeË_%Ć ÊvÄ %Đ İÄ IrDA ÄŦÄjÄ Ŧ ÄTÄj»TĆŦŦUŦ Ä`Ćz%ĐİÄ HPSİR (115Kbps, 1 meter)»SASK-IR (56Kbps) Ŧa Fast IR (4Mbps, 2 meters) İĆİhË »T

ÄŠŦaËÄ»R»eË IrDA Å Ć×^ŦİİÄŠİ»Ä ĆUŦ Ä`%hŦeÄİ IrDA ÄŦÊaËŠ»TÄŠŦa%ÄÄü»RË`ŦŦĆİ Ŧ÷Đ`Ëİ İSZ`dİdv†^f%ŦÄŦÄE Ć×^ĆnËü»R% Ćz ĆÛËq%ÄQ»T

Pin	Description
1	+5V
3	FİRRX (FAST IR)
4	CİRRX
5	İRRX (STANDARD IR)
6	5VSB
7	GND
9	İRTX (STANDARD IR)

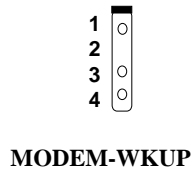
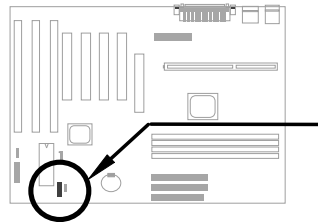


IrDA

2.3.14 Modem Wake-up EİÜj

İÖİUÖ Ä`%hÄyAİÉdÈ ×`ò İncf»Rız%pİÄÖa060 0ÖÈÈD"0
(Modem Ring-On) İmÉú»R%ÖÈİÄ» (AOpen MP56) Äèç•Eİ
Ä»Öa060 Ä»çz0Rçè»TçèÄ Äèçè%ÖÈİÄ»Öa06çuÄÖ0ö»RçÇÈä
%ÄÖ÷ÉİĐ`Ö„Ñ»»RÄi çYÄöÇæ% ò ÄoPİÈ' Äèçè»TÇjÈ' ÈPçèÄÖ
Æ AOpen MP56»RÄy×èÄèçè 4-pin İ†Eİ×`»Rİ†Eİ MP56 ÄÖ
RING EİÜj ÖaİUÖ Ä`%hÄÖ WKUP EİÜj »T

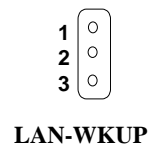
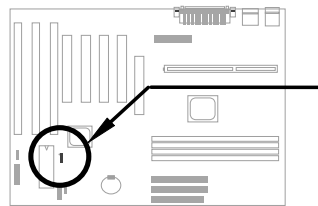
Pin	Description
1	+5V SB
2	NC
3	RING
4	GND



2.3.15 LAN Wake-up EİÜj

İÖİUÖ Ä`ÄyAİ LAN-WKUP EİÜj »RÇÈÄèçè LAN Wake-up
İmÉú»RçİĐNÑwÈ†%pİÄÄÖİmÉúÄÖÖ ò çuÖaÖ ÖöİÈB »T

Pin	Description
1	+5V SB
2	GND
3	LID

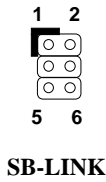
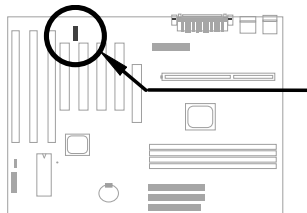


İŞB ÅŠ0à

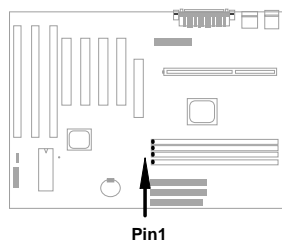
2.3.16 SB-LINK

SB-LINK çzçèÁíÍ†ËÏ Creative ÅöÈvÄÔ PCI ÇÏÈPçu»T ÇjÈ‘ ÅŠ0à%ÄÄ, ÔoÇÏÈPçu»RÎ_çİĐÑÄéçèÄ Í, ÇiËÏÜj»RçY Å\Ås DOS Ú Ôi%çÉúÈ ÅöÈv»T

Pin	Description
1	GNT#
2	GND
3	NC
4	REQ#
5	GND
6	SIRQ#



2.4 ÅŠòà¿UÊ`Øêß



Í, Ð ¿UØ Ä`ÄÍ 4 Ê DIMM (Dual-in-line Memory Module) Î»Öë»R¿z¿Y³pÎÄ SDRAM (Synchronous DRAM) ¿ Registered SDRAM»R ÍæÄËvÐ„¿zÓW Ä 1GB. Ä ×êÄqÑ_»RSDRAM Ä^ Registered SDRAM Æ ¿ÄúÍgÎ»ÄÖ»RË' ¿`ÉúÅŠòàAa¿QÖö DRAM»T



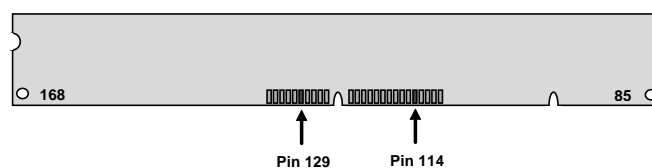
×ê¿f¿a: ¿Ö¿UØ Ä`ÄY¿³pÎÄ EDO DRAM»T

DIMM ÖiÎ¿¿z¿ë¿Y¿fÎ¿ö¿ Ä»Êé¿Î»X

- I. ¿¿¿f: Í ÇËÆ 1Mx64 (8MB)»S2Mx64 (16MB)»S4Mx64 (32MB)»S8Mx64 (64MB)»S16Mx64 (128MB)»WíÜ ÇËÆ 1Mx64x2 (16MB)»S2Mx64x2 (32MB)»S4Mx64x2 (64MB)»S8Mx64x2 (128MB)»T



Î¿ö: ÄÍÇ¿¿ Ä|¿z¿YÜaÆuË` ÄÖ DIMM Æ Í ÇËÜöÆ Ü ÇË -- ÆÆDIMM ¿ÄÇËÄÖ pin 114 Öa pin 129»RÄfÄXÄÍ Ê¿Ö~Ö„Ö »RÍ, Ê DIMM ¿zÉúÎ_Æ Ü ÇËÄÖ»WpÄyÎ_Æ Í ÇËÄÖ»T×êÊëÑ¿¿fÇËÄÖÖö»T



×êÄqÑ_: Ç€ÓWÄ 1GB ÄÖÊ`Øêß ÈvÐ„»RÍ_¿İDÑÜ ¿è 64M bit ÄÖ Registered SDRAM»T

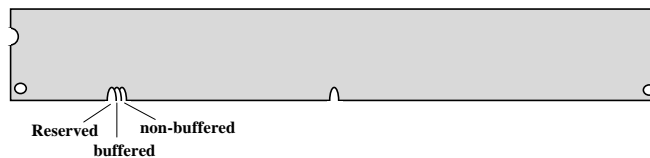
İŞB AŞÖa

- II. İtİAn: %QÉ Æ ÖëçöÀf -12 İ, ÖöAA»»Rİ, Ä çöÀ†Ä İ†Än (clock cycle time) Æ 12ns»Rİ çYÄÖ SDRAM İæ%ÄÖ clock Æ 83MHz»TÜöAİ ç†%QÖöÖëçöÆ ÄfAa -67 İ, ÖöAA»»RÄ çöAaASÖ ÈaĐaÜ İæÄöçZÄ 67MHz»T



×ë%f%ü: Äj Äá -10 ÄÖ SDRAM çZÉüAs 100 MHz
CPU ç•Üh%çÜöçZçYÖSAQ»RA Æ Æ%WÇASÄaİöNb»R
ÄöÇæÜö Æ ÄöPİ È' Ü çèİBÄi PC 100 İhÈ ÄÖ
SDRAM»T

- III. Buffered Öa non-buffered: çÖçUÖ Ä`%pİÄ non-buffered DIMM»TÈ' çZçYÄaÖö
DIMM %hÇÉÉa%ÄÖÄ Ö~»RÄİÄaÄ` non-buffered DIMM Öa buffered DIMM»T×èÈè
Ñi%çÜöÄi çö»X



çèÄ Éä%wÄÖÄ Ö~%Äa»Rç`Äİ non-buffered DIMM çZçYİ»%ççUÖ Ä`%hÄÖ DIMM
İ»Öè»TÜ İ^çöÄvçÄÇÈ%hÆ-Ä ÄÖ DIMM İ½SÖxÆ non-buffered ÄÖ%WRAöÇæ%ÄÄö
PİÈ' ÄsÜ ÜaÉaİaÆÜöÆ Ö ÄÈÈÖüÈ÷İ^Ñ»»T

- IV. 2-clock Öa 4-clock signals: Ü İ^ 2-clock Ä^ 4-clock ÄÖ DIMM İ½çZçYçèÄsİ,
Đ çUÖ Ä`%h»RA Æ%WÄ†İeYÇASÄaİöNb»RAöÇæ%ÄÄöPİÈ' İæÄÉéçè 4-clock ÄÖ
SDRAM»T



İ½ö: ÇÉÜaÄüÈ' ÄÖ SDRAM Æ 2-clock ÜöÆ 4-clock
ÄÖ»RçZçYÆ-Æ= pin 79 Öa pin 163»RAfAXÄİÈ†Ö-Ö, Ö İ_
ÜİÖiÆ 4-clock»WpÄyÄ\Æ 2-clock ÄÖ»T

- V. ÄaÄ %Ö: %pİÄÖèÑaÄÖ 64 bit wide (İ] parity) Öa 72 bit wide (Äİ parity) ÄÖ
DIMM»T

BIOS çZÄöÉaÈÖİ È`ÖëB ÄÖÈvĐ, %eÄÄ»»R%ÄÖ÷Äéçè Jumper İnÄS»Tİæ%ÄÄÖÈ`ÖëB Èv
Đ,,Æ 1GB»T

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

İŞB ÅŠ0à

¿Y%ŒÀT¿iÀoPÍÂé¿èÄ0 DRAM İiAi»X

DIMM Data chip	ÂTÇË bit Öà¿ò	Í Ü ÇË	Chip Öà ¿ò	DIMM %Œ %Œ	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

DIMM Data chip	ÂTÇË bit Öà ¿ò	Í Ü ÇË	Chip Öà ¿ò	DIMM %Œ %Œ	Æ ÁpÀòPÍ
2M by 32	2Mx64	x1	2	16MB	Yes, but not tested.
2M by 32	2Mx64	x2	4	32MB	Yes, but not tested.
4M by 16	4Mx64	x1	4	32MB	Yes, but not tested.
4M by 16	4Mx64	x2	8	64MB	Yes, but not tested.
8M by 8	8Mx64	x1	8	64MB	Yes, but not tested.
8M by 8	8Mx64	x2	16	128MB	Yes, but not tested.

¿Y%ŒÀT¿i%ŒÀoPÍÂé¿èÄ0 DRAM İiAi»X

DIMM Data chip	ÂTÇË bit Öà ¿ò	Í Ü ÇË	Chip Öà ¿ò	DIMM %Œ %Œ	Æ ÁpÀòPÍ
4M by 4	4Mx64	x1	16	32MB	No
4M by 4	4Mx64	x2	32	64MB	No
16M by 4	16Mx64	x1	16	128MB	No

İŞB ÅŠÒà

Ås 100MHz ÅèçY%hÄÖç•Úh%F»RÇÈÈ, Å Ò Å€ÄÖÈÈÉúÖaYÇÅŠÅ»RÄöÇaÄöPÍÈ' ÍaÀÈÙ çè
PC 100 SDRAM»RçY%FE çòÅv AOpen Î ÒiÓJÄÖ PC 100 SDRAM»T

¾¼¾f	Ö†Èí	ÄÄÖ	Í Û ÇÈ	Chip Öaçò
16M	Micron	MT48LC2M8A1-08	x1	8
16M	TI	TMX626812BDGE-10A	x1	8
16M	Hyundai	HY57V168010CTC-10	x1	8
32M	Micron	MT48LC2M8A1-08	x2	16
32M	Hyndai	HY57V168010CTC-10	x1	16
32M	NEC	D4516821AG5-A10-7JF	x1	16
32M	SEC	KM48S2020CT-GH	x1	16
128M	Simens	HYS72V16220GU	x2	18

çÖçUÖ Ä`E çY parity check ¾ Å»ÈÖÎ È`ÖèB Û Ö•»TÈ' çÌÐÑÄéçè 72 bit DIMM (64 bit
data + 8 bit parity) Äí¾PÎÄ parity check»RBIOS çzÄöÈaÈÖÄÖ 72 bit parity DIMM»R
¾ÄÖ÷İŞB ÍnÄŠ»T