

General

Name-Brand computers:

The motherboard/case/power supply/proprietary modem, sides, faceplate, bezels, rails, and attached peripherals of a Name-Brand computer shall, for our purposes, be considered to be a single unit. In general, these parts cannot be used on a dissimilar brand or model.

Exceptions: These cards, if present: Video, sound, network, modem (ONLY if PCI)

Exceptions: Most drives: floppy, zip, Jaz, hard disk, CD/DVD/CD+-RW/DVD+-RW.

Exceptions: CPU, System memory.

Case/Power Supply

All computers shall be built using an adequate power supply.

- In computers coming from Gateway, Dell, HP, Micron, and others, it is considered that the installed Power Supply is of adequate wattage.

- In the event that a power supply in a unit has failed, it is to be replaced with a unit that supplies an equal, or greater wattage, and similar air flow characteristics.

All Computers must have a front, top, and both sides.

No computer shall ship with missing Bezels.

No computer shall ship with missing dust-plates in the rear of the computer.

No computer case that requires rails shall ship with drives attached without the appropriate rails.

a. Processor

Any processor from the following families is allowed.

- Pentium III/Celeron

 - Socket 370, Slot 1

- Athlon/Duron

 - Any Socket, Any Slot

- Pentium IV

 - Any Socket

Disallowed Processor Families

- Pentium, Pentium MMX, Pentium PRO, Pentium II

- Intel XEON* - notify build team Coordinator

- Cyrix

- AMD K6, K6-2, K6-3 (III)

- VIA

BIOS Settings: certain motherboards require the appropriate BIOS settings to adjust the CPU.

Settings may depend on the CPU but also on the speed of the installed RAM.

a.1.

CPU COOLER

- all CPUs must have an appropriate CPU cooling fan, and/or adequate heat sink to insure the CPU does not overheat Thermal grease shall be applied to the heatsink.

BIOS settings:

- whenever possible, check that the FAN speed is registering with the BIOS.

b. System Memory

All base systems which will build to **Windows 98, Windows Me or Windows 2000** spec must have **192M** RAM or **256M** RAM, no less than **192M** no more than **256M**.

The following combinations are acceptable:

1 X 128M + 1 X 64M; 2 X 128M
3 X 64M; 4 X 64M.

All base systems which will build to **Linux or Windows XP** spec must have between **256M** and **512M** RAM.

The following combinations are acceptable:

1 X 256M; 2 X 256M
1 X 128M + 2 X 64M; 1 X 128M + 3 X 64M
2 X 128M; 3 X 128M; 4 X 128M; 2 X 128M + 1 X 64M; 2 X 128M + 2 X 64M; 3 X 128M + 1 X 64M
4 X 64M

Fast Page RAM/EDO RAM (SIMMs)

-all Fast Page/EDO SIMMs are disallowed

SDRAM (DIMMs)

PC66

-all PC66 is disallowed

PC100

64M and above

-disallowed: 32M

-disallowed: registered

PC133

64M and above

-disallowed: 32M

-disallowed: registered

RDRAM (RIMMs)

PC600 & PC600 ECC

-ALL

PC800 & PC800 ECC

-ALL

PC1024 & PC1024 ECC

-ALL

DDR-RAM, DDR-2 RAM (DIMMs)

-ALL

BIOS Settings: ALL RAM settings shall be adjusted using the SPD. (Serial Presence Detect.)

c. Motherboards:

Initial Preparatory action: Revert to BIOS setup defaults before making other modifications.

Slot 1

Any slot 1 board that supports Pentium III CPUs of 700 Mhz or more.

-In general, this means any slot 1 board that has jumper or DIP settings to set the CPU speed to 700 or above, or any slot one board that has NO such jumpers.

-Acceptable Slot 1 processor speeds are: 700, 750, 800, 850, 900, and 1000.

-Acceptable Slot 1 front side bus speed is: 100 Mhz.

Socket 370: All motherboards capable of supporting a CPU of at least 700 Mhz.

Slot A All motherboards

Socket A All motherboards

Other AMD: All motherboards using AMD sockets newer than socket A (462)

P4: All motherboards

-disallowed motherboards:

- Any motherboard with an embedded processor not within spec
- Any 8088/8086/80286/80386/80486 motherboard
- Any Pentium, or Pentium MMX motherboard including socket 3, socket 4, socket 5, and socket 7
- Any Pentium Pro motherboards, including socket 8
- Any Xeon motherboard
- Any Server motherboard
- Pentium II motherboard (board with an LX chipset)

-Just because a motherboard hosts a Pentium II CPU, that fact in and of itself does not mean the board is incapable of hosting a Pentium III CPU.

BIOS settings BOOT order: A, CDROM, C.

Power Supplies

Power supplies shall have a working fan

Case fan:

All systems shall have a working case fan whenever appropriate

Floppy drive

All systems must be able to read floppy disks. Factory installed LS-120 drives are acceptable.
BIOS settings: 1.44M floppy as Drive A.

CDROM

All systems shall be equipped with a minimum of a 24X CDROM
A DVD-ROM may be substituted for a CDROM
A CD-RW may be substituted for a CDROM.
A DVD-RW may be substituted for a CDROM.

If there is only ONE CD unit in the computer, it must have its jumpers shunted to be a MASTER device.
All CD units are attached to the SECONDARY IDE interface.

Disallowed CD/DVD/CD-RW/DVD-RW drives: SCSI, FireWire (IEEE-1394), USB, or any external CD device.
BIOS Settings: Secondary IDE adapter set to AUTO (detect)

Hard disk drives:

All systems shall have a minimum of an eight Gigabyte (8G) IDE or EIDE hard disk drive.
-No system shall have MULTIPLE hard disk drives.

All hard disk drives shall have their jumpers shunted to be a MASTER device.

All hard disk drives shall be attached to the Primary IDE interface.
All hard disk drives shall be attached using a flat 80 pin IDE cable, no more than 18" long.
-No hard disk shall be attached using a rounded IDE cable.

Disallowed drives: SCSI
BIOS settings: Primary IDE adapter set to AUTO (detect)

Sound card:

All computers shall ship with sound capabilities.

-If the computer has on-board audio, then that is the audio that shall be used.

-no computer shall have both on-board audio and a PCI sound card installed.

All slot-based sound cards shall be of type: PCI.

Modem:

If the computer has no proprietary modem already installed, then the computer shall have a PCI modem installed if and only if it is running a version of Microsoft Windows.

If the motherboard has a proprietary slot for a proprietary modem, but has no proprietary modem installed, then a PCI modem may be installed.

If the system is built to a Linux or Windows XP spec, then it shall have no modem, except in the case where the modem is a factory installed unit (proprietary modem riser or special modem made only to suit that model computer.)

Network Interface Card (NIC):

If the computer has LAN on Motherboard (LOM) then that shall be used. Otherwise, all computers shall ship with a PCI Network interface adapter, offering at least 100-baseT capabilities.

Video Card:

Computers with on-board video shall use the on-board video adapter except in those instances when a name-brand computer ships with an additional AGP or PCI adapter from the factory.

Computers without on-board video that have an AGP slot shall use an AGP interface card.

In the unlikely event that no AGP video card can be made to work with the computer, or none is available, then a PCI adapter may be used.

BIOS Setting:

The computer's BIOS shall be adjusted to the appropriate setting for the installed card type, either AGP or PCI. If the system is using on-board video, no settings need be set.

Keyboard:

System shall be tested with a PS/2 keyboard to determine that the PS/2 port works.

PS/2 keyboard port, if not plainly marked, will be the PS/2 port furthest from the center of the case.

Mouse:

System shall be tested with a PS/2 mouse port to determine that the PS/2 port works.

PS/2 mouse port, if not plainly marked, will be the PS/2 port nearest to the center of the case.

USB:

System shall be tested with a USB device to determine that USB is enabled and works.

Operating system:

Linux: Mepis 7.02 or above, Ubuntu 8.04 or above.

Windows OS: Windows OS may be installed only if the appropriate Windows COA is attached to the computer case. No exceptions to this.

Windows OS should be installed using the In-house developed install disks.

NO other operating system should be installed except as designated by the Build Team Manager.

IMPORTANT: If a WINDOWS variant is to be installed, there MUST be a WINDOWS Certificate of Authenticity (COA) affixed to the side of the case. The COA may not be removed from one case and attached to another.