

Microflex Slim/Mini Desk Top PC

CIEOS-PIII; MILLENNIUM-PIII

MFII+-810e; MFIII+-810

User's Manual

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CHAPTER 2 GETTING STARTED

C

PapeMpecM f m+g052d7 f m+g052dMTr.o M.FdMpcM .h.N\$ dll MpnM- yM hLdM
VpeMt vdMdlL.vd8NBdM f m+g052d7 f m+g052dMTr.o M.FdMpcM .h.N\$ dll MpnM
I - yMrdt ldNBdLl N\$ dN\$prpk .hDMdo lOM

M

1. 4 s CdhnuGfar p

- * Tr.o MFDyM .h.N\$ dll MpnM l dM .bM Nmpk dcNemrVMh llt rrd8zM
- * The Socket 370 all-in-one ATX type motherboard pre-installed inside the slim size or Mini Desk Top case.
- * I - nYhrVycM .ud8MTP 7 - nMTrpbW. ldcM c8Mudgh llt rrd8MpcM f m+g052dM t h8MTrpbM- nYhrVycM- n7TP M .ud8M ldcM c8Mudgh llt rrd8MpcM f m+g052dM
- * q hdM2Mh llt rrd8MpcM S S Mh8MS gwq i M I cdgh llt rrd8Mh8Mrg hghdM NM pbdcapt c8zM
- * q hdMExMh llt rrd8MpcM S S Mh8MS gwq i M I cdgh llt rrd8Mh8Mrg hghdM NM pbdcapt c8zM
- * q hdM2Mh llt rrd8MpcM q i MpcMudgh llt rrd8zM
- * q hdM2Mh llt rrd8MpcM q i MpcMudgh llt rrd8zM
- * CPU and cooling fan with heat sink pre-install on the top of CPU. If you have order the system with CPU together.
- * 168 pins DIMM memory from 16MB up to 512MB, If you have order the system with main memory together.
- * q hdMhLcdk M lL M3.L3MLe8.hDN\$ dN\$prpk .hDM t zM i EM2zLcdk lM6M lNpcM S 7- S gwq i Mh8M c8M llt rrt bphzM azM i EM5Mcdk lM6M lNpcM S M llt rrt bphzM
- * U ldc' lM t het rNM lzM
- * I pk dcMpc8zM
- * - S gwq i M lL Npsk t cdM .vdcM

2. s au5tnbps apm pin3Mj SGCap6 aISI apM npsnps ap3 SA al phatous wM

The AC input voltage can be switch from 110 Volts to 230 Volts or from 230 Volts to 110 Volts. The AC input voltage convert switch is located on the backside of the power supply. Please double check whether the AC input voltage is matching at your country or not. If it

10. **Chapd alalpoSpus C3aIp7pSnp6SCLr pd TLp8139 p10/1000 63hp2 Chop**
Eos alnaoCp3 ChapNsw69pSlps thy CnMCGSIps amaoASI5phSloA Clar Itj aIp
tnhoCCotSnplSI pAtnr SAhp5/98/2000pChr pAtnr SAhpNTyp

11. **BhhoCCnbps apBg puClr hBmauahhClf vp**
 3dMl f mm⁺g052dMr.o M.FdMl- Mt lM7q MrpblNcddMh8N8dMl f mm⁺g052dM
 i .h.N dll MpmMl- Mt lM7q MrpblNcddMpcMpeNpMh llt mMhM7q Mlt c8 lzM
 I rdt ldlvdsclpNdmM9MsN8dM .h.N dll MpmMl- Mvlbdo Mh llt rt bphMvM DdM
 ApzMEpsN8. lM t het nspN8dt .rd8M7q Mlt c8Mh llt rt bphzM

Important Notes:

* **The 0 2BBi810apSgv psteapO pAtGhs t3pA tos plpxpO BphSopl thal puClr pCp**
hoChr Clr vp6Mpf SMpuCnpSIR al pos apl thal puClr pA tos pO BpspBmp6Itr bap
hM3SIqplSI plpxpO BBSmpv txar pl thal puClr pAs tus pAtG6 apC6 GpSp hM3SIq
6Sos pO BChr pBmpuClr vp

* **pTs ap0 2BBi810ap0 tntpc ah5pTS3pO pAtGhs t3pA tos p3pxpO BphSopl thal p**
uClr pCp hChr Clr p6Mpf SMpuCnpSIR al pos apl thal puClr pA tos pO BpspBmp
6Itr baphM3SIqplSI p3pxpO BBSmpv txar pl thal puClr pAs tus pAtG6 apC6 GpSp
hM3SIq6Sos pO BChr pBmpuClr vp

CHAPTER 3 SPECIFICATION

C

3.1 Motherboard specification

3dM pb3dapt c8MM NMMndMrg hghdM d1.Dhd8M .bM CI M CP yM e8.pM
lpeh8Mh8M27522i amIM dtk pcl M3.nMe.r8ghzM
3dM prpk .hDM b dndt .rd8M t b cdIM b dM pb3dapt c8zM

M

2 EmT7 d ES p

- **0 Sos aI6SCR pSIapSbtup**

rhbdrM6052d706052Mci - v MC ct n3.LMh8M do pcVM phbcprrdcM UBjMM
rhbdrM6025PPM7q M phbcpM eaMn- v jMMw BM05E9- M27522i amIM
f P T MEb dchdbMM .haph8M 0E667v f MemdcM7q M&M dt r3Mt c8k t cdM
ldhlpczM

M

- **S3aar M**

66/100/133 MHz system speed (133MHz system speed is only available when the motherboard use 82810e chipset)

- **Processor supports**

- rhbdrM drdcphMpLl dbM72MI UMvMhdrM Ug6U6KM- gl CP Mdhbeo MmM
- I UMvMEEi v FMe lMcdqdhLVzM

- rhbdrM drdcphM667U27UEE72276U27722M

- rhbdrM- gl CP M2276U276677227EE7227EE7066M

- P ehpM d dLhphM sMI UMprt DiM

M

- **0 Cmp av Sif p**

- I cpv.8dIM6M ni i MpLl dbIMp MempcM6i B7xi B760i B76U6i BM
TS wP i M do pcVM p8erdIMpM56i BM

- TempcbIM ehpM d dLhphM sMI do pcVMndM

- TempcbIM- - pcMt c.bVMphs.Dect hphM

- I - 5EEM5EEi v FjMpo nr.t hbMIS wP i Mhdct LdM

M

- **BBg Sp**

- B.Ldhld8M9 P wS Bnq TyMi M.blMBP Tv Mq i zM

- Bnq T7 3.mldM dte mCddhM dte nyv t c8M .ll Mbr.bMM

M

- **Bg pOSIop**
 - q hMpt c8M - nMe lM t lhcMEh3t hLd8MS EMhbcst LdMempcbIMkMS EM 8dv.LdIM .bM6M3t hhdrlYMempcbIM q M p8dM Mp M p8dM Mh8M Be lM o t lhcMS EN i P M p8dM Mh8M rtt NP P 76M .bM t u.o eo Nt h lscM ct hM6i B7dLMk .bM6025P BM v jzM
 - q hMpt c8M pmmM. Il MphbprdcM MempcbIM zxi B M pmmM c.vdM h8M BTg 562Znl M dv.LdM
 - q hMpt c8M MempcbIM pM.DB Mndd8NUP w TM6- U2u6Mh8M erbgo p8dM nt ct rrdM pcbM h8t c8M h3t hLd8MI I Mh8M.DB Mndd8N- I M p8dlzM
 - I T7M pe ldmcbM .bM pe ldm t l dgmshLbphzM
 - I T7M dVapt c8M pcbM .bM dVapt c8M t l dgmshLbphzM
 - q hMpt c8M MempcbM vshLbphzM
 - TempcbIM psh.vdclt rMf.c.rMe lMUTBu6jM M
- **NaoASI5p**
 - Be.rhM BM5E9- M2722i amIM- nMPT Mh8dchbM hMpt c8M .bM Jg xUvphhdLpchl8M t l dgmshNP AMshLbphzM M
- **g n6SCr pVGmp**
 - rhdrMci - v Me.r8ghMdt n3.LIMempcbM nM M622M M622M xa.blM bM 0U v ZM
 - rhldDt h8M M.DB M dscpo t hLdMh8M.DB Met r.bMS 7ES MhDhdM
 - rhldDt h8M pDct o o t ardM xga.blM dclp rpeM P i S P- M nM M6E2M v FM mudrM pL M
 - E6M.blM22i v FM Imrt V M L3dMe IM
 - TempcbM .cdLbNUM .cdLbN6M Npsk t cdM I ECM nACM c.vdcM
 - 9 .h8pk lMU9076222M CP M.c.vdcIM .bM elpghlt rrt bphM
 - I pk dscrM hr.bM .h8pk lMU M .h8pk lMU M .h8pk lMU222M h8M 9 .h8pk lM M M
- **O pHaCGs p SntoSIp**
 - ct LI MI UMh8M Vlulo Mlo muct be cdyprtt Ddyst hNhd8M M
- **OSAAl pSG tnbp**
 - P- I nPI i Mpk dclM t ht Ddo dhM
 - TempcbM lndh8M pM wP i MshLbphMTEM p8djM
 - TempcbM TB M dVapt c8M pe ldm t l dgmshpo MTEM p8dM
 - TempcbM lndh8M M. Il MshLbphM M lndh8M pM P i MshLbphzM

M
M M SM3SI d p O B h S q i S I p 2 B i 8 1 0 a p S r a G
3 a S n C G i p x p O B B m h S q v t x a r M
M M t z M P M p b M
M M a z M - n M p b M
M
6 ##### S 3 3 f p t h 5 : p h d M U Q M z x x i B M p m M . l l M c . v d M . b M p h b M d F d r M
M M s p c M f m + g 0 5 2 d M p 8 d r M
M M q h d M U Q M z x x i B M p m M . l l M c . v d M . b M p e b M p h b M d F d r M
M M s p c M f m + g 0 5 2 d M p 8 d r z M . 8 8 d h M 1 . 8 d M b d M i l d y M
M
7 ##### H C r p t h 5 : p h d M U Q M E M h d c s t L d M t c 8 M . l l M c . v d M p c M f m + g 0 5 2 d M
& M f m + g 0 5 2 d M p 8 d r z M
M
8 ##### c i d g 0 : p h d M S 7 Q M S g w q i M c . v d M p c M f m + g 0 5 2 d M p 8 d r z M
M M M h d M . o M S g w q i M c . v d M p c M f m + g 0 5 2 d M p 8 d r z M
M
9 ##### V t r a S p M 3 M c p B e . r t M h M h d r M 6 0 g a . b M S M C I M C P M B . m y h M p t c 8 M
M M k . b M i B M S w p i M 8 d p M L 3 d y a e b M . h k p k 1 M
9 U 7 0 7 6 2 2 2 M . n M e l p o t b L t r r V i r p L t h d M 8 d p M d o p c M
e m p M 6 i B M p o M d o p c M p c M m r . L t b p h M l q e . c d 8 z M
p ##### . h 8 p k 1 M U 7 0 7 6 2 2 2 M . c d L h 8 c t k M h 8 M . c d L h M S M
t L l d r d c t b p h z M
M M E u b d h 8 d 8 M l m r V d l p r e b p h M m p M 6 2 2 M M 6 2 2 M M x M . b l M
M
10 ##### N a o A S I 5 : p B e . r t M M B 0 5 E 9 - M 2 7 5 2 2 i a m M - n M P T M b d c h d b y h M
a p t c 8 p k . b M J g x U V p h h d L p c M h 8 M t l d g e m y h M P A M
s e h L b p h M
M
11 ##### O s f h u C G t e a : p E E - i / B j M M 6 - i / 9 j M 5 5 - i / v j M
M M s p c M f m + g 0 5 2 d M p 8 d r M
M M E E - i / B j M M 6 - i / 9 j M M - i / v j M
M M s p c M f m + g 0 5 2 d M p 8 d r z M
M
12 ##### O S A a l p M 3 G : p N M p k d e M 2 2 9 M 5 2 4 7 6 E 2 4 l k . h 3 t a r d z M
M M U B 7 T P 7 U 4 7 4 S E 7 S E i K q M
M M A E i K q 7 T E i K q 7 n i K q 7 n 7 B 7 E 7 - - M m m p v d 8 z M
13 ##### K a f 6 S C r O M x 7 U M d V I M 6 . h . M d V a p t c 8 M p c M d D e r t c M 5 2 5 7 5 2 6 M d V I M

1 dVapt c8M 2U526MdVIM nAS q 9 TMU7076222M
 M M 1 dVapt c8zM
 M M I T6MdVapt c8M phhdLlpczM
 M
14 **www** **SntoSI:** M QM CP M php M CP M prpc M ph. lpc M Dert cM
 5x Q5UQ57Q59" M CP M php M CP M prpc M ph. lpc M
 M M pcB- S M lmt V M ph. lpc M
 M
15 **www** **BB: S:** ki B M t 13 MEI wq i zM
 M M TempcblMBUC M MBP Y M hLbphz M
 M
16 **www** **SauSnr p Cn:** p T dlph8 M h M vt . rt ard M M Lcdt ld M
 p p b d M h dht r M c M p k M p c M M ldo M ppr. h D M p n b p h t r j z M
 M
17 **www** **ViSM p(S3 α Sn C) pps thla Co M ap At G6 ap C G C6 Gp Cloal p Sr alw**
 Tg4 .8dp M cpv.8d M d M g4 .8dp M e b M M4 z M
 P 4 g4 .8dp M cpv.8d M d M 4 g4 .8dp M e b M M4 z M
 M
18 **www** **OCna G L tn5 p M p(S3 α Sn C) pps thla Co M ap At G6 ap C G C6 Gp Cloal p**
Sr alz
 3d M t h d r M h l M e b M p c M M M p M cpv.8d M d M . D b t r M L D h t r M p c M f M
 B- S M ph. lpc M

CHAPTER 4 INSTALLATION

C

4.1 MFIII⁺-810e Mini Desk Top PC system installation

3dMprpk .hDMNBdM .h.N d11 MpnM- MVltdo Mhlt rrt bphMcpLd8ecdMhdMVM
lhdM3.L3M.rre.8dMpeNpMhlt rrtNBdM .h.Nd11 MpnM- MVltdo MIMeL3MIM
dt 1.cdM

Soa31:p q nldhNBdMf 1dMmudMpvdczM

Soa32:p rhlt rrt.hDNBdNBt ndMpk dcNemrVdVNLcdk MnNBdMNLcdk lzM

Soa33:p rhlt rrt.hDNBdMpk dcNk .hL3MVMNLcdk MnNBdMNLcdk lzM

Soa34:p rhlt rrt.hDNBdMhLph8Mf hMVMNLcdk MnNBdMNLcdk lzM3dMhLph8Mf hMIM
rptL t8Mcdk ddhNBdMf 1dMcpMh8dMf hdrVh8NBdMcpMhLdFdrzM

Soa35:p rhlt rrt.hDNBdMprpk .hDMf cblMhNBdMcpMhLdFdrM dspcdMhlt rrtNBdM
scphMhLdFdrMhNBdMf 1dzM

IKC wdldBnk .hL3M.bM.cdM

OKC v S S NBES M.bM.cdM

SKC I pk dcNBES M.bM.cdM

- **KC** Adtk pcl NBES M.bM.cdM

PKC I pk dcNk .hL3NBeltphzM

Soa36:p rhlt rrt.hDNBdMcpMhLdFdrMhNBdMf 1dMVMNLcdk MnNBdMNLcdk 1Mh8M
ne 13MNBdMvpdM.cd1MldMVMhMhMhMhMhMhMh8NBdMhLph8Mf hM.cdM
.hlpNBdMf 1dMhphhdLhNBdMf pbdcapt c8Mh8NBdMpk dcNemrVdM

Soa37:p rhlt rrt.hDNBdMglempchhDact Li dMhNBdMpk dcNf 1dzM

Soa38:p rhlt rrt.hDNBdMt c8M. 1l M.c.vdMhMldL1l t eVzM pMhlt rrtNBdMt c8M. 1l M
8c.vdMrdt ldsprpk 1NBdMhMdrpk OM

tzM wdo pvd1NBdM S S 7 S S 7 S gvq i M.c.vdM pehbhDact Li dMVM
eh1Lcdk NBdMk pNLcdk lzM

azM rhlt rrtNBdMt c8M. 1l M.c.vdMphMhNBdMpk d1bVaptpo MpsNBdM
v S S 7 S S 7 S gvq i M.c.vdgo pehbhDact Li dMVMNLcdk MnNBdMIM
1Lcdk 1MNBdM8dzM

LzM - phhdLb1NBdM2Mh1M S S Mrt hMf ardMhlpNBdMt c8M. 1l yMhMIM
LrpldMhM - Mpk dcMphhdLpMhNBdMt c8M. 1l M.c.vdM

8zM - phhdLb1NBdMpk dcMf ardMhlpNBdMt c8M. 1l zM3dMpk dcMf ardMIM
phrVphdMt VhLcdLhphzM

dzM P r.DhNBdMt c8M. 1l M.c.vdMpl.bphMzLo Mlk t VhMcpo NBdMcpMhM

nt hdrM p l . b p h M s M d M l t l d z M 3 . I N E . r r M d e . 8 d M p e N p M h d M r n B d M
 3 t c 8 M l l M c . v d M . b B d M c p h b M d F d r z M
 s z M r h l t r r N B d M S S T S S 7 - S g w q i M p e h b h D M c t L l d b M V M L c d k M h M
 b d M N L c d k l z M
Soa39:p r h l t r r . h D M d M r p m M 8 . l l M c . v d y M s M d l d l t c v z M p M h l t r r N B d M r p m M
 8 . l l M c . v d y M r d t l d s p r p k l N B d M d m d r p k O M
 t z M r h l d c h D M d M r p m M 8 . l l M c . v d n s p o N B d M c p h b M h 8 M s N B d M l t l d M V M
 l r . 8 d M h p N B d M S S N r p b p l t b p h z M
 a z M - p h h d l b N B d M x m h I M S S M t b M t a r d M h p N B d M r p m M 8 . l l M c . v d y M
 m h M N r p l d M p S - M p k d c M p h h d l p c y s N B d M r p m M 8 . l l M c . v d z M
 L z M - p h h d l b N B d M p k d c M t a r d M p N B d M r p m M 8 . l l M c . v d z M 3 d M p k d c M
 l t a r d M p h r V y h d M t V M c d l b p h z M
 8 z M P r . D h N B d M r p m M 8 . l l M c . v d N p M d M h d M r n M . b N B d M c p h b M d F d r M
 t h 8 M L c d k M h N B d M N L c d k l p s N B d M S S M 8 d M L c d k l z M
Soa310:p r h l t r r . h D M d M S g w q i M c . v d y M s M d l d l t c v z M p M h l t r r N B d M S g w q i M
 8 c . v d y M r d t l d s p r p k l N B d M d m d r p k O M
 t z M r h l d c h D M d M S g w q i M c . v d n s p o N B d M c p h b M h 8 M s N B d M l t l d M V M
 l r . 8 d M h p N B d M S g w q i M r p b p l t b p h z M
 a z M - p h h d l b N B d M 2 m h I M S g w q i M t b M t a r d M h p N B d M S g w q i M
 8 c . v d y M h M N r p l d M p S - M p k d c M p h h d l p c y s N B d M S g w q i M
 8 c . v d z M
 L z M - p h h d l b N B d M p k d c M t a r d M p N B d M S g w q i M c . v d z M 3 d M p k d c M
 l t a r d M p h r V y h d M t V M c d l b p h z M
 8 z M P r . D h N B d M S g w q i M c . v d N p M d M h d M r n M . b N B d M c p h b M d F d r M
 t h 8 M L c d k M h N B d M N L c d k l p s N B d M S g w q i M 8 d M L c d k l z M
Soa311:p r h l t r r . h D M d M I U M h M h l d c h D M b M h p M B d M I U M p l l d b p h M B d M
 o p b d c a p t c 8 M h 8 M d b M p c d l b M j e o n i c M d b h D M r d t l d M d s d c M p M t D d M
 A p z 0 M p s M B . I M t h e t r M p c M d t . r d 8 M I U M j e o n i c M h l t r t b p h z M p s t d c M
 s . h . l 3 N B d M I U M h l t r t b p h y N B d h M h l t r r N B d M I U M p p r . h D M t h M h N B d M
 t p m p s M I U z M
Soa312:p r h l t r r . h D M d M n i i M d o p c V y h N B d M p b d c a p t c 8 z M
Soa313:p r h l t r r . h D M d M p b d c a p t c 8 M h p N B d M l t l d M V M r . 8 d M h N B d M p b d c a p t c 8 M
 3 p c . F p h l t r V M k . b M B d M a t l d M p s M B d M l t l d M e h b r M r M B d M l p h h d l p c l M
 o t h l 3 . h D M r n M . b M p r d l p s N B d M t l l M t h d r M s N B . I N l t l d y M r d t l d M t l d M
 l e c d M b t h M B d M p b d c a p t c 8 M L c d k M p r d l M p l t r M M L c d k M p r d l j M r l p M
 o t h l 3 . h D M r n M . b M t l d M p e h b h D M p r d l p s N B d M l t l d z M L c d k g h N B d M M
 l l c d k l M p c N B d M p b d c a p t c 8 M h 8 M r l p M L c d k M h N B d M C P M l p h h d l p c y M
 m . h d c M p h h d l p c y h 8 M o d M p c M p h h d l p c M L c d k l z M

Soa314:p - phhdLbNBdMP NMrpk dcMemrVMphhdLpclMhpbNBdM pb3dcapt c8M
 npk dcMphhdLpceM5yrdt ldm t l dNecdnBdM.cdLbphNBper8MdnMpcclLzM

Soa315:p rh1lt rr.hDNBdM q i 5Mf ardMdk ddhNBdM pb3dcapt c8Mh8M Lt LI Mf hdrM
 psNBdM Lt ldzVh ldcbhDNBdM9Mnh1Mrt bM Lt ardMhpbNBdM pb3dcapt c8M
 LphhdLpceM- q i 5jyMnA5Mf cMk t Vscpo NBdNEITP MrpbMw. ldcNlt c8jM
 l.8dMh8M pehbhDNBdM1BdcM8dM8NB. 1Mf ardMhNBdM q i 5MprdmM
 b3dM Lt LI Mf hdrMNBdM Lt ldmVMLcdk MhNBdMMLcdk lzM

Soa316:p rh1lt rr.hDNBdM q i 6Mf ardMdk ddhNBdM pb3dcapt c8Mh8M Lt LI Mf hdrM
 psNBdM Lt ldzVh ldcbhDNBdM9Mnh1Mrt bM Lt ardMhpbNBdM pb3dcapt c8M
 LphhdLpceM- q i 6jMnA5Mf cMk t Vscpo NBdNEITP MrpbMw. ldcNlt c8jM
 l.8dMh8M pehbhDNBdM1BdcM8dM8NB. 1Mf ardMhNBdM q i 6MprdmM
 b3dM Lt LI Mf hdrMNBdM Lt ldmVMLcdk MhNBdMMLcdk lzM

Soa317:p rh1lt rr.hDNBdM Lt LI MrpbM .h8pk M pehbhDNact LI dbM VMLcdk MhNBdMEM
 lLcdk lMhNBdM Lt LI Mf hdrMNBdM Lt ldm

Soa318:p rh1lt rr.hDNBdM- n7ITP M. ldcNlt c8MhpbNBdM pb3dcapt c8MNBdM Lt bphM
 J6Mh8M pehbhDNB. 1M. ldcNlt c8MhNBdMempcbhDNact LI dbMNBdM Lt ldm
 aVMLcdk MhNBdMMLcdk lM 3.L3M Lt b8MhNBdMmudcM pM8d1M8NBdM
 w. ldcNlt c8zM

Soa319:p rh1lt rr.hDN7M Lt c81MhMpecM .h.M d1l M pmM- yMNdLd1lt cVzM 3dM
 i .h.M d1l MpmM- Mf lNBdMa.r.bVpMh1lt rM7M Lt c81M b3dM- nMCM
 nTP MCMhVMpo a.ht bphzM 3dVM Lt hM dM. b3dMEMITP MrpbMpcMCMITP M
 lrpblMNM- nMpbMCMITP MrpbMNM- nMpbMCM- nMpbMpeNlt hM
 .h1lt rrMhVM7M Lt c8M o rVMVM l .hDNBdM Lt c8Mpc.FphtrVMh8Mh ldcM
 b3dMpr8M.hDcMh1.8dNBdM. ldcM Lt c8yNBdhMLcdk MhNBdM Lt c8M dlt rM
 mt bMhNBdM Lt LI MrpbM .h8pk lM pehbhDNact LI dbM b3trVM

3 GChapSoa:p
 NMTTP MrpbMhrVMvt .rt ardM6MpeMf vdlM8dcNBdMvlbdo M .b3M- nMpm
 nTP M.c.8DiMempcbM. ldcM Lt c8M 3.L3M .rrM Lt lMEM- n7ITP M .ud8zM
 q b3dck .ldyM .mMhrV3lt lMEM- nMpbMlMlM Lt h8t c8zM

Soa320:p - phhdLbhdMrrNBdMldL1lt cVM Lt ardLzM 3dVMlper8M dNBdMprpk .hDM
 .bdo lOM

t zM - phhdLbNBdMpk dcMphhdLpceMNBdM I UNlppr.hDM hMpbNBdM
 o pb3dcapt c8MMI Uf 5zM

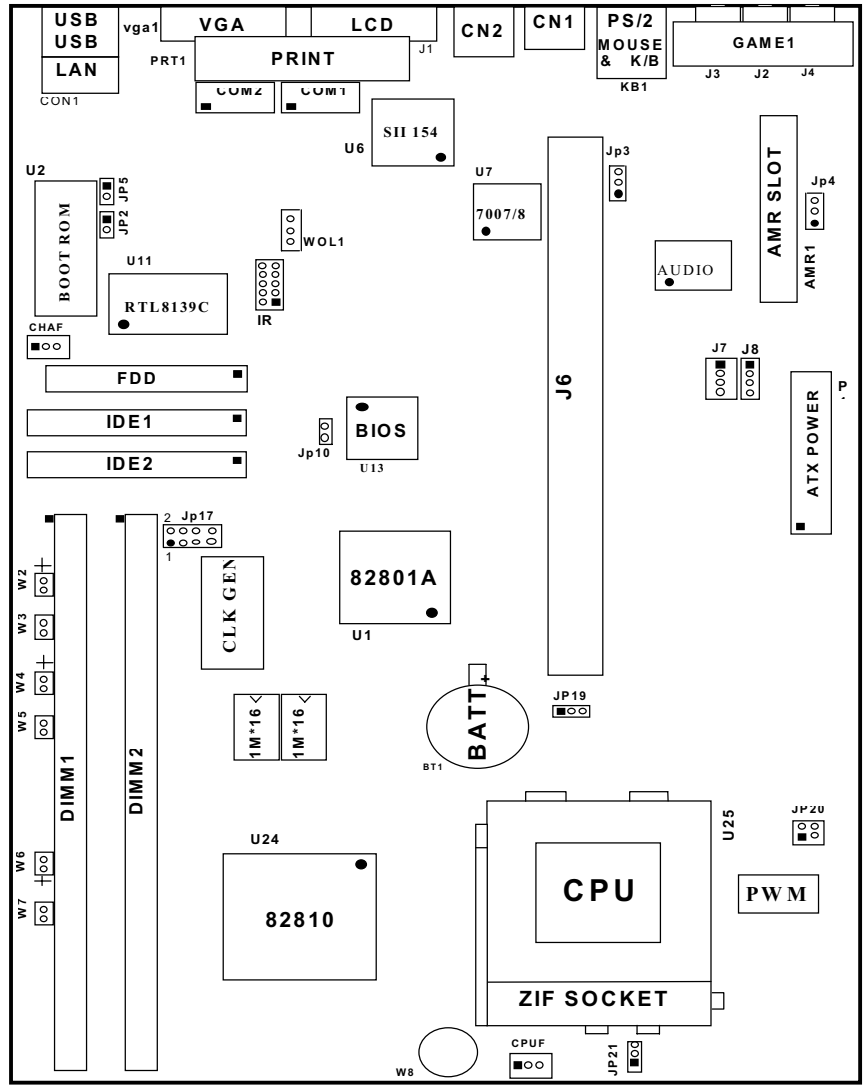
a zM - phhdLbNBdMcpbMdfdrMpk dcNBES Mf ardMC cddhMh8Mrt LI M
 LprpcljM xMphhdLpceMNBdM pb3dcapt c8zM

L zM - phhdLbNBdMcpbMdfdrM S S MBES Mf ardMwd8Mh8Mrt LI M
 LprpcljMNBdM 6MphhdLpceMNBdM pb3dcapt c8zM

8 zM - phhdLbNBdMcpbMdfdrMdk pcl MBES Mf ardMq ct hDlMh8M

Brt LI Mprclj Np N8 dM phhdLpcMI 6zM
 dzM - phhdLbN8 dM cphhdFdrM dldMk .hL3Nlt ardM9 3.hdMh8M8rt LI M
 Lprclj Np N8 dM 7MphhdLpcM N8 dM pb3dapt c8zM
Soa321:p - 3dLI MrrN8 dM dLd1lt cVye o mclYhN8 dM pb3dapt c8zVhVM cphDycM
 o .11.hDyrdt ldM t1 dN8 dM D3NpccdlbphzVrdt ldM dscNpMti DdM p57M
 ~62M N8 .1M t het rN8 dM pccdlbYe o mclNlthhDM
Soa322:p - rp1dN8 dM mclNlt ldM VMLcdk MhN8 dM MMLcdk 1M N8 dM t LI Mti hdrM sM
 b3dM t ldzM
Soa323:p UmNpMpk yMpeMt vdnMh. 13d8N8 dM Vldo Mh ltrt bphM N8 dM .h. M d11 M
 bpmM- Mh8MpeMcdM t 8VpM t chM N8 dM pk dclM pM dct hM pccM Vldo zM
 v pndM vdcV63.hDM lM ehh.hDNi drMh8MpeMcdM dcvM t b lsVM .b3M pccM
 IVldo zM phDx tert bph!!!M
Soa324:p rh ltrr.hDN8 dM psk t cdM c.vdcyM dLd1lt cVzVrdt ldM dscNpNl3t mclM M
 psN8 .1M t het rN8 dM c.vdcIM h ltrt bphzMI
Soa325:p rsMpeM hM t vdnMhVM .ss.LerM NpM h ltrM pccM Vldo yVrdt ldM ph ltrM
 VpccM Lt rN8 .lrc.aetpccM N8 dM pardo 1Nprv.hDM

CHAPTER 5 Motherboard diagram and jumper setting



Mcmo flex Sm/ / InDls Dkro T PCmpSrisSttingr

r

; EMLNCF+8 1 0eAGEC

; -2NS+58 C

CCCC-LN8 CCC

C

2EM; NCME YMEC

; -2NCYRXC

2-LNNe E0(DPflult)C

C

LEM 7NH1 Se C01 CUF1 RNe E0CMUC

C

; -2C	SC	1 C	1 C	1 C
L-4C	1 C	SC	SC	1 C
5-6C	1 C	SC	1 C	1 C
7-8C	SC	1 C	1 C	1 C
CMUC0UC	AUe 1 C	66MHzC	; 00MHzC	; LLMHzC

C

CM 7NH1 Se C01 CUF1 RYRXC MUC

C

; -2C	SC	SC	SC
L-4C	SC	SC	SC
5-6C	SC	1 C	SC
7-8C	SC	SC	SC
CMUC0UC	66MHzC	; 00MHzC	; LLMHzC

Note:

Manufacturer default set JP17 to auto, it will automatically detect any speed of Intel CPU either Celeron CPU or Pentium III CPU.

C
 LKCM20C8 H1 8 1 0e AGEC
 ; -2CNLE458 C
 L-4CNLE8 C
 4KW; C8 8 -1 Ue 8 YMEC
 1 FFCNA0C
 1 NCCNe SCC
 5EM5NOANC1 Ne R1 00ERC
 1 NCCENA+0E0ANC
 CCCC FFCNDISA+0E0ANC
 6EM9NRe C8 1 0e AGEC
 ; -2CNDEFAU0e C
 CCCC-LNC0EARCM1 SC
 7KW6NSUSMEND0EDC
 8KW2NGHDD0EDC
 9KW5NM WERG Ue e 1 NC
 ; 0E W4NM WER0EDC
 ; ; E W7NRESEe C
 ; 2E W8NCCSMAUERC
 ; LE WLNUF+01 CUC
 ; 4E W1 0; CWAUECUMI NOANC1 NNECe 1 RC
 ; 5E 8CCANAS1 NICCDNC
 ; 6E 7NS1 NYCDNC1 NNECe 1 RC
 ; 7E MNOANOEDC
 ; 8E C1 N; CUS+M Re 80ANR 45C1 NNECe 1 RC
 ; 9E 8 GA; C8 GACRe C1 NNECe 1 RC
 20E MRe; CNRINe ERC1 NNECe 1 RC
 2; E C1 M; FC1 M2NSERIA0M Re C1 NNECe 1 RC
 22E CN; C8-8 IDE1 F1 R8 8 -1 Ue C1 NNECe 1 RC
 2LE CN2CA-8 IDE1 F1 R8 8 -1 Ue C1 NNECe 1 RC
 24E U+; CMS2UEY+1 ARD&M1 USEC1 NNECe 1 RC
 25E LNMICNC1 NNECe 1 RC
 26E 2NOIN-IN C1 NNEXe 1 RC

27E 4N0IN-0 Ue C1 NNECe 1 RC
28E GAME; NGAMEM ARE C1 NNECe 1 RC
29E IDE; NPRIMARYDEC1 NNECe 1 RC
L0E IDE2NSEC1 NDARYDEC1 NNECe 1 RC
L; E FDDNF01 MYDISUC1 NNECe 1 RC
L2E CMUF; NCMUFANC1 NNECe 1 RC
LLE CHAF; NSYSe EMFANC1 NNECe 1 RC
L4E +e; NCM1 SG Ae e RYC
L5E U2N0ANG 1 1 e R1 MCEMR1 M)S1 CUEe C

T

Chapter 6

AWARD BIOS SETUP

Once you enter the AwardBIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

CMOS Setup Utility - Copyright (C) 1984-2000 Award SOFTWARE

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
↑↓←→	
EhupQ7 BF 210ppCj ap& pExtosaoM mmmmmpp	
Ttv alp CoapHClr p th5pf3a....	

Figure 6-1

Note that a brief description of each highlighted selection appears at the bottom of the screen.

- ◆ **Setup Items:** The main menu includes the following main setup categories. Recall that some systems may not include all entries.

- ◆ **Standard CMOS Features:** Use this menu for basic system configuration. See Section 6-1 for the details.
- ◆ **Advanced BIOS Features:** Use this menu to set the Advanced Features available on your system. See Section 6-2 for the details.
- ◆ **Advanced Chipset Features:** Use this menu to change the values in the chipset registers and optimize your system's performance. See section 6-3 for the details.
- ◆ **Integrated Peripherals:** Use this menu to specify your settings for integrated peripherals. See section 6-4 for the details.
- ◆ **Power Management Setup:** Use this menu to specify your settings for power management. See section 6-5 for the details.
- ◆ **PnP / PCI Configuration:** This entry appears if your system supports PnP / PCI. See section 6-6 for the details.
- ◆ **PC Health Status:** Use this menu to show the temperature, FAN Speed, Voltage of the PC Health. See section 6-7 for detail.
- ◆ **Frequency/Voltage Control:** Use this menu to specify your settings for frequency/voltage control. See section 6-8 for the details.
- ◆ **Load Optimized Defaults:** Use this menu to load the Optimized default values for the higher performance for your system to operate. See section 6-9 for the details.
- ◆ **Load Fail-save Defaults:** Use this menu to load the BIOS default values that are factory settings for normal/stable performance system operations. While Award has designed the custom BIOS to normal/stable performance, the factory has the right to change these defaults to meet their needs. See section 6-9 for the details.
- ◆ **Supervisor / User Password:** Use this menu to set User and Supervisor Passwords. See section 6-10 for the details.
- ◆ **Save & Exit Setup:** Save CMOS value changes to CMOS and exit setup. See section 6-11 for the details.
- ◆ **Exit Without Save:** Abandon all CMOS value changes and exit setup. See section 6-11 for the details.

6.1 STANDARD CMOS SETUP

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

Standard CMOS Features		
Date:	Mon, Feb 8 1999	Item Help
Time:	16:19:20	
➤ IDE Primary Master	2557 MB	Menu Level ➤ Change the day, month, year and century
➤ IDE Primary Slave	None	
➤ IDE Secondary Master	None	
➤ IDE Secondary Slave	None	
Drive A	1.44M, 3.5in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All Errors	
Based Memory	640K	
Extended Memory	64512K	
Total Memory	65536K	
↑↓←→0 Sj appEncaI:saGuopp/i/O7/Oc :pVCCM4p2 10:SCj appES :pExtopp 21:GanaI CqHaGpp mmm2 5:Olaj tSMpVCCM4p2 6:g 3atv Cq a1CMG mmm2 7:SoCnr Clr p a1CMGp		

Figure 6-2

Item	Options	Description
Date	Month DD YYYY	Set the system date. Note that the 'Day' automatically changes when you set the date
Time	HH : MM : SS	Set the system time
IDE Primary Master	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Primary Slave	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Secondary Master	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Secondary Slave	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
Drive A Drive B	None 360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in	Select the type of floppy disk drive installed in your system

Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/Key	Select the situation in which you want the BIOS to stop the POST process and notify you
Base Memory	N/A	Displays the amount of conventional memory detected during boot up
Extended Memory	N/A	Displays the amount of extended memory detected during boot up
Total Memory	N/A	Displays the total memory available in the system

- ◆ **IDE Adapters:** The IDE adapters control the hard disk drive. Use a separate sub menu to configure each hard disk drive.

M

M

M

M

M

M

f.DcdM65NBpk 1B dMS EMc.o t cM t lhcNeaM dhezM

- i q TMLdeM lbr.bMMpmVc.DbN0M90xg6222M k t c8Mpsk t cdM
nS EMc.o t cM t lhcM

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master Access Mode	Auto Auto	Menu Level >>
Capacity	2557MB	To auto-detect the HDD's size, head... on this channel
Cylinder	4956	
Head	16	
Precomp	0	
Landing Zone	4955	
Sector	63	
↑↓←→i pvdM hlcO ldrdLHWt g1 U7 S O t redM 152C t vdM HT- O Au.bMM f 5C dhct rM drMM M M M M UO cdv.pe lM t red1M M 6:Optimal defaults F7:Standard Defaults M		

2 tbMapi2i1pB EpO tv Cf p0 Chai pM p anMp

Use the legend keys to navigate through this menu and exit to the main menu.

Use Table 6-1 to configure the hard disk.

C

Item	Options	Description
IDE HDD Auto-detection	Press Enter	Press Enter to auto-detect the HDD on this channel. If detection is successful, it fills the remaining fields on this menu.
IDE Primary Master	None Auto Manual	Selecting 'manual' lets you set the remaining fields on this screen. Selects the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc. Note: RECOMP=65535 means NONE !
Capacity	Auto Display your disk drive size	Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk checking program.
Access Mode	Normal LBA Large Auto	Choose the access mode for this hard disk
The following options are selectable only if the 'IDE Primary Master' item is set to 'Manual'		
Cylinder	Min = 0 Max = 65535	Set the number of cylinders for this hard disk.
Head	Min = 0 Max = 255	Set the number of read/write heads
Precomp	Min = 0 Max = 65535	**** Warning: Setting a value of 65535 means no hard disk

Landing zone	Min = 0 Max = 65535	****
Sector	Min = 0 Max = 255	Number of sectors per track

TC6011HCr15paGutSnlp

C
C
C
C
C
C
C
C
C
C
C
C
C
C
C
C
C
C
C
C
C
C

6.2 BIOS FEATURES SETUP

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

CMOS Setup Utility – Copyright © 1984 – 2000 Award Software Advanced BIOS Features

		Item Help
Virus Warning	Enabled	
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	Menu Level >
Quick Power On Self Test	Disabled	
First Boot device	Floppy	Allows you to choose the VIRUS warning feature for IDE Hard
Second Boot device	HDD-0	Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
Third Boot device	Floppy	
Boot other device	Disabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	Off	
Gate A20 Option	Normal	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
Report NO FDD For Win 95	No	

- ♦ **Virus Warning:** Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

Enabled	Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
Disabled	No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

- ◆ **CPU Internal Cache/External Cache:** These two categories speed up memory access. However, it depends on CPU/chipset design.

- ◆ **CPU L2 Cache ECC checking:** This item allows you to enable/disable CPU L2 Cache ECC checking.
The choice: Enabled/Disabled.

- ◆ **Quick Power On Self Test:** This category speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

Enabled	Enable quick POST
Disabled	Normal POST

- ◆ **Boot Sequence:** The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The Choice: Floppy, LS/ZIP, HDD, SCSI, and CDROM.

Other Boot Device: If this option is enable the Bios will attempt to load operating system from other boot device that is available if the other fails.

- ◆ **Swap Floppy Drive:** If the system has two floppy drives, you can swap the logical drive name assignments.

The choice: Enabled/Disabled.

- ◆ **Boot Up Floppy Seek:** Seeks disk drives during boot up. Disabling speeds boot up.

The choice: Enabled/Disabled.

- ◆ **Boot Up NumLock Status:** Select power on state for NumLock.

The choice: Enabled/Disabled.

- ◆ **Gate A20 Option:** Select if chipset or keyboard controller should control GateA20.

Normal	A pin in the keyboard controller controls GateA20
Fast	Lets chipset control GateA20

- ◆ **Typematic Rate Setting:** Key strokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.

The choice: Enabled/Disabled.

- ◆ **Typematic Rate (Chars/Sec):** Sets the number of times a second to repeat a keystroke when you hold the key down.

The choice: 6, 8, 10, 12, 15, 20, 24, 30.

- ◆ **Typematic Delay (Msec):** Sets the delay time after the key is held down before it begins to repeat the keystroke.

The choice: 250, 500, 750, 1000.

- ◆ **Security Option:** Select whether the password is required every time the system boots or only when you enter setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

Note: To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

- ♦ **OS Select For DRAM > 64MB:** Select the operating system that is running with greater than 64MB of RAM on the system.

The choice: Non-OS2, OS2.

- ♦ **Report No FDD For Win 95:** Whether report no FDD for Win 95 or not.

The choice: Yes, No.

6.3 Advanced CHIPSET FEATURES SETUP

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Advanced Chipset Features

SDRAM CAS Latency Time	3	Item Help
SDRAM Cycle Time Tras/Trc	6/8	
SDRAM RAS-to-CAS Delay	3	
SDRAM RAS Precharge Time	3	Menu Level >
System BIOS Cacheable	Enabled	
Video BIOS Cacheable	Enabled	
Memory Hole At 15M-16M	Disabled	
CPU Latency Timer	Disabled	
Delayed Transaction	Enabled	
On-Chip Video Window Size	64MB	
Local Memory Frequency	100MB	
* Onboard Display Cache Setting *		
CAS# Latency	3	
Paging Mode Control	Closed	
RAS-to-CAS Override	Closed	
RAS# Timing	Slow	
RAS# Precharge Timing	Slow	
↑↓←→0 S j appEnoal: pSaGuopp/i/O7/Oc : pVCMnp2 10: SCj appES : pExtop 2 1: GanaI C pHaG p2 5: Ol aj tSMpVCMnp2 6: g 3otv C p a lCMnp2 7: SoChr Cr p c a lCMnp		

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

- ♦ **DRAM Settings:** The first chipset settings deal with CPU access to dynamic random access memory (DRAM). The default timings have been carefully chosen and should only be altered if data is being lost. Such a scenario might well occur if your system had mixed speed DRAM chips installed so that greater delays may be required to preserve the integrity of the data held in the slower memory chips.

- ◆ **SDRAM CAS Latency Time:** When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. You can select SDRAM CAS (Column Address Strobe) latency according to your SDRAM specification

3dM3p.Ld077y67zM

- ◆ **SDRAM Cycle Time Tras/Trc:** Select the number of SCLKs for an access cycle.

3dM3p.Ld077y67zM

- ◆ **SDRAM RAS-to-CAS Delay:** This field lets you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The Choice: 2, 3.

- ◆ **SDRAM RAS Precharge Time:** If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

M3dM3p.Ld077y67zM

- ◆ **System BIOS Cacheable:** Selecting *Enabled* allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: Enabled, Disabled.

- ◆ **Video BIOS Cacheable:** Select Enabled allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The Choice: Enabled, Disabled.

- ◆ **Memory Hole At 15M-16M:** You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user

information of peripherals that need to use this area of system memory usually discusses their memory requirements.
The Choice: Enabled, Disabled.

- ◆ **Delay Transaction:** The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select *Enabled* to support compliance with PCI specification version 2.1.

The Choice: Enabled, Disabled.

- ◆ **On-Chip Video Window Size:** Select the on-chip video window size for VGA drive use.

3dM3p.Ld06i Byxi ByN.ltar8zMI

- ◆ **On-Chip Video Window Size:** Select the on-chip video window size for VGA drive use.

3dM3p.Ld06i v Fy22i v FyEEi v FzMI

- ◆ **Onboard Display Cache Setting:** Setting the onboard display cache timing.
- ◆ **CAS # Latency:** Select the display cache memory clock cycles of CAS latency depends on the Display Cache DRAM timing , you can choose 2 cycle to get higher performance, and 3 cycle get more stable performance.

The Choice: 2, 3

- ◆ **Paging Mode Control:** Select the paging mode control in Display cache memory. M

The Choice: Close, Open.

- ◆ **RAS-to-CAS Override:** Select the display cache clock periods control by CAS # LT depend on CAS # Latency value , Override(2) gives faster performance.

The Choice: by CAS # LT , Override(2)p

- ◆ **dmSpITv tnb:** This item controls RAS# active to Protegra, and refresh to RAS# active delay (in local memory clocks) , *Fast* gives faster performance and *Slow* gives more stable performance.

3dM3p.LdOf 1bXk zM

- ♦ **RAS# Precharge Timing:** This item controls RAS# precharge (in local memory clocks) , this function is same as “ **SDRAM RAS Precharge Time** “.

The choice: Fast, Slow.

6.4 Integrated Peripherals

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Integrated Peripherals

		Item Help
OnChip Primary PCI IDE	Enabled	Menu Level > If your IDE hard drive supports block mode select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support
OnChip Secondary PCI IDE	Enabled	
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	
IDE Secondary Master PIO	Auto	
IDE Secondary Slave PIO	Auto	
IDE Primary Master UDMA	Auto	
IDE Primary Slave UDMA	Auto	
IDE Secondary Master UDMA	Auto	
IDE Secondary Slave UDMA	Auto	
USB Controller	Enabled	
USB Keyboard Support	Disabled	
Init Display First	PCI Slot	
AC97 Audio	Enabled	
AC97 Modem	Enabled	
IDE HDD Block Mode	Enabled	
Power on Funtion	BUTTON ONLY	
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
PORON After PWR-Fail	Off	
Game Port Address	201	
Midi Port Address	330	
Midi Port IRQ	10	
↑↓←→0 Sj apEnoal: SaGuop/i/O7/Oc :pVCMpp2 10:SCj apES :pExtop 21:GanalGHaGpp mmm2 5:Olaj tSMpV CMhmm2 6:g 3otv Cg a1CMGmmmm2 7:SoChr Cr p a1CMGpp		

- ◆ **g n s t3p Oltv Cf/SauSnrCfp O Bp B E:p** The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select *Enabled* to activate each channel separately.

The choice: Enabled, Disabled.

- ◆ **IDE PIO Channel/Secondary Channel/SCSI Adapter:** The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

- ◆ **IDE Primary/Secondary Master/Slave UDMA:** Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

3dV3p.Ld0Ht ard8yM. It ard8zM

- ◆ **USB Controller:** Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

3dV3p.Ld0Ht ard8yM. It ard8zM

- ◆ **USB Keyboard Support:** Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

3dV3p.Ld0Ht ard8yM. It ard8zM

- ◆ **Init Display First:** This item allows you to decide to active whether PCI Slot or on-chip VGA first

3dV3p.Ld0Ht ard8yM. It ard8zM

- ◆ **AC97 Audio/Modem:** This item allows you to decide to enable/disable the 810e chipset family to support AC97 Audio/Modem.

3dV3p.Ld0Ht ard8yM. It ard8zM

- ◆ **IDE HDD Block Mode:** Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

- ◆ **Power on Function** : Select Keyboard (Hot Key / Pass word) / PS/2 Mouse Power on Function.

3dNEp.LdOht ardyM. It ar8M
i pe ldsbyM pe ldsbyM

- ◆ **Onboard FDC Controller**: Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.

The choice: Enabled, Disabled.

- ◆ **Onboard Serial Port 1/Port 2**: Select an address and corresponding interrupt for the first and second serial ports.

The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

- ◆ **UART Mode Select**: The Default setting is Normal.

IRDA: HP Standard Mode IR.

ASKIR: ASK standard Mode IR.

- **Onboard Parallel port**: This field allows the user to select the LPT port. The default value is 378H.

378H: Enable Onboard LPT port and address is 378H.

278H: Enable Onboard LPT port and address is 278H.

3BCH: Enable Onboard LPT port and address is 3BCH.

Disabled: Disable Onboard CHIP's LPT port.

NOTE: *Parallel Port address is 378H/3BCH that selects*

*the routing of IRQ7 for
LPT1.*

*Parallel Port address is 278H
that selects the routing of
IRQ5 LPT1.*

- **Onboard Parallel port Mode:** This field allows the user to select the parallel port mode. The default value is ECP + EPP.
 - Normal:** Standard mode. IBM PC/AT Compatible bidirectional parallel port.
 - EPP:** Enhanced Parallel Port mode.
 - ECP:** Extended Capabilities Port mode.
 - EPP+ECP:** ECP Mode & EPP Mode.
- **PWRON AFTER PWR-Fail:** AC Power Recovery ON/OFF system control.
 - Off :** Always turn OFF system power when AC recovery
 - On :** Always turn ON system power when AC recovery
 - Former-Sts :** Turn ON/OFF system depend on the last status of system if the system is on before Power-Loss , then will auto power on after power recovery.
- ♦ **Game port Address:** Default setting is 201.
The choice: 201,209, Disabled.
- ♦ **Midi Port Address:** On board Audio chip Midi port address setting , Default setting is 330.
The choice: 330,300,290,Disabled.
- ♦ **Midi Port IRQ:** On board Midi Port IRQ setting , Default etting is 5
The choice: 5 , 7

6.5 POWER MANAGEMENT SETUP

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

**CMOS Setup Utility – Copyright © 1984 – 2000 Award Software
Power Management Setup**

ACPI function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	
Power Management	User Define	Menu Level >
Video Off Method	DPMS	
Video Off In Suspend	Yes	
Suspend Type	Stop Grant	
MODEM Use IRQ	3	
Suspend Mode	Disable	
HDD Power Down	Disable	
Soft-Off by PWRBTN	Delay 4 Sec	
Wake-up by PCI card	Enabled	
Power On by Ring	Disable	
USB KB Wake-up From S3	Disable	
Resume by alarm	Disable	
** Reload Global Timer Events **		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE 1	Disabled	
FDD, COM, LPT Port	Disabled	
PCI PIRQ [A-D]#	Disabled	
↑↓←→0 Sj appEnoal: pSaGuop+/i/O7/Oc :p/CM/2 10:SG appES :pExtop 21:GanaICHaGpp mmm2 5:Olaj tSMp/CM/2 6:g 3otv CGr a1CM/2 7:SoChr Clr p a1CM/2		

Figure 6-5

- ◆ **ACPI Function:** This item allows you to enable/disable the Advanced Configuration and Power Management .

The choice: Enabled, Disabled.

- ◆ **ACPI Suspend Type:** Use this item to define how your system suspend. In the default, S1(POS), the suspend mode is equivalent to a software power down. If you select S3(STR), the suspend mode is a suspend to RAM – the system shuts down with the exception of a refresh current to the system memory.
- ◆ **Power Management:** This category allows you to select the type (or degree) of power saving and is directly related to the following modes:
 - 5. Min. Power Saving
 - 6. Max. Power Saving
 - 7. User Defined

Disable (default)	No power management. Disables all four modes
Min. Power Saving	Minimum power management. hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management -- g NLYp mVmBLmBLEp g d pSLp O7 1h Suspend Mode = 1 min., and HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

- ◆ **Video Off In Suspend:** This determines the manner in which the monitor is blanked.

4. Video Off In Suspend	3. Min. Power Saving
5. Video Off In Suspend	3. Max. Power Saving
6. Video Off In Suspend	3. User Defined

- ◆ **Video Off In Suspend:** This determines the manner in which the monitor is blanked.

- ◆ **Suspend Type:** Select the Suspend Type.
- ◆ **MODEM Use IRQ:** This determines the IRQ in which the MODEM can use.
- ◆ **Suspend Mode:** When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.
- ◆ **HDD Power Down:** When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.
- ◆ **Soft-Off by PWRBTN:** Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has “hung.”
- ◆ **Power on by ring :** When you select *Enabled*, a signal from ring returns the system to Full On state.
- ◆ **Resume by alarm :** When you select *Enabled*, the following fields appear. They let you set the alarm that returns the system to Full On state.
 The choice: Enabled, Disabled.
- ◆ **Reload Global Timer Events:** Timer events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as *Enabled* , even when the system is in a power down mode.
 Primary IDE 0
 Primary IDE 1
 Secondary IDE 0
 Secondary IDE 1

FDD, COM, LPT Port
PCI PIRQ[A-D] #

6.6 PnP/PCI CONFIGURATION SETUP

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its

own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

M
CMOS Setup Utility – Copyright © 1984-2000 Award Software
PnP/PCI Configurations

PnP OS Installed	No	Item Help
Reset Configuration Data	Disabled	
Resources Controlled By	Manual	Menu Level >
> IRQ Resources	Press Enter	
> Memory Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	

↑↓←→ 0 Sj apEncaI: pSaGuopp/i/O7/Oc :pVCOAp2 10:SCj apES :pExtpp
 2 1:Ganal C@HaGpp
 mmm2 5:Olaj tSMpVCOAp2 6:g 3otv C@raICM6mmmm2 7:SoCnr Cr p aICM6p

Figure 6-6

- ♦ **PnP OS Installed:** This item allows you to determine install PnP OS or not.

The choice: Yes, No.

M

- ♦ **Reset Configuration Data:** Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

3dVp.LdOht ard8yM. It ard8M

- ♦ **Resource controlled by:** Auto will allow the Award Plug and Play BIOS to automatically configure all of the boot and Plug and Play compatible devices. If you have trouble in assigning the interrupt resource automatically you can select "manual", it will allow you to choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a ">").
3dVp.LdMelp/ET- SjyM t h e r M
- ♦ **IRQ Resources:** When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.
- ♦ **IRQ3/4/5/7/9/10/11/12/14/15 assigned to:** This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices compliant with the original PC AT bus specification, PCI/ISA PnP for devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture.
The Choice: *Legacy ISA and PCI/ISA PnP*.
- ♦ **Memory Resources:** This sub menu can let you control the memory resource.
- ♦ **Reserved Memory Base:** wd1dcvd8M Mp k Mo do pcVspcM3dMrdD LVM
8dv.Ld/hphgI hI Mdv.LdjzM
- 3p.Ld1McdM022yM- 22yM 222yM 022yM - 22yM x22yM 7 zM
- ♦ **Reserved Memory Length:** Reserved a low memory length for the legacy device(non-PnP device).
- 3p.Ld1McdM06KyM 06KyM xKzM
- ♦ **PCI/VGA Palette Snoop:** Leave this field at *Disabled*.
- 3p.Ld1McdMht ard8yM. It ard8zM

6.7 PC Health Status

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Power Management Setup

CPU Warning Temperature	Disabled	Item Help
Current System Temp.	25 ° C/ 77 ° F	
Current CPU1 Temp.	49 ° C/120 ° F	Menu Level
Current CPUFAN1 Speed.	4172 RPM	➤
Current CPUFAN2 Speed.	4358 RPM	
Current CPUFAN3 Speed.	4358 RPM	
IN0(V)	2.0 V	
IN1(V)	1.55 V	
IN2(V)	3.36 V	
+5V	4.94 V	
+12V	11.97 V	
-12V	- 12.11 V	
-5V	- 4.94 V	
VBAT(V)	3.31 V	
5VSB(V)	5.34 V	
Shutdown Temperature	70 ° C/ 158 ° F	
↑↓←→0 S j a n E n c o a l : p S a G u o p + / i / O 7 / O c : p V C M p 2 1 0 : S C j a n E S : p E x t o p 2 1 : G a n a I C H a G p m m m 2 5 : O l a j t S M p V C M h m m 2 6 : g 3 o t v C g r a I C M h m m m 2 7 : S o C h r C l r p a I C M h p		

Figure 6-7

CPU Warning Temperature: this item is to setting the Max. Temperature of CPU before it will have warning alarm.

Shutdown Temperature: this item is to setting the temperature for system shutdown , the choice: from 60 ° C to 70 ° C

6.8 Frequency/Voltage Control

CMOS Setup Utility – Copyright © 1984-2000 Award Software
 Frequency/Voltage Control

Auto Detect DIMM/PCI CLK	Enabled	Item Help
Spread Spectrun	Disabled	
Host CPU/DIMM/PCI Clock	Default	Menu Level >
CPU Clock Ratio	X3	

Figure 6-8

- ◆ **Auto Detect DIMM/PCI CLK:** This item allows you to enable/disable auto detect DIMM/PCI Clock.
 - 3dVp.LdOht ard8yM . It ard8zM
 - M
- ◆ **Host CPU/DIMM/PCI Clock:** These item appear if you have set the CPU internal Core Speed to manual. Use the CPU/DIMM/PCI Clock to set the system bus frequency for the installed processor (usually 133 MHz, 100MHz or 66 MHz).
 - 3dVp.LdOht ard8yM . It ard8zM
 - M
- ◆ **07 p1 CrtS:** This item allows you to select the CPU ratio.
 - From X3 to X8

6.9 Defaults Menu

Selecting “Defaults” from the main menu shows you two options which are described below :

- ◆ **Load Fail-Save Defaults:**

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Fail-Save Defaults (Y/N) ? N

Pressing 'Y' loads the Fail-Save default values that are factory settings for normal performance system operations.

- ◆ **Load Optimized Defaults:**

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N) ? N

Pressing 'Y' loads the Optimized default values for the most stable, optimal performance system operations.

6.10 Supervisor/User Password Setting

You can set either supervisor or user password, or both of them. The differences between are:

supervisor password : can enter and change the options of the setup menus.

user password : just can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Section 3). If the Security option is set to "System", the password will be required both at boot and at entry to Setup. If set to "Setup", prompting only occurs when trying to enter Setup.

6.11 Exit Selecting

Save & Exit Setup

Pressing <Enter> on this item asks for confirmation:

Save to CMOS and EXIT (Y/N)? Y

Pressing “Y” stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.

6.12 POST Messages

During the Power On Self-Test (POST), if the BIOS detects an error requiring you to do something to fix, it will either sound a beep code or display a message.

If a message is displayed, it will be accompanied by:

PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP

POST Beep

Currently there are two kinds of beep codes in BIOS. This code indicates that a video error has occurred and the BIOS cannot initialize the video screen to display any additional information. This beep code consists of a single long beep followed by two short beeps. The other code indicates that your DRAM error has occurred. This beep code consists of a single long beep repeatedly.

Error Messages

One or more of the following messages may be displayed if the BIOS detects an error during the POST. This list includes messages for both the ISA and the EISA BIOS.

CMOS BATTERY HAS FAILED

CMOS battery is no longer functional. It should be replaced.

CMOS CHECKSUM ERROR

Checksum of CMOS is incorrect. This can indicate that CMOS has become corrupt. This error may have been caused by a weak battery. Check the battery and replace if necessary.

DISK BOOT FAILURE, INSERT SYSTEM DISK AND PRESS ENTER

No boot device was found. This could mean that either a boot drive was not detected or the drive does not contain proper system boot files. Insert a system disk into Drive A: and press <Enter>. If you assumed the system would boot from the hard drive, make sure the controller is inserted correctly and all cables are properly attached. Also be sure the disk is formatted as a boot device. Then reboot the system.

DISKETTE DRIVES OR TYPES MISMATCH ERROR - RUN SETUP

Type of diskette drive installed in the system is different from the CMOS definition. Run Setup to reconfigure the drive type correctly.

DISPLAY SWITCH IS SET INCORRECTLY

Display switch on the motherboard can be set to either monochrome or color. This indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the system and change the jumper, or enter Setup and change the VIDEO selection.

DISPLAY TYPE HAS CHANGED SINCE LAST BOOT

Since last powering off the system, the display adapter has been changed. You must configure the system for the new display type.

EISA Configuration Checksum Error PLEASE RUN EISA CONFIGURATION UTILITY

The EISA non-volatile RAM checksum is incorrect or cannot correctly read the EISA slot. This can indicate either the EISA non-volatile memory has become corrupt or the slot has been configured incorrectly. Also be sure the card is installed firmly in the slot.

EISA Configuration Is Not Complete PLEASE RUN EISA CONFIGURATION UTILITY

The slot configuration information stored in the EISA non-volatile memory is incomplete.

Note: When either of these errors appear, the system will boot in ISA mode, which allows you to run the EISA Configuration Utility.

ERROR ENCOUNTERED INITIALIZING HARD DRIVE

Hard drive cannot be initialized. Be sure the adapter is installed correctly and all cables are correctly and firmly attached. Also be sure the correct hard drive type is selected in Setup.

ERROR INITIALIZING HARD DISK CONTROLLER

Cannot initialize controller. Make sure the cord is correctly and firmly installed in the bus. Be sure the correct hard drive type is selected in Setup. Also check to see if any jumper needs to be set correctly on the hard drive.

FLOPPY DISK CNTRLR ERROR OR NO CNTRLR PRESENT

Cannot find or initialize the floppy drive controller. make sure the controller is installed correctly and firmly. If there are no floppy drives installed, be sure the Diskette Drive selection in Setup is set to NONE.

Invalid EISA Configuration

PLEASE RUN EISA CONFIGURATION UTILITY

The non-volatile memory containing EISA configuration information was programmed incorrectly or has become corrupt. Re-run EISA configuration utility to correctly program the memory.

NOTE: When this error appears, the system will boot in ISA mode, which allows you to run the EISA Configuration Utility.
--

KEYBOARD ERROR OR NO KEYBOARD PRESENT

Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are being pressed during the boot.

If you are purposely configuring the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. This will cause the BIOS to ignore the missing keyboard and continue the boot.

Memory Address Error at ...

Indicates a memory address error at a specific location. You can use this location along with the memory map for your system to find and replace the bad memory chips.

Memory parity Error at ...

Indicates a memory parity error at a specific location. You can use this location along with the memory map for your system to find and replace the bad memory chips.

MEMORY SIZE HAS CHANGED SINCE LAST BOOT

Memory has been added or removed since the last boot. In EISA mode use Configuration Utility to reconfigure the memory configuration. In ISA mode enter Setup and enter the new memory size in the memory fields.

Memory Verify Error at ...

Indicates an error verifying a value already written to memory. Use the location along with your system's memory map to locate the bad chip.

OFFENDING ADDRESS NOT FOUND

This message is used in conjunction with the I/O CHANNEL CHECK and RAM PARITY ERROR messages when the segment that has caused the problem cannot be isolated.

OFFENDING SEGMENT:

This message is used in conjunction with the I/O CHANNEL CHECK and RAM PARITY ERROR messages when the segment that has caused the problem has been isolated.

PRESS A KEY TO REBOOT

This will be displayed at the bottom screen when an error occurs that requires you to reboot. Press any key and the system will reboot.

PRESS F1 TO DISABLE NMI, F2 TO REBOOT

When BIOS detects a Non-maskable Interrupt condition during boot, this will allow you to disable the NMI and continue to boot, or you can reboot the system with the NMI enabled.

RAM PARITY ERROR - CHECKING FOR SEGMENT ...

Indicates a parity error in Random Access Memory.

Should Be Empty But EISA Board Found

PLEASE RUN EISA CONFIGURATION UTILITY

A valid board ID was found in a slot that was configured as having no board ID.

NOTE; When this error appears, the system will boot in ISA mode,
--

which allows you to run the EISA Configuration Utility.

**Should Have EISA Board But Not Found
PLEASE RUN EISA CONFIGURATION UTILITY**

The board installed is not responding to the ID request, or no board ID has been found in the indicated slot.

NOTE: When this error appears, the system will boot in ISA mode, which allows you to run the EISA Configuration Utility.

Slot Not Empty

Indicates that a slot designated as empty by the EISA Configuration Utility actually contains a board.

NOTE: When this error appears, the system will boot in ISA mode, which allows you to run the EISA Configuration Utility.

SYSTEM HALTED, (CTRL-ALT-DEL) TO REBOOT ...

Indicates the present boot attempt has been aborted and the system must be rebooted. Press and hold down the CTRL and ALT keys and press DEL.

**Wrong Board In Slot
PLEASE RUN EISA CONFIGURATION UTILITY**

The board ID does not match the ID stored in the EISA non-volatile memory.

NOTE: When this error appears, the system will boot in ISA mode, which allows you to run the EISA Configuration Utility.

FLOPPY DISK(S) fail (80) → Unable to reset floppy subsystem.

FLOPPY DISK(S) fail (40) → Floppy Type mismatch.

Hard Disk(s) fail (80) → HDD reset failed

Hard Disk(s) fail (40) → HDD controller diagnostics failed.

Hard Disk(s) fail (20) → HDD initialization error.

Hard Disk(s) fail (10) → Unable to recalibrate fixed disk.

Hard Disk(s) fail (08) → Sector Verify failed.

Keyboard is locked out - Unlock the key.

BIOS detect the keyboard is locked. P17 of keyboard controller is pulled low.

Keyboard error or no keyboard present.

Cannot initialize the keyboard. Make sure the keyboard is attached correctly and no keys are being pressed during the boot.

Manufacturing POST loop.

System will repeat POST procedure infinitely while the P15 of keyboard controller is pull low. This is also used for M/B burn in test.

BIOS ROM checksum error - System halted.

The checksum of ROM address F0000H-FFFFFFH is bad.

Memory test fail.

BIOS reports the memory test fail if the onboard memory is tested error.

6.13 POST Codes

POST (hex)	Description
CFh	Test CMOS R/W functionality.
C0h	Early chipset initialization: shadow RAM -Disable L2 cache (socket 7 or below) -Program basic chipset registers

POST (hex)	Description
C1h	Detect memory -Auto-detection of DRAM size, type and ECC. -Auto-detection of L2 cache (socket 7 or below)
C3h	Expand compressed BIOS code to DRAM
C5h	Call chipset hook to copy BIOS back to E000 & F000 shadow RAM.
0h1	Expand the Xgroup codes locating in physical address 1000:0
02h	Reserved
03h	Initial Superio Early Init switch.
04h	Reserved
05h	1. Blank out screen 2. Clear CMOS error flag
06h	Reserved
07h	1. Clear 8042 interface 2. Initialize 8042 self-test
08h	1. Test special keyboard controller for Winbond 977 series Super I/O chips. 2. Enable keyboard interface.
09h	Reserved
0Ah	1. Disable PS/2 mouse interface (optional). 2. Auto detect ports for keyboard & mouse followed by a port & interface swap (optional). 3. Reset keyboard for Winbond 977 series Super I/O chips.
0Bh	Reserved
0Ch	Reserved
0Dh	Reserved
0Eh	Test F000h segment shadow to see whether it is R/W-able or not. If test fails, keep beeping the speaker.
0Fh	Reserved
10h	Auto detect flash type to load appropriate flash R/W codes into the run time area in F000 for ESCD & DMI support.
11h	Reserved

POST (hex)	Description
12h	Use walking 1's algorithm to check out interface in CMOS circuitry. Also set real-time clock power status, and then check for override.
13h	Reserved
14h	Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers.
15h	Reserved
16h	Initial Early_Init_Onboard_Generator switch.
17h	Reserved
18h	Detect CPU information including brand, SMI type (Cyrrix or Intel) and CPU level (586 or 686).
19h	Reserved
1Ah	Reserved
1Bh	Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to SPURIOUS_soft_HDLR.
1Ch	Reserved
1Dh	Initial EARLY_PM_INIT switch.
1Eh	Reserved
1Fh	Load keyboard matrix (notebook platform)
20h	Reserved
21h	HPM initialization (notebook platform)
22h	Reserved

POST (hex)	Description
23h	<ol style="list-style-type: none"> 1. Check validity of RTC value: e.g. a value of 5Ah is an invalid value for RTC minute. 2. Load CMOS settings into BIOS stack. If CMOS checksum fails, use default value instead. 3. Prepare BIOS resource map for PCI & PnP use. If ESCD is valid, take into consideration of the ESCD's legacy information. 4. Onboard clock generator initialization. Disable respective clock resource to empty PCI & DIMM slots. 5. Early PCI initialization: <ul style="list-style-type: none"> -Enumerate PCI bus number -Assign memory & I/O resource -Search for a valid VGA device & VGA BIOS, and put it into C000:0.
24h	Reserved
25h	Reserved
26h	Reserved
27h	Initialize INT 09 buffer
28h	Reserved
29h	<ol style="list-style-type: none"> 1. Program CPU internal MTRR (P6 & PII) for 0-640K memory address. 2. Initialize the APIC for Pentium class CPU. 3. Program early chipset according to CMOS setup. Example: onboard IDE controller. 4. Measure CPU speed. 5. Invoke video BIOS.
2Ah	Reserved
2Bh	Reserved
2Ch	Reserved
2Dh	<ol style="list-style-type: none"> 1. Initialize multi-language 2. Put information on screen display, including Award title, CPU type, CPU speed
2Eh	Reserved
2Fh	Reserved
30h	Reserved
31h	Reserved

POST (hex)	Description
32h	Reserved
33h	Reset keyboard except Winbond 977 series Super I/O chips.
34h	Reserved
35h	Reserved
36h	Reserved
37h	Reserved
38h	Reserved
39h	Reserved
3Ah	Reserved
3Bh	Reserved
3Ch	Test 8254
3Dh	Reserved
3Eh	Test 8259 interrupt mask bits for channel 1.
3Fh	Reserved
40h	Test 8259 interrupt mask bits for channel 2.
41h	Reserved
42h	Reserved
43h	Test 8259 functionality.
44h	Reserved
45h	Reserved
46h	Reserved
47h	Initialize EISA slot
48h	Reserved
49h	1. Calculate total memory by testing the last double word of each 64K page 2. Program writes allocation for AMD K5 CPU.
4Ah	Reserved
4Bh	Reserved
4Ch	Reserved
4Dh	Reserved

POST (hex)	Description
4Eh	<ol style="list-style-type: none"> 1. Program MTRR of M1 CPU 2. Initialize L2 cache for P6 class CPU & program CPU with proper cacheable range. 3. Initialize the APIC for P6 class CPU. 4. On MP platform, adjust the cacheable range to smaller one in case the cacheable ranges between each CPU are not identical.
4Fh	Reserved
50h	Initialize USB
51h	Reserved
52h	Test all memory (clear all extended memory to 0)
53h	Reserved
54h	Reserved
55h	Display number of processors (multi-processor platform)
56h	Reserved
57h	<ol style="list-style-type: none"> 1. Display PnP logo 2. Early ISA PnP initialization -Assign CSN to every ISA PnP device.
58h	Reserved
59h	Initialize the combined Trend Anti-Virus code.
5Ah	Reserved
5Bh	(Optional Feature) Show message for entering AWDFLASH.EXE from FDD (optional)
5Ch	Reserved
5Dh	<ol style="list-style-type: none"> 1. Initialize Init_Onboard_Super_IO switch. 2. Initialize Init_Onboard_AUDIO switch.
5Eh	Reserved
5Fh	Reserved
60h	Okay to enter Setup utility; i.e. not until this POST stage can users enter the CMOS setup utility.
61h	Reserved
62h	Reserved
63h	Reserved
64h	Reserved

POST (hex)	Description
65h	Initialize PS/2 Mouse
66h	Reserved
67h	Prepare memory size information for function call: INT 15h ax=E820h
68h	Reserved
69h	Turn on L2 cache
6Ah	Reserved
6Bh	Program chipset registers according to items described in Setup & Auto-configuration table.
6Ch	Reserved
6Dh	1. Assign resources to all ISA PnP devices. 2. Auto assign ports to onboard COM ports if the corresponding item in Setup is set to "AUTO".
6Eh	Reserved
6Fh	1. Initialize floppy controller 2. Set up floppy related fields in 40:hardware.
70h	Reserved
71h	Reserved
72h	Reserved
73h	(Optional Feature) Enter AWDFLASH.EXE if : -AWDFLASH is found in floppy drive. -ALT+F2 is pressed
74h	Reserved
75h	Detect & install all IDE devices: HDD, LS120, ZIP, CDROM.....
76h	Reserved
77h	Detect serial ports & parallel ports.
78h	Reserved
79h	Reserved
7Ah	Detect & install co-processor
7Bh	Reserved
7Ch	Reserved
7Dh	Reserved
7Eh	Reserved

POST (hex)	Description
7Fh	1. Switch back to text mode if full screen logo is supported. -If errors occur, report errors & wait for keys -If no errors occur or F1 key is pressed to continue: ♦Clear EPA or customization logo.
80h	Reserved
81h	Reserved
82h	1. Call chipset power management hook. 2. Recover the text font used by EPA logo (not for full screen logo) 3. If password is set, ask for password.
83h	Save all data in stack back to CMOS
84h	Initialize ISA PnP boot devices
85h	1. USB final Initialization 2. NET PC: Build SYSID structure 3. Switch screen back to text mode 4. Set up ACPI table at top of memory. 5. Invoke ISA adapter ROMs 6. Assign IRQs to PCI devices 7. Initialize APM 8. Clear noise of IRQs.
86h	Reserved
87h	Reserved
88h	Reserved
89h	Reserved
90h	Reserved
91h	Reserved
92h	Reserved
93h	Read HDD boot sector information for Trend Anti-Virus code

POST (hex)	Description
94h	<ol style="list-style-type: none"> 1. Enable L2 cache 2. Program boot up speed 3. Chipset final initialization. 4. Power management final initialization 5. Clear screen & display summary table 6. Program K6 write allocation 7. Program P6 class write combining
95h	<ol style="list-style-type: none"> 1. Program daylight saving 2. Update keyboard LED & typematic rate
96h	<ol style="list-style-type: none"> 1. Build MP table 2. Build & update ESCD 3. Set CMOS century to 20h or 19h 4. Load CMOS time into DOS timer tick 5. Build MSIRQ routing table.
FFh	Boot attempt (INT 19h)

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Chapter 7 Drivers Installation

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1.3.1.1

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1. You must have more than 33MB memory on your system in order to install WINDOWS NT VGA driver.
2. If you are using Windows 95, you must update to Windows 95 OSR2.1 or later version.
3. If you are using Windows NT, you must update to Server Pack 4 or later version.
4. We are assuming your CD-ROM is X drive.
5. Multi language supported for both VGA and Sound drivers installation.

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7.1.1.1

VGA Driver

Windows95/Windows98 :

Run X : \MF-810\VGA\WIN9X\VGA\SETUP.EXE

Windows NT 4.0 :

Run X : \MF-810\VGA\WINNT_4.0\VGA\SETUP.EXE

Please follow on screen instruction to complete your installation.

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82801/82802 INF DRIVER

Windows 95 :

1. Install USB Supportment Driver From win95 CD Driver (OSR2.1 Support USB Need).
2. Install X : \MF-810\INTELINF\SETUP.EXE and follow on screen instruction.
3. After re-start your computer, just simply click NEXT to choose Windows default driver.

Windows 98 :

1. Install X : \MF-810\INTELINF\SETUP.EXE and follow on screen instruction.
2. After re-start your computer, at prompt of asking for ICHxIDE.CAT, please points to C:\WINDOWS\CATROOT , otherwise just simply click NEXT to choose Windows default driver.

Please follow on screen instruction to complete your installation.

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Sound Driver

1. For Windows 95/98 user, before you install Sound Driver, please remove PCI Multimedia Audio device under "OTHER DEVICE" of "DEVICE MANAGER".
2. Windows 95 : Run X : \MF-810\SOUND\WIN95\DRV\SETUP.EXE
3. Windows 98 : Run X : \MF-810\SOUND\WIN98\SETUP.EXE
4. WindowsNT 4.0 : Run X : \MF-810\SOUND\NT4\SETUP.EXE
5. AUDIO RACK : Run X : \MF-810\SOUND\AP\SETUP.EXEC

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10/100Mbit Fast Ethernet Driver

You must go to Realtek Web site to download the RTL8139C driver to update the fast Ethernet driver.

The Web site is :

<http://www.realtek.com.tw/>

Windows 95 : X : \R8139C\WIN95\
Windows 98 : X : \R8139C\WIN98\
Windows 2000 : X : \R8139C\WIN2000\
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PC Health Software

Windows 95 : Run X : \MF-810\HWDOCTOR\SETUP.EXE

Windows 98 : Run X : \MF-810\HWDOCTOR\SETUP.EXE

NOTES	<ol style="list-style-type: none">1. For Windows 95 user : You must run SETUP.EXE twice in order to complete this installation. The computer will install device identification at first time when you run SETUP.EXE. When you finish, you need re-start your computer manually and run SETUP.EXE once again to install correspond driver.2. <i>Please follow on screen instruction to complete your installation.</i>3. Please refer to HELP for Windows 95/98 relate questions.
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Suspend Type (STR)

1. Please set "ACPI Suspend Type" at "Power Management Setup" from BIOS to S3(STR) mode, and save the setting.
2. Since default setting of Power Management within Windows 98 is APM (Advanced Power Management) mode, you must change it to ACPI (Advanced Configuration and Power Interface) mode at **the BIOS Setup Menu** in order to have STR function.
3. When you installing Windows 98, please use following command to add ACPI function in to Windows 98.
SETUP /P J
Note : You can find ACPI mode under "System Device" of "Device Manager" after you installed Windows 98.
4. After you have successfully installed Windows 98, please install your VGA, INF, and SOUND driver.
5. You can then choose "STAND BY" from the "SHUT DOWN" option under "START" to get into STR mode.

6. To wake up your system, please press Power Button to power on and wait 9~12 seconds to return back original Windows 98 screen.

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Power On System / Hot-key / PS/2 Mouse / Power Button

This Mother board has two ways to Power On System, one is use power button the other is use keyboard. This document description how to use keyboard to control Power On function.

2. Power On System

7. Power On System

Please setting both JP4 2-3 closed. In this condition the system will ignore the BIOS SETUP "Power On Function" under "INTEGRATED PERIPHERALS", system only can power on by Power Button.

2. Power On System

7. Power On System

You have to setting both JP4 1-2 closed. In this setting you can change BIOS SETUP to "Password" or "Hot-key" "PS/2 Mouse" in "Power On Function" item under "INTEGRATED PERIPHERAL SETUP".

m:p When choose "Password", then user can setting your password in "KB Power On Password" item. After save CMOS SETUP, the next time want to power on, you have to key in your password to power on, otherwise the system will not power on.

B:p When choose "Hot-key" or "PS/2 Mouse" , then user can choose by key in Hot-key or Push Mouse button, or use Power button to power on system.

7.2 Question and Answer:

Q1: When you forget password or the system can not power on by power button?

Answer: There has two solution of this problem:

- sol 1:** 1st : Turn off the Power Supply by ON/OFF switch.
2nd: Clear CMOS by JP19 2-3 closed about 10 sec and move the Jumper to 1-2 closed for Normal use.
3rd: Switch ON the Power Supply by ON/OFF switch.
4th: Follow Function 1 or Function 2 to setting your Power On Function.

sol 2: Change the Jumper setting both JP4 2-3 closed . Let you can use power button to Power On your system, and you can setting BIOS again. In this condition you can choose use Function 1 (use Power Button Power On) or use Function 2 (Use Keyboard Password/ Hot-key Power On) to setting your system.

Q2: When use Function 2 use keyboard Password/Hot-key Power On, there has keyboard error problem?

Answer: This is the Power Supply 5V standby current too small can not drive the keyboard.

sol: If your Power Supply 5V StandBy current is not enough to drive keyboard. You can not use keyboard password/Hot-key power on Function, Please change the Jumper setting JP3 2-3 closed only can use Function 1: Power Button Power On.

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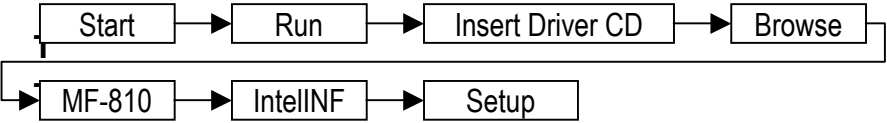
Quick Installation Guide

Driver Installation

After you have successfully added Windows 95/98 to your hard drive, insert Windows 95/98 CD

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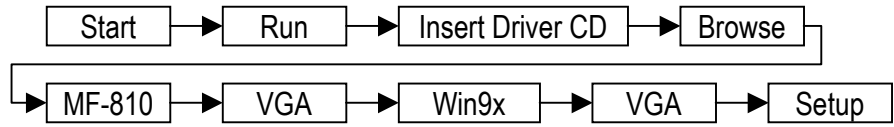
Intel810 inf files



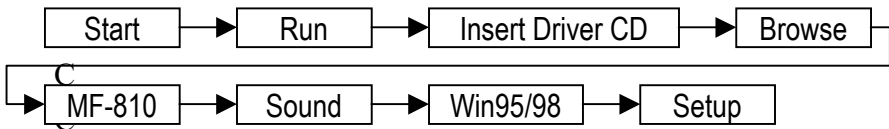
Insert the floppy disk into the floppy disk drive. The system will automatically find the driver files and install them. If the system does not find the driver files, you will need to manually install the driver files.

- Intel® firmware 82802 firmware hub device.
--Windows will automatically find driver if not specify.
- Intel® 82801AA LPC Controller.
--Driver is in Windows95/98 CD.
- Intel® 82801AA Ultra ATA Controller.
--Driver is under "C:\Windows\catroot."(only Windows98)
- USB Root Hub.
--Driver is in Windows95/98 CD.
- System will restart.

VGA Driver



Sound driver



Refer to your instruction manual for more detailed information