Microflex Slim/Mini Desk Top PC

CIEOS-PIII; MILLENNIUM-PIII
MFII+-810e; MFIII+-810

User's Manual

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HAPTER 1 INTRODU TION

Introduction

C

3.1M t het rM1Me.bt ardMpcMpb3M f m+g052dMr.o M.FdM- Mh8M f mn+g052dM i .h.M d11 MpmM- zM

3dM pb3dcapt c8M1M rrg hgphdM8d1.Dhd8M .b3MP CI M4 CP yP e8.pMpeh8M h8M 527522i Mdk pcl M3.mMe.r8g hzM 3.1M pb3dcapt c8M1M8d1.DhMpcMpb3M f m+g 052dMr.o M.FdM- Mh8M f mn+g052dM .h.M d11 MpmM- yMpb3M f m+g052dMh8M i f mn+g052dMcdM8dMdk M d1.Dhd8M.b3M NMbeLbecdzM

M

3dM.ssdcdhLdMdk ddhM f m+g052dMh8M f mn+g052dMcdM1bd8M M8dMprrpk .hDM

- **Chapteapr t11aI anop**
  - i f m+M052dM t 1dM.FdOHELo /BjMM6Lo /9 jMMLo /v jM
  - i f mn+M052dM t 1dM.FdOHELo /BjMM6Lo /9 jMM5Lo /v jM
- **d thaI puCI r pr t11aI anop**
  - i f m+M052dMv.1dcM t c8OMMM- nMrpbM
  - Mmbpht rMOMMM- n7hTP M.ud8MM
  - i f mn+M052dMv.1dcM t c8OHMM- nMrpblM
  - MM Mmbpht rOHMM- n7hTP M.ud8M
  - MzMMMTP M
  - MM MzM6MMTP MHMMM- nMM
  - MM MzM5MMTP MHM6MM- nMM
  - MM M8zMMM- nM
- **c id g 0 pr t11aI anop**
  - i f m+M052dMS gwq i OMr.o MvmdMS gwq i MTt o dM1MpbdapplmjM
  - i f mn+M052dMS gwq i OMM7xQMS gwq i MTbt h8t c8M1FdjM
- **2 GS33 f pr th5 pr t11aI anop**
  - i f m+M052dMrpmmMM.11 OHM76QMrpmmMM.11 M.b3pebMcphbMdFdrM3.88dhM .h1.8dM8dMt 1djM
  - i f mn+M052dMrpmmMM.11 OHM76QMrpmmMM.11 M.b3MphbMdFdrM1bt h8t c8M 1.FdjM

CHAPTER 2 GETTING STARTED

C

P apebMpecM f m+g052d7 f mn+g052dMr.o M.FdMpcM .h.M$ d1l M pmMI - yMq hLdM VpeM t vdMdLd.vd8M3dM f m+g052d7 f mn+g052dMr.o M.FdMpcM .h.M$ d1l M pmM I - yMrdt 1dM3dLl M3dMpmpk .hDMdo 1OM

M

1. 4 s Cdlhptnu Gr ar p

* Tr.o M1FdMpcM .h.M$d1l Mpm Mt 1dM.b3M NMpk dcMemmrVMh1bt rrd8zM
* The Socket 370 all-in-one ATX type motherboard pre-installed inside the slim size or Mini Desk Top case.
* I - nMhrVMpcM .ud8MTP 7I - nM3MrpbMv. 1dcMt c8Mcdg h1bt rrd8MpcM f mn+g052dM t h8MMrpbIMI- nMhrVMpcM- n7hTP M .ud8M 1dcMt c8Mcdg h1bt rrd8MpcM f mn+g 052dM
* q hdM2Mh1Mrt bMt ardMpcMS S Mh8MS gwq i M I cdg h1bt rrd8MhM3dMrrg hgphdMI NMpb3dcapt c8zM
* q hdMExMh1Mrt bMt ardMpcMf S S Mcdg h1bt rrd8MhM3dMrrg hgphdMP NM o pb3dcapt c8zM
* q hdM2Mh1Mrt bMt ardMpcMq i M3MpcbMcdg h1bt rrd8zM
* q hdM2Mh1Mrt bMt ardMpcMq i M6MpcbMcdg h1bt 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 hdMtdbMLcdk Mt Ll M3.L3Mh Lre8.hDM3dMpmpk .hDOM tzM i EM2zLMLcdk 1M6MLlMpcMS S 7- S gwq i Mh8Mt c8Mh1bt rrt bphzM azM i EM5MLcdk 1MMLlMpcMS S Mh1bt rrt bphzM
* U1dc' 1M t het rM3MLlzM
* I pk dcMpc8zM
* - S gwq i M.1l Mpsk t cdMc.vdcM

2. s au5tnbps apm ptn3Mj SGCbap6a1SI apM npSnps ap3SAaI 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

is the wrong voltage, please make the correct setting of this switch.

3. [illegible]

[illegible]

4. [illegible]

You can install the 168 pins DIMM memory module into location DIMM1 and DIMM2 on your motherboard. Since 168 pins DIMM module is 64 bits wide, therefore 1 piece of DIMM module may match a 64 bits system.

5. [illegible]

Please refer to the step 8 of the Mini Desk Top PC system installation at page No. 11 of this manual for detailed hard disk installation.

6. [illegible]

[illegible]

7. [illegible]

[illegible]

8. [illegible] SET7 [illegible]

9. [illegible] 95/98/2000 [illegible]

10. **OGaChapd a1aIpoSpus C3oaIp7pSnp6SCIr pd TLp8139 p10/1000 63hp2 Chop Eos aInaoqCop3 CbapNSw69pS1pos thpv CnMCGp1SIpos apnaoASI5phS1oACIapr Itj aIp tnhoCGGotSnp1SIpAtnr SAhp95/98/2000pCnr pAtnr SAhpNTwpp**

11. **BnhoCGGnbpos apB'g puCIr pBlpnauahhCIf wp**

3dMI f nn^{+}g052dMTr.o MT.FdMI- M3t 1M5Mf7q MrpblMscddMf1h8M3dMI f nn^{+}g052dM i .h.M8 d1l M pmMI- M3t 1MEMf7q MTrpblMscddMpcMpe MpMn1bt rrMf1hVMf7q MLt c8 1zM I rdt 1dMdsdcMpMbdmM9MpsM3 dM .h.M8 d1l M pmMI- MVlbdo Mn1bt rrt bphMbMt DdM ApzM3EMpsM3.1Md t he t rMpcM8dbt .rd8Mf7q MLt c8Mn1bt rrt bphzM

Important Notes:

*** The 0 2BB^{+}i810apSGv pSteapO pAtGGphs t3pAtos p1pxpO BphCSopI thaIpuCIr pChp hoCnr CIr wp6MpfSMpuCnpSIr aIpos apIthaIpuCIr pAtos pO BpoSpBSmp6Itr bap hM33SIop1SIp1pxpO B'BSmpv txar pIthaIpuCIr pAs tus pAtGGp6apC6GapoSphM33SIop 6Sos pO BpCnr pBSmpuCIr wp**

***pTs ap0 2BBB^{+}i810ap0 tntpc ah5pTS3pO pAtGGphs t3pAtos p3pxpO BphCSohpI thaIp uCIr pChphoCnr CIr Dp6MpfSMpuCnpSIr aIpos apIthaIpuCIr pAtos pO BpoSpBSmp 6Itr baphM33SIop1SIp3pxpO B'BSmpv txar pIthaIpuCIr pAs tus pAtGGp6apC6GapoSp hM33SIop6Sos pO BpCnr pBSmpuCIr wp**

CHAPTER 3 SPECIFICATION

C

3.1 Motherboard specification

3dMd pb3dcapt c8M1MH NMMMmdMrrghgphdMdd1.Dhd8MM.b3MH CI M4 CP yMH e8.pM lpeh8Mh8M527522i am1M4dbk pcl MB.mMe.r8ghzM

3dMpbrrpk .hDM1MB dMdbt .rd8Mdt becd1MsMB dMd pb3dcapt c8zM

M

2 EmT7 d ESp

- **0 Sos aI6SCIr puSI apSbtup**

  mhbdrM06052d706052MCi - v MCct m3.LMh8Mi do pcVM4 phbcprrdcMt UBjMHM mhbdrM06025P P M7q M4 phbcprMv eaMn- v jMHMv BM05E9- M527522i am1M f P T MEb3dchdbMHM9 .haph8M9 0E667v f Memdc M7q M&M3dt rb3M3t c8k t cdM 1dh lpczMM

  M

- **S3aar** M

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

- **Processor supports**

  - mhbdrM drdcphMTpLl dbME72M4 I UMpcMhbdrM Ug6U6KMl- gI CP MIdhbeo MmM - I UMmMpM3EEi v FMe 1MdqedhLVzM
  - mhbdrM drdcphM667U227UEE76227 6U27722M
  - mhbdrMl- gI CP M6227 6U27 667 7227 EE70227 0EE7066M
  - P ebpMdbdLbphMsMI UMprbt DdM

  M

- **0 Ctnpv av SIf p**

  - I cpv.8d1M6M8 ni i MpLl dblMpMemmpcbME6i B76xi B7560i B76U6i BM TS wP i Md do pcVMd p8erd1MmMpM56i BM
  - TemmpcblMH ebpMdbdLbphMsM do pcVMMmdM
  - TemmpcblMI- - MpcMt c.bVMphs.Dect bphM
  - I - 5EEM5EEi v FjMpo mr.t hbMTS wP i MhbdcstLdM

  M

- **BBg Sp**

  - B.Ldh1d8MH9 P wS MBmq TyMi M.blMBP Tv Mq i zM
  - Bmq T7- 3.m1dbMMdbemyCcddhMMdbemyv t c8MS.1l MMbr.bVM

  M

- **B'g pOSI op**
  - • q hMapt c8M - nMa e 1Mo t 1bdcMEh3t hLd8MnS EMhbdcst LdMemmpcb1Mc Mn S EM 8dv.Ld1Mt .b3M6ML3t hhdr1yMemmpcb1MI nq Mo p8dM2MpMo p8dMaMh8MBe 1M o t 1bdcMS EMS i P Mo p8dM6Mh8MUrbct MP P 766Mt .b3Mo t u.o eo Mct h1sdcM ct bdMpsM6i B71dLMk .b3M006025P BM4 v jzM
  - • q hMapt c8MsrpmmVM8. 1l MpphbcprrdcMemmpcb1M1zxxi BMsrpmmVM8c.vdMh8MBTg 562MZnI MI dv.LdM
  - • q hMapt c8Memmpcb1Mk pM.D3MImdd8MUP w TM56- UU2u6Mh8Mo erb go p8dM nt ct rrdrMpcbMpcMt h8t c8yMh3t hLd8MI I Mh8M.D3Mmdd8MI- I Mo p8d1zM
  - • I T76Mo pe 1dMpcbMt .b3Mo pe 1dMt t 1 dgemMehLbphzM
  - • I T76MdVapt c8MpcbMt .b3MdVapt c8Mt t 1 dgemMehLbphzM
  - • q hMapt c8Memmpcb MpcMwMehLbphzM
  - • Temmpcb1Mk pMh.vdc1t rNdc.t rMe 1MUTBu6jM

  M
- **NaoASI5p**
  - • Be.rbMhMw BM5E9- M2 7522i am1M- nMP T Mb3dchdbyhMapt c8Mt .b3MJg xUMphhdLbpcMh8Mt t 1 dgemMhMBP AMehLbphzM

  M
- **g n6SCIr pVGmp**
  - • mhbdrMCi - v Mae.r8g hMDct m3.L1MemmpcbMmMpM5622Mt M5622M6xa.b1Mt bM 0Ui v ZM
  - • mhbdDct bd8MM.D3Mdcspco t hLdMh8M.D3Mt r.bVM6S 7ES MhD.hdM
  - • mhbdDct bd8MhcpDct o o t ardM6xga.b1MbedgLprpcMvP i S P - MmMpM6E2M1 v FM mudrMrpL1 M
  - • E6Ma.b1M22i v FM.1mrt VMt L3dMae 1M
  - • TemmpcbM.cdLbNUM.cdLbN6MNpsk t cdM I ECMnACMc.vdcM
  - • 9 .h8pk 1MU79076222M CP Mc.vdc1Mt .b3Mebpg h1bt rrt bphM
  - • I pk dcserMhr.bVM .h8pk 1MUyM .h8pk 1M0yM .h8pk 1M222Mh8M 9 .h8pk 1MA M

  M
- **O pHaCGs pv SntoSIp**
  - • ct LI MI UMh8MTVlbdo Mo mdct becdywprbt Ddyst hMmdd8M

  M
- **OSAaIpSCj tnbp**
  - • P - I n7P I i Mpk dcMt ht Ddo dhbM
  - • TemmpcbMe 1mdh8MpMwP i MehLbphMTEMp8djM
  - • TemmpcbMUTBMdVapt c8MMpe 1dM t 1 dgemMcpo MTEMp8dM
  - • TemmpcbMe 1mdh8MpM.1l MehLbphyMe 1mdh8MpMP i MehLbphzM

- Temmpcbvlpsbk t cdMTe lmdh8Mh8Mpk dcbyssMehLbphM9 .h8pk l9UyM
  9 .h8pk l90yM .h8pk 1M222jM
- Temmpcbv t l dgemyhhMhMsbcMqzTM
- Temmpcbvpk dcMelbpo M8dMh1bthbyssMcM8drt VMNdLph8Mpk dcbyssjM

M

- **TViSMqS3otSnCCyppsthplaCoMapAtGGbapCj CtC6GapCloaIpSIraIw**
  Tg4 .8dpMMcpv.8d1M8dMTg4 .8dpMeb0M4 zM
  P 4 g4 .8dpMMcpv.8d1M8dM4 g4 .8dpMebM4 zM
  M
- **OCnaGLtn5pSMqS3otSnCCyppsthplaCoMapAtGGbapCj CtC6GapCloaIpSIraIz**
  3dMthdrMhl MebMpcbMMpMcpv.8dM8dM8.Dbtr MDht rMspcMf M- S M
  o ph.bpczMM
  M
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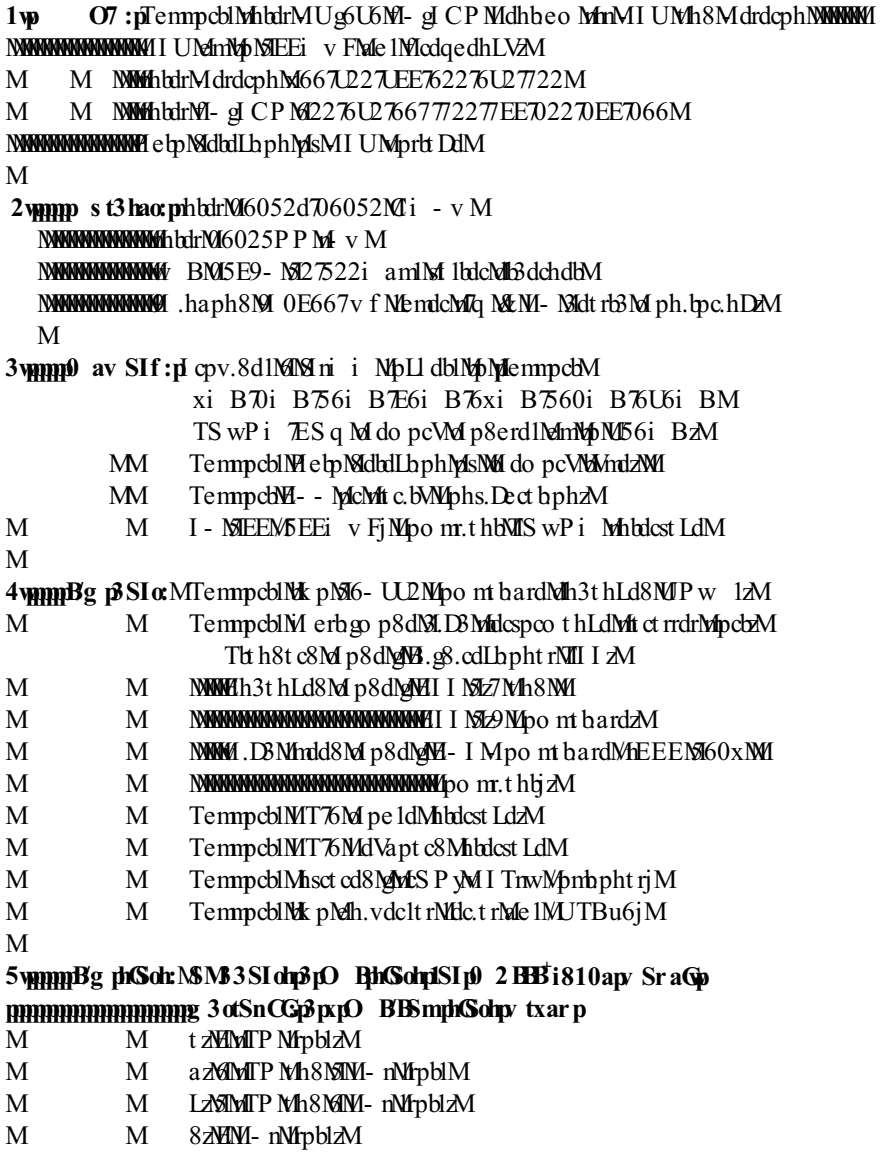
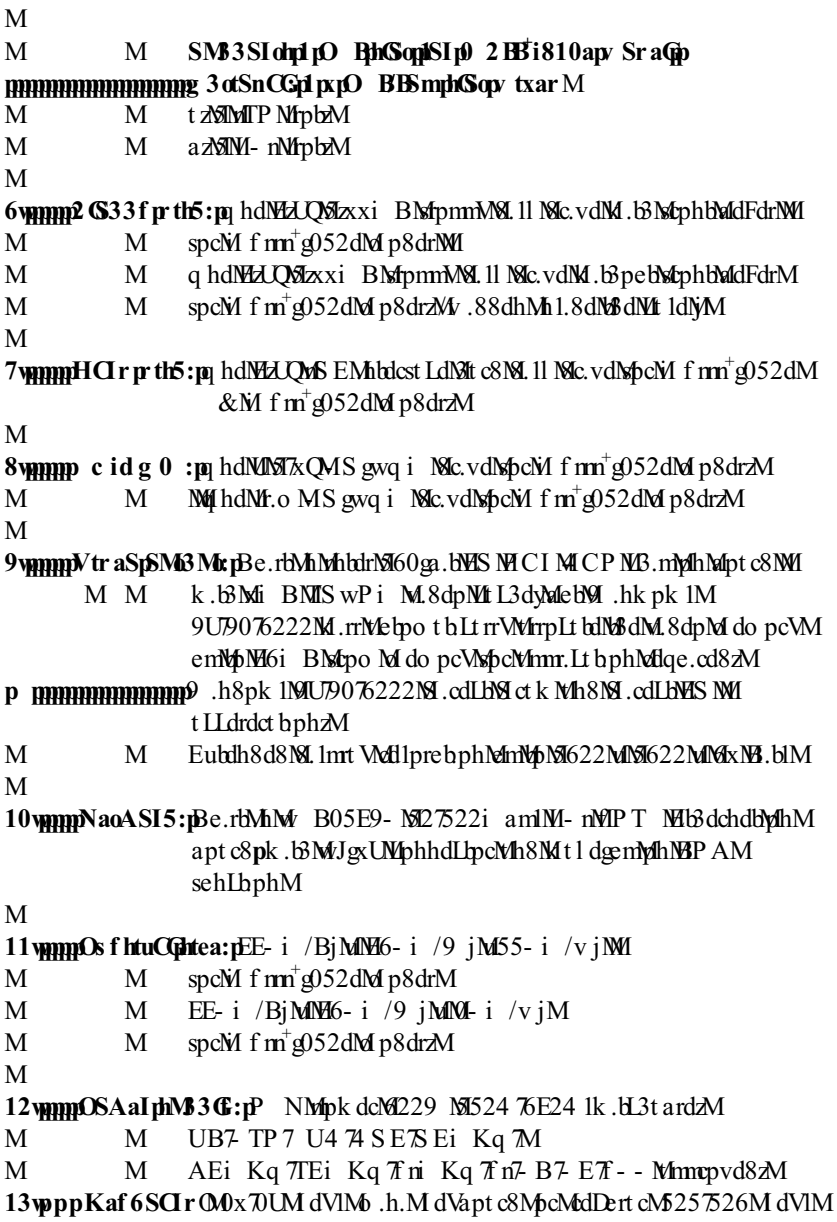
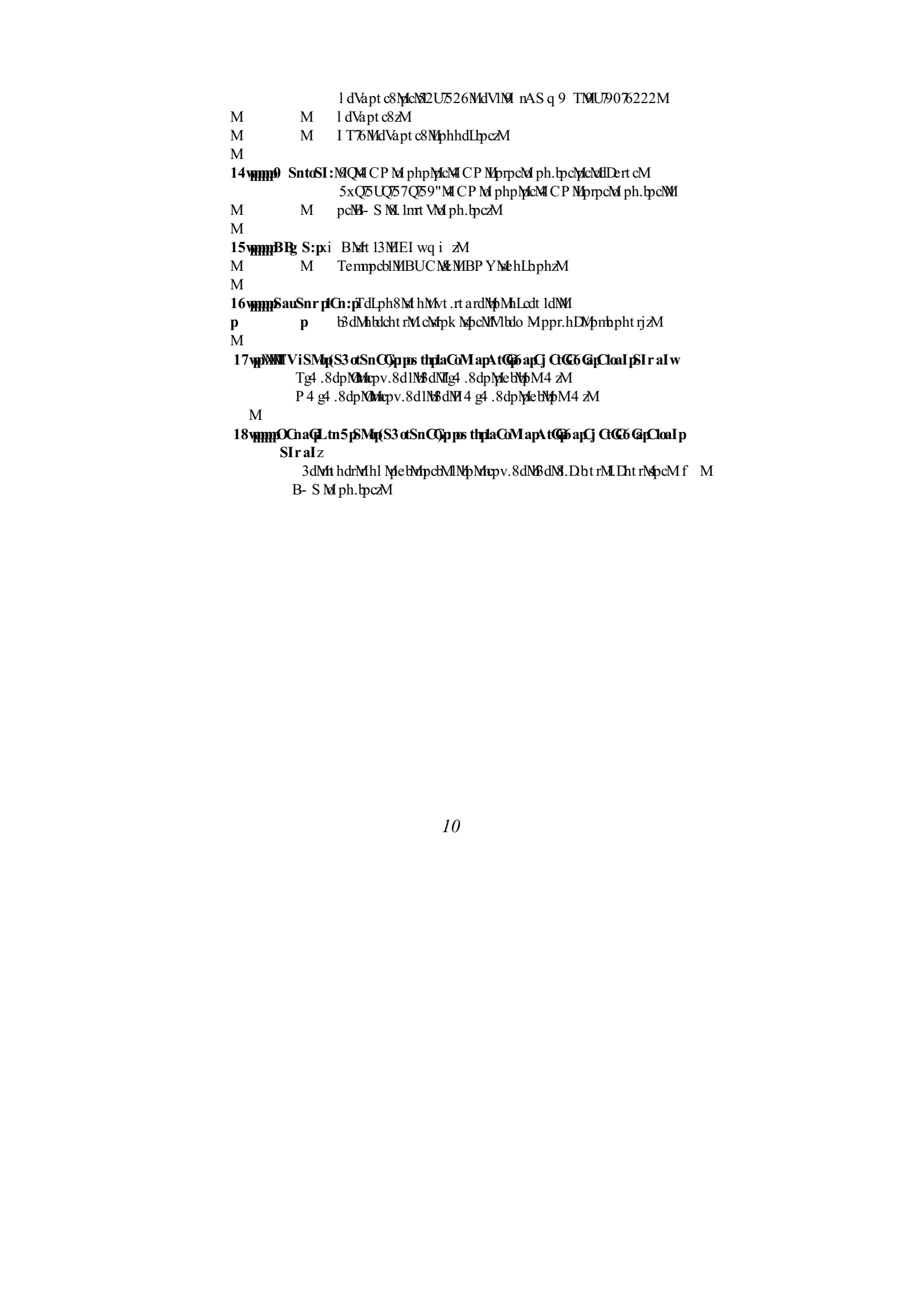
3.2 The MFII^{+}-810e Slim Size and MFIII^{+}-810e Mini Desk Top PC Specifications:







CHAPTER 4 INSTALLATION

C

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

3dMprrpk .hDMMBdM .h.MI d1l MpmM- MMbdo Mh1lt rrt bphMcpLd8ecdMbdmMVM 1bdmM3.L3M.rrMe.8dMpeMpMh1lt rrMBdM.h.Md1l MpmM- MMbdo M1MeL3M1M dt 1.dczMM

Soa31:p q mdhMBdMt 1dMmmdcMpvdczM
Soa32:p mh1lt rr.hDMBdMBMBt mdMpk dcMemmrVMVMLcdk MhMBdMMLcdk 1zMM
Soa33:p mh1lt rr.hDMBdMpk dcMk .bL3MVMLcdk MhMBdMMLcdk 1zMM
Soa34:p mh1lt rr.hDMBdMdLph8Mt hMVMLcdk MhMBdMMLcdk 1zM 3dMdLph8Mt hM1M rpLt bd8Mdtk ddhMBdMt 1dMphbM18dMt hdrMh8MBdMphbMdFdrzM
Soa35:p mh1lt rr.hDMBdMprrpk .hDMt cblMphMBdMcphbMdFdrMdspcdMh1lt rrMBdM scphbMdFdrMhMpMBdMt 1dzM

I EC wd1dbMk .bL3M.b3M.cdzM

OEC v S S MBES M.b3M.cdzM

SEC I pk dcMBES M.b3M.cdzM

- EC Adtk pcl MBES M.b3M.cdM

PEC I pk dcMk .bL3MBebphzM

Soa36:p mh1lt rr.hDMBdMcphbMdFdrMhbpMBdMt 1dMVMLcdk MhMBdMMLcdk 1Mh8M me13MhMBdMapvdM.cd1M1bdmMyMyMyMyMyMj Mh8MBdMdLph8Mt hM.cdM .hbpMBdMt 1dMpMphhdLbMpMBdMpb3dcapt c8Mh8MBdMpk dcMemmrVzMM
Soa37:p mh1lt rr.hDMBdMglemmpcbhDMct L1 dbMhMBdMpk dcMt 1dzM
Soa38:p mh1lt rr.hDMBdMt c8M.1l M8c.vdyMsMdLd11t cVzM pMh1lt rrMBdMt c8M.1l M 8c.vdyMrdt 1dMprrpk 1MBdMbdmMdrpk OM

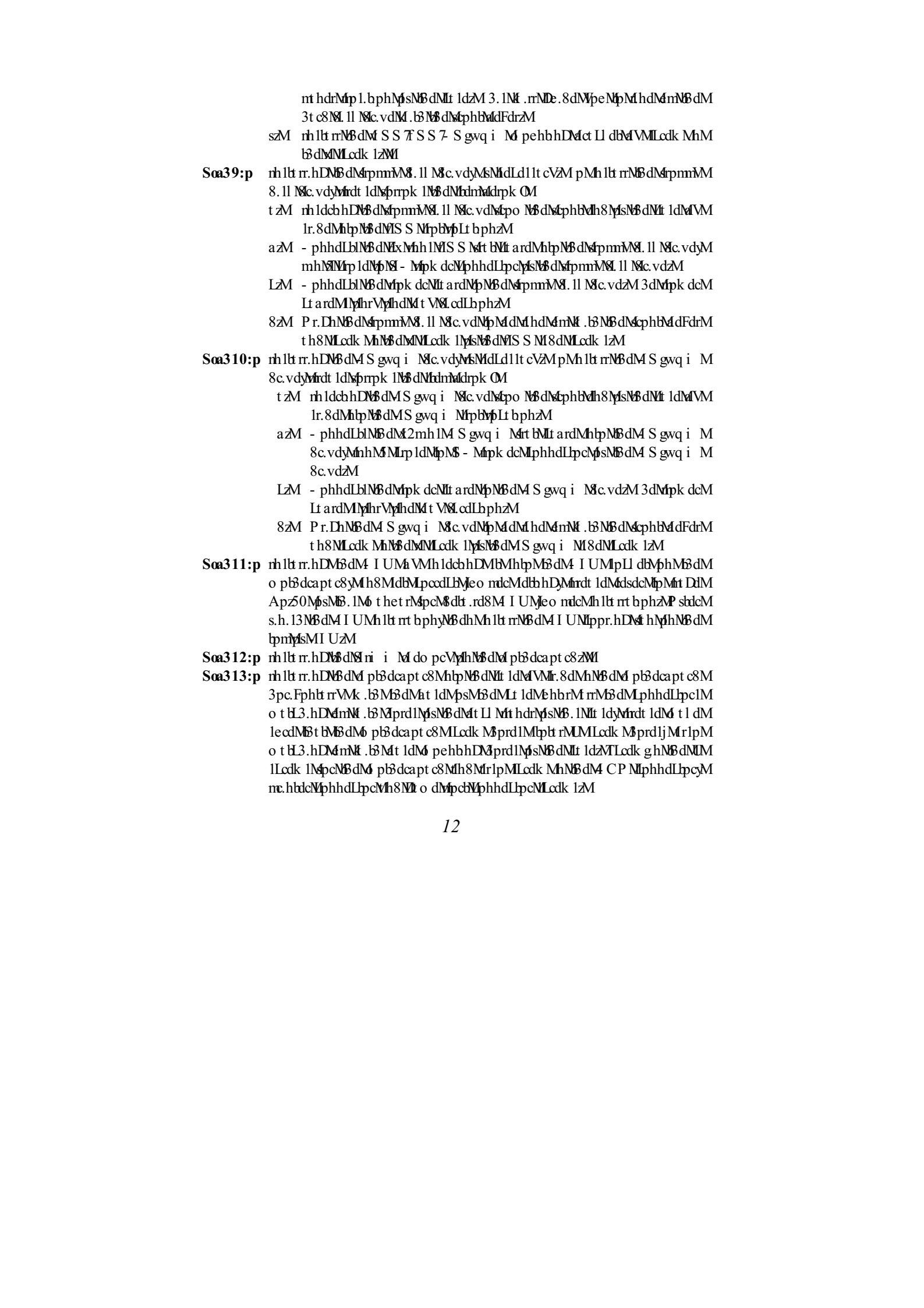
t zM wdo pvd1MBdM S S 7 S S 7- S gwq i M8c.vd1M pehbhDMct L1 dbMVM eh1Lcdk MBdMk pMLcdk 1zM

azM mh1lt rrMb3dMt c8M8.1l M8c.vdMphMb3dMrpk d1bMaptpo MpsMb3dM v S S 7 S S 7- S gwq i M8c.vdgo pehbhDMct L1 dbMVMLcdk MhMBdMM 1Lcdk 1MbMBdM18dzM

LzM - phhdLb1MBdM2Mh1M S S Mt bMt ardMhbpMBdMt c8M.1l yMh1MM Lrp1dMpMI - Mpk dcMphhdLbpcMsMBdMt c8M.1l M8c.vdzM

8zM - phhdLb1MBdMpk dcMt ardMpMBdMt c8M.1l zM 3dMpk dcMt ardM1M phrVMhdMt VM.cdLhphzM

dzM P r.DhMBdMt c8M.1l M8c.vdMp1.bphMzULo Mk t VMcpo MBdMcphbM



Soa314:p - phhdLblMB dMP NMnpk dcMemmrVMLphhdLbpc1MhbpMB dMo pb3dcapt c8M mpk dcMphhdLbpcM5yMrdt 1dMt 1 dMecdMB dMLcdLbphMB per8MadMpccdLbzM

Soa315:p nh1bt rr.hDMB dM-q i 5MLt ardMadbk ddhMB dMpb3dcapt c8Mh8Mat Ll Mt hdrM psMB dMLt 1dzMh1dcb hDMB dM9Mnh1Mrt bMLt ardMhbpMB dMo pb3dcapt c8M LphhdLbpcM- q i 5jyMnA5Mt cMk t VMcpo MB dMEnTP MrpbMw.1dcMLt c8jM 1.8dMh8Mpehb hDMB dMb3dcM1.8dMsMB.1MLt ardMhMB dM-q i 5MprdMsM b3dMt Ll Mt hdrMsMB dMt 1dMVMLcdk MhMB dMNLcdk 1zM

Soa316:p nh1bt rr.hDMB dM-q i 6MLt ardMadbk ddhMB dMpb3dcapt c8Mh8Mat Ll Mt hdrM psMB dMLt 1dzMh1dcb hDMB dM9Mnh1Mrt bMLt ardMhbpMB dMo pb3dcapt c8M LphhdLbpcM- q i 6jMnA5Mt cMk t VMcpo MB dMEnTP MrpbMw.1dcMLt c8jM 1.8dMh8Mpehb hDMB dMb3dcM1.8dMsMB.1MLt ardMhMB dM-q i 6MprdMsM b3dMt Ll Mt hdrMsMB dMt 1dMVMLcdk MhMB dMNLcdk 1zM

Soa317:p nh1bt rr.hDMB dMat Ll MrpbM.h8pk Mpehb hDMct Ll dbMVMLcdk MhMB dMEM 1Lcdk 1MhMB dMat Ll Mt hdrMsMB dMt 1dzM

Soa318:p nh1bt rr.hDMB dM- n7nTP Mw.1dcMLt c8MhbpMB dMpb3dcapt c8MbMB dMpLt bphM J6Mh8Mpehb hDMB.1Mw.1dcMLt c8MhMB dMemmpcb hDMct Ll dbMsMB dMt 1dM a VMLcdk MhMB dMNLcdk 1M3.L3MpLt bd8MhMB dMmmdcMk pM1.8d1MsMB dM w.1dcMLt c8zM

Soa319:p nh1bt rr.hDM7q MLt c81MhMpecM .h.MS d1l M pmM- yMsMdLd11t cVzM 3dM i .h.MS d1l MpmM- M3t 1MB dMa.r.bVMpMh1bt rrMM7q MLt c81Mb3dcM- nMcM nTP McMhVMpo a.ht bphzM 3dVMLt hMdMb3dcMEMTP Mrpb1McMMTP M 1rpb1MM5M- nMrpbMcMMTP MrpbMM6M- nMrpb1McMEM- nMrpblzMpeMLt hM .h1bt rrMhVM7q MLt c8MLo mrVMVM1 .hDMB dMLt c8MpcFphbt rrVMh8Mh1dcbM b3dMpr8Ms.hDdcMh1.8dMB dMc1dcMLt c8yMB dhMLcdk MhMB dMLt c8Mo dbt rM mrt bdMhMB dMat Ll MrpbM.h8pk 1Mpehb hDMct Ll dbMD3brVzM

3 GaChapn Soa:p

MMMTP MrpbMhrVMvt .rt ardMsMpeM3t vdMc8dcMB dMVlbdo M.b3M- nMpM nTP Mc.8DdMemmpcbMc1dcMLt c8M3.L3M.rrM3t 1MEM- n7nTP Mo .ud8zM q b3dck .1dyMM.rrMhrVM3t 1MEM- nMrpb1M1Mt h8t c8zM

Soa320:p - phhdLb hDMrrMB dMdLd11t cVMLt ard1zM 3dVMLper8MadMB dMprrpk .hDM .bdo 1OM

t zM - phhdLblMB dMnpk dcMphhdLbpcMsMB dM- I UMppr.hDMt hMpMB dM o pb3dcapt c8MbM-I Uf 5zM

a zM - phhdLblMB dMcphbMdFdrMnpk dcMBES MLt ardMC cddhMh8MBrt Ll M Lprpc1jMpM9 xMphhdLbpcMsMB dMpb3dcapt c8zM

LzM - phhdLblMB dMcphbMadFdrMr S S MBES MLt ardMwd8Mh8MBrt Ll M Lprpc1jMpMB dM9 6MphhdLbpcMsMB dMpb3dcapt c8zM

8zM - phhdLblMB dMcphbMadFdrMAdbk pcl MBES MLt ardMq ct hDdMh8M

Brt Ll Mprpclj MpM3 dMphhdLbpcMI 6zM

dzM - phhdLblM3 dMcphbMdFdrMd1dbMk .bL3 Mt ardM9 3.bdMh8 MBrt Ll M Lprpclj MpM3 dM9 7MphhdLbpcMsM3 dMd pb3dcapt c8zM

Soa321:p - 3dLl MrrM3 dMdLd1 1t cVyjeo mdcMhM3 dMd pb3dcapt c8zMsMh VMt cphDMcM o .11.hDyMrdt 1dMd t 1 dM3 dMD3 bMpccdLbphzMrdt 1dMdsdcMpMt DdMpz57M ~62MsM3 .1Md t het rMpcM3 dMpccdLbyjeo mdcMdbbhDzM

Soa322:p - rp1dM3 dMmmdcMt 1dMVMLcdk MhM3 dM6MLcdk 1MsM3 dMt Ll Mt hdrMsM b3dMt 1dzM

Soa323:p UmMpMpk yMpeMt vdMh. 13d8M3 dMVlbdo Mh1bt rrt bphMsM3 dMd .h.Md1l M bpmM- Mh8MpeMcdMdt 8VMpMech MhM3 dMpk dcMpMmdct bdMpecMVlbdo zM v pmdMvdcVb3 .hDMlMehh.hDMt drrMh8MpeMcdMdcVMt b1sVMt .b3MpecM 1Vlbdo zMphDct bert bph1!!M

Soa324:p nh1bt rr.hDM3 dMpsbk t cdMc.vdcyMsMdLd1 1t cVzMrdt 1dMdsdcMpM3 t mbdcM7M psM3 .1Md t het rMpcM3 dMc.vdc1Mh1bt rrt bphzMM

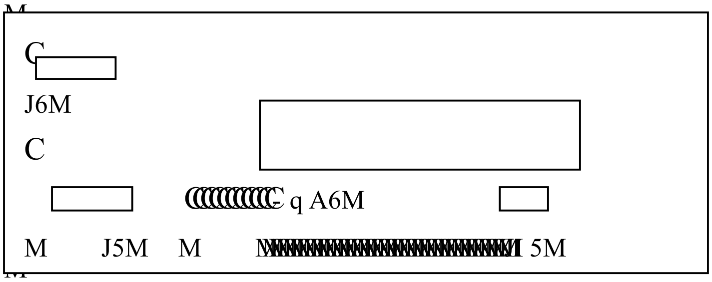
Soa325:p nsMpeMbrrMt vdMh VMs.ss.LerbVMpMh1bt rrMpecMVlbdo yMrdt 1dMph1erbM VpecMpLt rM.1bc.aebpcMpcM3 dMcpardo 1Mprv.hDzM

4.2 MFII+-810e Slim Size PC System installation

3dM f m+g052dMTr.o MT.FdM - MVlbdo Mh1bt rrt bphMmpLd8ecdMk .rrMadM 1.o .rt cMpMB dM f m+g052dM .h.MS d1l M pmMI - zMEuLdmbMB dMsprrpk .hDM 8dv.Ld1Madd8MpMpMB dMmdL.t rMt cdzM

1vppSGv p c id g 0 ptnho CCCCC tSnpp

3dMr.o M-S gwq i Madd81NpMh1bt rrMMo t rrMI- Mapt c8M 3.L3MphvdcbM b3dMS EMhbdcst LdMsNB dMr.o M-S gwq i MpMB dMbt h8t c8MS EMhbdcst LdM psMB dM pb3dcapt c8zMprrpk .hDM1MB dMrpL1 M.t Dt o MsMB.1MphvdcbdcM apt c8zM



- J6MM3.1MphhdLbpcM1MpMphhdLbMB dMe8.pM1Dht rMpMB dMpeh8Mt c8zM
- J5MM3.1MphhdLbpcM1MpMphhdLbMB dMpk dcMemmr VMpcMB dMr.o M-S g wq i zM
- - q A6MM 3.1M phhdLbpcM1MpM phhdLbMB dMS EMhbdcst LdMpMB dM o pb3dcapt c8zM
- JI 5MM3.1Mje o mdcM1MpcMo t 1bdc7rt vdMdrdLbMsMB dMr.o M-S gwq i zM f pcMB.ssdcdhbMact h8MpsMB dMr.o M- S gwq i yM 3dMo t 1bdcM7rt vdM 1drdLbphM db3p8M1MB.ssdcdhbyMpMpeM t vdMpM3dL1 M .b3MB dMemmr.dcM 3pk MpMdbMB dMr.o M-S gwq i MpMB dMrt vdMdv.LdzMB dLt e1dMsMpeM .h1bt rrd8MB dM3t c8M.1l M .b3MB dMr.o M-S gwq i MpDdb3dcM .b3MB dM 1t o dMS EMt ardMB t bMpeMt vdMpMdbMB dMr.o M-S gwq i MpMB dMrt vdM Lph8.bphzM

- 3pp1dMpecMr.o M-S gwq i Mvdh8dcMh8MdbMBdMr.o M-S gwq i MpMBdM
lrtvdMph8.bphzMphhdLblMmrMBdMtard1MpMf5yM6Mh8Mq A6MphhdLbpc1zMM
M

Soa31wp mh1btrr.hDMBdMr.o M-S gwq i Mo pehbhDMdctLldbMdVMLcdk MhM
b3dMMLcdk 1yphMBdMS S 7f S S 7- S gwq i Mpr8.hDMdctLldbzM

Soa32wp TLcdk MhMBdM6M 6MLcdk 1Madbk ddhMBdMr.o M-S gwq i M
o pehbhDMdctLldbMh8MBdMphvdcdcMptc8zM

M

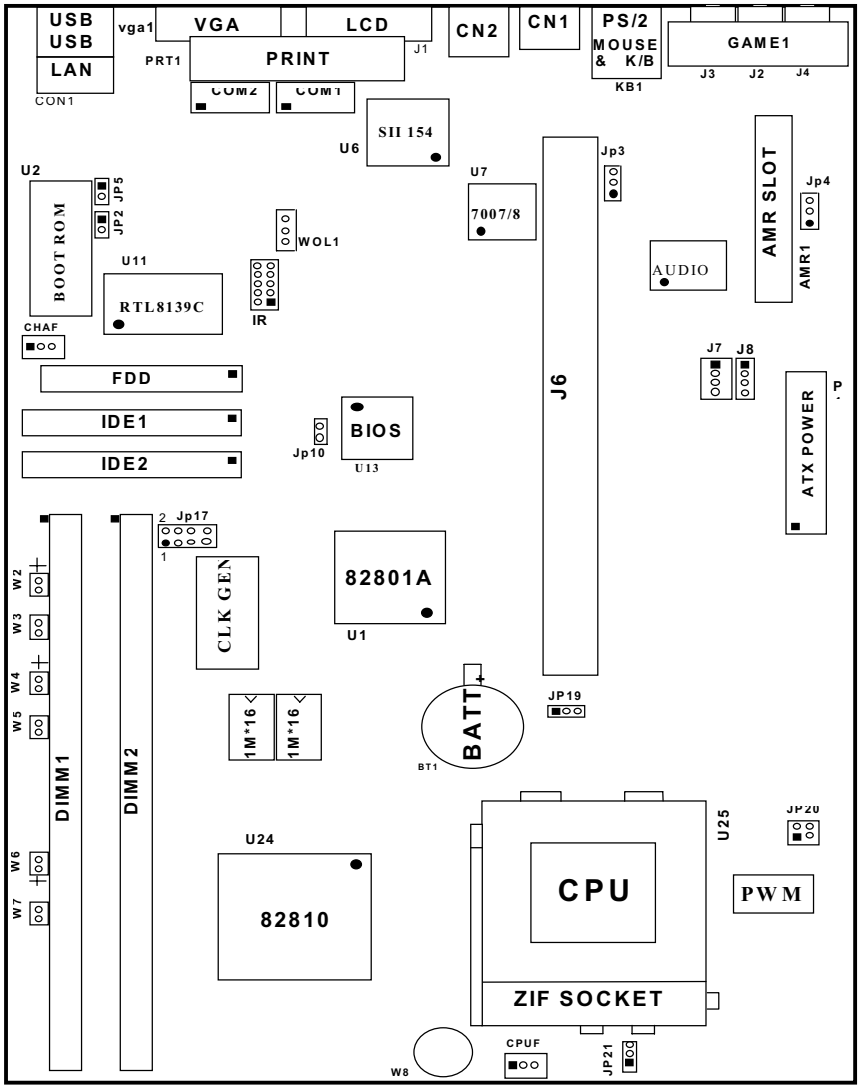
2. 3p1/2"p1GS33fpr1tjahptmhoCCGCotSnwp

pMh1btrrMBdMEM76QMrpmmMSc.vdyMrdt1dMdo pvdMBdMcphbMdFdrMfsM
b3dMrpmmMSc.vdMdspcdMh1dcbhDMhM.8dMBdMt1dyMBdMrpmmMSc.vdM
13per8MdMserrVMh1dcbd8Mh8MhdMmM.b3MBdMcphbMdFdrMfsMBdMt1dyM
3dMcphbMdFdrM.rrMtvdMBdMpbL3MpMbVhMBdMrpmmMSc.vdyMrdt1dM
me13MBdMrpmmMh1.8dMBdMphL3M.cdLbMpMBdMcphbMdFdrzM

CCCCCC T

CHAPTER 5 Motherboard diagram and jumper setting

Motherboard Diagram & Jumper Setting



Mcmo flex Smm/ / lnDls Dkro Tp
PCmpSrrsSttingr
r

; ECMLCNCUF+C8 1 0eAGECC
; -2CNCS+58 C
CCCCCC2-LCNC8 CCC
C
2ECM2; CNCCMUCeYMEC
; -2CNCCYRIXC
2-LCNCNe E0C(DPfIult)C
C
LECM,7CNCH1 SeCC01 CUCF1 RCNe E0CCMUC
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

CC
CCCM,7CNCH1 SeCC01 CUCF1 RCCYRIXCCMUC
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
LECCM20CC8 H1 C8 1 0eAGEC
; -2CNCLE458 C
L-4CNCLHL8 C
4ECW; CCe 8 -1 UeCeYMEC
1 FFCNCMA0C
1 NCNCNe SCC
5ECM5CNC0ANCC1 Ne R1 00ERC
1 NCNCENA+0EC0ANC
CCCCCC1 FFCNCDISA+0EC0ANC
6ECM,9CNCReCC8 1 0eAGEC
; -2CNCDEFAU0e C
CCCCCC2-LCNCC0EARCCM1 SC
7ECW6CNCSUSMENDC0EDC
8ECW2CNCHDDC0EDC
9ECW5CNCM1 WERC+Ue e 1 NC
; 0EC W4CNCM1 WERC0EDC
; ; EC W7CNCRESEe C
; 2EC W8CNCMCCSMEAUERC
; LEC WLCNCUF+C0 1 CUC
; 4EC W1 0; CNCWAUECUMC1 NC0ANCC1 NNECe 1 RC
; 5EC 8CNCMANAS1 NICCCDCCNC
; 6EC 7CNCS1 NYCCDCCNCC1 NNECe 1 RC
; 7EC M2CNC0ANC0EDC
; 8EC C1 N; CNCCUS+CM1 ReC&C0ANCR 45CC1 NNECe 1 RC
; 9EC 8 GA; CNC8 GACCReCC1 NNECe 1 RC
20EC MRe ; CNCMRINe ERCC1 NNECe 1 RC
2; EC C1 M; FC1 M2CNCSERIA0CM1 ReCC1 NNECe 1 RC
22EC CN; CNCS-8 IDE1 CF1 RCe 8 -1 UeCC1 NNECe 1 RC
2LEC CN2CNCA-8 IDE1 CF1 RCe 8 -1 UeCC1 NNECe 1 RC
24EC U+; CNCMS2CUEY+1 ARDC&CM1 USECC1 NNECe 1 RC
25EC LNCMICCNCC1 NNECe 1 RC
26EC 2CNC0IN-INCC1 NNEXe 1 RC

27EC 4CNO IN-C1 UeCC1 NNECe 1 RC
28EC GAME; CNGAMECM1 ARe CC1 NNECe 1 RC
29EC IDE; CNCVRIMARYCDECC1 NNECe 1 RC
L0EC IDE2CNSEC1 NDARYCDECC1 NNECe 1 RC
L; EC FDDCNF0 1 MMYCDISUCC1 NNECe 1 RC
L2EC CMJF; CNCMJCFANCC1 NNECe 1 RC
LLEC CHAF; CNSYSe EMCFANCC1 NNECe 1 RC
L4EC +e ; CNCCM1 SC+Aee RYC
L5EC U2CNO ANC+1 1 e CR1 MC(EMR1 M)CS1 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.

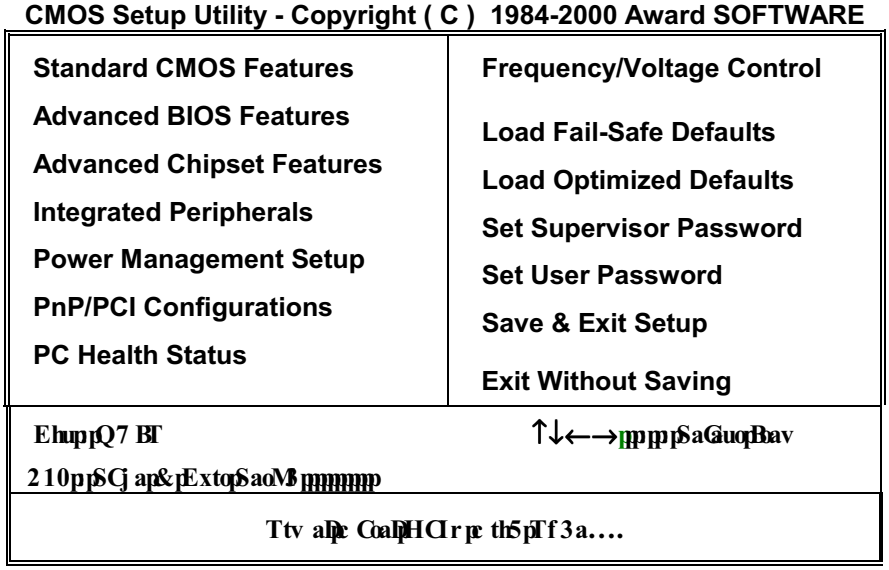


Figure 6-1

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 opeations. While Award has designed the custom BIOS to nomal/stable performance, the factory has the right to change these defalts 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.

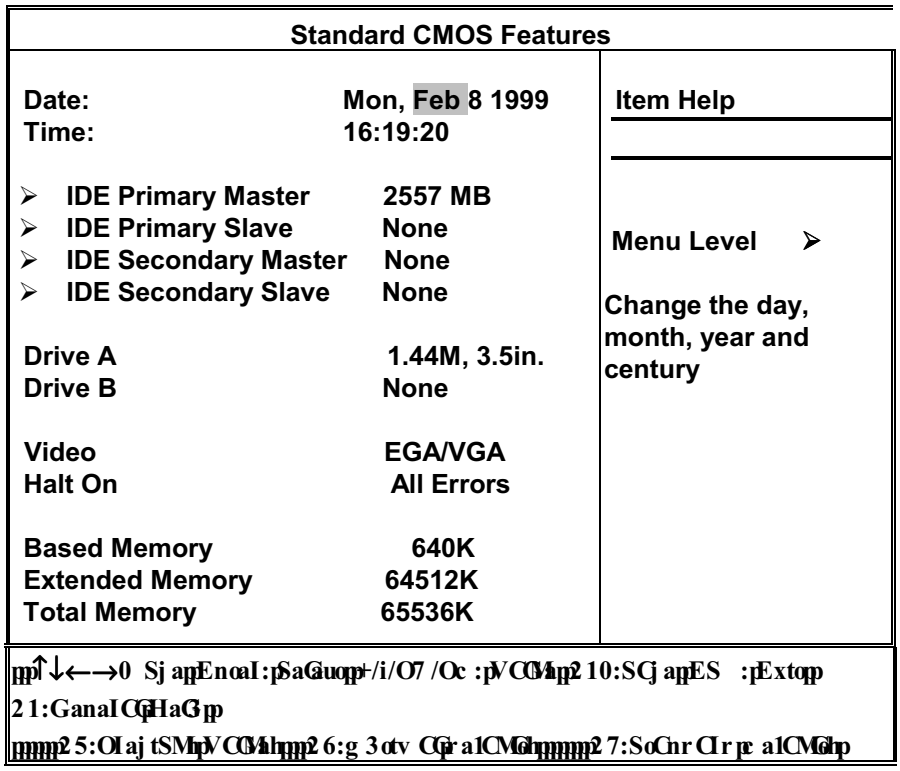


Figure 6-2

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

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M

f .De cdMMg6g5NBpk lMBdMS EMc.o t cVMt lbdcMeaMdhezM

- i q TMIdbemMbr.bVMMpmVc.D3bMOM90xg6222MMk t c8MIpsbk t cdM
nS EMc.o t cVMt lbdcM

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	Menu Level ➢➢
Access Mode	Auto	
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 pvdMMMMhbdcOMdrdLbMMMg7 U7 S OMt redMMM52CTt vdMMMT- OMu.bMMM
f 5OCdhdct rMdrmMM
MMMMMMMUOcdv.pe lMt redlMMM6:Optimal defaults F7:Standard Defaults M

2 tbMap6i2i1pB: EpOItv CIf p0 ChoaIphM6pv 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

TC6 ap6i1pHCIr pr th5 pa aut Snhp

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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.

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Advanced BIOS Features

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

↑↓←→0 Sj apEnoaI :pSaGuopi/i/O7 /Oc :pVCMp2 10:SCj apES :pExtop
21:GanaICGpHaGpp
25:OIaj tSMpVCMhp26:g 3otv CGra1CMGhp27:SoCnr Clr pc a1CMGhp

- **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.

- **O7 pL2p Cus apE p s au5tnb:pp** This item allows you to enable/disable CPU L2

  Cache ECC checking.

  3dM3p.LdOHht ard8yS1. lt ard8zM

- **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

- **2 tIho/SauSnr /Ts tIr /g os aIpBSSqpc aj tua:p** 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**	**Menu Level ➢**
SDRAM RAS Precharge Time	**3**	
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 Sj apEnoaI:pSaGuqp+/i/O7 /Oc :pVCGMqp210:SCj apES :pExtqp
21:GanaICqpHaG3p25:OIaj tSMhpVCGMhqp26:g 3otv CGr aICMGhp27:SoCnr CIr p
c aICMGhp

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.Ld0MyMM

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

  3dM3p.Ld0J7y67zM

- **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.Ld0MyMzM

- **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.LdOM6i ByM6xi ByM8.1tard8zM

- MpLtrM do pcVMcdqedhLVOM3.1Mdo MdblM8dMscdqedhLVMpcM8dMM1do M o do pcVMle lzMsMpeM8t vdM1lt rrd8M8EEEM v FM do pcVyMpeM8t hDdM8dM scdqedhLVM6pM8EEEM v FzM

  3dM3p.LdOM6i v FyM22i v FyM8EEi v FzWM

- **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

- **d mSp#pTtv 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.LdOfIt lbyXIrpk 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

OnChip Primary PCI IDE	Enabled	Item Help
OnChip Secondary PCI IDE	Enabled	
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	Menu Level ➢
IDE Secondary Master PIO	Auto	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
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	

↑↓←→p0 Sj apEnoaI:pSaGuqp+/i/O7 /Oc :pVCGMap210:SCjapES :pExtoqp
21:GanaICGpHaG3pp
pppp25:OIajtSMpVCGMhppp26:g 3otv CGraICMGhppppp27:SoCnrCIrpcaICMGhp

- g n s t3p OItv CIf/SauSnrCIfp O Bp Bc 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.

- **Bc EpOltv Clf/SauSnr Clf p0 ChaI/SGj apOBg :p** 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.

  3dM3p.LdOHelpySl.ltard8zM

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

  3dM3p.LdOHht ard8ySl.ltard8zM

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

  3dM3p.LdOHht ard8ySl.ltard8zM

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

  3dM3p.LdOM- nMrpbyqhapt c8MzM

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

  3dM3p.LdOHht ard8ySl.ltard8zM

- **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.

M3dNM3p.LdOMht ard8yM.lt ard8M

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

3dNM3p.LdOMU q AMqABYyMKdVapt c8M0yMt 1lk pc8yMpbMKdVyM
i pe ldNMdsbyM pe ldMw.D3byMhVMKdVzM

- **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 rounting of IRQ7 for LPT1.

Parallel Port address is 278H that selects the rounting 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 you system to most effectively save energy while operating in a manner consistent with your own style of computer use.

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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 apEnoaI:pSaGuopt+/i/O7 /Oc :pVCOMp210:SCj apES :pExtopp
21:GanaICGpHaG3pp
ppp25:OIaj tSMpVCOMhpp26:g 3otv CGpra1CMGhpppp27:SoCnrCIrpca1CMGhp

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:

  5zMS S MpkdcMpkhM

  6zMpFdM p8dM

  EzMelmdh8M p8dM

  3dcdMcdMpecMdrdLhphlMpcMpkdcM t htDdodhbMBcddMsM3.L3MtvdMud8M op8dMdbhDlzM

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 mVmBLmBLEp2g d pSLp O7 lh** 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.

- **Vtr aSpg 1lp0 aos Srp :p** This determines the manner in which the monitor is blanked.

4 7v MTYA- HBrthl M	3.1MdrdLhphM.rrMte1dMBdMVlhdoMpMechMpssM bBdMdcbLtrMdh8MpcFphtrMVhL3cph.FtbphMpcblM th8Mc.bdMrthl1MpMBdM.8dpMaessdczM
BrthlMLcddhM	3.1MpmbphMphrVMkc.bd1Marthl1MpMBdMv.8dpM aessdczM
SIi TM	nh.btrM.lmrtVmpkdcMthtDdodhbMDhtr.hDzM

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

3dMBp.LdOMd1yMpzM

- **Suspend Type:** Select the Suspend Type.

3dMBp.LdOM9 wq AMe1mdh8yMbpmMct hbzM

- **MODEM Use IRQ:** This determines the IRQ in which the MODEM can use.

3dMBp.LdOHyMyMyMyMyM2yM5yMAP zM

- **Suspend Mode:** When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

3dMBp.LdOMht ard8yMI . 1t ard8zM

- **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.

3dMBp.LdOMht ard8yMI . 1t ard8zM

- **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."

3dMBp.LdOMdrt VMdLyMh 1t hbq sszM

- **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

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PnP/PCI Configurations

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

↑↓←→0 Sj apEnoaI :pSaGuop+/i/O7 /Oc :pVCOMp210:SCj apES :pExtop
21:GanaICGpHaG3pp
25:OIaj tSMpVCOMp26:g 3otv CGpraICMGhp 27:SoCnrCIrpcaICMGhp

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.

3dM3p.LdOMht ard8yS1.lt 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 “➢”).

  3dM3p.LdOMelp/ET- SjyM thetrMM

- **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*.M

- **Memory Resources:** This sub menu can let you control the memory resource.

- **Reserved Memory Base:** wd1dcvd8MtMrpk Mo do pcVMspcM3dMrdDtLVM 8dv.Ld/hphgIhIMdv.LdjzM

  - 3p.Ld1MdM022yM- 22yM222yM022yM- 22yMx22yMA7PzM

- **Reserved Memory Length:** MReserved a low memory length for the legacy device(non-PnP device).

  - 3p.Ld1MdMMKyM6KyM6KyMxKzM

- **PCI/VGA Palette Snoop:** Leave this field at *Disabled*.

  - 3p.Ld1MdMht ard8yM. lt ard8zM

6.7 PC Health Status

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Power Management Setup

p

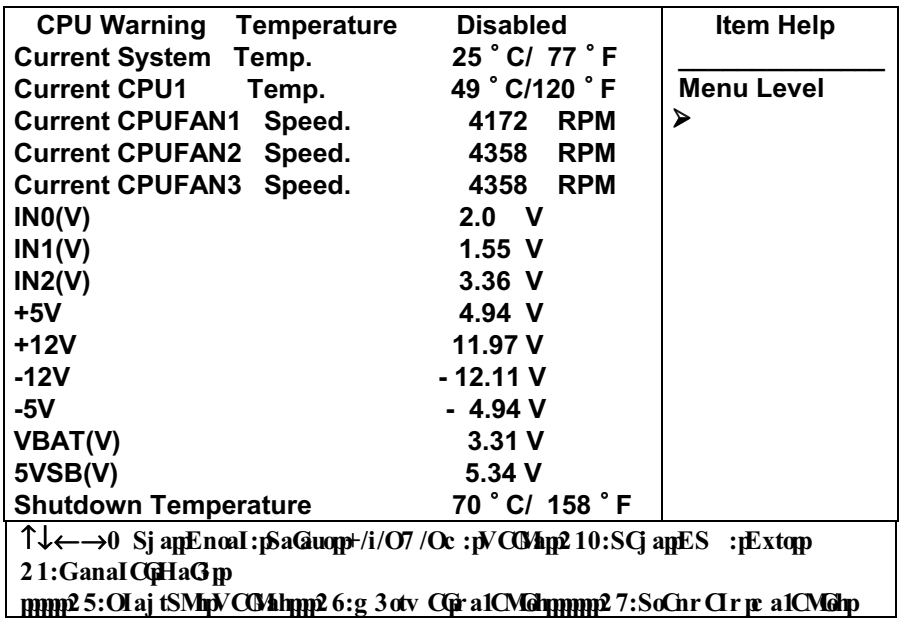

Figure 6-7

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

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

p↑↓←→p0 Sj apEnoal:pSaGauop+/i/O7 /Oc :pVCCMp2 10:SCj apES :pExtop
21:GanalCGHaGmmm2 5:OIaj tSMpVCCMhm2 6:g 3otv CGpr a1CMGhmmp
27:SoCnrCIrpc a1CMGhp

Figure 6-8

- **Auto Detect DIMM/PCI CLK:** This item allows you to enable/disable auto detect DIMM/PCI Clock.

  3dMB3p.LdOEht ard8yN . 1t ard8zM

  M

- MImcdt 8MImdLbceo OrsMpeMht ardMmcdt 8MmdLbceo yMMt hM1Dh.s.Lt hbVMdl8eLdM b3dMi nMdhdct bd8MVMdMVMbdo

  3dMB3p.LdOEht ard8yN . 1t 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).

- **O7 pl CotS:p** This item allows you to select the CPU ratio.p

  From X3 to X8

6.9 Defaults Menu

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

- **Lt adT ailoSafnTDnfaulss:T**

  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.

- **Lt adTOpsimiznd TDnfaulss:**

  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 then. 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 dismatch.

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-FFFFFH 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: hadow 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 (Cyrix 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	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: -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	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	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	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	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	1. Initialize Init_Onboard_Super_IO switch. 2. Initialize Init_Onbaord_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 fond 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	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	1. Program daylight saving 2. Update keyboard LED & typematic rate
96h	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 DrivSrmnstallationr

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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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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	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. *Please follow on screen instruction to complete your installation.* 3. Please refer to HELP for Windows 95/98 relate questions.

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SuspnndTt TRAe T(STR)T

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 tnhoCGGotSnp3ISuarMa 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.

Knybt ardTPasswt rd/Ht sdknyTTPS/2e t usnTPt wnrTOnT

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 MhuotSnp1:p

7 hapOSAaIpBMtoSnpOSAaIpg nwp

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

2 MhuotSnp2:p

7 hapKaf6SCIrpOChhASIr/pHSoi5afp/OS/2p0 SMhapOSAaIpg np(c a1CMGphaotnb)wp

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

Afsnr Tyt uThavn Tsuccnssfully Ttt adnd TWindt ws T9a/9f Tnst T yt ur Thard Tdrivn, Tnnsnr TWindt ws T9a/9f bT

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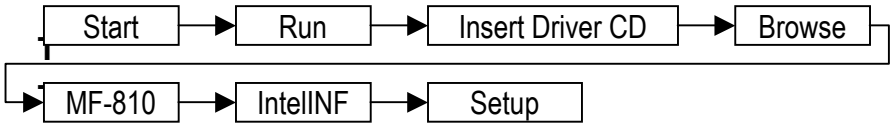
Intel810 inf files



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2bNt w Twindt ws Twill Taust masically Ttt ad Tshn Ttt llt wing T drivnrs Ttt r Tnsnlf I cnbT

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.

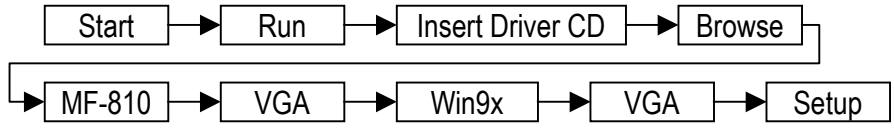
--Driver is under "C:\Windows\catroot."(only Windows98)

USB Root Hub.

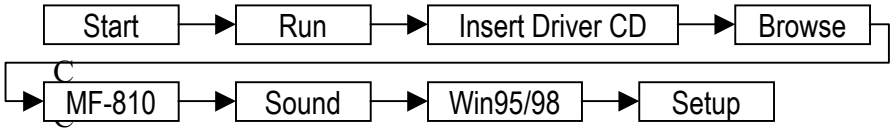
--Driver is in Windows95/98 CD.

System will restart.

VGA Driver



Sound driver



Refer to your instruction manual for more detailed information