

İP³XÍÓ İŞB ÀŞÒà

ç0ÍÓĚ_çYİqÁaÔçDzÃÔ% À»»RŮ»Ã ÀfÀ ÀŠÒàĚ'ÃÔÂ†İè»R×è×eŮ ÀæÑíÍ,ÂáÂSa[ÂíÂŠ
Òà»T



×è%f%â: ESD (Electrostatic Discharge) ÆÊÚcŮ,,Ã
Ó,,%ÂN_»RçëÃ Û€B Ó,,Ò (IC) ÅöĚvÃ Â Â ÚcŮ,,Ña
ÚÍÃÔŮ%Be»RÀnÃÓÑ"ÂeÑ]ÍŚİ' ØŎ»RÔèŎèØ »RÛi çc
çu%eÂpç]ÃÔŮ†ç Â Â ÐaĚq»TÆĚ%WŎŠÃŎÚcŮ,,Ã Ó,,
ÂíÑ}ÝrİŎ% »R×èÛ ÀÆ%fÀTÃÔŮŠÃŎĚŎÆZ»X

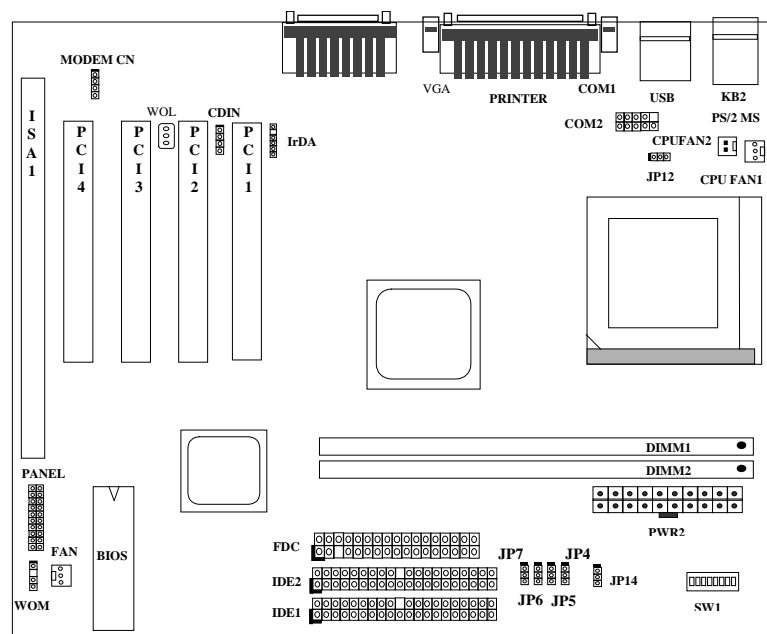
1. Ê¼ÅÜĚ' %ŠÑaÍaÀ€Ç€Ð"Ã}ÀŠŎaŮ†ç »RÁpÂy%uŎf
%4Ç€Ě_Ů†ç ÀõÃŎÚcŮ,,çnŎa%3Â çi»T

2. ÀsĚ' ÀŠŎaŮ†ç Ěä»RÍæÀĚĚr%hÃÍĚİÀr×^ÃŎ%â
Ú »R%4Í»ç ÃŎŮ,,%4Ů†ç À Í¼ÃÍÀs× »TÀfÃXÃdÃÍ
%âÚ »R×èÂéçèç À çzçYÃŎ% ÚcŮ,,ÃŎİÚç_Â•»RÃí
ŎaÂ†İèŮ†ç %eçUŎ Ā`Ěİpİ»T

İŞB ÅŠ0à

2.1 Jumper 0aËİÚj ÄÔÀ ò~

¿Y%ÆÆ¿U0 Ä`¼Jumper Ä^ ËİÚj (connector) ÄÔË¿0~ 0é»X



İŞB ÅŠ0à

Jumpers:

SW1:	CPU Èð%aó„Ú¼ŃaÇÙÚh
JP4, JP5, JP6, JP7	CPU ĸ•Í»Úhİ%Ń•Úh
JP12:	CPU I/O Ó„Ú½
JP14:	İ ^ Ê¼CMOS

ĖİÚj:

PS2:	PS/2 ÑaÓÁĖİÚj
KB:	PS/2 Ūp×J ĖİÚj
COM1:	COM1 ĖİÚj
COM2:	COM2 ĖİÚj
PRINTER:	ÀJ Ā Ø ĖİÚj
PWR2:	ATX Ó„Ñ×ĖİÚj
USB:	USB ĖİÚj
FDC:	Floppy ĖİÚj
IDE1:	İĐ%QİİIDE Í†ĖİÚj
IDE2:	İĐ%XİİIDE Í†ĖİÚj
VGA:	VGA ĖİÚj
CPUFAN1:	CPU ÇÑĖĖĖİÚj
CDUFAN2:	CPU ÇÑĖĖĖİÚj
FAN:	ÇÑĖĖĖİÚj
IrDA:	IrDA (Æ ĸ•×^ĐaŪ) Í†ĖİÚj
PANEL:	Åv¼ ÇĖÄ` Å ŪpŌaŪ` ŌŌÍ†ĖİÚj
CD-IN:	CDROM ÇİÑ××^ĖİÚj
MODEM-CN:	Mono in (Pin 1-2) Ōa Mic out (Pin 3-4)
WOM:	0V Wake On Modem ĖİÚj
WOL:	Wake On LAN ĖİÚj

İŠB ÅŠòà

2.2 Jumpers

Äi Üñ Jumper Î_Æ Ñ ÂéçèÄaÇÈÈÄ çUØ Ä`Æ ÄpÈiÈaÄeÝ ÍÆÏ ðÍçnúÈa»RçÌðÑ×iØy
ÄÖÄ ò~»Tumper Í„ÈqÆ %QÄèÄyÇiðÜÄüÄÖð ×Ä¼ ð Î»Äs%QÈaÄ ÄüÄÖÈaÈŠ%Ä»RÄí×i
ØyÄÖ¼ Ä»Æ È_ð ×ÄÍfÖñ ÑaÇÈÄSÖ~ÄÖÖ"Ä (pin) ÄÄÄ×Î»ÄtÄj ç»TçÖÍ¼Ä•çi ÖÈÈaÄÖ
Jumper Ä»ÎÄsÍæÈqçèÄèÍæÄè%ÄÄÖÄÄÖR»RÄs×iØyÄv×è×eÖ'È'çç %ÄÖèÄpÑ_Ö„»T
ÄsÖ ÖöÄÖçUØ Ä`Ä»RÍ„ÈqÑ"ÄÍçi ÄüÄÖÄIä×^ÖèçöÄ ÎP%QÖð(pin1)Ä Ä »RÑ
ÄöÇæÖ»Äü Jumper ÍnÄs 1-2ÄÖÄ ò~Èa»RÑ_ÄpÆ Ä È_ð ×Ä¼Ä»ð)Î»Äs
pin1 Ä^ pin2 ÄÖÄ ò~Ä»R È_Äp Í†ÈÍ^ ò)Äs %Q Èp »TÄfÄX ÄöÇæÖ»Äü
Jumper Open Èä»R Ñ_ÄpÆ Ä È_ð ×Ä¼ ð ÎØð"»WÑ ÄöÇæÖ»ÄüJumper
Short Èä»RÑ_ÄpÆ Ä È_ð ×Ä¼ ð Î»Ä»RÄèÄpÍ^ ò »T



Open



Short

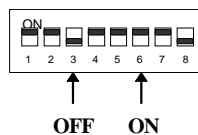


Jumper set at 1-2



Jumper set at 2-3

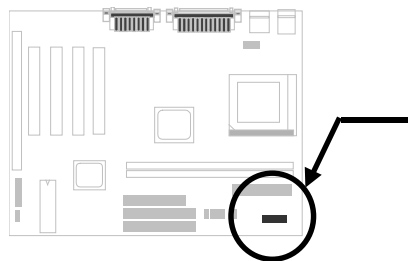
È¼ÄÖÄÈÄÖ Jumper Ä¼•»RÍ,ð çUØ Ä`Ä»RÄèèÄÄ ÖÑð"Ý (DIP Switch) **SW1**
ÄíÎÄŠ CPU Èð¼üÖ„Ü½ (Vcore) ÖaÇÜÜh»R×èÈèÖñÇÄüÄÖÖèÖèÄíÈÍÎÄŠ»TÄsçÖ¼üçf
¾»RÇj ÄÍÎ¼Ä Ä ÖÑð"Ý ÄÖON/OFF»RÍ¼Æ ÄéçèÄfÄa%ç ÖèÄÖÄ çö¼ Ä»»T



2.2.1 İñÃŠ CPU Ó„Ú½

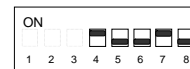
S4	S5	S6	S7	S8	Vcore
ON	ON	ON	ON	OFF	3.52V
OFF	ON	ON	ON	OFF	3.45V
OFF	OFF	ON	ON	OFF	3.2V
ON	OFF	OFF	ON	OFF	2.9V
OFF	OFF	OFF	ON	OFF	2.8V
OFF	OFF	ON	OFF	OFF	2.4V
ON	ON	OFF	OFF	OFF	2.3V
OFF	ON	OFF	OFF	OFF	2.2V

SW1 çèÃíİñÃŠ CPU Èð%ñó„Ú½
(Vcore) ÕaÇÌÚĦ»R ÅšDIP %ĦÅQ
Ãí 8 Ú %ÕİÃÅ»Đ"Ý »RÃŠòàÀ€
CPU %ÃÃũ»R×èçèİM-8 İiĐ"Ý
ÃiÃ ÅŠ Vcore»TçÕçUØ Ä`ÀQ%þ
İÃ 32 İiÓ„Ú½İñÃŠ»RÃÓøýÃÒÃ
ÀT×èÈèÕİP2-7ÇĐ»T



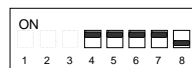
3.2V

K6-233



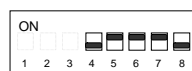
2.9V

K6-166/200 or M2



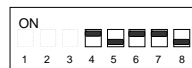
3.52V

6x86 or K5



3.45V

P54C



3.3V

IDT C6



2.8V

P55C (MMX)



2.4V

K6-2 400/450 and K6-III



2.2V

K6-266/300 or K6-2

İŞB AŞÖä

»f Ä DaÄTçî çòÄvçÄÇE»hçzÄÄCPU İnÄŞ% Ä»»R Ó ÖöÄÖInÄŞÇäçzEuÑÖaÑ†ÄÖ
CPU ÄÍÄäçî »q»RÍÄŞÈä×eÈäçÌÈe0ñ' CPU ÄÖÖ»Ä »çç »T

CPU	Type	Vcore	S4	S5	S6	S7	S8
INTEL P54C	Single Voltage	3.45V	OFF	ON	ON	ON	OFF
INTEL P55C	Dual Voltage	2.8V	OFF	OFF	OFF	ON	OFF
AMD K5	Single Voltage	3.52V	ON	ON	ON	ON	OFF
AMD K6-166/200	Dual Voltage	2.9V	ON	OFF	OFF	ON	OFF
AMD K6-233	Dual Voltage	3.2V	OFF	OFF	ON	ON	OFF
AMD K6-266/300	Dual Voltage	2.2V	OFF	ON	OFF	OFF	OFF
AMD K6-2	Dual Voltage	2.2V	OFF	ON	OFF	OFF	OFF
AMD K6-2 400/450	Dual Voltage	2.4V	OFF	OFF	ON	OFF	OFF
AMD K6-III	Dual Voltage	2.4V	OFF	OFF	ON	OFF	OFF
Cyrix 6x86	Single Voltage	3.52V	ON	ON	ON	ON	OFF
Cyrix 6x86L	Dual Voltage	2.8V	OFF	OFF	OFF	ON	OFF
Cyrix M2	Dual Voltage	2.9V	ON	OFF	OFF	ON	OFF
IDT C6	Single Voltage	3.52V 3.3V	ON ON	ON OFF	ON ON	ON ON	OFF OFF



PİÁz: ÄfÄXÈ' Äéçè Intel PP/MT-233 Äè AMD K6 Ä†ÄTÍSì' ØÖ»R
×eÄéçè0 »ÄÖ CPU ÇÑÈE»TÄfÄXÍJÄ|İBÄiÍ, Ää CPU ÄÖİİÖ Ö-
ÄU»RÄ†İèçzEuÑ"Í, çç»ÄÇÄSÄÖİ' ðY»TÄÍY Ä CPU ÇÑÈE»RÄsÄö
ÇæÄÖ web ÈÖ (<http://www.aopen.com.tw>) »hÄÍÄTçî ÄY ÄÖÖ
Èe»T



İ½ö: Í Ö,,Ü½CPUÄÖ I/OÖ,,Ü½Vcpuio (CPU I/O Voltage) İçÄ
Èö»ÄÖ,,Ü½ Vcore»RÄ Æ Ö Ä Ü Ö,,Ü½ CPU Äf PP/MT MMX
(P55C)»SAMD K6 Äè Cyrix 6x86L/M2»RVcpuio Öa Vcore ÄY½½
ÄÄa»RVcpuio »eÄÍİçÄ Vio (PBSRAM »e Chipset Voltage)»T
ççUÖ Ä ÄÍEdÈ ×~Ö ççYÄöÈeÈÖİ Í Ö,,Ü½ÄeÜ Ö,,Ü½CPU»T

İ½ö: Í, ð çUÖ Ä Äéçè»W5 İi»ÄTÄD"Y ÄiÄ ÄŞ Vcore»RÄi çYÜq
ÄQçzÄÍ 32 ÖöInÄŞÇa»RÄ†ÄR»W1.3V Ä 3.5V »ÄD»ÄÖÄiÄÍÖ,,Ü½R
ÄéçYÄÄÄQEB CPU ÈaÈ_A ÄyÖ~Äa»T

İŞB ÀŠÒà

İ, Đ ĸU0 Ä ĸY%pİÄ 1.3V Ä 3.5V %ÄD»Ä0 CPU Èð%ü0,,Ü%»RAs CPU ÄQÉBÈäÍaÄý
 Ö~Äa»TĸY%fÆ ÄiÄÍ0,,Ü%ÇaÄ0İnÄŠ%Ä Ä»»X

Vcore	S4	S5	S6	S7	S8
1.30V	OFF	OFF	OFF	OFF	ON
1.35V	ON	OFF	OFF	OFF	ON
1.40V	OFF	ON	OFF	OFF	ON
1.45V	ON	ON	OFF	OFF	ON
1.50V	OFF	OFF	ON	OFF	ON
1.55V	ON	OFF	ON	OFF	ON
1.60V	OFF	ON	ON	OFF	ON
1.65V	ON	ON	ON	OFF	ON
1.70V	OFF	OFF	OFF	ON	ON
1.75V	ON	OFF	OFF	ON	ON
1.80V	OFF	ON	OFF	ON	ON
1.85V	ON	ON	OFF	ON	ON
1.90V	OFF	OFF	ON	ON	ON
1.95V	ON	OFF	ON	ON	ON
2.00V	OFF	ON	ON	ON	ON
2.05V	ON	ON	ON	ON	ON
2.1V	ON	OFF	OFF	OFF	OFF
2.2V	OFF	ON	OFF	OFF	OFF
2.3V	ON	ON	OFF	OFF	OFF
2.4V	OFF	OFF	ON	OFF	OFF
2.5V	ON	OFF	ON	OFF	OFF
2.6V	OFF	ON	ON	OFF	OFF
2.7V	ON	ON	ON	OFF	OFF
2.8V	OFF	OFF	OFF	ON	OFF
2.9V	ON	OFF	OFF	ON	OFF
3.0V	OFF	ON	OFF	ON	OFF
3.1V	ON	ON	OFF	ON	OFF
3.2V	OFF	OFF	ON	ON	OFF
3.3V	ON	OFF	ON	ON	OFF
3.4V	OFF	ON	ON	ON	OFF
3.5V	ON	ON	ON	ON	OFF

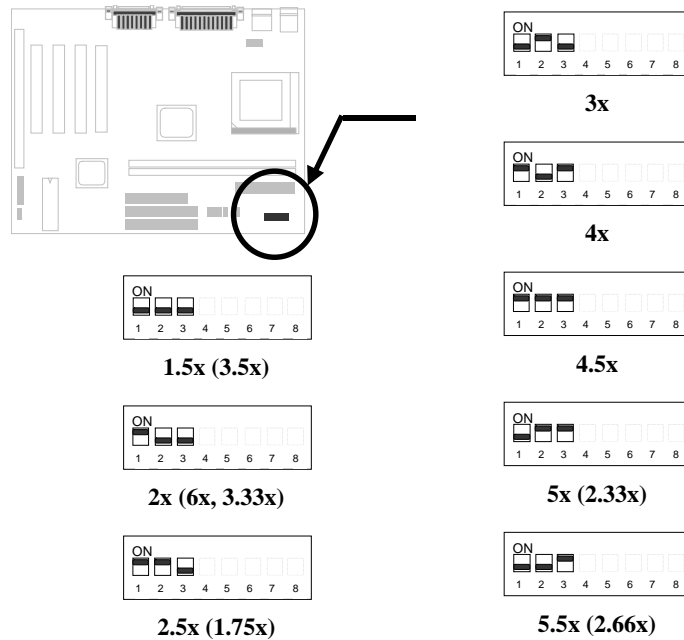
İŞB AŞÖà

2.2.2 Ü Øö CPU Úhİ%

S1	S2	S3	CPU Frequency Ratio
OFF	OFF	OFF	1.5x (3.5x)
ON	OFF	OFF	2x (6x, 3.33x)
ON	ON	OFF	2.5x (1.75x)
OFF	ON	OFF	3x
ON	OFF	ON	4x
ON	ON	ON	4.5x
OFF	ON	ON	5x (2.33x)
OFF	OFF	ON	5.5x (2.66x)

SW1 ¼hÄÖİİP-3 İi¼ÖİÄD"Ý Æ
çèÄİİnÄŞÇÜÚh (CPU Ratio) çè
ÄÖ»T

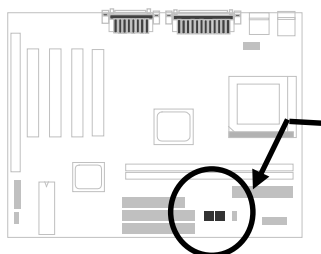
$$\text{CPU Frequency Ratio} = \text{CPU Ratio} * \text{External bus clock}$$



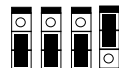
İŞB ÅŠ0à

<u>JP4</u>	<u>JP5</u>	<u>JP6</u>	<u>JP7</u>	<u>CPU</u>	<u>PCI</u>
2-3	2-3	2-3	1-2	60MHz	30MHz
1-2	2-3	2-3	1-2	66.8MHz	33.4MHz
2-3	1-2	2-3	1-2	70MHz	35MHz
1-2	1-2	2-3	1-2	75MHz	25MHz
2-3	2-3	2-3	2-3	75MHz	37.5MHz
2-3	2-3	1-2	1-2	80MHz	28.7MHz
1-2	2-3	2-3	2-3	80MHz	40MHz
1-2	2-3	1-2	1-2	83.3MHz	27.7MHz
2-3	1-2	2-3	2-3	83.3MHz	41.7MHz
2-3	1-2	1-2	1-2	95.3MHz	31.6MHz
1-2	1-2	1-2	1-2	100MHz	33.3MHz
1-2	1-2	2-3	2-3	105MHz	35MHz
2-3	2-3	1-2	2-3	110MHz	36.7MHz
1-2	2-3	1-2	2-3	115MHz	38.3MHz
2-3	1-2	1-2	2-3	120MHz	40MHz
1-2	1-2	1-2	2-3	124MHz	41.3MHz

JP4 »S JP5 »S JP6 0a
 JP7 çèÁíÛ Â CPU ç•
 Űh (bus clock) »SAGP
 Clock 0a PCI Clock»T

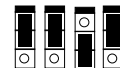


JP4 JP5 JP6 JP7



CPU:60MHz;
 PCI:30MHz

JP4 JP5 JP6 JP7



CPU:75MHz;
 PCI:25MHz

JP4 JP5 JP6 JP7



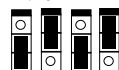
CPU:66.8MHz;
 PCI:33.4MHz

JP4 JP5 JP6 JP7



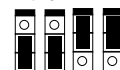
CPU:75MHz;
 PCI:37.5MHz

JP4 JP5 JP6 JP7



CPU:70MHz;
 PCI:35MHz

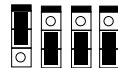
JP4 JP5 JP6 JP7



CPU:80MHz;
 PCI:28.5MHz

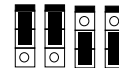
İŞB ÅŠ0à

JP4 JP5 JP6 JP7



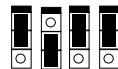
CPU:80MHz;
PCI:40MHz

JP4 JP5 JP6 JP7



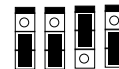
CPU:105MHz;
PCI:35MHz

JP4 JP5 JP6 JP7



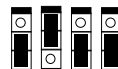
CPU:83.3MHz;
PCI:27.7MHz

JP4 JP5 JP6 JP7



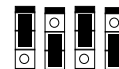
CPU:110MHz;
PCI:36.7MHz

JP4 JP5 JP6 JP7



CPU:83.3MHz;
PCI:41.7MHz

JP4 JP5 JP6 JP7



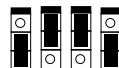
CPU:115MHz;
PCI:38.3MHz

JP4 JP5 JP6 JP7



CPU:95.3MHz;
PCI:31.6MHz

JP4 JP5 JP6 JP7



CPU:120MHz;
PCI:40MHz

JP4 JP5 JP6 JP7



CPU:100MHz;
PCI:33.3MHz

JP4 JP5 JP6 JP7



CPU:124MHz;
PCI:41.3MHz



ÞİÁz: VIA MVP4 İÖ¼ İıĐa³pİİÄ 100MHz ç•Üh»RÄpçİİnÄŞAjÂ`
ÉuÂë³Öİ»İ Öıçè»Rİ, ÄáİnÄŞ³ŞĐhçİİÖ¼ İı³pİİÄÖİhÈ »RçzÉuÑ«Ñ}
ÈqĖ· ÄÖÄ‡İè»T

ÞİÁz: Ü Øö 100/105/110/112/115/120/124MHzĖä»RÄöÞİĖ· ÍæÆÜ çè
PC100 SDRAM»T



×ê³f³u: ¼fÄ ĐaÄTçİçòÄvçÄÇĖ¼³ŞÄĖ„ÄÖ CPU»RÄn¼ÄİpÄİÑ† CPU
ĖŮçİ»RçÜ×eÄÖİnÄŞ×eĖèÄİ CPU Ö‡Ėİİ¼ÄeÄÖİhÈ »T

İŞB ÅŠ0à

INTEL Pentium	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
P54C 100	100MHz =	1.5x	66MHz	OFF	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2
P54C 133	133MHz =	2x	66MHz	ON	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2
P54C 166	166MHz =	2.5x	66MHz	ON	ON	OFF	1-2 & 2-3 & 2-3 & 1-2
P54C 200	200MHz =	3x	66MHz	OFF	ON	OFF	1-2 & 2-3 & 2-3 & 1-2

INTEL Pentium MMX	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
PP/MT 166	166MHz =	2.5x	66MHz	ON	ON	OFF	1-2 & 2-3 & 2-3 & 1-2
PP/MT 200	200MHz =	3x	66MHz	OFF	ON	OFF	1-2 & 2-3 & 2-3 & 1-2
PP/MT 233	233MHz =	3.5x	66MHz	OFF	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2

Cyrix 6x86 & 6x86L	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
P166+	133MHz =	2x	66MHz	ON	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2
P200+	150MHz =	2x	75MHz	ON	OFF	OFF	1-2 & 1-2 & 2-3 & 1-2

Cyrix M2	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
MX-PR200	166MHz =	2.5x	66MHz	ON	ON	OFF	1-2 & 2-3 & 2-3 & 1-2
	150MHz=	2x	75MHz	ON	OFF	OFF	1-2 & 1-2 & 2-3 & 1-2
MX-PR233	200MHz =	3x	66MHz	OFF	ON	OFF	1-2 & 2-3 & 2-3 & 1-2
	166MHz=	2x	83.3MHz	ON	OFF	OFF	1-2 & 2-3 & 1-2 & 1-2
MX-PR266	233MHz =	3.5x	66MHz	OFF	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2
MX-PR300	225MHz=	3x	75MHz	OFF	ON	OFF	1-2 & 1-2 & 2-3 & 1-2
	233MHz=	3.5x	66MHz	OFF	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2

IDT C6	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
C6-150	150MHz =	2x	75MHz	ON	OFF	OFF	1-2 & 1-2 & 2-3 & 1-2
C6-200	200MHz =	3x	66MHz	OFF	ON	OFF	1-2 & 2-3 & 2-3 & 1-2

AMD K5	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
PR100	100MHz =	1.5x	66MHz	OFF	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2
PR133	100MHz =	1.5x	66MHz	OFF	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2
PR166	116MHz =	1.75x	66MHz	ON	ON	OFF	1-2 & 2-3 & 2-3 & 1-2

İŞB AŞÖa

AMD K6	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
K6-166	166MHz =	2.5x	66MHz	ON	ON	OFF	1-2 & 2-3 & 2-3 & 1-2
K6-200	200MHz =	3x	66MHz	OFF	ON	OFF	1-2 & 2-3 & 2-3 & 1-2
K6-233	233MHz =	3.5x	66MHz	OFF	OFF	OFF	1-2 & 2-3 & 2-3 & 1-2
K6-266	266MHz=	4x	66MHz	ON	OFF	ON	1-2 & 2-3 & 2-3 & 1-2
K6-300	300MHz=	4.5x	66MHz	ON	ON	ON	1-2 & 2-3 & 2-3 & 1-2

AMD K6-2	CPU Core Frequency	Ratio	External Bus Clock	S1	S2	S3	JP4,JP5,JP6,JP7
K6-2 300	300MHz	3x	100MHz	OFF	ON	OFF	1-2 & 1-2 & 1-2 & 1-2
K6-2 333	333MHz	3.5x	95MHz	OFF	OFF	OFF	2-3 & 1-2 & 1-2 & 1-2
K6-2 350	350MHz	3.5x	100MHz	OFF	OFF	OFF	1-2 & 1-2 & 1-2 & 1-2
K6-2 366	366MHz	5.5x	66MHz	OFF	OFF	ON	1-2 & 2-3 & 2-3 & 1-2
K6-2 380	380MHz	4x	95MHz	ON	OFF	ON	2-3 & 1-2 & 1-2 & 1-2
K6-2 400	400MHz	4x	100MHz	ON	OFF	ON	1-2 & 1-2 & 1-2 & 1-2
K6-2 450	450MHz	4.5x	100MHz	ON	ON	ON	1-2 & 1-2 & 1-2 & 1-2
K6-2 475	475MHz	5x	95MHz	OFF	ON	ON	2-3 & 1-2 & 1-2 & 1-2
K6-III 400	400MHz	4x	100MHz	ON	OFF	ON	1-2 & 1-2 & 1-2 & 1-2
K6-III 450	450MHz	4.5	100MHz	ON	ON	ON	1-2 & 1-2 & 1-2 & 1-2

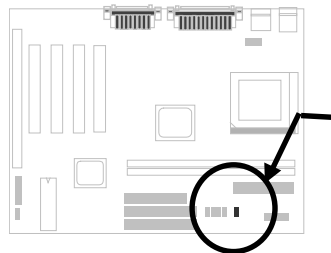


×eÄqÑ: Cyrix 6x86/M2 Ä^ AMD K5 CPU Äéçè P-rating ÄQÆÖa Intel P54C Í†Äñ% ò ÈäÄÖÈèÄi Ä Öè»RÄp%ÖÍ»Ühİ%ÄÝ%4ÄBÄi ÖèçöÄsç•ÄÖP-rating»TÄi Äf»RCyrix P166+ Äp%ÖÜhÆ133MHz Ä ÈPÉúÆ İçÄ P54C 166MHz»RÄi AMD PR133Äp%ÖÜhÆ100MHz Ä ÈPÉúÆ İçÄ P54C 133MHz»T

2.2.3 İ^Ê½CMOS

JP14	İ^Ê½CMOS
1-2	Normal operation (default)
2-3	Clear CMOS

ÀfÄXË'ÄeÊ`ÄiİmŠÅ0ÄİİeË\×i Èä»RçİĐŇç
 È_À01[~fv.1İmÈIC>Đ»Rİ^Ê½ÄYÇÄİmT^`d
 Ä0İmŠÇäÄü»R%•ÉuÇÄŇĐ"Ø »T



JP14



Normal Operation
(default)

JP14



Clear CMOS

İ^Ê½CMOS Ä0İ'ÄäÄf¾:

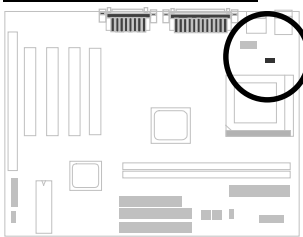
1. ×e×eÄŠ0,,0¼Ä00,,Ň×%ŠY È0»T
2. È,, PWR2 ÈİÜj¾ÄÈ_ ATX Ó,,Ň××^ÄøÈ0»T
3. Äa06 Jumper Èİ0~ÓeÄpçi JP14 ÄiÄsÄ0Ä 0~»T
4. È_Đ ×Äİf0¼Đ Ä)Ä ¾fÄi»RÄ È^Ä2-3 0"Ä ¾Ä»T
5. ¾QŇÄüÈäĐ»Äü»RÄ ¾fĐ ×Äİf0¼ÄÄŇÈ^ÄoÄ 1-2 0"Ä ¾Ä»RÄ İpçÜÈq00ÄQÄÆ
 ÖR»T
6. ÇÄŇçİĐ"Ó,,0¼0,,Ň×»T
7. ÀfÄXŇbÇÈİmŠŇÄ0ÄİİeË\×i »RçÄsÄİİeÈiÈäÈä»RÄ ¾f [DEL] Ä ÜpĐ¾¾ BIOS
 Setup İ'Ä»¾¾RÄRÇÄŇİmŠŇÈ\×i »T

İŞB ÅŠ0à

2.2.4 I/O Ó„Ú½

JP12	I/O Ó„Ú½
1-2	3.32V
2-3	3.45V

JP12 Åj %ŌÍ»Î òìçèÀ0»TÍ, Çi jumper ççYçèÁíÎÅŠÎ0
¼ İiŌa PBSRAM ÅŌŌ„Ú½(Vio)»T



JP12



3.32V

JP12



3.45 V

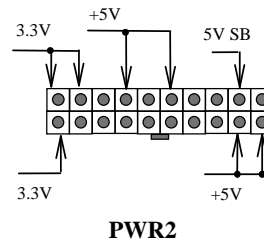
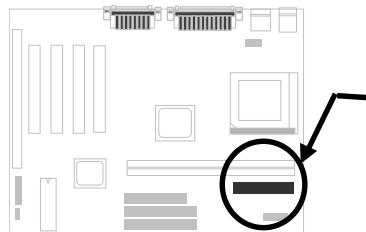
2.3 Í†ËÏÚj

2.3.1 Ó„Ñ×Í†ËÏ×^

ATX Ó„Ñ×Í†ËÏÚj ÅéçèÀf%Ä Å020-pin Í†ËÏÚj »R×è×eÅŠË'Í»%Ä0% ÄgÆ çÛ×eÄ0»T

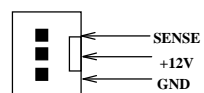
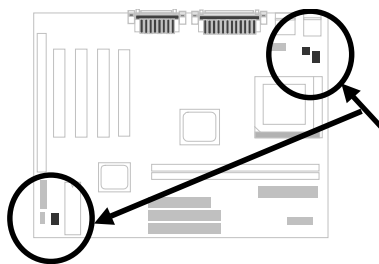


×è×e%Ä: ÅsÍ†ËÏÄèÅ0Ë%0„Ñ×Í†ËÏ×^%ÄÄv»R×èç Ý ÍÄ†ìè0„
Ñ×»T

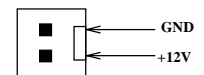


2.3.2 ÇÑÈÈËÏÚj

Í, Ð çU0 Ä`%Ä1Ä CPUFAN1»SCPUFAN2 Óa FAN %eÇ1ÇÑÈÈËÏÚj »XCPU ÇÑÈÈçz
çYËÏÄs 2-pin Ä0 CPUFAN1 Äè 3-pin Ä0 CPUFAN2 ËÏÚj %Ä1»WÄ1FAN ÄyççYÍ†
ËÏ0 ÍuÄ0ÇÑÈÈ»T×èÄqÑ»Rç^ÄÍ 3-pin ËÏÚj %Ä1ÄÇÑÈÈ0aËËççú»RÄnËÍ, ÓèËÏÚj ÄÍ
Äy%Ä1ÄÇÇ1SENSE ËÏ0»T



CPUFAN1 & FAN

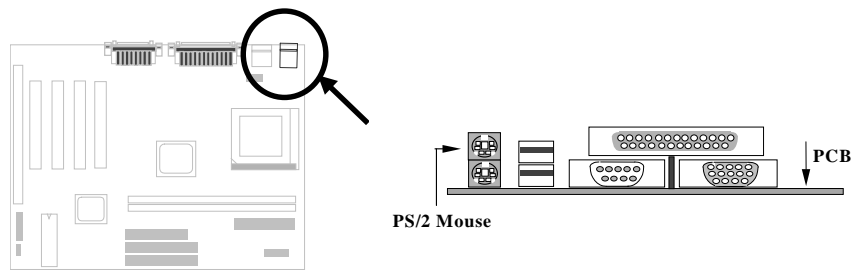


CPUFAN2

İŞB ÅŠ0à

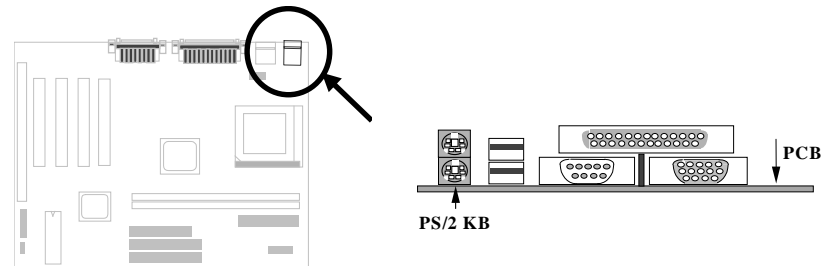
2.3.3 PS/2 Ñà0Ā

×ēĪ†ĒĪ PS/2ĪÑà0ĀĀ ōēçōĀĒĒPS2 MSĪĀ0ĒĪŪj ¼ĥ»T



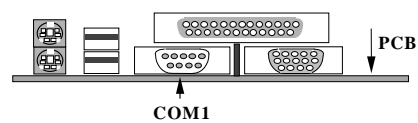
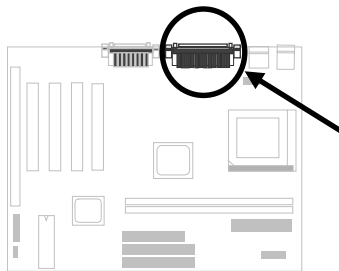
2.3.4 Ūp×]

×ēĒ_PS/2 Ūp×]ĒĪĀ ōēçōĀĒĒKB2 Ā0Ī†ĒĪŪj ¼ĥ»T



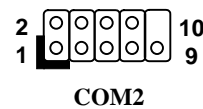
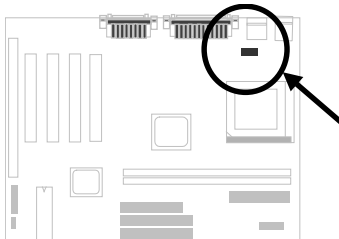
2.3.5 À ÀTÊ (COM1)

Åû% ÇĖĀ` %hĀĪ%QÇi0ēzöĀ**COM1** Å0 9-pin D-ÅĖ ĖĪŪj »RzēĀĪĪ†ĖĪÀ ÀTÊ Ñà0Ā
(serial mouse) ĀēĖ 0à000 »T



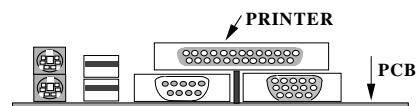
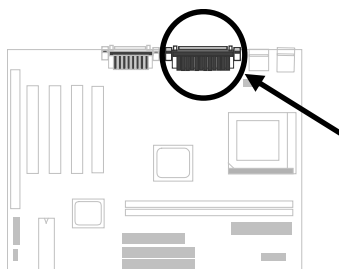
2.3.6 À ÀTÊ (COM2)

×ēĖ_ 10-pin Å0Ėā×ĖĖĪ0**COM2**»T



2.3.7 ÀĴĀ 0

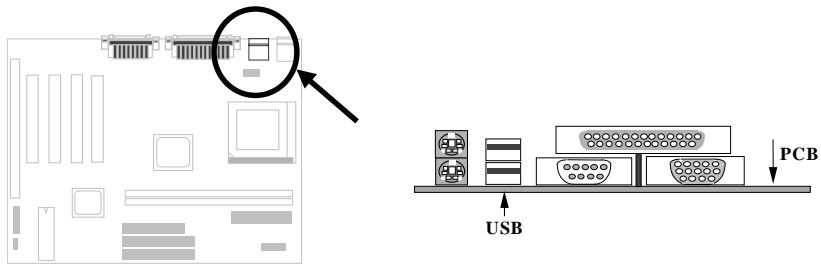
zU0 Ā` Åû% ÇĖĀ` %hĀĪ%QÇi0ēzöĀ**PRINTER** Å0 25-pin D-ÅĖĪŪj »RzēĀĪĪŠĪ»ĀŸĀT
Ā»ĴĀ 0 »T



İŞB ÅŠÒà

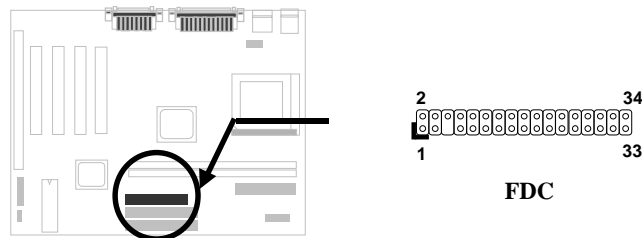
2.3.8 USB ÒàÒ~

È'çË_ USB ÒàÒ~Í†ËÏÀ USB ËÏÛj »RÍ, Ð çUØ Ä` %hÁÍÄüçUSB ËÏÛj »RÖêçöÆ USB»T



2.3.9 Í€ÒêØ

ÀsçUØ Ä` %hÁÍ%QÇiÖêçöÆFDC ÄÒ 34-pin ËÏÛj »RçZèÁÍÍ†ËÏÄüçÍ€ÒêØ »T



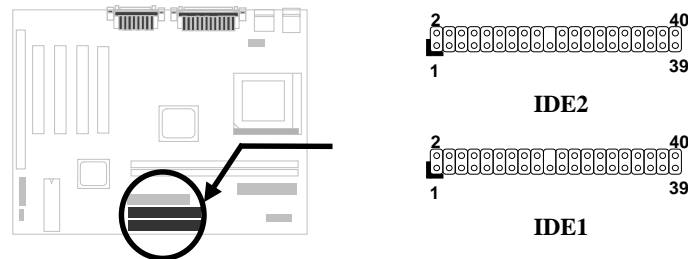
2.3.10 IDE İŞÖêØ Òa CDRÖM

ÀsçUØ Ä` %h»RËÍÁÍÄüçiÖêçöÆIDE1 Ä^ IDE2 ÄÒ 40-pin ÈaÈŠ»RçZ%UÄ` Í†ËÏÄüçi IDE ÒàÒ~»RÍæÿçZÍ†ËÏçÇi IDE ÒàÒ~»R%QÉ IDE1 %dÖöÆçUÍ,,ÖU (primary channel)»RIDE2 %dÖöÆçAÖÍ,,ÖU (secondary channel)»T

Í†ËÏÄ ü %QÍ,,ÖUÄÖİP%Qç<ÒàÒ~çİĐÑİnÆmaster mode»WİP%Kç<ÒàÒ~çİĐÑİnÆ slave mode»Tç %QÇiÒàÒ~Ä»çÆİŞÖêØ Äêç ÖêØ »T

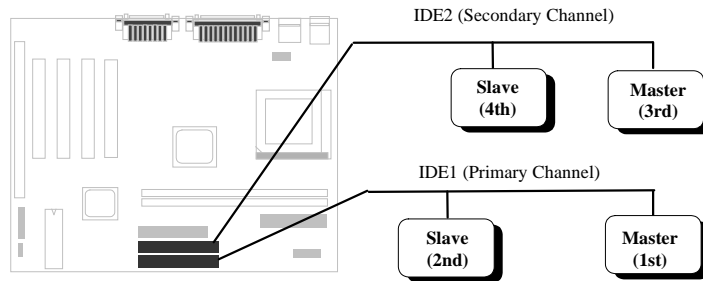
×êË_È'İP%Qç<ÒàÒ~İnÆmaster mode ÄÝËÏÄ IDE1»RİP%Kç<ÒàÒ~İnÆ slave mode ÄaÖaËÏÄ IDE1»TÄfÄXÈ'ÄİİP%çç<%çİPçç<»R×êÄæÄäËÏÄÄ IDE2 ÄÒ master %ç slave mode»T

İŞB ÅS0à



×è¾¾: IDE ÍhÈ ÅðÍËä×~ÍæÄ ¾¾zDh0] 46 ¾¾
¾¾ (18ÇoÀe)»R¿YÁ\0 ÈäDaÜ ¾¾Ä"»T

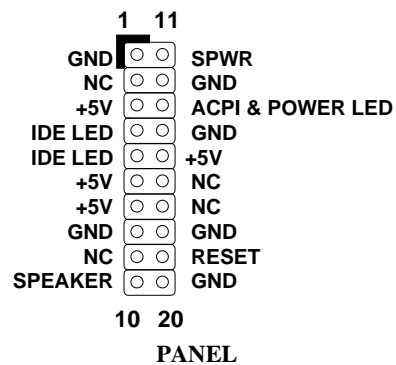
×è¾¾: ÅÊÖWÄ ÍæÀeÄÖAY00Ä•× »RÈä×~ÍæÖN0÷ÄÖ
0ä0~ÍæÀeInÄÄ master mode»RÄYÄæNi ¾¾F0éÅðÍÄÖ
DDÄäÅS0aÑ†0ä0~»T



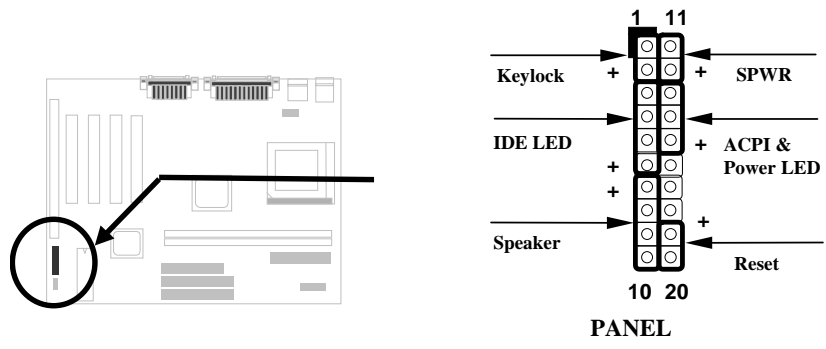
2.3.11 Åv¾ ÇÈÄ`ÈÏÜj

Åv¾ ÇÈÄ`ÈÏÜj ÅÊ20-pin ÈäÈŠ»RÖe¿öÄÄ
PANEL»TÄ0Èä×~ÈÏÜj ¿ACPI & Power
LED Ä ¿öÜ`»RÜp×]Ü (keylock)»RÇÄÑ†D"
0 (reset) Ä D†»RÍÜ¿ (speaker) Í¿»TÈ'
¿¿YÄæ¿|0éÄÍÅS0à»T

Çj È' ÄÍ Às BIOS ¾¾ÄInÄŠ "suspend
mode"»RÄyÑ D¿¾¾ suspend 0i À»Èä»R
ACPI & Power LED Ä ¿öÜ`Ä\ÑD"ÄÈ'
Ý'»T



İŞB ÅŠ0ä

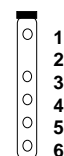
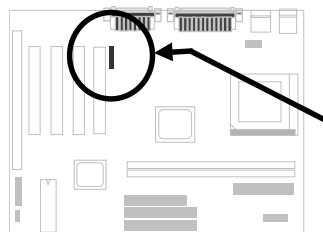


2.3.12 Å ĺ•ˆĐáÛ Ê (IrDA)

ĺŃĺUŦ Å`ÄŦİİ»XÄ ÀTÊ (serial port 2) ĺz»İÄ IrDA Å ĺ•ˆŦiİi»TÄi Ûñ IrDA (Infrared Data Association) Ç ĺŦÅ ĺë HP»SCompaq»SIBM İĺŦfÄi ÄÄĺüÄŦ»QÇİİi Ūİ»RĺëÄiËŪŦŦŦSĺëÅ ĺ•ˆĐáˆŦ ÈaÄŦÄŦİ_ŦaŪİĺë»TÄüÄiİË»ÄİŦİİiĺİ»R IrDA Ä\İ%ÄSÄeÄÄÅ ĺ•ˆĐáÛ ÄŦŦeÑa»Tĺ`Ç€Ë'ÄŦŦ„Ŧ%ÄyİaÅ ĺ•ˆĐáÛ ĺñü»RĺSİBÄi IrDA İñÄŠ»Rİ_ÉüË Äs»QÄŠĐkŪ %Ŧ»R%ŦŦ÷Ç€İ†Ëİˆˆ»Äİ†Ëİ»RAj ĺzÄŦÈaŦaİÄË`ÄÆ Ŧ„Ŧ%ÄeÇi»YŦÄÄ Äfİ' (PDA) Äs»Äİ†ˆˆ»SĐaŦŦŪaÈñŦ ÈaÄeË_»ĺ ĒvÄ »İÄ IrDA ÄŦ Ä]Ä Ŧ ÄTÄ]»TĺŦŦUŦ Ä`ĺz»İÄHPSIR (115Kbps, 1 meter) Ŧa ASK-IR (56Kbps) İĺİhË »T

ÄŠŦaÈa»RˆeË IrDA Å ĺ•ˆŦiİiÄŠİ»Ä ĺU Ŧ Ä`»ÄŦŦeÄİIrDA ÄŦÈaÈŠ»TÄŠŦa»ÄÄü»RË' ŪŦŦİŦŦŦ»ÈiİSZ dİdv†fİ»ŦÄŦÅ ĺ•ˆĺñü»R % ĺzĺŪËq»ÄQ»T

Pin	Description
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX
6	NC

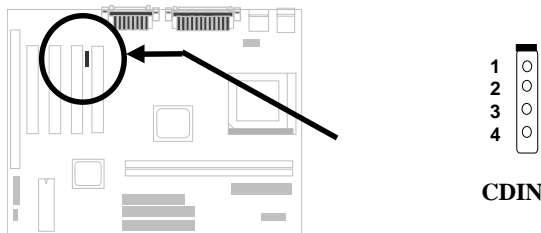


IrDA

İŞB AŞ0à

2.3.13 CD ÇİÑ××^Ëİ Üj

İ, ÇİËİ Üj Æ ÇèÂİ İ†Ëİ CDROM Ä0ÇİÑ××^»T



2.3.14 Mono In/Mic Out Ëİ Üj

İ, ÇİËİ Üj ÇZèÂİ İ†Ëİ %0ËİÀ»0à06ÇuÄ0 Mono In/Mic Out Ëİ Üj »TÄp%» Pin 1-2 Æ Mono In»Rpin 3-4 Æ Mic Out»TÇ€ÄqÑ_Ä0Æ »RÇðÄvİ, %QY Ä0Ëİ Üj ÄYÄdÄİÄe ÄSÄ00èNä»RÇ^Äİ%ð0äÄ00ä06ÇuÄİİ%Äeİ, ÇİËİ Üj »T Ü ÜäÄv×êÇ Êè0ng |¼ Ä0Ëİ0"ÄS0,»RÄYÄg0à06ÇuÄ00iËİ ðüÊ÷İ ^ Ñ»»T

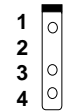
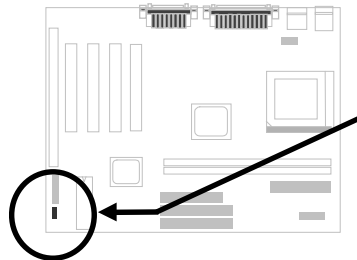
Pin	Description
1	Mono In
2	GND
3	GND
4	Mic Out



2.3.15 Wake on Modem ĖİŰj

çŰçU0 Å` %hÂyAİEdÈ x`ð İıçf»Rçz%pİA0a060 00ĖĖB"0
(0V Wake On Modem) çŰç»R%0ĖİA» (AOpen MP56)
Åeç•ĖİA»0a060 Å»çz0Rçè»TçèÅ Åeçè%0ĖİA»0a06çuA0
06»RçÇĖÅ%40÷ĖİĐ` 0„N»»RAİçYA0Çæ%4 0 Å0PİĖ'Åeçè»TÇj
Ė'ĖPçèA0Æ` AOpen MP56»RÅy×èÅeçè 4-pin İtĖİx`»Rİ†
Ėİ MP56 A0 RING ĖİŰj 0açU0 Å` %hÂWOM ĖİŰj »T

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

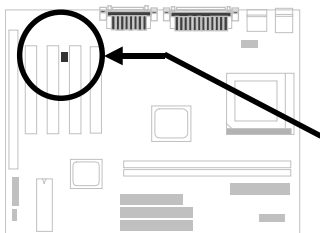


WOM

2.3.16 Wake on LAN ĖİŰj

çŰçU0 Å` ÂyAİWOL ĖİŰj »R ÇĖÅeçèWake On LAN çŰç»R
çİĐNŰvç%pİA0çŰçA00 0 çu0a0 00İĖB »T

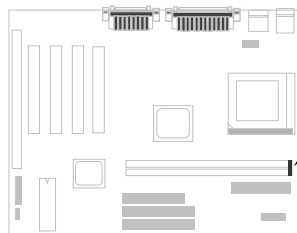
Pin	Description
1	+5V SB
2	GND
3	LID



WOL

İŞB AŞÖa

2.4 AŞÖa;UE`Øêß



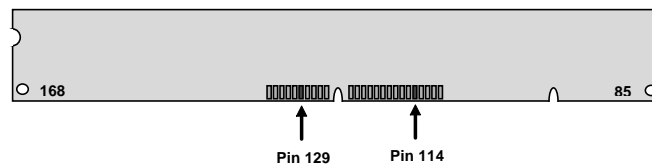
AÖ;UØ Ä`ÄÍ 2 È DIMM (Dual-in-line Memory Module) İ»Öë»R;Z;Y%
İÄ SDRAM (Synchronous DRAM)»R
İæÄEvD„;ZÖWÄ 512MB»T

;Ö;UØ Ä` ;Z;Y%İÄÖeÑa64bit ÄÖ DIMM Öiİi»T

- I. %f%f: İ ÇÈÆ 1Mx64 (8MB)»S2Mx64 (16MB)»S4Mx64 (32MB)»S8Mx64 (64MB)»S16Mx64 (128MB)»WÄi Ü ÇÈÆ 1Mx64x2 (16MB)»S2Mx64x2 (32MB)»S4Mx64x2 (64MB)»S8Mx64x2 (128MB)»T

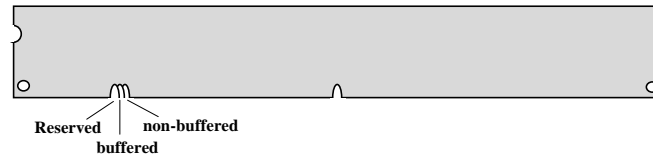


İ½ö: ÄÍÇi% Ä|;Z;YÜaÆiÈ` ÄÖ DIMM Æ Í ÇÈÜöÆ Ü
ÇÈ -- ÆÆDIMM %hÇÈÄÖ pin 114 Öa pin 129»RÄfÄX
ÄÍÊ;Ö-Ö„Ö »RÍ, È DIMM ;ZÉúİ_Æ Ü ÇÈÄÖ»WÄpÄy
İ_Æ Í ÇÈÄÖ»T×eÈeÑi%ÇÈÄÖÖeöè»T



- II. %QÉ Æ Öë;öÄf-12 Í,ÖöÄÄ»»RÍ,Ä ;öÄ†Ä İ†Äñ (clock cycle time) Æ 12ns»R Äi;YÄÖ SDRAM İæÄÖ clock Æ 83MHz»TÜöÄÍ;QÖöÖë;öÆ ÄfÄa-67 Í,Öö ÄÄ»»RÄ ;öÄaÄSÖ ÈaDü İæÄö;Ä 67MHz»T
- III. Buffered Öa non-buffered: ;Ö;UØ Ä` %İÄnon-buffered DIMM»TÈ` ;Z;YÄaÖö DIMM %hÇÈÄa%ÄÖÄ Ö~»RÄíÄaÄ non-buffered DIMM Öa buffered DIMM»T×e ÈeÑi%fÖeÄi;ö»X

İŞB ÅŠòà



çëÄ Éä%ÄÖÄ Ò~¾Äa»Rç^ÄÍ non-buffered DIMM ççYÎ»¾çUØ Ä`¾ÄÄDIMM
Î»Öë»TÛ Î^ çöÄvçÄÇË¾ÄÆ:Ä ÄÖDIMM Í½ŠÖxÆ non-buffered ÄÖ¾Ä»RÄöÇæ¾ÄÄö
pÍË'ÄsÛ ÜaÉaÍæÄËÜöÆ Ò ÄËËrÖüË:Î^ Ñ»»T

IV. 2-clock Öa 4-clock signals: Û Î^ 2-clock Öa 4-clock ÄÖ DIMM Í½ççYçèÄsÍ,
Ð çUØ Ä`¾Ä»RÄ ÄË¾ÄËËYÇÄŠÄaİöÑb»RÄöÇæ¾ÄÄöpÍË' ÍæÄËÄç4-clock ÄÖ
SDRAM»T



Î½ö: ÇËÜaÄüË' ÄÖ SDRAM Ä 2-clock ÜöÆ 4-clock
ÄÖ»RççYÆ:Æ pin 79 Öa pin 163»RÄfÄXÄÍË†Ö~Ö,Ö Î_
ÚÍÖiÆ 4-clock»WpÄyÄ\Æ 2-clock ÄÖ»T

V. ÄaÄ %Ö: %pÍÄÖëÑäÄÖ 64 bit wide (İ] parity) Öa 72 bit wide (İ] parity)
SDRAM»T

BIOS çÄöÉaËÖÎ Ê`Öeß ÄÖËvÐ,%ÄÄÄ»R¾ÄÖ÷Äéçè Jumper ÍnÄŠ»TÍæ¾ÄÄÖÊ`Öeß
ËvÐ,,Æ 512MB»T

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

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

Total Memory Size = Size of DIMM1 + Size of DIMM2

İŞB AŞÖà

¿Y³ƒÀT¿ÄoPÍÂé¿èÄÖ DRAM İiAi »X

DIMM Data chip	Bit size per side	Single/Double side	Chip count	DIMM size	Recommended
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
4M by 16	4Mx64	x2	8	64MB	Yes
4M by 16	4Mx64	x1	4	32MB	Yes
8M by 8	8Mx64	x1	8	64MB	Yes
8M by 8	8Mx64	x2	16	128MB	Yes

DIMM Data chip	Bit size per side	Single/Double side	Chip count	DIMM size	Recommended
2M by 32	2Mx64	x1	2	16MB	Yes, but not tested.
2M by 32	2Mx64	x2	4	32MB	Yes, but not tested.

¿Y³ƒÀT¿ÄoPÍÂé¿èÄÖ DRAM İiAi »X

DIMM Data chip	Bit size per side	Single/Double side	Chip count	DIMM size	Recommended
4M by 4	4Mx64	x1	16	32MB	No
4M by 4	4Mx64	x2	32	64MB	No
16M by 4	16Mx64	x1	16	128MB	No