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**The United Nations
University**

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**THIRD COLLEGE ON MICROPROCESSOR-BASED REAL-TIME
CONTROL - PRINCIPLES AND APPLICATIONS IN PHYSICS
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COMPATIBLE HARDWARE

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These are preliminary lecture notes, intended only for distribution to participants.

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LINUX HARDWARE COMPATIBILITY HOWTO

VERSION: 0.6

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Note: This list was originally posted by who-knows? I don't remember, and I haven't seen it in a while, so I'll take the responsibility of maintaining this list. Please send your hardware (in)compatibility lists to erc@apple.com.

PLEASE put the word "HARDWARE" in your subject line IN CAPS!

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Welcome to the Linux Hardware Compatibility HOWTO. It is my hope that this will be of help to people and that it will do away with a lot of the "Will XXX work with my System?" questions. I also hope that this will help people who want to buy a system to run Linux or are in the process of upgrading their system and want to make sure that the hardware they buy is compatible with Linux (especially for items such as SCSI controller's and CD-ROM's, and video cards for X).

Please be aware that the list NO LONGER contains X hardware specifics. These will be posted as a separate listing (along with clocks, settings, etc.)

People who have emailed me (erc@apple.com) about specific pieces of hardware that they've gotten to work have their name and email address printed alongside. This is to help others who are having difficulty get help directly from the guilty party. ;)

If you are wondering about a specific piece of Hardware and you don't find it in this list all I can say is I don't know at this time but as soon as I find out it will be in the next list. If you find out that it works from some other source, i.e. a friend or trying it out, PLEASE let me know. Also even though a piece of equipment is on this system doesn't mean that I know how to get it to work with Linux, it is on this list because someone has told me that it works on THEIR system. So if it is on the list and you can't make it work, it sounds like a good time to, in order, do:

- 1) read ALL the faq's
- 2) read comp.os.linux.help, and scan the subjects for your XXX
- 3) email the person listed here who says it works (if any)
- 3) post AFTER READING comp.os.linux.help and c.o.l.announce.

Thanks to everyone that has helped and sent info this list, it is a lot better because of their help!

This HOWTO is archived in a number of places, including [sunsite.unc.edu](http://sunsite.unc.edu/pub/Linux/docs/HOWTO) in /pub/Linux/docs/HOWTO. It is posted periodically to comp.os.linux.announce.

NOTEBOOKS:

Altima 486DX/33 Linux/with X11
Compaq LTE386s/20 (Notebook) (using XFree 1.2)
Compaq Contura 3/25 (25 MHZ 386 SL notebook with VGA type grayscale screen and 120 MB hd.
Leading Edge 386/25 SLC (erc@apple.com)
NEC UltraLite Versa (howard@hal.com)
Packard Bell 386SX20 laptop
CompuDyne 4DX/33 486 notebook with grayscale CCFT lcd screen---
Phoenix bios 1.01, trackball (ps2 mouse compatible)
486 processor & 130 mb toshiba 3.5" drive.
Linux 99.5 with X
(Runs 386bsd 0.1---you need to bang on the keyboard while it boots, otherwise the keyboard comes up locked)
Twinhead(? rumored to be a Altima/CompuDyne clone)

BRAND NAME COMPUTERS

ACER 1200
Bitwise
Compaq Deskpro 386/20
Comtrade
Comtrade Local Bus
Comtrade EISA/VLB (cae@jpmorgan.com)
Dell 486P (486DX2/50) (William Perry, wmperry@bronze.ucs.indiana.edu)
Diamond Flower Industries DFI 386-20
DTK
EDGE Technology, 486/33DX
Hewlett Packard HP QS20
Highscreen Tower 386
Hi Tech USA 486/33 ISA
Gateway 2000 33Mhz 386DX
Gateway 486 DX2 66V
Gateway 486/33V (barrett@pamsrc.enet.dec.com)
Gecko 486-50
Insight 486DX/25
Insight 486DX-50 ISA and EISA
IPC 38633
Laser 386SX/2E
Microlink 486dx/50 localbus
Osborne Computers (Australia) 486/33 EISA
Paradise
Packard Bell Legend 520 SX
Toshiba 1850 laptop
Trigem 386v
Tyan Pro-EISA, Opti EISA Chip-set
PACOMP 486/33
Tandy 4000
Viglen Gene
Vobis Highscreen 486DX/33
Xpand 386/40
Zenon 486/33 Local Bus
Zeos 486DX2/50 VL-Bus

CPU

Intel 80386
Intel 80386SX
Intel 80386SLC
Intel 80386DX
Intel 80486SX
Intel 80486DX
AMD AM386SX
AMD AM386DX
AMD AM386DXL
Cyrix 486DLC

FPU

Cyrix FasMath 387/40
IIT 387 (all speeds)
Intel 387 (all speeds)
ULSI MathCo 387/33
(rumored to have some problems with some versions due to chip bug)

MOTHERBOARD

386 AWP
AMI EISA Enterprise II
AMI Series 50 Super Voyager 486/33 DX
AVM 486DX-50
C386 PEAK-DM

CONTAQ-386 Upgradable System Board

DTK
DTK PEM-2530
ECS EM486/50 (EISA)
ECS UL-486
ETEQ G486EB
G486PLB
G486SLC The Symphony Mainboard - Companion (BIOS AMI 1991)
GS3486
HOT-307H 386-33/40 (OPTI chipset)
HM386sx
ISA486S
M407 PC Chips motherboard
Magitronic/VLSI V386SX-25Mhz
Micronics 80386DX ASIC (Brian Hook, bwh@beach.cis.ufl.edu)
Micronics 80486 ASIC EISA
Micronics EISA-II motherboard w/8 EISA slots and 64KB cache RAM standard
Micronics Gemini 80486DX, Rev. E (Brian Hook, bwh@beach.cis.ufl.edu)
MST-386
MST 486A (Armas Inc. ROC)
Mylex EISA mae486
Oktec Trout 386
OCTECK 386-33 64K cm
PLB-486/50
ST 486 VESA Localbus (OPTI Chipset) (mow@marsu.tynet.sub.org)
SUPER 486-33C
Symphony 80486 PC/AT chipset
T/B, UNICHIP chipset, 386DX25 upgradeable to 486DX50
UMC 386
UMC 80486
Viglen
ZIDA 386/33DX-128C

BIOS

AMI
AMI 9-25-88
AMI 07/12/90
AMI (Dated 08/30/90)
AMI (Dated 05/05/91)
AMI (Dated 7/7/91)
AMI 486 ISA (dated 12/12/91)
AMI 486/50
Award
Microid 1.43 (mow@marsu.tynet.sub.org)
Mylex 6.15.92
Phoenix
Phoenix Technologies V D.02.05 QS/20
Pheonix 80486 Ver 1.01.22-2
Phoenix 80486/EISA ROM BIOS PLUS Version 1.01.22-2
Phoenix C3.04e
Quadtel

CONTROLLERS (Multifunction)

Buslogic 742a
Future Domain TMC950 based SCSI/IDE controller + 4 floppies
HP Multifunction
IDE-PLUS-V3 multi I/O board
ISFP multiple IO-card
IODE-3290U (IDE/FD/2S/1P/1G)
Kouwell KW-556D (2S/1P/game/IDE/floppy)
Laser Multi-IO/IDE Card
MCT-AIO Serial/Parallel/Game (16550AFN)
MIO-16 Multi IO Card
MTI 3220

SUPER IDE I/O CARD, model PT-604
Super IDE/FDC MULTI I/O card Modem 827 Version 11
Super I/O MP57

CONTROLLERS (I/O)

Accent ASYNC-4 4 port serial card
BOCA ATIO
Gw2760 EX SUPER IO CARD
GW232c mini serial card
PC-COMM 4-port card with 16550 uarts
ShineCom Multi-User catd LCS-8880 (AST 4-port clone)

CONTROLLERS (Floppy)

Adaptec 1542B (built-in) (but see INCOMPATIBILITIES)

CONTROLLERS (Hard Drive)

Note: Linux should work with all IDE, MFM, and RLL controllers, pretty much regardless of the version of Linux.

RLL

Mitsubishi 65MB (Brian Hook, bwh@beach.cis.ufl.edu)
Seagate ST-11R
Seagate ST- 277R (Brian Hook, bwh@beach.cis.ufl.edu)
WD 1006V-SR2

MFM

DTC150x XT (8-bit) MFM HD
Seagate ST11M
Seagate ST22M MFM controller w/floppy
Western Digital WD1003

IDE

DC600 Caching IDE controller (4Mb RAM) (BIOS Dated 01/24/92 (c) Tekram Tech.)
DC 680T

ESDI

6280-15TX
DTC-6180
DTC-6180-15T
Western Digital 1007A-WA2

CONTROLLERS (SCSI)

Adaptec AHA1542B (but see INCOMPATIBILITIES)
Adaptec AHA-i742A, BIOS version 1.34 (in enhanced mode)
Adaptec AHA1740
Adaptec AHA-1740 SCSI-2 controller (BIOS v1.34) in Enhanced Mode
Buslogic 445s
Future Domain SCSI Model 1680
Future Domain SCSI card, TMC-850 (works with kernel 0.99p4+)
Future Domain SCSI card, TMC-950 chip
MYLEX DCE376 EISA SCSI controller (in WD emulation mode only)
Seagate ST-02
UltraStor SCSI

WD7000fasst SCSI Card, firmware rev 5.0 (only works with .99+)

SOUND BOARDS

ATI Stereo F/X
ProAudio Spectrum-16 (but see INCOMPATIBILITIES)
SoundBlaster
SoundBlaster PRO

HARD DRIVES (RLL)

CDC Wren II
Micropolis 1325 (100MB)
Toshiba ((105MB) used as 68MB MFM)

HARD DRIVES (MFM)

CDC Wren II
Computer Memories Inc. 6426-S (20 MB, Full-height)
Maxtor (68MB)
Seagate 251-1
Seagate ST225
Seagate ST296N
Tandon 262 (20 MB)

HARD DRIVES (IDE)

All should work and the following have been verified.
** PLEASE DON'T EMAIL ME WITH IDE HD'S UNLESS THEY DON'T WORK! **

Alps DR312C (202MB)
Conner CP3204F
Conner (210MB)
Fujitsu (520MB)
Fujitsu 2652S
Fujitsu M2624-T (490meg)
Maxtor 7120A (120MB)
Maxtor 7213A (213MB)
Maxtor LXT340AT (340MB)
Maxtor XT 1140 (140MB)
Maxtor (340MB)
Miniscribe 8051A
Miniscribe 8380
Seagate (44MB)
Seagate ST125A
Seagate ST1102A (85MB)
Seagate ST1144A (124MB)
Seagate ST1239A (211MB)
Seagate ST3120A
Seagate ST3144A (120/130MB IDE)
Seagate ST351A/X (44MB)
Seagate ST157AT
Seagate ST3283A (245MB)
Quantum ELS 170AT (170MB)
Quantum LPS120AT (120 MB)
Quantum Prodrive LPS 240 AT
Quantum Prodrive 80AT
Quantum (240MB)
Western Digital AC280 (80MB)
Western Digital AP-4200 (200 MB)
Western Digital (120MB)
Western Digital AC2200 (210MB)
Western Digital WDAC3400 (340MB)

HARD DRIVES (ESDI)

Fujitsu M2249E (320MB)
Imprimis (300MB)
Imprimis (360MB)
NEC ESDI (350MB)

HARD DRIVES (SCSI)

All should work and the following have been verified.
CDC WREN VI (700MB)
Fujitsu M2614
Fujitsu M2624 (520Mb SCSI)
Maxtor 7120SCS
Maxtor LXT-200S
Maxtor LXT-340-SY (324MB)
Maxtor XT8380S
Maxtor XT8760S
Maxtor PO-12S (1.2GB)
Micropolis 1542 (330MB)
Micropolis 1664 (340MB)
Seagate ST277N (60MB)
Seagate ST296N
Seagate ST41200 (1000MB)
Seagate ST41650 (1400MB, but only 1000MB accessible)
Quantum ProDrive P80S
Quantum ProDrive 105s
Quantum ProDrive 80s

TAPE DRIVES (SCSI)

Archive Viper 150MB (erc@apple.com)
Calliper CP-150 (QIC) (aka Commodore A4070) (barrett@pamsrc.enet.dec.com)
Exabyte EXB-4200 (2GB DAT) (john@linux.demon.co.uk)
Sankyo CP150SE tapestreamer
Sankyo CP525
TANDBERG 3600 streamer, using 250MB DC6250 cartridges
Wangtek 5525ES
Wangtek 5150ES
Wangtek PC36 adapter/5099EN 60MB drive

CD-ROM DRIVES

All SCSI should work and the following have been verified.
** PLEASE DON'T EMAIL ME WITH SCSI CD-ROM'S UNLESS THEY DON'T WORK! **

Matsushita/Kotobuki/Panasonic CR-5xx series
*Mitsumi/Radio Shack
NEC CDR-74
*Sony CDU-541
*Sony CDU-535 (erc@apple.com)
Soundblaster CD-ROM
Texel DM-3024
Toshiba 3401 (barrett@pamsrc.enet.dec.com)
*Internal Sony CDU-31a CD ROM drive and proprietary Sony interface card
DEC RRD42 (Michael Griffith, grif@yenko.ucr.edu)

* = Some require drivers not in the stock kernel - see the Linux Software
Map - sunsite:/pub/Linux/docs/LSM for those drivers.

NETWORK CARDS

wd8013 \
wd8003 >---These will work by default with the kernel
SMC Elite 16 /

Novell/Eagle NE2000
nel000
3com503 EtherlinkII
3c503 EtherlinkII/16
Cnet UTP 10baseT (NE 2000 emulation)
PE-8013 (WD-8013 Compatible)
SIIG Inc E-Lan/200 (NE 2000 comp.)
SMC Plus Elite
Compex ENETi6-COMBO (Michael Griffith, grif@yenko.ucr.edu)

PRINTERS

Apple Personal LaserWriter NTR
Brother HL-4PS
Brother HJ100
BJ200(Cannon?)
Canon BJ 10e
Canon LPB4+
Citizen Swift 24
Dec Writer III
Diablo 630
Epson Action Laser II
Epson LQ 400
Epson LQ-570
EPSON LX800
Epson RX-80
HP Deskjet 500
HP Laserjet II (barrett@pamsrc.enet.dec.com)
HP Laserjet III w/Postscript
HP Laserjet III w/Pacific Page PE/XL PS Cartridge
HP Laserjet IIip
HP Think Jet
Infoscribe 1000
Kodak Diconix 150 ink jet
Kodak Diconix 150 plus
KX-P1124
NEC Pinwriter P6
NEC P2200XE
NEC P5300 dot matrix
NEC SilentWriter 95
Olivetti DM290
Panasonic KXP-P1091
Panasonic KX-P2124
Panasonic 1624
Seikosha SL-80A1
Star LC10 colour
STAR LC 24/10
Tandy TRS-80 Printer

MODEMS

ATI 9600etc
CASE Quattro 2400
Dallas Fax 9696
Digicom Scout+ (internal 14.4kbps v32bis/v42bis/MNP2-5)
Discovery 2400C
Everex (2400) MNP5
FasTalk 2400 II
Galaxy UFO
Gateway 2000 TelePath Data/Fax Modem (only with 0.99.10+) (Daniel Quinlan, quinlan@spectrum.cs.bucknell.edu)
GVC 9600 v.42bis
Logicode Technology- QuickTel 9600 V.32/V.42bis
Maestro Data Optimizer
Maestro 2400XR
MegaHertz C424FM (internal Compaq-compatible modem)

Multitech v.32 external
Packard Bell internal 1200
P.C. Logic 144I, V32bis & V42bis
Practical Peripherals PM14400FXSA V.32BIS
Quikkomm (2400)
SEL Panther 4 (2400bps)
Smartlink 9614AV - 14.400 highspeed modem from Archteck
Supra Faxmodem V.32bis
Supramodem 2400
Swan 2400 baud
Telebit T2500 (19.2k)
Turbo modem (v.32, v.42, v.42bis)
US Robotics Courier (2400)
US Robotics - Courier HST Dual Standard
US Robotics v.32bis
US Robotics Sportster (newer model) v.32bis (Ed Carp, erc@apple.com)
Zoom 2400 Internal
Zoom 2400 External w/SendFax
Zoom FaxModem 14.4k
Zoom 14.4k raw
ZyXEL 1496-E
ZyXEL U-1496E (v.32bis/v.42bis/FOX external modem)

MICE

A-Tech serial (switch set to Mouse Systems emulation)
A4TECH (Taiwan) Serial emulates MS-Mouse w/2 Buttons
Agiler (Microsoft/Mouse System)
ATI Busmouse
Artec M-22 (3-button)
Artec serial optical (mouse systems/microsoft)
Genius GM-F303
Genius GM-6 (microsoft compat)
Genius GM-6000 2/3 buttons serial mouse
Laser Microsoft/MouseSystem compatible
Logitech DEXXA mouse (acts like a Microsoft mouse)
Logitech FirstMouse serial version
Logitech MouseMan
Logitech Pilot Serial (3 buttons)
Logitech series 9
Logitech Series 14, 2 Button
Logitech Trackman 3Button (flakey at best)
Keen three button serial
Kensington Expert Mouse (trackball)
Inland Mouse Plus (emulates MicroSoft or Mouse Systems)
Microsoft Serial
Microsoft Ballpoint mouse
Mouse Systems Serial
M-O-U-S-E mouse (taiwan)
Osborne (Microsoft Compat.)
PC accessories MCST
Primax three buttoned mouse (Microsoft/MouseSystems)
Qtronix
Quickshot QS-159
Viglen mouse, 3 buttons, can't get the middle button to work in X
Z-Nix (Microsoft Compatible)

OTHER

vt320 terminal (IRQ 10 from HP multi-function card)
vt220 terminal on COM2
vti-925 terminal

INCOMPATIBILITIES

From: mow@marsu.tynet.sub.org

The ProAudio Spectrum 16 does not work properly in combination with the Adaptec 1542B. This is due to both card's busmastering feature. NeXTSTEP/Intel even crashes with this configuration.

--
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If you want magic, let go of your armor. Magic is so much stronger than steel!
-- Richard Bach, "The Bridge Across Forever"