Linux Hardware Compatibility HOWTO

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3.1.5

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This document attempts to list most of the hardware known to be either supported or unsupported under Linux.

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1. Introduction

This document lists most of the hardware components (not whole computers) known to be supported or not supported under Linux, so reading through this document you can choose the components for your own Linux computer and know what to avoid. As the list of components supported by Linux changes constantly, this document will never be complete. If a component is not mentioned in this HOWTO, I simply have not found support for the component and nobody has told me about support.

Subsections titled 'Alpha, Beta drivers' list hardware with alpha or beta drivers in varying degrees of usability. Note that some drivers only exist in alpha kernels, so if you see something listed as supported but isn't in your version of the Linux kernel, upgrade.

1.1. Notes on binary−only drivers

Some devices are supported by binary−only modules; avoid these when you can. Binary−only modules are modules which are compiled for ONE kernel version. The source code for these modules has NOT been released. This may prevent you from upgrading or maintaining your system. It will also prevent you from using the component on alternate (usually non−x86) architectures.

Linus Torvalds says "I allow binary−only modules, but I want people to know that they are _only_ ever expected to work on the one version of the kernel that they were compiled for." (See http://lwn.net/1999/0211/a/lt−binary.html for the rest of the message.)

1.2. Notes on commercial drivers

Various commercial drivers for sound, video, etc. exist for Linux. Tracking these commercial drivers is beyond the scope of this document. These drivers might be mentioned at various points in this document, but note that no effort has been made to make sure that this information is current.

1.3. System architectures

This document primarily deals with Linux for x86−based platforms. For other platforms, check the following:

- Alpha
- ARM
- CRIS (Axis Communications ETRAX 100LX embedded CPU)
- IA−64
- m68k
- MIPS
- PA−RISC
- PowerPC
- S/390
- SuperH
- SPARC

There are also the ELKS and uClinux ports, which are forks of the mainstream kernel source designed for MMU−less (mostly very low−end and embedded) systems.

1.4. Related sources of information

- The LDP has an index of hardware−related HOWTO documents.
- Price Watch (street price search engine, also useful for finding specs on various bits of hardware)
- Guide to Computer Vendors

1.5. Known problems with this document

This document can't possibly be up−to−date at all times. I would like to see this document be a useful reference again. The following items need to be fixed for that to happen:

- Old cruft needs to be eliminated. Much of this document was written in 1995, give or take, when PCI was new and not supported terribly well, and ISA PnP was seen as something evil. Oh, how the times have changed...

  Also, many of the model numbers listed in this document are no longer available, and are probably not of much interest to the vast majority of people. Personally, I think hardware that hasn't been available for more than 5 years or so can safely be removed. Old versions of this document will always be available on the Internet...

- URLs in this document need updating. I've begun to do that, but it is a big job... Diffs are welcome.
- In the process of updating and converting this document to DocBook, some cruft was introduced. If anyone wants to help clean up this, get the latest source (preferably by emailing me at <steve@silug.org>) and grep for "FIXME".
- Lists in this HOWTO that are available in other HOWTOs or FAQs need to be either updated here or dropped completely from this document. (A good example is the list of video cards supported by XFree86.)
- Newer interfaces such as USB need to be added into the list. (Would a USB−attached hard drive go under "USB", "Removable drives", "Hard drives", or all of the above?)
- And, of course, random hardware that just isn't listed in this document needs to be added.

All of this is going to require a lot of work. If this happens to interest you, please email <steve@silug.org>. I can use the help. :−)

1.6. New versions of this document

The latest version of this document can be found on the Linux Documentation Project home site or any of its many mirrors.

1.7. Feedback and corrections

If you have questions or comments about this document, please feel free to email Steven Pritchard at <steve@silug.org>. I also welcome corrections and additions. At some point in the near future, I plan to set up a web interface for adding components to this document. In the mean time, please just use the word "hardware" somewhere in the subject when sending corrections or additions.

1.8. Acknowledgments

This document has passed through many hands. I don't know if he wrote the first version, but in 1993 Ed Carp was maintaining it. In August of 1994, FRiC (Boy of Destiny) took over. After he fell off the face of the planet in late 1995 or early 1996 (and we all miss him from IRC, I might add), Patrick Reijnen took over (sometime in 1997) and continued to maintain this document until late 1999.

Recent versions of this document contained the following:

> Thanks to all the authors and contributors of other HOWTO's, many things here are shamelessly stolen from their works; to FRiC, Zane Healy and Ed Carp, the original authors of this HOWTO; and to everyone else who sent in updates and feedbacks. Special thanks to Eric Boerner and lilo (the person, not the program) for the sanity checks. And thanks to Dan Quinlan for the original SGML conversion.

Many thanks to all those who have contributed to this document over the years.

In addition, I'd like to thank the many members of the Southern Illinois Linux Users Group and the Linux Users of Central Illinois for giving me so many interesting problems to solve over the years, and, of course, my wife Kara for putting up with me all these years. :–)

1.9. Revision History

The following is the revision history of this document since I (Steven Pritchard) took over maintenance.

Revision History

Revision 3.1.5	2002–03–28	Revised by: sjp

Moved revision history to Introduction section. More dead link fixes and other corrections. Thanks to Lin Hung–Ta, Silviu Tamasdan, and various others.

Revision 3.1.4	2002–02–17	Revised by: sjp

Added note about CRIS architecture. Updated WAN Cards section.

Revision 3.1.3	2001–12–30	Revised by: sjp

Updated video card section and other minor cleanups and updates.

Revision 3.1.2	2001–12–21	Revised by: sjp

Update location for GS–4500 software in the scanners section. (Thanks to Jan Willamowius for pointing out that the page had moved.) Begin updating RAID controller section by separating SCSI RAID and IDE RAID.

Revision 3.1.1	2001–12–14	Revised by: sjp

List printers with a "F" or missing grade from the linuxprinting.org database in the incompatible hardware section.

Revision 3.1.0 2001−12−12 Revised by: sjp

Fix/remove more broken/dead links. Import printer listing from linuxprinting.org.

Revision 3.0.7 2001−10−18 Revised by: sjp

Started fixing dead links. (Thanks to Rob Janssen, Shaul Karl, Charles McColm, and Paul Stephenson for the corrections.)

Revision 3.0.6 2001−09−14 Revised by: sjp

Started cleaning up incompatible hardware section.

Revision 3.0.5 2001−09−04 Revised by: sjp

Updated CPU and motherboards sections. Added WAN Cards section and removed old "Frame Relay", "X.25", and "Synchronous PPP, Cisco HDLC" sections under Network adapters.

Revision 3.0.4 2001−06−25 Revised by: sjp

Updated Network adapters and Controllers (multiport) sections to include current Cyclades products. (Thanks to Ivan Passos at Cyclades for the update.)

Revision 3.0.3 2001−05−28 Revised by: sjp

Added USB section. Added note on non−x86 hardware to CPU section. Updated Motherboards section. Added a link to the Sound HOWTO in the Sound cards section. Folded Related sources of information section into introduction and removed dead links.

Revision 3.0.2 2001−05−10 Revised by: sjp

LDP−requested cleanup.

Revision 3.0.1 2001−05−07 Revised by: sjp

Updated modems section.

Revision 3.0.0 2001−04−22 Revised by: sjp

First DocBook version. Various updates.

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2. Computers/Motherboards/BIOS

ISA, VLB, EISA, PCI, and AGP buses are all supported. All recent motherboards should work fine, although certain integrated controllers may or may not work well (or at all).

2.1. Specific system/motherboard/BIOS

Please note that this is by no means a complete list. Please send updates.

Manufacturer	Model Number	Description	Notes
Intel	STL2	ServerWorks chipset, dual Socket 370 (PIII), integrated video (ATI), ethernet (eepro100), and dual−channel SCSI (aic7xxx)	
Intel	815EEA, 815EEA2L	Intel 815 chipset, Socket 370 (PIII/Celeron), integrated video, audio, ethernet (815EEA2L only)	video, sound, ethernet, etc. are all supported, although they require recent kernels and XFree86
SuperMicro	370DL3	ServerWorks chipset, dual Socket 370 (PIII), integrated ethernet (eepro100), SCSI (aic7xxx)	
SuperMicro	370DLE	ServerWorks chipset, dual	

		Socket 370 (PIII), integrated ethernet (eepro100)	
SuperMicro	P6DGE	Intel 440GX chipset, dual Slot 1 (PII/PIII/Celeron)	
SuperMicro	P6DBE	Intel 440BX chipset, dual Slot 1 (PII/PIII/Celeron)	
Soyo	SY−K7VTA−B	VIA KT133 chipset, Socket A, integrated ATA/100 and AC97 audio	
Tyan	Thunder K7 (S2462NG/S2462UNG/S2462UNGM)	AMD 760MP chipset, dual Athlon MP, integrated video (ATI RAGE XL), dual ethernet (2 x 3Com 3C920), dual−channel SCSI (Adaptec AIC−7899W – S2462UNG/S2462UNGM only)	Early models apparently had bugs. Be sure you have a recent BIOS and a recent 2.2.x or 2.4.x kernel.

The following are old notes and are probably out of date.

- IBM PS/2 MCA systems

  Supported since kernel version 2.0.7, but only for the stable kernel releases. For information you can look at the Micro Channel Linux Home Page. Software for MCA systems can be found here. Information on the MCA SCSI subsystem can be found here.

- EFA E5TX−AT motherboard has a solvable problem with RedHat Linux 5.0 and possibly other versions of Linux. It spontaneously reboots while probing hardware. To solve, update BIOS to version 1.01. Get the BIOS update here.

- The Zida 6MLX motherboard with PII Intel LX chipset is mentioned only to work with Linux when the PII cache is disabled in BIOS. BIOS upgrade does not solve the problem. Symptom is random reboots during or shortly after system boot.

2.2. Unsupported

- Supermicro P5MMA with BIOS versions 1.36, 1.37 and 1.4. Linux will not boot on this motherboard. A new (beta) release of the BIOS which makes Linux boot, is available here.
- Supermicro P5MMA98. Linux will not boot on this motherboard. A new (beta) release of the BIOS which makes Linux boot, is available here.
- DataExpert Corp. ExpertColor TX531 V1.0 motherboard with chipset ACER M1531 (Date: 9729, TS6) and ACER M1543 (Date: 9732 TS6) seems to present not reproducible segmentations faults, kernel oops and kernel hangs under heavy load and tape access. The problem seems to be the PCI−bus, respectively the ACER chipset.

3. Laptops

For more information about Linux and laptops, the following sites are good starting points.

- Linux Laptop Homepage
- Linux Mobile Guide − A Guide for Laptops and Mobile Devices

Other information related to laptops can be found at the following sites:

- Avanced Power Management
- Notebook battery status
- non−blinking cursor
- other general info

3.1. Specific laptops

- Compaq Concerto (pen driver)
- Compaq Contura Aero
- IBM ThinkPad
- IBM Thinkpad 770 series
- NEC Versa M and P
- Tadpole P1000
- Tadpole P1000 (another one)
- TI TravelMate 4000M
- TI TravelMate 5100
- Toshiba Satellite Pro 400CDT

3.2. PCMCIA

- PCMCIA

PCMCIA drivers currently support all common PCMCIA controllers, including Databook TCIC/2, Intel i82365SL, Cirrus PD67xx, and Vadem VG−468 chipsets. Motorola 6AHC05GA controller used in some Hyundai laptops is not supported. See Appendix B for a list of supported PCMCIA cards.

4. CPU/FPU

Please see this note for more on non−x86 hardware.

4.1. Intel

Intel 386SX/DX/SL, 486SX/DX/SL/SX2/DX2/DX4, Pentium, Pentium Pro, Pentium II, Pentium III (regular and Xeon versions), Pentium 4, and Celeron are all supported.

4.2. AMD

AMD 386SX/DX, 486SX/DX/DX2/DX4, K5, K6, K6−2, K6−3, and Athlon (all varieties, including MP) are all supported. Older versions of K6 should be avoided as they are buggy. Setting "internal cache" disabled in bios setup can be a workaround. Some early K6−2 300Mhz have problems with the system chips.

The old NexGen processors are also supported.

A few very early AMD 486DX's may hang in some special situations. All current chips should be okay and getting a chip swap for old CPU's should not be a problem.

4.3. Cyrix

Cyrix 386SX/DX, 486SX/DX, 5x86, 6x86, and MediaGX are all supported.

- enable cache on Cyrix processors
- Cyrix software cache control
- Cyrix 5x86 CPU register settings

4.4. IDT

IDT Winchip C6−PSME2006A processors are supported under Linux.

4.5. Transmeta

The Transmeta Crusoe processors are supported.

4.6. Misc. notes

Linux has built−in FPU emulation if you don't have a math coprocessor.

Linux supports SMP (multiple CPUs) in all 2.x kernels. See the Linux SMP HOWTO for more information.

ULSI Math*Co series has a bug in the FSAVE and FRSTOR instructions that causes problems with all protected mode operating systems. Some older IIT and Cyrix chips may also have this problem.

There are problems with TLB flushing in UMC U5S chips in very old kernels. (1.1.x)

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5. Memory

All memory like DRAM, EDO and SDRAM can be used with Linux. Be aware that older kernels or kernels running on a mortherboard with an older BIOS may only be able to detect 64MB of RAM. If you have this problem, when you add more than 64 Mb of memory you have to add the following line to your LILO configuration file:

append="mem=<number of Mb>M"

So when you have 96 MB of memory this should become

append="mem=96M"

Don't use a number higher than the amount of RAM you really have. This will cause crashes.

---

6. Video cards

Please note that this section is currently being updated, so some information may not be entirely correct or complete.

Linux will work with all video cards in text mode, VGA cards not listed below probably will still work with mono VGA and/or standard VGA drivers.

If you're looking into buying a cheap video card to run X, keep in mind that accelerated cards (ATI Mach, ET4000/W32p, S3) are MUCH faster than unaccelerated or partially accelerated (Cirrus, WD) cards.

"32 bpp" is actually 24 bit color aligned on 32 bit boundaries. It does NOT mean the cards are capable of 32 bit color, they still display 24 bit color (16,777,216 colors). 24 bit packed pixels modes are not supported in XFree86, so cards that can do 24 bit modes to get higher resolutions in other OS's are not able to do this in X using XFree86. These cards include Mach32, Cirrus 542x, S3 801/805/868/968, ET4000, and others.

AGP (Accelerated Graphics Port) support is growing fast. Most of the X−servers (both freely available and commercial versions) have more or less support for AGP.

6.1. XFree86

The following is a list of cards known to work with XFree86 versions 3.3.6 and/or 4.1.0. See the XFree86 web site for more information.

Card Name	**Chipset**	**XFree86 3.3.x server**	**XFree86 4.x driver**	**Notes**
2 the Max MAXColor S3 Trio64V+	S3 Trio64V+	XF86_S3	vga	
2−the−Max MAXColor 6000	ET6000	XF86_SVGA	tseng	
3DLabs Oxygen GMX	PERMEDIA 2	XF86_3DLabs	glint	
3DVision−i740 AGP	Intel 740	XF86_SVGA	i740	
3Dlabs Permedia2 (generic)	PERMEDIA 2	XF86_3DLabs	glint	
928Movie	S3 928	XF86_S3	vga	
ABIT G740 8MB SDRAM	Intel 740	XF86_SVGA	i740	
AGP 2D/3D V. 1N, AGP−740D	Intel 740	XF86_SVGA	i740	
AGX (generic)	AGX−014/15/16	XF86_AGX	vga	
ALG−5434(E)	CL−GD5434	XF86_SVGA	cirrus	
AOpen AGP 2X 3D Navigator PA740	Intel 740	XF86_SVGA	i740	
AOpen PA2010	Voodoo Banshee	XF86_SVGA	tdfx	
AOpen PA45	SiS6326	XF86_SVGA	sis	
AOpen PA50D	SiS6326	XF86_SVGA	sis	

AOpen PA50E	SiS6326	XF86_SVGA	sis	
AOpen PA50V	SiS6326	XF86_SVGA	sis	
AOpen PA80/DVD	SiS6326	XF86_SVGA	sis	
AOpen PG128	S3 Trio3D	XF86_SVGA	s3virge	
AOpen PG975	3dimage975	XF86_SVGA	trident	
AOpen PS3010	RIVATNT2	XF86_SVGA	nv	
AOpen PT70	S3 ViRGE/DX	XF86_SVGA	s3virge	
AOpen PT75	S3 ViRGE/DX	XF86_SVGA	s3virge	
AOpen PT80	SiS6326	XF86_SVGA	sis	
ARISTO i740 AGP (ART−i740−G)	Intel 740	XF86_SVGA	i740	
ASUS 3Dexplorer	RIVA128	XF86_SVGA	nv	
ASUS AGP−V2740	Intel 740	XF86_SVGA	i740	
ASUS PCI−AV264CT	ati	XF86_Mach64	ati	
ASUS PCI−V264CT	ati	XF86_Mach64	ati	
ASUS Video Magic PCI V864	S3 864	XF86_S3	vga	
ASUS Video Magic PCI VT64	S3 Trio64	XF86_S3	vga	
AT25	Alliance AT3D	XF86_SVGA	apm	
AT3D	Alliance AT3D	XF86_SVGA	apm	
ATI 3D Pro Turbo	ati	XF86_Mach64	ati	
ATI 3D Pro Turbo PC2TV	ati	XF86_Mach64	ati	
ATI 3D Xpression	ati	XF86_Mach64	ati	
ATI 3D Xpression+	ati	XF86_Mach64	ati	
ATI 3D Xpression+ PC2TV	ati	XF86_Mach64	ati	
ATI 8514 Ultra (no VGA)	ATI−Mach8	XF86_Mach8	vga	
ATI All−in−Wonder	ati	XF86_Mach64	ati	
ATI All−in−Wonder 128 Pro AGP	ati	XF86_SVGA	r128	
ATI All−in−Wonder Pro	ati	XF86_Mach64	ati	
ATI Graphics Pro Turbo	ati	XF86_Mach64	ati	
ATI Graphics Pro Turbo 1600	ati	XF86_Mach64	ati	
ATI Graphics Ultra	ati	XF86_Mach8	ati	
ATI Graphics Ultra Pro	ati	XF86_Mach32	ati	
ATI Graphics Xpression	ati	XF86_Mach64	ati	
ATI Mach32	ati	XF86_Mach32	ati	
ATI Mach64	ati	XF86_Mach64	ati	
ATI Mach64 3D RAGE II	ati	XF86_Mach64	ati	

ATI Mach64 3D RAGE II+DVD	ati	XF86_Mach64	mach64	
ATI Mach64 3D Rage IIC	ati	XF86_Mach64	mach64	
ATI Mach64 3D Rage Pro	ati	XF86_Mach64	mach64	
ATI Mach64 CT (264CT)	ati	XF86_Mach64	mach64	
ATI Mach64 GT (264GT), aka 3D RAGE	ati	XF86_Mach64	mach64	
ATI Mach64 VT (264VT)	ati	XF86_Mach64	mach64	
ATI Radeon (generic)	ati		radeon	
ATI Radeon AGP	ati		radeon	
ATI Radeon AGP VIVO	ati		radeon	
ATI Radeon All In Wonder AGP	ati		radeon	
ATI Rage 128	ati	XF86_SVGA	r128	
ATI Rage 128 (generic)	ati	XF86_SVGA	r128	
ATI Rage 128 Mobility	ati		r128	
ATI Rage Fury AGP	ati	XF86_SVGA	r128	
ATI Rage Fury Pro AGP	ATI	XF86_SVGA	r128	
ATI Rage LT	ati	XF86_Mach64	mach64	
ATI Rage LT PRO	ati	XF86_Mach64	mach64	
ATI Rage Mobility	ati		ati	
ATI Rage Mobility M4 AGP	ati	XF86_SVGA	r128	
ATI Rage Mobility P	ati	XF86_Mach64	mach64	
ATI Rage XL	ati	XF86_SVGA	ati	
ATI Rage XL AGP	ati	XF86_SVGA	ati	
ATI Ultra Plus	ati	XF86_Mach32	mach32	
ATI Video Boost	ati	XF86_Mach64	mach64	
ATI Video Charger	ati	XF86_Mach64	mach64	
ATI Video Xpression	ati	XF86_Mach64	mach64	
ATI Video Xpression+	ati	XF86_Mach64	mach64	
ATI WinBoost	ati	XF86_Mach64	mach64	
ATI WinCharger	ati	XF86_Mach64	mach64	
ATI WinTurbo	ati	XF86_Mach64	mach64	
ATI Wonder SVGA	ati	XF86_SVGA	ati	
ATI XPERT 128 AGP	ati	XF86_SVGA	r128	
ATI XPERT 99 AGP	ati	XF86_SVGA	r128	
ATI Xpert 128 AGP	ati	XF86_SVGA	r128	
ATI Xpert 2000 AGP	ati	XF86_SVGA	r128	

ATI Xpert 98	ati	XF86_Mach64	ati	
ATI Xpert 99 AGP	ati	XF86_SVGA	ati	
ATI Xpert XL	ati	XF86_Mach64	ati	
ATI Xpert@Play	ati	XF86_Mach64	ati	
ATI Xpert@Play 98	ati	XF86_Mach64	ati	
ATI Xpert@Work	ati	XF86_Mach64	ati	
ATI integrated on Intel Maui MU440EX motherboard	ati	XF86_Mach64	ati	
ATrend ATC−2165A	ET6000	XF86_SVGA	et6000	
AccelStar Permedia II AGP	PERMEDIA 2	XF86_3DLabs	glint	
Acorp AGP i740	Intel 740	XF86_SVGA	i740	
Actix GE32+ 2MB	S3 801/805	XF86_S3	vga	
Actix GE32i	S3 805i	XF86_S3	vga	
Actix GE64	S3 864	XF86_S3	vga	
Actix ProStar	CL−GD5426/5428	XF86_SVGA	cirrus	
Actix ProStar 64	CL−GD5434	XF86_SVGA	cirrus	
Actix Ultra	S3 928	XF86_S3	vga	
Acumos AVGA3	CL−GD5420/2/4/6/8/9	XF86_SVGA	cirrus	
Alliance ProMotion 6422	AP6422	XF86_SVGA	vga	
Appian Jeronimo 2000	PERMEDIA 3		glint	
Aristo ART−390−G S3 Savage3D	S3 Savage	XF86_SVGA	savage	
Ark Logic ARK1000PV (generic)	ARK1000PV	XF86_SVGA	vga	
Ark Logic ARK1000VL (generic)	ARK1000VL	XF86_SVGA	vga	
Ark Logic ARK2000MT (generic)	ARK1000MT	XF86_SVGA	vga	
Ark Logic ARK2000PV (generic)	ARK1000PV	XF86_SVGA	vga	
Atrend (Speedy) 3DIO740 AGP (ATC−2740)	Intel 740	XF86_SVGA	i740	
Avance Logic 2101	Avance Logic	XF86_SVGA	vga	
Avance Logic 2228	Avance Logic	XF86_SVGA	vga	
Avance Logic 2301	Avance Logic	XF86_SVGA	vga	
Avance Logic 2302	Avance Logic	XF86_SVGA	vga	
Avance Logic 2308	Avance Logic	XF86_SVGA	vga	
Avance Logic 2401	Avance Logic	XF86_SVGA	vga	
Binar Graphics AnyView	ET6000	XF86_SVGA	et6000	
Boca Vortex (Sierra RAMDAC)	AGX−015	XF86_AGX	vga	
COMPAQ Armada 7380DMT	S3 Aurora64V+	XF86_S3	vga	

COMPAQ Armada 7730MT	S3 Aurora64V+	XF86_S3	vga	
California Graphics SunTracer 6000	ET6000	XF86_SVGA	tseng	
Canopus Co. Power Window 3DV	S3 ViRGE	XF86_SVGA	s3virge	
Canopus SPECTRA 3200R2	RIVATNT	XF86_SVGA	nv	
Canopus SPECTRA 5400	RIVATNT2	XF86_SVGA	nv	
Canopus SPECTRA 5400 Premium Edition	RIVA ULTRA TNT2	XF86_SVGA	nv	
Canopus Total−3D	Verite 1000	XF86_SVGA	vga	
Cardex Challenger (Pro)	ET4000/W32(i/p)	XF86_SVGA	tseng	
Cardex Cobra	ET4000/W32(i/p)	XF86_SVGA	tseng	
Cardex Trio64	S3 Trio64	XF86_S3	vga	
Cardex Trio64Pro	S3 Trio64	XF86_S3	vga	
Chaintech AGP−740D	Intel 740	XF86_SVGA	i740	
Chaintech Desperado 3F10	Voodoo Banshee	XF86_SVGA	tdfx	
Chaintech Desperado RI20	RIVA128	XF86_SVGA	nv	
Chaintech Desperado RI30	RIVATNT	XF86_SVGA	nv	
Chaintech Desperado RI40/41	RIVATNT2	XF86_SVGA	nv	
Chaintech Desperado RI50	RIVATNT2	XF86_SVGA	nv	
Chaintech Desperado RI60	RIVATNT2	XF86_SVGA	nv	
Chaintech Desperado SI21	SiS6326	XF86_SVGA	sis	
Chaintech Desperado SI31	SiS6326	XF86_SVGA	sis	
Chaintech Tornado I7000	Intel 740	XF86_SVGA	i740	
Chaintech Tornado S6000	SiS6326	XF86_SVGA	sis	
Chips & Technologies CT64200	ct64200	XF86_SVGA	chips	
Chips & Technologies CT64300	ct64300	XF86_SVGA	chips	
Chips & Technologies CT65520	ct65520	XF86_SVGA	chips	
Chips & Technologies CT65525	ct65525	XF86_SVGA	chips	
Chips & Technologies CT65530	ct65530	XF86_SVGA	chips	
Chips & Technologies CT65535	ct65535	XF86_SVGA	chips	
Chips & Technologies CT65540	ct65540	XF86_SVGA	chips	
Chips & Technologies CT65545	ct65545	XF86_SVGA	chips	
Chips & Technologies CT65546	ct65546	XF86_SVGA	chips	
Chips & Technologies CT65548	ct65548	XF86_SVGA	chips	
Chips & Technologies CT65550	ct65550	XF86_SVGA	chips	

Chips & Technologies CT65554	ct65554	XF86_SVGA	chips	
Chips & Technologies CT65555	ct65555	XF86_SVGA	chips	
Chips & Technologies CT68554	ct68554	XF86_SVGA	chips	
Chips & Technologies CT69000	ct69000	XF86_SVGA	chips	
Chips & Technologies CT69030	ct69030	XF86_SVGA	chips	
Cirrus Logic GD542x	CL−GD5420/2/4/6/8/9	XF86_SVGA	cirrus	
Cirrus Logic GD543x	CL−GD5430/5434/5436	XF86_SVGA	cirrus	
Cirrus Logic GD5446 (noname card)	CL−GD5446, 1MB (upgradable to 2MB).	XF86_SVGA	vga	
Cirrus Logic GD544x	CL−GD544x		cirrus	
Cirrus Logic GD5462	CL−GD5462	XF86_SVGA	cirrus	
Cirrus Logic GD5464	CL−GD5464	XF86_SVGA	cirrus	
Cirrus Logic GD5465	CL−GD5465	XF86_SVGA	cirrus	
Cirrus Logic GD5480	CL−GD5480	XF86_SVGA	cirrus	
Cirrus Logic GD62xx (laptop)	CL−GD6205/15/25/35	XF86_SVGA	vga	
Cirrus Logic GD64xx (laptop)	CL−GD6420/6440	XF86_SVGA	vga	
Cirrus Logic GD754x (laptop)	CL−GD7541/42/43/46/48	XF86_SVGA	vga	
Colorgraphic Dual Lightning	ET4000/W32(i/p)	XF86_SVGA	tseng	
Compaq Armada 7400	S3 ViRGE/MX	XF86_SVGA	s3virge	
Compaq Armada 7800	S3 ViRGE/MX	XF86_SVGA	s3virge	
Creative Blaster Exxtreme	PERMEDIA 2	XF86_3DLabs	glint	
Creative Graphics Blaster TNT2	RIVATNT2	XF86_SVGA	nv	
Creative Labs 3D Blaster PCI (Verite 1000)	Verite 1000	XF86_SVGA	vga	
Creative Labs Graphics Blaster 3D	CL−GD5464	XF86_SVGA	cirrus	
Creative Labs Graphics Blaster Eclipse (OEM Model CT6510)	CL−GD5465	XF86_SVGA	cirrus	
Creative Labs Graphics Blaster MA201	CL−GD544x		cirrus	
Creative Labs Graphics Blaster MA202	CL−GD544x		cirrus	
Creative Labs Graphics Blaster MA302	CL−GD5462	XF86_SVGA	cirrus	
Creative Labs Graphics Blaster MA334	CL−GD5464	XF86_SVGA	cirrus	
Creative Labs Savage 4 3D Blaster				
Cyrix MediaGX	MediaGX	XF86_SVGA	cyrix	
DFI−WG1000	CL−GD5420/2/4/6/8/9	XF86_SVGA	cirrus	
DFI−WG5000	ET4000/W32(i/p)	XF86_SVGA	tseng	
DFI−WG6000	WD90C33	XF86_SVGA	vga	

DSV3325	S3 ViRGE	XF86_SVGA	s3virge	
DSV3326	S3 Trio64V+	XF86_S3	vga	
DataExpert DSV3325	S3 ViRGE	XF86_SVGA	s3virge	
DataExpert DSV3365	S3 Trio64V+	XF86_S3	vga	
Dell S3 805	S3 801/805	XF86_S3	vga	
Dell onboard ET4000	ET4000	XF86_SVGA	tseng	
Diamond Edge 3D	nv1	XF86_SVGA	vga	
Diamond Fire GL 1000	PERMEDIA	XF86_3DLabs	glint	
Diamond Fire GL 1000 PRO	PERMEDIA 2	XF86_3DLabs	glint	
Diamond Fire GL 3000	GLINT 500TX	XF86_3DLabs	glint	
Diamond Monster Fusion	Voodoo Banshee	XF86_SVGA	tdfx	
Diamond Multimedia Stealth 3D 2000	S3 ViRGE	XF86_SVGA	s3virge	
Diamond Multimedia Stealth 3D 2000 PRO	S3 ViRGE/DX	XF86_SVGA	s3virge	
Diamond SpeedStar (Plus)	ET4000	XF86_SVGA	tseng	
Diamond SpeedStar 24	ET4000	XF86_SVGA	tseng	
Diamond SpeedStar 24X (not fully supported)	WD90C31	XF86_SVGA	vga	
Diamond SpeedStar 64	CL−GD5434	XF86_SVGA	cirrus	
Diamond SpeedStar A50	SiS6326	XF86_SVGA	sis	
Diamond SpeedStar HiColor	ET4000	XF86_SVGA	tseng	
Diamond SpeedStar Pro (not SE)	CL−GD5426/28	XF86_SVGA	cirrus	
Diamond SpeedStar Pro 1100	CL−GD5420/2/4/6/9	XF86_SVGA	cirrus	
Diamond SpeedStar Pro SE (CL−GD5430/5434)	CL−GD5430/5434	XF86_SVGA	cirrus	
Diamond SpeedStar64 Graphics 2000/2200	CL−GD5434	XF86_SVGA	cirrus	
Diamond Stealth 24	S3 801/805	XF86_S3	vga	
Diamond Stealth 32	ET4000/W32(i/p)	XF86_SVGA	tseng	
Diamond Stealth 3D 2000	S3 ViRGE	XF86_SVGA	s3virge	
Diamond Stealth 3D 2000 PRO	S3 ViRGE/DX	XF86_SVGA	s3virge	
Diamond Stealth 3D 3000	S3 ViRGE/VX	XF86_SVGA	s3virge	
Diamond Stealth 3D 4000	S3 ViRGE/GX2	XF86_SVGA	s3virge	
Diamond Stealth 64 DRAM SE	S3 Trio32	XF86_S3	vga	
Diamond Stealth 64 DRAM with S3 SDAC	S3 864	XF86_S3	vga	
Diamond Stealth 64 DRAM with S3 Trio64	S3 Trio64	XF86_S3	vga	
Diamond Stealth 64 VRAM	S3 964	XF86_S3	vga	

Diamond Stealth 64 Video VRAM (TI RAMDAC)	S3 968	XF86_S3	vga	
Diamond Stealth II S220	Verite 2100	XF86_SVGA	vga	
Diamond Stealth II/G460 AGP	Intel 740	XF86_SVGA	i740	
Diamond Stealth III (S520/S540)				
Diamond Stealth Pro	S3 928	XF86_S3	vga	
Diamond Stealth VRAM	S3 911/924	XF86_S3	vga	
Diamond Stealth Video 2500	Alliance AT24	XF86_SVGA	apm	
Diamond Stealth Video DRAM	S3 868	XF86_S3	vga	
Diamond Stealth64 Graphics 2001 series	ARK2000PV	XF86_SVGA	vga	
Diamond Stealth64 Graphics 2xx0 series (864 + SDAC)	S3 864	XF86_S3	vga	
Diamond Stealth64 Graphics 2xx0 series (Trio64)	S3 Trio64	XF86_S3	vga	
Diamond Stealth64 Video 2001 series (2121/2201)	S3 Trio64V+	XF86_S3	vga	
Diamond Stealth64 Video 2120/2200	S3 868	XF86_S3	vga	
Diamond Stealth64 Video 3200	S3 968	XF86_S3	vga	
Diamond Stealth64 Video 3240/3400 (IBM RAMDAC)	S3 968	XF86_S3	vga	
Diamond Stealth64 Video 3240/3400 (TI RAMDAC)	S3 968	XF86_S3	vga	
Diamond Viper 330	RIVA128	XF86_SVGA	nv	
Diamond Viper 550	RIVATNT	XF86_SVGA	nv	
Diamond Viper 770	RIVATNT2	XF86_SVGA	nv	
Diamond Viper PCI 2Mb	Weitek 9000	XF86_P9000	vga	
Diamond Viper Pro Video	Weitek P9100	XF86_SVGA	vga	
Diamond Viper VLB 2Mb	Weitek 9000	XF86_P9000	vga	
Digital 24−plane TGA (ZLXp−E2)	TGA	XF86_TGA	vga	
Digital 24−plane+3D TGA (ZLXp−E3)	TGA	XF86_TGA	vga	
Digital 8−plane TGA (UDB/Multia)	TGA	XF86_TGA	vga	
Digital 8−plane TGA (ZLXp−E1)	TGA	XF86_TGA	vga	
EIZO (VRAM)	AGX−014/15/16	XF86_AGX	vga	
ELSA ERAZOR II	RIVATNT	XF86_SVGA	nv	
ELSA ERAZOR III	RIVATNT2	XF86_SVGA	nv	
ELSA GLoria Synergy	PERMEDIA 2	XF86_3DLabs	glint	
ELSA GLoria−L	GLINT 500TX	XF86_3DLabs	glint	
ELSA GLoria−L/MX	GLINT MX	XF86_3DLabs	glint	
ELSA GLoria−S	PERMEDIA	XF86_3DLabs	glint	
ELSA GLoria−XL	GLINT MX	XF86_3DLabs	glint	
ELSA GLoria−XXL	GLINT MX	XF86_3DLabs	glint	

ELSA Gloria−4	S3 968	XF86_S3	vga	
ELSA Gloria−8	S3 968	XF86_S3	vga	
ELSA Synergy II	RIVATNT2	XF86_SVGA	nv	
ELSA VICTORY ERAZOR	RIVA128	XF86_SVGA	nv	
ELSA VICTORY ERAZOR LT	RIVA128	XF86_SVGA	nv	
ELSA Victory 3D	S3 ViRGE	XF86_SVGA	s3virge	
ELSA Victory 3DX	S3 ViRGE/DX	XF86_SVGA	s3virge	
ELSA WINNER 1000/T2D				
ELSA Winner 1000 R3D	RIVA128	XF86_SVGA	nv	
ELSA Winner 1000AVI (AT&T 20C409 version)	S3 868	XF86_S3	vga	
ELSA Winner 1000AVI (SDAC version)	S3 868	XF86_S3	vga	
ELSA Winner 1000ISA	S3 805i	XF86_S3	vga	
ELSA Winner 1000PRO with S3 SDAC	S3 864	XF86_S3	vga	
ELSA Winner 1000PRO with STG1700 or AT&T RAMDAC	S3 864	XF86_S3	vga	
ELSA Winner 1000PRO/X	S3 868	XF86_S3	vga	
ELSA Winner 1000TRIO	S3 Trio64	XF86_S3	vga	
ELSA Winner 1000TRIO/V	S3 Trio64V+	XF86_S3	vga	
ELSA Winner 1000TwinBus	S3 928	XF86_S3	vga	
ELSA Winner 1000VL	S3 928	XF86_S3	vga	
ELSA Winner 2000	S3 928	XF86_S3	vga	
ELSA Winner 2000/Office	PERMEDIA 2	XF86_3Dlabs	glint	
ELSA Winner 2000AVI	S3 968	XF86_S3	vga	
ELSA Winner 2000AVI/3D	S3 ViRGE/VX	XF86_SVGA	s3virge	
ELSA Winner 2000PRO−2	S3 964	XF86_S3	vga	
ELSA Winner 2000PRO−4	S3 964	XF86_S3	vga	
ELSA Winner 2000PRO/X−2	S3 968	XF86_S3	vga	
ELSA Winner 2000PRO/X−4	S3 968	XF86_S3	vga	
ELSA Winner 2000PRO/X−8	S3 968	XF86_S3	vga	
ELSA Winner 3000	S3 ViRGE/VX	XF86_SVGA	s3virge	
ELSA Winner 3000−L−42	S3 ViRGE/VX	XF86_SVGA	s3virge	
ELSA Winner 3000−M−22	S3 ViRGE/VX	XF86_SVGA	s3virge	
ELSA Winner 3000−S	S3 ViRGE	XF86_SVGA	s3virge	
EONtronics Picasso 740	Intel 740	XF86_SVGA	i740	
EONtronics Van Gogh	Intel 740	XF86_SVGA	i740	
EPSON CardPC (onboard)	SPC8110	XF86_SVGA		

EPSON SPC8110 (CardPC)	SPC8110	XF86_SVGA	vga	
ET3000 (generic)	ET3000	XF86_SVGA	tseng	
ET4000 (generic)	ET4000	XF86_SVGA	tseng	
ET4000 W32i, W32p (generic)	ET4000/W32(i/p)	XF86_SVGA	tseng	
ET4000/W32 (generic)	ET4000/W32	XF86_W32	tseng	
ET6000 (generic)	ET6000	XF86_SVGA	tseng	
ET6100 (generic)	ET6100	XF86_SVGA	tseng	
ET6300 (generic)	ET6300	XF86_SVGA	tseng	
EliteGroup(ECS) 3DVision−i740 AGP	Intel 740	XF86_SVGA	i740	
Elsa Victory II	Voodoo Banshee	XF86_SVGA	tdfx	
Elsa Winner T3D	S3 Trio3D	XF86_SVGA	s3virge	
Everex MVGA i740/AG	Intel 740	XF86_SVGA	i740	
ExpertColor DSV3325	S3 ViRGE	XF86_SVGA	s3virge	
ExpertColor DSV3365	S3 Trio64V+	XF86_S3	vga	
Flagpoint Shocker i740 8MB	Intel 740	XF86_SVGA	i740	
Gainward CardExpert 740 8MB	Intel 740	XF86_SVGA	i740	
Gainward Challenger EV	ET6000	XF86_SVGA	tseng	
Generic VGA compatible	Generic VGA	XF86_VGA16	vga	
Genoa 5400	ET3000	XF86_SVGA	tseng	
Genoa 8500VL(−28)	CL−GD5426/28	XF86_SVGA	cirrus	
Genoa 8900 Phantom 32i	ET4000/W32(i/p)	XF86_SVGA	tseng	
Genoa Phantom 64i with S3 SDAC	S3 864	XF86_S3	vga	
Genoa Systems Phantom 740	Intel 740	XF86_SVGA	i740	
Genoa VideoBlitz III AV	S3 968	XF86_S3	vga	
Gigabyte Predator i740 8MB AGP	Intel 740	XF86_SVGA	i740	
Graphics Blaster TNT	RIVATNT	XF86_SVGA	nv	
Guillemot Maxi Gamer Xentor 32	RIVATNT2	XF86_SVGA	nv	
HOT−158 (Shuttle)	Intel 740	XF86_SVGA	i740	
Hercules Dynamite	ET4000/W32	XF86_W32	tseng	
Hercules Dynamite 128/Video	ET6000	XF86_SVGA	tseng	
Hercules Dynamite 3D/GL	PERMEDIA 2	XF86_3DLabs	glint	
Hercules Dynamite Power	ET4000/W32(i/p)	XF86_SVGA	tseng	
Hercules Dynamite Pro	ET4000/W32(i/p)	XF86_SVGA	tseng	
Hercules Dynamite TNT	RIVATNT	XF86_SVGA	nv	

Hercules Graphite HG210	AGX−014	XF86_AGX	vga	
Hercules Graphite Power	AGX−016	XF86_AGX	vga	
Hercules Graphite Pro	AGX−015	XF86_AGX	vga	
Hercules Graphite Terminator 64	S3 964	XF86_S3	vga	
Hercules Graphite Terminator 64/DRAM	S3 Trio64	XF86_S3	vga	
Hercules Graphite Terminator Pro 64	S3 968	XF86_S3	vga	
Hercules Stingray	ALG−2228/2301	XF86_SVGA	vga	
Hercules Stingray 128 3D	Alliance AT3D	XF86_SVGA	apm	
Hercules Stingray 64/V with ICS5342	ARK2000MT	XF86_SVGA	vga	
Hercules Stingray 64/V with ZoomDAC	ARK1000PV	XF86_SVGA	vga	
Hercules Stingray Pro	ARK1000PV	XF86_SVGA	vga	
Hercules Stingray Pro/V	ARK1000PV	XF86_SVGA	vga	
Hercules Terminator 128 2X/i AGP	Intel 740	XF86_SVGA	i740	
Hercules Terminator 128/3D	S3 Trio3D	XF86_SVGA	s3virge	
Hercules Terminator 3D/DX	S3 ViRGE/DX	XF86_SVGA	s3virge	
Hercules Terminator 64/3D	S3 ViRGE	XF86_SVGA	s3virge	
Hercules Terminator 64/Video	S3 Trio64V+	XF86_S3	vga	
Hercules Thriller3D	Verite 2200	XF86_SVGA	vga	
Integral FlashPoint	ET4000/W32(i/p)	XF86_SVGA	tseng	
Intel 5430	CL−GD5430	XF86_SVGA	cirrus	
Intel 740 (generic)	Intel 740	XF86_SVGA	i740	
Intel 810	Intel 810	XF86_SVGA	i810	
Intel 815	Intel 815	XF86_SVGA	i810	
Intel Express 3D AGP	Intel 740	XF86_SVGA	i740	
Interay PMC Viper	ET6000	XF86_SVGA	tseng	
JAX 8241	S3 801/805	XF86_S3	vga	
Jaton Video−58P	ET6000	XF86_SVGA	tseng	
Jaton Video−70P	CL−GD5464	XF86_SVGA	cirrus	
Jaton Video−740 AGP 3D	Intel 740	XF86_SVGA	i740	
Jazz Multimedia G−Force 128	ET6000	XF86_SVGA	tseng	
Jetway J−740−3D 8MB AGP, i740 AGP 3D	Intel 740	XF86_SVGA	i740	
Joymedia Apollo 7400	Intel 740	XF86_SVGA	i740	
KouTech KeyVision 128 EV	ET6000	XF86_SVGA	tseng	
LeadTek WinFast 3D S600	S3 ViRGE	XF86_SVGA	s3virge	
LeadTek WinFast 3D S680		XF86_SVGA	s3virge	

	S3 ViRGE/GX2			
LeadTek WinFast S200	ET4000/W32(i/p)	XF86_SVGA	tseng	
LeadTek WinFast S430	S3 968	XF86_S3	vga	
LeadTek WinFast S510	S3 968	XF86_S3	vga	
Leadtek WinFast 2300	PERMEDIA 2	XF86_3Dlabs	glint	
Leadtek WinFast 3D S320	RIVATNT	XF86_SVGA	nv	
Leadtek WinFast 3D S320II	RIVATNT2	XF86_SVGA	nv	
Leadtek WinFast 3D S3500	RIVA128	XF86_SVGA	nv	
Leadtek Winfast S900	Intel 740	XF86_SVGA	i740	
MAXI Gamer AGP 8 MB	Intel 740	XF86_SVGA	i740	
MELCO WGA−TS	RIVATNT2	XF86_SVGA	nv	
MELCO WGP−VG4S	S3 ViRGE	XF86_SVGA	s3virge	
MELCO WGP−VX8	S3 ViRGE/VX	XF86_SVGA	s3virge	
MSI MS−4417	SiS6326	XF86_SVGA	sis	
MachSpeed VGA ET6000	ET6000	XF86_SVGA	tseng	
Machspeed Raptor i740 AGP 4600	Intel 740	XF86_SVGA	i740	
Magic−Pro MP−740DVD	Intel 740	XF86_SVGA	i740	
Matrox Comet	ET4000/W32(i/p)	XF86_SVGA	tseng	
Matrox Marvel II	ET4000/W32(i/p)	XF86_SVGA	tseng	
Matrox Millennium	mga2064w	XF86_SVGA	mga	
Matrox Millennium G200	mgag200	XF86_SVGA	mga	
Matrox Millennium G400	mgag400	XF86_SVGA	mga	
Matrox Millennium G450	mgag450		mga	
Matrox Millennium II	mga2164w	XF86_SVGA	mga	
Matrox Mystique	mga1064sg	XF86_SVGA	mga	
Matrox Mystique G200	mgag200	XF86_SVGA	mga	
Matrox Productiva G100	mgag100	XF86_SVGA	mga	
MediaVision Proaxcel 128	ET6000	XF86_SVGA	tseng	
Mirage Z−128	ET6000	XF86_SVGA	tseng	
Miro CRYSTAL VRX	Verite 1000	XF86_SVGA	vga	
Miro Crystal 10SD with GenDAC	S3 801/805	XF86_S3	vga	
Miro Crystal 12SD	S3 Trio32	XF86_S3	vga	
Miro Crystal 16S	S3 928	XF86_S3	vga	
Miro Crystal 20SD PCI with S3 SDAC	S3 868	XF86_S3	vga	

Miro Crystal 20SD VLB with S3 SDAC (BIOS 3.xx)	S3 864	XF86_S3	vga	
Miro Crystal 20SD with ICD2061A (BIOS 2.xx)	S3 864	XF86_S3	vga	
Miro Crystal 20SD with ICS2494 (BIOS 1.xx)	S3 864	XF86_S3	vga	
Miro Crystal 20SV	S3 964	XF86_S3	vga	
Miro Crystal 22SD	S3 Trio64	XF86_S3	vga	
Miro Crystal 40SV	S3 964	XF86_S3	vga	
Miro Crystal 80SV	S3 968	XF86_S3	vga	
Miro Crystal 8S	S3 801/805	XF86_S3	vga	
Miro Crystal DVD	SiS6326	XF86_SVGA	sis	
Miro MiroMedia 3D	S3 ViRGE	XF86_SVGA	s3virge	
Miro MiroVideo 20TD	ET4000/W32(i/p)	XF86_SVGA	tseng	
Miro Video 20SV	S3 968	XF86_S3	vga	
NVIDIA GeForce	GeForce	XF86_SVGA	nv	
NVIDIA GeForce 2 (generic)	GeForce 2		nv	
NVIDIA GeForce 2 GTS (generic)	GeForce 2		nv	
NVIDIA GeForce 2 Go (generic)	GeForce 2		nv	
NVIDIA GeForce 2 MX (generic)	GeForce 2		nv	
NVIDIA GeForce 256 (generic)	GeForce 256		nv	
NVIDIA GeForce 3 (generic)	GeForce 3		nv	
NVIDIA GeForce DDR (generic)	GeForce DDR		nv	
NVIDIA Riva 128 (generic)	RIVA128	XF86_SVGA	nv	
NVIDIA Riva TNT (generic)	RIVATNT	XF86_SVGA	nv	
NVIDIA Riva TNT2 (generic)	RIVATNT2	XF86_SVGA	nv	
NatSemi Geode	MediaGX	XF86_SVGA	cyrix	
NeoMagic (laptop/notebook)			neomagic	
NeoMagic 128XD (laptop/notebook)			neomagic	
NeoMagic 256 (laptop/notebook)	MagicGraph 256 series		neomagic	
Number Nine FX Motion 331	S3 Trio64V+	XF86_S3	vga	
Number Nine FX Motion 332	S3 ViRGE	XF86_SVGA	s3virge	
Number Nine FX Motion 531	S3 868	XF86_S3	vga	
Number Nine FX Motion 771	S3 968	XF86_S3	vga	
Number Nine FX Reality 772	S3 ViRGE/VX	XF86_SVGA	s3virge	
Number Nine FX Vision 330	S3 Trio64	XF86_S3	vga	
Number Nine GXE Level 10/11/12	S3 928	XF86_S3	vga	

Number Nine GXE Level 14/16	S3 928	XF86_S3	vga	
Number Nine GXE64	S3 864	XF86_S3	vga	
Number Nine GXE64 Pro	S3 964	XF86_S3	vga	
Number Nine GXE64 with S3 Trio64	S3 Trio64	XF86_S3	vga	
Number Nine Imagine 128	I128	XF86_I128	i128	
Number Nine Imagine 128 (2−8MB)	I128	XF86_I128	i128	
Number Nine Imagine 128 Series 2 (2−4MB)	I128	XF86_I128	i128	
Number Nine Imagine 128 T2R	I128	XF86_I128	i128	
Number Nine Revolution 3D AGP T2R	I128	XF86_I128	i128	
Number Nine Revolution IV (T2R4)	I128	XF86_I128	i128	
Number Nine Visual 9FX Reality 332	S3 ViRGE	XF86_SVGA	s3virge	
Oak 87 ISA (generic)	Oak OTI−087	XF86_SVGA	vga	
Oak 87 VLB (generic)	Oak OTI−087	XF86_SVGA	vga	
Oak ISA Card (generic)	Oak OTI−067/77	XF86_SVGA	vga	
Ocean (octek) VL−VGA−1000	ARK1000VL	XF86_SVGA	vga	
Octek AVGA−20	CL−GD5420	XF86_SVGA	cirrus	
Octek Combo−26	CL−GD5426	XF86_SVGA	cirrus	
Octek Combo−28	CL−GD5428	XF86_SVGA	cirrus	
Octek VL−VGA−26	CL−GD5426	XF86_SVGA	cirrus	
Octek VL−VGA−28	CL−GD5428	XF86_SVGA	cirrus	
Orchid Celsius (AT&T RAMDAC)	AGX−015	XF86_AGX	vga	
Orchid Celsius (Sierra RAMDAC)	AGX−015	XF86_AGX	vga	
Orchid Fahrenheit 1280	S3 801	XF86_S3	vga	
Orchid Fahrenheit VA	S3 801/805	XF86_S3	vga	
Orchid Fahrenheit−1280+	S3 801/805	XF86_S3	vga	
Orchid Kelvin 64	CL−GD5434	XF86_SVGA	cirrus	
Orchid Kelvin 64 VLB Rev A	CL−GD5434	XF86_SVGA	cirrus	
Orchid Kelvin 64 VLB Rev B	CL−GD5434	XF86_SVGA	cirrus	
Orchid P9000 VLB	Weitek 9000	XF86_P9000	vga	
Orchid Technology Fahrenheit Video 3D	S3 ViRGE	XF86_SVGA	s3virge	
PC−Chips M567 Mainboard	SiS5597	XF86_SVGA	sis	
Palit Daytona AGP740	Intel 740	XF86_SVGA	i740	
Paradise Accelerator Value	Oak OTI−087	XF86_SVGA	vga	
Paradise/WD 90CXX	WD90CXX	XF86_SVGA	vga	

PixelView Combo TV 3D AGP (Prolink)	CL−GD5465, 4MB	XF86_SVGA	vga	
PixelView Combo TV Pro (Prolink)	CL−GD5480, 4MB	XF86_SVGA	vga	
PowerColor C740 (SG/SD) AGP	Intel 740	XF86_SVGA	i740	
QDI Amazing I	Intel 740	XF86_SVGA	i740	
RIVA TNT	RIVATNT	XF86_SVGA	nv	
RIVA TNT2	RIVATNT2	XF86_SVGA	nv	
RIVA Ultra TNT2	RIVA ULTRA TNT2	XF86_SVGA	nv	
RIVA128	RIVA128	XF86_SVGA	nv	
Real3D Starfighter AGP	Intel 740	XF86_SVGA	i740	
Real3D Starfighter PCI	Intel 740	XF86_SVGA	i740	
Rendition Verite 1000	Verite 1000	XF86_SVGA	vga	
Rendition Verite 2x00	Verite 2x00	XF86_SVGA	vga	
Revolution 3D T2R	I128	XF86_I128	i128	
S3 801/805 (generic)	S3 801/805	XF86_S3	vga	
S3 801/805 with ATT20c490 RAMDAC	S3 801/805	XF86_S3	vga	
S3 801/805 with ATT20c490 RAMDAC and ICD2061A	S3 801/805	XF86_S3	vga	
S3 801/805 with Chrontel 8391	S3 801/805	XF86_S3	vga	
S3 801/805 with S3 GenDAC	S3 801/805	XF86_S3	vga	
S3 801/805 with SC1148{2,3,4} RAMDAC	S3 801/805	XF86_S3	vga	
S3 801/805 with SC1148{5,7,9} RAMDAC	S3 801/805	XF86_S3	vga	
S3 864 (generic)	S3 864	XF86_S3	vga	
S3 864 with ATT 20C498 or 21C498	S3 864	XF86_S3	vga	
S3 864 with SDAC (86C716)	S3 864	XF86_S3	vga	
S3 864 with STG1703	S3 864	XF86_S3	vga	
S3 868 (generic)	S3 868	XF86_S3	vga	
S3 868 with ATT 20C409	S3 868	XF86_S3	vga	
S3 868 with ATT 20C498 or 21C498	S3 868	XF86_S3	vga	
S3 868 with SDAC (86C716)	S3 868	XF86_S3	vga	
S3 86C260 (ViRGE/MX)	S3 ViRGE/MX	XF86_SVGA	s3virge	
S3 86C280 (ViRGE/MX+)	S3 ViRGE/MX	XF86_SVGA	s3virge	
S3 86C325 (ViRGE)	S3 ViRGE	XF86_SVGA	s3virge	
S3 86C357 (ViRGE/GX2)	S3 ViRGE/GX2	XF86_SVGA	s3virge	

S3 86C365 (Trio3D)	S3 Trio3D	XF86_SVGA	s3virge	
S3 86C368 (Trio3D/2X)	S3 Trio3D	XF86_SVGA	s3virge	
S3 86C375 (ViRGE/DX)	S3 ViRGE/DX	XF86_SVGA	s3virge	
S3 86C385 (ViRGE/GX)	S3 ViRGE/GX	XF86_SVGA	s3virge	
S3 86C390 (Savage3D)	S3 Savage	XF86_SVGA	savage	
S3 86C391 (Savage3D)	S3 Savage	XF86_SVGA	savage	
S3 86C395 (Savage4 Pro+)				
S3 86C396 (Savage4)				
S3 86C397 (Savage4)				
S3 86C764 (Trio64)	S3 Trio64	XF86_S3	vga	
S3 86C765 (Trio64V+)	S3 Trio64V+	XF86_S3	vga	
S3 86C775 (Trio64V2/DX)	S3 Trio64V2	XF86_S3	vga	
S3 86C785 (Trio64V2/GX)				
S3 86C801 (generic)	S3 801/805	XF86_S3	vga	
S3 86C805 (generic)	S3 801/805	XF86_S3	vga	
S3 86C864 (generic)	S3 864	XF86_S3	vga	
S3 86C868 (generic)	S3 868	XF86_S3	vga	
S3 86C911 (generic)	S3 911/924	XF86_S3	vga	
S3 86C924 (generic)	S3 911/924	XF86_S3	vga	
S3 86C928 (generic)	S3 928	XF86_S3	vga	
S3 86C964 (generic)	S3 964	XF86_S3	vga	
S3 86C968 (generic)	S3 968	XF86_S3	vga	
S3 86C988 (ViRGE/VX)	S3 ViRGE/VX	XF86_SVGA	s3virge	
S3 86CM65 (Aurora64V+)	S3 Aurora64V+	XF86_S3	vga	
S3 911/924 (generic)	S3 911/924	XF86_S3	vga	
S3 924 with SC1148 DAC	S3 924	XF86_S3	vga	
S3 928 (generic)	S3 928	XF86_S3	vga	
S3 964 (generic)	S3 964	XF86_S3	vga	
S3 968 (generic)	S3 968	XF86_S3	vga	
S3 Aurora64V+ (generic)	S3 Aurora64V+	XF86_S3	vga	
S3 Savage (generic)	S3 Savage	XF86_SVGA	savage	
S3 Savage 2000 (generic)	S3 Savage2000	XF86_SVGA	savage	
S3 Savage/MX	S3 Savage	XF86_SVGA	savage	

S3 Savage3D	S3 Savage	XF86_SVGA	savage	
S3 Savage4				
S3 Savage4 (generic)	S3 Savage	XF86_SVGA	savage	
S3 Savage4 Pro+				
S3 Trio32 (generic)	S3 Trio32	XF86_S3	vga	
S3 Trio3D	S3 Trio3D	XF86_SVGA	s3virge	
S3 Trio3D/2X	S3 Trio3D	XF86_SVGA	s3virge	
S3 Trio64 (generic)	S3 Trio64	XF86_S3	vga	
S3 Trio64V+ (generic)	S3 Trio64V+	XF86_S3	vga	
S3 Trio64V2 (generic)	S3 Trio64V2	XF86_S3	vga	
S3 Trio64V2/DX (generic)	S3 Trio64V2	XF86_S3	vga	
S3 Trio64V2/GX (generic)	S3 Trio64V2	XF86_S3	vga	
S3 ViRGE (generic)	S3 ViRGE	XF86_SVGA	s3virge	
S3 ViRGE (old S3V server)	S3 ViRGE	XF86_S3V		
S3 ViRGE/DX (generic)	S3 ViRGE/DX	XF86_SVGA	s3virge	
S3 ViRGE/GX (generic)	S3 ViRGE/GX	XF86_SVGA	s3virge	
S3 ViRGE/GX2 (generic)	S3 ViRGE/GX2	XF86_SVGA	s3virge	
S3 ViRGE/MX (generic)	S3 ViRGE/MX	XF86_SVGA	s3virge	
S3 ViRGE/MX+ (generic)	S3 ViRGE/MX	XF86_SVGA	s3virge	
S3 ViRGE/VX (generic)	S3 ViRGE/VX	XF86_SVGA	s3virge	
S3 Vision864 (generic)	S3 864	XF86_S3	vga	
S3 Vision868 (generic)	S3 868	XF86_S3	vga	
S3 Vision964 (generic)	S3 964	XF86_S3	vga	
S3 Vision968 (generic)	S3 968	XF86_S3	vga	
SHARP 9080	S3 Aurora64V+	XF86_S3	vga	
SHARP 9090	S3 Aurora64V+	XF86_S3	vga	
SNI PC5H W32	ET4000/W32(i/p)	XF86_SVGA	tseng	
SNI Scenic W32	ET4000/W32(i/p)	XF86_SVGA	tseng	
SPEA Mercury 64	S3 964	XF86_S3	vga	
SPEA Mirage	S3 801/805	XF86_S3	vga	
SPEA/V7 Mercury	S3 928	XF86_S3	vga	
SPEA/V7 Mirage P64	S3 864	XF86_S3	vga	
SPEA/V7 Mirage P64 with S3 Trio64	S3 Trio64	XF86_S3	vga	

SPEA/V7 Mirage VEGA Plus	ALG−2228	XF86_SVGA	vga	
SPEA/V7 ShowTime Plus	ET4000/W32(i/p)	XF86_SVGA	tseng	
STB Horizon	CL−GD5426/28	XF86_SVGA	cirrus	
STB Horizon Video	CL−GD5440		cirrus	
STB LightSpeed	ET4000/W32(i/p)	XF86_SVGA	tseng	
STB LightSpeed 128	ET6000	XF86_SVGA	tseng	
STB MVP−2	ET4000	XF86_SVGA	tseng	
STB MVP−2 PCI	ET4000/W32(i/p)	XF86_SVGA	tseng	
STB MVP−2X	ET4000/W32(i/p)	XF86_SVGA	tseng	
STB MVP−4 PCI	ET4000/W32(i/p)	XF86_SVGA	tseng	
STB MVP−4X	ET4000/W32(i/p)	XF86_SVGA	tseng	
STB Nitro (64)	CL−GD5434	XF86_SVGA	cirrus	
STB Nitro 3D	S3 ViRGE/GX	XF86_SVGA	s3virge	
STB Nitro 64 Video	CL−GD5446		cirrus	
STB Pegasus	S3 928	XF86_S3	vga	
STB Powergraph 64	S3 Trio64	XF86_S3	vga	
STB Powergraph 64 Video	S3 Trio64V+	XF86_S3	vga	
STB Powergraph X−24	S3 801/805	XF86_S3	vga	
STB Systems Powergraph 3D	S3 ViRGE	XF86_SVGA	s3virge	
STB Systems Velocity 3D	S3 ViRGE/VX	XF86_SVGA	s3virge	
STB Velocity 128	RIVA128	XF86_SVGA	nv	
STB Velocity 64 Video	S3 968	XF86_S3	vga	
STB nvidia 128	RIVA128	XF86_SVGA	nv	
SiS 300	SiS300	XF86_SVGA		
SiS 3D PRO AGP	SiS6326	XF86_SVGA	sis	
SiS 530	SiS530	XF86_SVGA	sis	
SiS 540	SiS540	XF86_SVGA	sis	
SiS 5597	SiS5597	XF86_SVGA	sis	
SiS 5598	SIS5598	XF86_SVGA	sis	
SiS 620	SIS620	XF86_SVGA	sis	
SiS 630	SiS630	XF86_SVGA	sis	
SiS 6326	SiS6326	XF86_SVGA	sis	
SiS SG86C201	SIS86C201	XF86_SVGA	sis	
SiS SG86C205	SIS86C205	XF86_SVGA	sis	
SiS SG86C215	SIS86C215	XF86_SVGA	sis	

SiS SG86C225	SIS86C225	XF86_SVGA	sis	
Sierra Screaming 3D	Verite 1000	XF86_SVGA	vga	
Sigma Concorde	ET4000/W32	XF86_W32	tseng	
Sigma Legend	ET4000	XF86_SVGA	tseng	
Silicon Motion Lynx (generic)	Lynx	XF86_SVGA	siliconmotion	
Silicon Motion LynxEM	Lynx	XF86_SVGA	siliconmotion	
Soyo AGP (SY−740 AGP)	Intel 740	XF86_SVGA	i740	
Spacewalker Hot−158	Intel 740	XF86_SVGA	i740	
Spider Black Widow	AGX−015	XF86_AGX	vga	
Spider Black Widow Plus	AGX−016	XF86_AGX	vga	
Spider Tarantula 64	S3 964	XF86_S3	vga	
Spider VLB Plus	CL−GD5428	XF86_SVGA	cirrus	
TechWorks Thunderbolt	ET4000/W32	XF86_W32	tseng	
Techworks Ultimate 3D	CL−GD5464	XF86_SVGA	cirrus	
Toshiba Satellite 2050 CDS	S3 ViRGE/MX	XF86_SVGA	s3virge	
Toshiba Satellite 2520 CDS	S3 ViRGE/MX	XF86_SVGA	s3virge	
Toshiba Satellite 4030CDT	Cyber9525	XF86_SVGA	trident	
Toshiba Satellite 4060CDT	Cyber9525	XF86_SVGA	trident	
Toshiba Satellite 4080CDT	Cyber9525	XF86_SVGA	trident	
Toshiba Tecra 540CDT	S3 ViRGE/MX	XF86_SVGA	s3virge	
Toshiba Tecra 550CDT	S3 ViRGE/MX	XF86_SVGA	s3virge	
Toshiba Tecra 750CDT	S3 ViRGE/MX	XF86_SVGA	s3virge	
Toshiba Tecra 750DVD	S3 ViRGE/MX	XF86_SVGA	s3virge	
Trident 3DImage975 (generic)	3dimage975	XF86_SVGA	trident	
Trident 3DImage975 AGP	3dimage975	XF86_SVGA	trident	
Trident 3DImage985 (generic)	3dimage985	XF86_SVGA	trident	
Trident 8900/9000 (generic)	TVGA8900/9000	XF86_SVGA	vga	
Trident 8900D (generic)	TVGA8900D	XF86_SVGA	vga	
Trident 9910	CyberBladeXP	XF86_SVGA	trident	
Trident 9930	CyberBladeXPm	XF86_SVGA	trident	
Trident Blade3D (generic)	Blade3D	XF86_SVGA	trident	
Trident Cyber 9320 (generic)	Cyber9320	XF86_SVGA	trident	
Trident Cyber 9325 (generic)	Cyber9325	XF86_SVGA	trident	
Trident Cyber 9382 (generic)	Cyber9382	XF86_SVGA	trident	
Trident Cyber 9385 (generic)	Cyber9385	XF86_SVGA	trident	

Trident Cyber 9388 (generic)	Cyber9388	XF86_SVGA	trident	
Trident Cyber 9397 (generic)	Cyber9397	XF86_SVGA	trident	
Trident Cyber 939a (generic)	Cyber939a		trident	
Trident Cyber 9520 (generic)	Cyber9520		trident	
Trident Cyber 9525 (generic)	Cyber9525	XF86_SVGA	trident	
Trident CyberBlade (generic)	CyberBlade	XF86_SVGA	trident	
Trident CyberBladeXP	CyberBladeXP	XF86_SVGA	trident	
Trident CyberBladeXPm	CyberBladeXPm	XF86_SVGA	trident	
Trident Providia 9682 (generic)	Providia9682		trident	
Trident Providia 9685 (generic)	Providia9685		trident	
Trident TGUI9400CXi (generic)	TGUI9400CXi	XF86_SVGA	trident	
Trident TGUI9420 (generic)	TGUI9420		trident	
Trident TGUI9420DGi (generic)	TGUI9420DGi	XF86_SVGA	trident	
Trident TGUI9430DGi (generic)	TGUI9430DGi	XF86_SVGA	trident	
Trident TGUI9440 (generic)	TGUI9440	XF86_SVGA	trident	
Trident TGUI9660 (generic)	TGUI9660	XF86_SVGA	trident	
Trident TGUI9680 (generic)	TGUI9680	XF86_SVGA	trident	
Trident TGUI9682 (generic)	TGUI9682	XF86_SVGA	trident	
Trident TGUI9685 (generic)	TGUI9685	XF86_SVGA	trident	
Trident TVGA 8800BR	Generic VGA	XF86_VGA16	vga	
Trident TVGA 8800CS	Generic VGA	XF86_VGA16	vga	
Trident TVGA9200CXr (generic)	TVGA9200CXr	XF86_SVGA	vga	
Unsupported VGA compatible	Generic VGA	XF86_VGA16	vga	
VI720	CL−GD5434	XF86_SVGA	cirrus	
VL−41	S3 801/805	XF86_S3	vga	
VidTech FastMax P20	S3 864	XF86_S3	vga	
VideoExcel AGP 740	Intel 740	XF86_SVGA	i740	
VideoLogic GrafixStar 300	S3 Trio64	XF86_S3	vga	
VideoLogic GrafixStar 400	S3 Trio64V+	XF86_S3	vga	
VideoLogic GrafixStar 500	S3 868	XF86_S3	vga	
VideoLogic GrafixStar 550	CL−GD5464	XF86_SVGA	cirrus	
VideoLogic GrafixStar 560 (PCI/AGP)	CL−GD5465	XF86_SVGA	cirrus	
VideoLogic GrafixStar 600	ET6000	XF86_SVGA	tseng	
VideoLogic GrafixStar 700	S3 968	XF86_S3	vga	
ViewTop PCI	ET4000/W32(i/p)	XF86_SVGA	tseng	

ViewTop ZeusL 8MB	Intel 740	XF86_SVGA	i740	
Voodoo Banshee (generic)	Voodoo Banshee	XF86_SVGA	tdfx	
Voodoo Rush (generic)	Voodoo Rush	XF86_SVGA	tdfx	
Voodoo3 (generic)	Voodoo3	XF86_SVGA	tdfx	
Voodoo5 (generic)	Voodoo5		tdfx	
WD 90C24 (laptop)	WD90C24	XF86_SVGA	vga	
WD 90C24A or 90C24A2 (laptop)	WD90C24A	XF86_SVGA	vga	
Weitek P9100 (generic)	Weitek P9100	XF86_SVGA	vga	
WinFast S200	ET4000/W32(i/p)	XF86_SVGA	tseng	
WinFast S430	S3 968	XF86_S3	vga	
WinFast S510	S3 968	XF86_S3	vga	
Winfast S900 i740 AGP 8MB	Intel 740	XF86_SVGA	i740	
XGA−1 (ISA bus)	XGA−1	XF86_AGX	xga	
XGA−2 (ISA bus)	XGA−2	XF86_AGX	xga	

6.2. Commercial X servers

Commercial X servers provide support for cards not supported by XFree86, and might give better performances for cards that are supported by XFree86. Contact the vendors directly or check the Commercial HOWTO for more info.

- Xi Graphics (Accelerated−X)
- Metro Link (Metro−X)

6.3. Kernel Framebuffer (fbdev)

The kernel supports a graphical console on some video cards. This support was originally designed for non−x86 architectures which generally do not have text−capable video cards. It was integrated into the kernel in 2.2, and now supports various video cards.

More information can be found at linux−fbdev.org.

The following cards are supported:

- Amiga builtin chipset (amifb)
- ATARI builtin chipset (atafb)
- ATI Rage128 (aty128fb)
- ATI Mach64, RageII, RageII+, RageIIc (atyfb)
- Hercules Graphics Adaptor (hgafb)
- Matrox Millennium I, Millennium II, Mystique, G200 (matroxfb)

- PowerMAC "platinum" (platinumfb)
- S3 Savage4 (savagefb)
- 3Dfx Voodoo, Voodoo2, Voodoo3 (tdfxfb)
- S3 Trio64 (trio64fb)
- All VESA 2.0 cards (vesafb)

6.4. SVGALIB (graphics for console)

- VGA
- EGA
- ARK Logic ARK1000PV/2000PV
- ATI VGA Wonder
- ATI Mach32
- Cirrus 542x, 543x
- OAK OTI–037/67/77/87
- S3 (limited support)
- Trident TVGA8900/9000
- Tseng ET3000/ET4000/W32

7. Controllers (hard drive)

Enhanced IDE (EIDE) interfaces are supported, including support for UDMA and ATA/33, ATA/66, and so on for some controllers and compatible drives. Linux will detect these IDE interfaces:

- CMD−640 (Support for buggy interfaces in kernel 2.2)
- RZ1000 (Support for buggy interfaces in kernel 2.2)
- AEC62XX
- ALI M15x3
- AMD Viper
- CY82C693
- Cyrix CS5530 MediaGX
- HPT34X
- HPT366
- Intel PIIXn
- NS87415
- OPTi 82C621
- Promise PDC20246/PDC20262/PDC20267
- ServerWorks OSB4
- SiS5513
- SLC90E66
- Tekram TRM290
- VIA82CXXX
- DTC 2278D
- FGI/Holtek HT−6560B VLB (Support for secondary interface in kernel 2.2)
- Triton I (82371FB) (with busmaster DMA)
- Triton II (82371SB) (with busmaster DMA)
- ALI M14xx
- Promise DC4030
- QDI QD6580
- UMC 8672

Please see the IDE RAID controller section for information on IDE controllers with hardware RAID support.

Linux will work with standard IDE, MFM and RLL controllers. When using MFM/RLL controllers it is important to use ext2fs and the bad block checking options when formatting the disk.

ESDI controllers that emulate the ST−506 (MFM/RLL/IDE) interface will also work. The bad block checking comment also applies to these controllers.

Generic 8 bit XT controllers also work.

7.1. Alpha, Beta drivers

- UMC 8672 interfaces (experimental in kernel 2.2)
- Promise DC4030VL caching interface card (experimental support in kernel 2.2)

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8. Controllers (SCSI)

It is important to pick a SCSI controller carefully. Many cheap ISA SCSI controllers are designed to drive CD−ROM's rather than anything else. Such low−end SCSI controllers are no better than IDE. See the SCSI HOWTO and look at performance figures before buying a SCSI card.

Please see the SCSI RAID controller section for information on SCSI controllers with hardware RAID support.

8.1. Supported

- AMI Fast Disk (*VLB/EISA*) (BusLogic compatible)
- Adaptec AVA−1502E (*ISA/VLB*) (AIC−6360) (*AHA1520*)
- Adaptec AVA−1505/1515 (*ISA*) (Adaptec AHA−152x compatible)
- Adaptec AVA−1825 (*VLB*) (Adaptec AHA−152x compatible)

  This card has a SCSI, EIDE and floppy port which all work nicely.

- Adaptec AHA−1510/152x (*ISA/VLB*) (AIC−6260/6360)
- Adaptec AHA−154x (*ISA*) (all models)
- Adaptec AHA−174x (*EISA*) (in enhanced mode)
- Adaptec AHA−274x/274xT (*EISA*) (AIC−7771). The 274xT is supported since kernel series 2.1.x (*AHA2740*)
- Adaptec AHA−284x (*VLB*) (AIC−7770) (*AHA2740*)
- Adaptec AHA−2910B (*PCI*) (since kernel series 2.1.x)
- Adaptec AHA−2920 (*PCI*). Use the Future Domain driver. LILO parameters are needed when used for hard disks.
- Adaptec AHA−2920C (*PCI*)
- Adaptec AHA−2930/U/U2 (*PCI*)
- Adaptec AHA−2940/U/W/AU/UW/U2W/U2/U2B/U2BOEM (*PCI*) (AIC−7861, AIC−7871, AIC−7844, AIC−7881, AIC−7884). Some of these are only supported since kernel series 2.1.x (*AHA2740*)
- Adaptec AHA−2944D/WD/UD/UWD (*PCI*). Some of these are only supported since kernel series 2.1.x (*AHA2740*)
- Adaptec AHA−2950U2/U2B/U2W
- Adaptec AHA−3940/U/W/UW/AUW/U2W (*PCI*) (AIC−7872, AIC−7882) (since 1.3.6). Some of these are only supported since kernel series 2.1.x
- Adaptec AHA−3950U2B/U2D
- Adaptec AHA−3985U/W/UW (*PCI*) (AIC−7873, AIC−7883). Some of these are only supported since kernel series 2.1.x
- Adaptec *PCI* controllers with AIC−7850, AIC−7855, AIC−7860
- Adaptec on board controllers with AIC−777x (*EISA*), AIC−785x, AIC−786x, AIC−787x (*PCI*), AIC−788x (*PCI*), AIC−789x, AIC−3860. AIC−786x and AIC−789x are supported since kernel series 2.1.x
- AdvanSys ABP510/5150 Bus−Master (*ISA*)

  (more info)

- AdvanSys ABP5140 Bus−Master (*ISA*) PnP

  (more info)

- AdvanSys ABP5142 Bus−Master (*ISA*) PnP with floppy

  (more info)

- AdvanSys ABP920 Bus−Master (*PCI*)

  (more info)

- AdvanSys ABP930/U Bus−Master (*PCI/Ultra>*)

  (more info)

- AdvanSys ABP960/U Bus−Master (*PCI/ULTRA*) MAC/PC

  (more info)

- AdvanSys ABP542 Bus−Master (*ISA*) with floppy (single channel)

  (more info)

- AdvanSys ABP742 Bus−Master (*EISA*) (single channel)

  (more info)

- AdvanSys ABP842 Bus−Master (*VL*) (single channel)

  (more info)

- AdvanSys ABP940/U Bus−Master (*PCI/Ultra*) (single channel)

  (more info)

- AdvanSys ABP970/U Bus−Master (*PCI/Ultra*) MAC/PC (single channel)

  (more info)

- AdvanSys ABP752 Dual Channel Bus−Master (*EISA*) (dual channel)

  (more info)

- AdvanSys ABP852 Dual Channel Bus−Master (*VL*) (dual channel)

  (more info)

- AdvanSys ABP950 Dual Channel Bus−Master (*PCI*) (dual channel)

  (more info)

- Always IN2000
- AMD AM53C974
- BusLogic FlashPoint LT/DL/LW/DW (BT−930(R), BT−920, BT−932(R), BT−950(R), BT−952(R))

  (more info)

- Compaq Smart Array 2
- DPT PM2001, PM2012A (EATA−PIO)
- DPT Smartcache/SmartRAID Plus,III,IV families (*ISA/EISA/PCI*) (EATA−DMA)

  Take a look at this page for more information. Cards in these families are PM2011, PM2021, PM2041, PM3021, PM2012B, PM2022, PM2122, PM2322, PM2042, PM3122, PM3222, PM3332, PM2024, PM2124, PM2044, PM2144, PM3224, PM3334

- DTC 3180/3280
- DTC 329x (*EISA*) (Adaptec 154x compatible)
- Future Domain TMC−16x0, TMC−3260 (*PCI*)
- Future Domain TMC−8xx, TMC−950
- Future Domain chips TMC−1800, TMC−18C50, TMC−18C30, TMC−36C70
- ICP−Vortex PCI−SCSI Disk Array Controllers (many RAID levels supported) Patches for Linux 1.2.13 and 2.0.29 are available here. The controllers GDT6111RP, GDT6121RP, GDT6117RP, GDT6127RP, GDT6511RP, GDT6521RP, GDT6517RP, GDT6527RP, GDT6537RP and GDT6557RP are supported. You can also use pre−patch−2.0.31−4 to pre−patch−2.0.31−9.
- ICP−Vortex EISA−SCSI Controllers (many RAID levels supported) Patches for Linux 1.2.13 and 2.0.29 are available here. The controllers GDT3000B, GDT3000A, GDT3010A, GDT3020A and GDT3050A are supported. You can also use pre−patch−2.0.31−4 to pre−patch−2.0.31−9.
- Iomega PPA3 parallel port SCSI Host Bus Adapter embedded in ZIP drive
- Initio Corp. INI−9090U INI−9100, INI−9100W/A/UW, INI−9200U/UW, INI−9400U/UW, INI−9520U/UW, INI−A100U2W
- Initio Corp. INIC−950
- Media Vision Pro Audio Spectrum 16 SCSI (*ISA*)
- Mylex (formerly BusLogic) W Series (*PCI*) (BT−948, BT−958, BT−958D)
- Mylex (formerly BusLogic) C Series (*ISA/EISA/VLB/PCI*) (BT−946C, BT−956C, BT−956CD, BT−445, BT−747C, BT−757C, BT−757CD, BT−545C, BT−540CF)
- Mylex (formerly Buslogic) S Series (*ISA/EISA/VLB*) (BT−445S, BT−747S, BT−747D, BT−757S, BT−757D, BT−545S, BT−542D, BT−742A, BT−542B)
- Mylex (formerly BusLogic) A Series (*ISA/EISA*) (BT−742A, BT−542B)
- NCR 5380 generic cards
- NCR 53C400 (Trantor T130B) (use generic NCR 5380 SCSI support)
- NCR 53C406a (Acculogic ISApport / Media Vision Premium 3D SCSI)
- NCR chips 53C7x0 (the 53C710 is only supported in PCI variant)
- NCR chips 53C810(A), 53C815, 53C820, 53C825(A), 53C860, 53C875, 53C895 (53C895 supported 'on paper')
- Qlogic / Control Concepts SCSI/IDE (FAS408) (*ISA/VLB*)
- Qlogic FASXXX/FASXX family of chips (*ISA/VLB*)
- QLogic IQ−PCI, IQ−PCI−10, IQ−PCI−D (*PCI*) (ISP1020 chip)
- Quantum ISA−200S, ISA−250MG
- Seagate ST−01/ST−02 (*ISA*)
- SIIG Ultrawide SCSI Pro (Initio chipset).
- SoundBlaster 16 SCSI−2 (Adaptec 152x compatible) (*ISA*)
- Tekram DC−390, DC−390W/U/F

- Trantor T128/T128F/T228 (*ISA*)
- UltraStor 14F (*ISA*), 24F (*EISA*), 34F (*VLB*)
- Western Digital WD7000 SCSI

8.2. Alpha, Beta drivers

- AMD AM79C974 (*PCI*) (Compaq, HP, Zeos onboard SCSI)

  (driver)

- Adaptec ACB−40xx SCSI−MFM/RLL bridgeboard

  (driver)

- Always Technologies AL−500

  (driver)

- Iomega PC2/2B

  (driver)

- Ricoh GSI−8

  (driver)

8.3. Unsupported

- Adaptec AHA 2940UW Pro
- Adaptec AAA−13x RAID Adapters
- Adaptec AAA−113x Raid Port Cards
- Adaptec AIC−7810
- NCR chip 53C710 (*ISA*) (old obsolete chip, but still used in some Compaq models)
- Non Adaptec compatible DTC boards (327x, 328x)

9. SCSI RAID Controllers

This is by no means a complete list. This section will be updated in a future revision of this document.

- Mylex RAID controllers

  More information can be found here.

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10. IDE RAID Controllers

- Tekram D690CD IDE PCI Cache Controller (with RAID level 1 Mirroring and caching)
- ARCO Inc. DupliDisk IDE disk mirroring controller

  Support for ATA, IDE, E−IDE and UDMA drive. Controllers available can be plugged into ISA and PCI slots, and directly into the IDE controller. Furthermore, 3.5−inch and 5.25−inch Bay Mount units are available that fit into the respective drive bays. More information at Arco's web site. Make sure you have at least rev 3.00 of the firmware.

- 3ware Escalade IDE RAID controllers

  3ware's 5000−series and 6000−series controllers have been supported since kernel 2.2.15. Support for the 7000−series controllers and RAID5 on the 6000−series controllers requires kernel 2.4.5 or 2.2.20 or better. Also make sure to use a recent firmware for RAID 5, since older firmware revisions (and older versions of the driver) can cause data corruption when a RAID 5 array runs degraded.

- Adaptec ATA RAID 2400A

  4−port ATA/100 controller which supports RAID 0, RAID 1, RAID 1+0, and RAID 5. Use the dpt_i2o driver, which is included in recent 2.4.x kernels.

- Promise SuperTRAK SX6000

  6−port ATA/100 controller which supports RAID 0, RAID 1, RAID 1+0, RAID 3, and RAID 5. Use the pti_st driver or the generic i2o drivers. Be sure to set the BIOS on the card for "Other OS" instead of "Linux", and check for firmware updates.

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11. Controllers (I/O)

Any standard serial/parallel/joystick/combo cards. Linux supports 8250, 16450, 16550, and 16550A UART's. Cards that support non−standard IRQ's (IRQ > 9) can be used.

See National Semiconductor's ``Application Note AN−493'' by Martin S. Michael. Section 5.0 describes in detail the differences between the NS16550 and NS16550A. Briefly, the NS16550 had bugs in the FIFO circuits, but the NS16550A (and later) chips fixed those. However, there were very few NS16550's produced by National, long ago, so these should be very rare. And many of the ``16550'' parts in actual modern boards are from the many manufacturers of compatible parts, which may not use the National ``A'' suffix. Also, some multiport boards will use 16552 or 16554 or various other multiport or multifunction chips from National or other suppliers (generally in a dense package soldered to the board, not a 40 pin DIP). Mostly, don't worry about it unless you encounter a very old 40 pin DIP National ``NS16550'' (no A) chip loose or in an old board, in which case treat it as a 16450 (no FIFO) rather than a 16550A. − Zhahai Stewart < zstewart@hisys.com>

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12. Controllers (multiport)

12.1. Non−intelligent cards

12.1.1. Supported

- AST FourPort and clones (4 port)
- Accent Async−4 (4 port)
- Arnet Multiport−8 (8 port)
- Bell Technologies HUB6 (6 port)
- Boca BB−1004, 1008 (4, 8 port) − no DTR, DSR, and CD
- Boca BB−2016 (16 port)
- Boca IO/AT66 (6 port)
- Boca IO 2by4 (4 serial / 2 parallel, uses 5 IRQ's)
- Computone ValuePort (4, 6, 8 port) (AST FourPort compatible)
- DigiBoard PC/X, PC/Xem, PCI/Xem, EISA/Xem, PCI/Xr (4, 8, 16 port)
- Comtrol Hostess 550 (4, 8 port)
- PC−COMM 4−port (4 port)
- SIIG I/O Expander 4S (4 port, uses 4 IRQ's)
- STB 4−COM (4 port)
- Twincom ACI/550
- Usenet Serial Board II (4 port)

Non−intelligent cards usually come in two varieties, one using standard com port addresses and use 4 IRQ's, and another that's AST FourPort compatible and uses a selectable block of addresses and a single IRQ. (Addresses and IRQ's are set using `setserial`.) If you're getting one of these cards, be sure to check which standard it conforms to, prices are no indication.

12.2. Intelligent cards

12.2.1. Supported

- Computone IntelliPort II (4/8/16 port)

  (driver)

- Cyclades Cyclom−Y (RISC−based, 8−32 ports) (*ISA/PCI*)

  (driver)

- Cyclades−Z (high−end, 16−64 ports) (*PCI*)

  (driver)

- DigiBoard PC/Xe (*ISA*), PC/Xi (*EISA*) and PC/Xeve

  (driver)

- Equinox SST Intelligent serial I/O cards

  (driver)

- Hayes ESP 1, 2 and 8 port versions Included in kernel since 2.1.15. The driver for kernel versions 2.0.x can be found at (driver)
- Stallion EasyIO (*ISA*) / EasyConnection 8/32 (*ISA/MCA*) / EasyConnection 8/64 (*PCI*) For DIP switch settings and configuration files check (driver)
- Stallion EasyConnection 8/64 (*ISA/EISA*) / ONboard (*ISA/EISA/MCA*) / Brumby (*ISA*) The latest driver can be found at (driver)

12.2.2. Alpha, Beta drivers

- Comtrol RocketPort (8/16/32 port)

  (driver) (kernels 1.2.x). A driver for kernels 2.x can be found at (driver)

- DigiBoard COM/Xi Contact Simon Park (si@wimpol.demon.co.uk) or Mark Hatle (fray@krypton.mankato.msus.edu). NOTE: both email addresses seem not to exist any longer.
- Moxa C102, C104, C168, C218 (8 port), C320 (8/16/24/32 expandable) and C320T

  (driver)

- RISCom/8
- Specialix SIO/XIO (modular, 4 to 32 ports)

  (driver)

- Specialix IO8+ Contact

  devices@BitWizard.nl

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13. Network adapters

13.1. Supported

13.1.1. Ethernet

Ethernet adapters vary greatly in performance. In general the newer the design the better. Some very old cards like the 3Com 3c501 are only useful because they can be found in junk heaps for $5 a time. Be careful with clones, not all are good clones and bad clones often cause erratic lockups under Linux. Read the Ethernet HOWTO for detailed descriptions of various cards.

For ethernet cards with the DECchip DC21x4x family the "Tulip" driver is available. More information on this driver can be found at Donald Becker's site.

- 3Com 3c501 – "avoid like the plague" (3c501 driver)
- 3Com 3c503 (3c503 driver), 3c505 (3c505 driver), 3c507 (3c507 driver), 3c509/3c509B (*ISA*) / 3c579 (*EISA*)
- 3Com Etherlink III Vortex Ethercards (3c590, 3c592, 3c595, 3c597) (*PCI*), 3Com Etherlink XL Boomerang (3c900, 3c905) (*PCI*) and Cyclone (3c905B, 3c980) Ethercards (3c59x driver) and 3Com Fast EtherLink Ethercard (3c515) (*ISA*) (3c515 driver) Newer versions of this drivers are available at Donald Becker's site Avoid the 3c900 card when possible as the driver is not functioning well for this card.
- 3Com 3ccfe575 Cyclone Cardbus (3c59x driver)
- 3Com 3c575 series Cardbus (3c59x driver) (ALL PCMCIA ??)
- AMD LANCE (79C960) / PCnet–ISA/PCI (AT1500, HP J2405A, NE1500/NE2100)
- AT&T GIS WaveLAN
- Allied Telesis AT1700
- Allied Telesis LA100PCI–T
- Allied Telesyn AT2400T/BT ("ne" module)
- Ansel Communications AC3200 (*EISA*)
- Apricot Xen–II / 82596
- Cabletron E21xx
- Cogent EM110
- Crystal Lan CS8920, Cs8900 (driver)
- Danpex EN–9400
- DEC DE425 (*EISA*) / DE434/DE435 (*PCI*) / DE450/DE500 (DE4x5 driver)
- DEC DE450/DE500–XA (dc21x4x) (Tulip driver)
- DEC DEPCA and EtherWORKS
- DEC EtherWORKS 3 (DE203, DE204, DE205)
- DEC QSilver's (Tulip driver)
- Digi International RightSwitch
- DLink DE–220P, DE–528CT, DE–530+, DFE–500TX, DFE–530TX
- Fujitsu FMV–181/182/183/184
- HP PCLAN (27245 and 27xxx series)
- HP PCLAN PLUS (27247B and 27252A)
- HP 10/100VG PCLAN (J2577, J2573, 27248B, J2585) (*ISA/EISA/PCI*) Driver here, more information at Donald Becker's site
- ICL EtherTeam 16i / 32 (*EISA*)
- Intel EtherExpress

- Intel EtherExpress Pro
- KTI ET16/P−D2, ET16/P−DC ISA (work jumperless and with hardware−configuration options)
- Macromate MN−220P (PnP or NE2000 mode)
- NCR WaveLAN
- NE2000/NE1000 (be careful with clones)
- Netgear FA−310TX (Tulip chip)
- New Media Ethernet
- PureData PDUC8028, PDI8023
- SEEQ 8005
- SMC Ultra / EtherEZ (*ISA*)
- SMC 9000 series
- SMC PCI EtherPower 10/100 (Tulip driver)
- SMC EtherPower II (epic100.c driver)
- Sun LANCE adapters (kernel 2.2 and newer)
- Sun Intel adapters (kernel 2.2 and newer)
- Schneider & Koch G16
- Western Digital WD80x3
- Zenith Z−Note / IBM ThinkPad 300 built−in adapter
- Znyx 312 etherarray (Tulip driver)

13.1.2. ISDN

- ISDN for Linux WWW page
- ISDN4Linux tools are available from here.

- 3Com Sonix Arpeggio (driver)
- ASUSCOM Network Inc. ISDNLink 128K PC adapter (HiSax)
- AVM A1 (HiSax)
- AVM B1 (avmb1)
- Combinet EVERYWARE 1000 ISDN (driver)
- Compaq ISDN S0 (*ISA*) (HiSax)
- Creatix PnP S0 (HiSax)
- Dr. Neuhaus Niccy PnP/PCI (HiSax)
- Dynalink IS64PH (HiSax)
- Eicon.Diehl Diva 2.0 (*ISA/PCI*) (S0 and U interface, no PRO version) (HiSax)
- Eicon.Diehl Diva Piccola (HiSax)
- Elsa Microlink PCC−16, PCF, PCF−Pro, PCC−8 (HiSax)
- ELSA QuickStep 1000/1000PCI/3000 (HiSax)
- HFC−2BS0 based cards (HiSax)
- IBM Active 2000 (*ISA*) (act2000)
- ICN ISDN cards (icn)
- Ith Kommunikationstechnik GmbH MIC 16 (ISA) (HiSax)
- ITK ix1−micro Rev.2 (HiSax)
- Octal PCBIT (pcbit)
- Sedlbauer Speed Card (HiSax)
- Teles SO−8/SO−16.0/SO−16.3/SO−16.3c/SO−16.4 and compatible ones (HiSax)
- Traverse Technologie NETjet PCI S0 (HiSax)
- USR Sportster internal TA (HiSax)

ISDN cards that emulate standard modems or common Ethernet adapters don't need any special drivers to

work.

13.1.3. WAN Cards

Manufacturer	Model name	Bus	Driver	Notes
Cyclades	PC300/RSV	PCI		1 or 2 ports, RS−232 and V.35
Cyclades	PC300/X21	PCI		1 or 2 ports, X.21
Cyclades	PC300/TE	PCI		1 or 2 ports, T1 and E1
Emerging Technologies Inc.	ET/5025	ISA		1 port, 8−bit
Emerging Technologies Inc.	ET/5025+16	ISA		1 port, 16−bit
Emerging Technologies Inc.	ET/5025+2S	ISA		2 port, 16−bit
Emerging Technologies Inc.	ET/5025PCI	PCI		4 port
FarSite Communications	FarSync X21 T2P/WAN T2P	PCI		2 port
FarSite Communications	FarSync X21 T4P/WAN T4P	PCI		4 port
ImageStream	WANic 520	PCI	See ImageStream web site	1 or 2 synchronous serial, T1, or E1 ports
ImageStream	WANic 600	PCI	See ImageStream web site	4 or 8 synchronous serial, T1, or E1 ports
ImageStream	WANic 720	PCI	See ImageStream web site	1 or 2 HSSI, DS3, or E3 ports with i960 co−processor
ImageStream	WANic 800	PCI	See ImageStream	1 or 2 HSSI, DS3, or E3

			web site	ports
ImageStream	WANic 1000	PCI	See ImageStream web site	1 ATM DS3/E3, single mode OC3, or multimode OC3
ImageStream	Aries 500	CompactPCI	See ImageStream web site	1 or 2 asynchronous serial ports
ImageStream	Aries 600	CompactPCI	See ImageStream web site	4 or 8 asynchronous serial, T1, or E1
ImageStream	Aries 720	CompactPCI	See ImageStream web site	1 or 2 HSSI, DS3, or E3 ports with i960 co−processor
ImageStream	Aries 800	CompactPCI	See ImageStream web site	1 or 2 HSSI, DS3, or E3 ports
ImageStream	Maxim 520	PCI Mezzanine Card (PMC)	See ImageStream web site	1, 2, or 4 asynchronous serial, T1, or E1 ports
ImageStream	Maxim 600	PCI Mezzanine Card (PMC)	See ImageStream web site	4 asynchronous serial + 4 T1 or E1 ports
ImageStream	Maxim 800	PCI Mezzanine Card (PMC)	See ImageStream web site	1 or 2 HSSI ports
ImageStream	Maxim 1000	PCI Mezzanine Card (PMC)	See ImageStream web site	1 ATM DS3/E3, single mode OC3, or multimode OC3
ImageStream	ATM/OC12	PCI Mezzanine Card (PMC)	See ImageStream web site	1 ATM OC12 port (32/64−bit PMC)

Sangoma	S514/FT	PCI	Wanpipe	1.54Mbps (T1). The card can be configured to support from 64kbps to 1.54Mbps.
Sangoma	S5141	PCI	Wanpipe	RS232/V.35/X.21on dual ports. Main port is 4Mpbs, secondary is 512kbps.
Sangoma	S5142	PCI	Wanpipe	RS232/V.35/X.21on four ports. Main ports are 4Mpbs, secondaries are 512kbps. Functionally identical to two separate S5141 cards.
Sangoma	S508/FT	ISA	Wanpipe	1.54Mbps (T1). The card can be configured to support from 64kbps to 1.54Mbps.
Sangoma	S508	ISA	Wanpipe	4Mbps, RS232/V.35/X.21
Sangoma	S503	ISA	Wanpipe	64kbps, RS232/V.35/X.21
Sangoma	S502	ISA	Wanpipe	obsolete card

13.1.4. Wireless

- ZCOM WL2420 ISA Product information can be found here. Object file kernel drivers are available here.

13.1.5. Frame Relay, X.25, Synchronous PPP, Cisco HDLC

See WAN cards section.

13.1.6. Pocket and portable adapters

- For more information on Linux and use of the parallel port, go to the Linux Parallel Port Home Page (alternate location). Check Appendix C for a complete list of supported parallel port devices (excluding printers).

13.1.7. Slotless

- SLIP/CSLIP/PPP (serial port)
- EQL (serial IP load balancing)
- PLIP (parallel port) – using ``LapLink cable'' or bi–directional cable

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13.1.8. ARCnet

- Works with all ARCnet cards

13.1.9. TokenRing

Take a look at the token ring web site here.

- 3Com 3C619/B/C Tokenlink 16/4 (ibmtr)
- 3Com 3C319 Velocity ISA (ibmtr)
- IBM PCI token ring adapter
- IBM Wake on Lan TR adapter
- IBM 16/4 TR PCI Adapter 2, Adapter 2 Wake on Lan, Adapter 2 Wake on Lan Special
- IBM High Speedd 100/16/4 token ring
- IBM ISA 16/4, MCA 16/4 (ibmtr)
- IBM Tropic chipset cards
- Olicom RapidFire 3139, 3140, 3141, 3540 (more info)
- Olicom OC–3136, OC–3137, OC–3138, OC–3129 (more info)
- Madge Smart 100/16/4 PCI, 16/4 PCI Mk3, 16/4 PCI Mk2 (more info)
- Madge Presto PCI, 16/4 CardBus (more info)
- Syskonnect TR4/16(+) SK–4190 ISA, SK–4590 PCI, SK–4591 PCI (sktr)

13.1.10. FDDI

- DEC DEFEA (*EISA*) / DEFPA (*PCI*) (kernel 2.0.24 and later)

13.1.11. Amateur radio (AX.25)

- Gracilis PackeTwin
- Ottawa PI/PI2
- Most generic 8530 based HDLC boards

13.1.12. PCMCIA cards

- See Appendix B for complete list or the webpages of David Hinds here.

13.2. Alpha, Beta drivers

13.2.1. Ethernet

- Racal−Interlan NI5210 (i82586 Ethernet chip). Improved support in kernel 2.2 and newer
- Racal−Interlan NI6510 (am7990 lance chip). Starting with kernel 1.3.66 more than 16Mb Ram is supported.
- Racal−Interlan PCI card (AMD PC net chip 97c970)??

13.2.2. ISDN

- SpellCaster's Datacomute/BRI, Telecomute/BRI (*ISA*) (sc)

13.2.3. ATM

- Efficient Networks ENI155P−MF 155 Mbps ATM adapter (*PCI*) (driver)

13.2.4. Wireless

- Proxim RangeLan2 7100 (*ISA*) / 630x (OEM *mini−ISA*) (driver)

13.3. Unsupported

- 3Com 3C359 Velocity XL PCI
- 3Com 3C339 Velocity PCI
- IBM PCI LANStreamer, MCA LANStreamer token ring
- Intel TokenExpress PRO, TokenExpress 16/4
- Sysconnect / Schneider & Koch Token Ring cards (all of them)

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14. Sound cards

More information on sound drivers and sound cards can be found on Alan Cox's OSS page, ALSA, and the Linux Sound HOWTO.

14.1. Supported

- 4Front Technology Virtual Mixer (includes SoftOSS)
- 4Front Technology Virtual Synth (SoftOSS)
- 6850 UART MIDI
- A−Plus Sound of Music (OPL3−SA)
- A−Trend Harmony 3Ds751 (*PCI*)
- AcerMagic S23
- Adlib FM synthesizer card
- Adlib MSC 16 PnP (CS4235)
- AMD Interwave reference card
- ARC Probook
- Audio Excell DSP16
- Avance Logic ALS−007 chip based cards. Code for this chip is integrated in the Sound Blaster 16 driver. Isapnptools should be used for configuration.
- AW32 Pro (R2.2−W2)
- AW35 (CS4237)
- AW37 Pro (CS4235)
- Aztech Sound Galaxy NX Pro, NX Pro 16, WaveRider 32+
- Aztech Washington
- BTC Mozart Sound System
- BTC−1831 Sound Card (Opti 1688)
- Bravo Sound Card (Opti 82C930)
- Bull PowerPc builtin audio
- CDR4235−6/−8
- CS32−3DI
- Compaq Deskpro XL integrated Business Audio
- Creative EMU8000 add on (PnP)
- Creative Phone Blaster 28.8/33.6
- Creative Sound Blaster 1.0 to 2.0
- Creative Sound Blaster Pro
- Creative Sound Blaster 16
- Creative Sound Blaster 16 ASP
- Creative Sound Blaster 16 PnP (type−1 up to type−10)
- Creative Sound Blaster 16 Vibra
- Creative Sound Blaster 2.x
- Creative Sound Blaster 32/AWE
- Creative Sound Blaster 32/AWE PnP (type−1 up to type−10)
- Creative Sound Blaster AWE64 (type−1 up to type−7)
- Creative Sound Blaster AWE64 Gold (type−1 and type−2)
- Creative Sound Blaster PCI64/128
- Creative Sound Blaster AWE64/Gold and 16/32/AWE PnP cards need to be activated using isapnptools

- Creative ViBRA16C/CL/S (type−1 and type−2) PnP
- Creative ViBRA16X PnP (half duplex only)
- CrystaLake Crystal Clear Series 100
- Crystal Audio (CS4235)
- Crystal CRD4236B−1E
- Crystal CRD4237B−5/−8
- Crystal CSC0B35 (CS4236B)
- Crystal CX4237B−SIDE
- Crystal Onboard PnP Audio (CS4235)
- Dell Latidude builtin audio
- Diamond Crystal MM PC/104
- Digital AXP builtin audio
- ECHO−PSS cards (Orchid SoundWave32, Cardinal DSP16)
- ESS 1868, 1869 (type−1 and type−2), 1878, 1879, 1968 PnP AudioDrive
- Ensoniq AudioPCI (ES1371)
- Ensoniq AudioPCI / SoundBlaster PCI (ES1370)
- Ensoniq Soundscape Elite
- Ensoniq Soundscape PnP (model 1 and 2)
- Ensoniq Soundscape S−2000
- Ensoniq Soundscape VIVO, VIVO90
- Ensoniq ActionNote 880 C/CX
- Gallant's sound card (SC−6000 and SC−66000 based)
- Generic AD1815 based soundcard (PnP)
- Generic CMI8330 based soundcard (PnP)
- Generic Crystal CS4232 based soundcard or motherboard (non PnP)
- Generic Crystal CS4232 by Acer (PnP mode)
- Generic Crystal CS4232 type−1 up to type−3 (PnP mode)
- Generic Crystal CS4235 type−1
- Generic Crystal CS4236 (type−1 up to type−3)
- Generic Crystal CS4236 based soundcard or motherboard (non PnP)
- Generic Crystal CS4236A (type−1 and type−2), CS4236B
- Generic Crystal CS4237 based soundcard or motherboard (non PnP)
- Generic Crystal CS4237B (type−1 and type−2)
- Generic Crystal CS4238 based soundcard or motherboard (non PnP)
- Generic ESS ES688, ES1688, ES1788, ES1868, ES1869, ES1887, ES1888 based soundcard or motherboard
- Generic Jazz16 based soundcard
- Generic MAD16 (OPTi 82C928), MAD16 Pro, MAD16 Pro (duplex) (OPTi 82C929)
- Generic Mozart soundcard (OAK OTI−601 chip)
- Generic OPTi 82C924, 82C925 based sound card (PnP)
- Generic OPTi 82C924 soundcard (non PnP mode). Use the MSS driver and the isapnp tools
- Generic OPTi 82C930
- Generic OPTi 82C931 (more info)
- Generic Soundscape based soundcard
- Generic Windows Sound System compatible
- Generic Yamaha OPL3−SA1 (YMF701) based soundcard
- Generic Yamaha OPL3−SA2 (YMF711) based soundcard (type−1, type−3, type−4)
- Generic Yamaha OPL3−SA3 (YMF715) based soundcard
- Generic Yamaha OPL3−SAx (YMF715/YMF719) non−PnP
- Gravis Ultrasound
- Gravis Ultrasound Extreme

- Gravis Ultrasound 16−bit sampling daughterboard
- Gravis Ultrasound MAX
- Gravis Ultrasound ACE
- Gravis Ultrasound PnP (with RAM), PnP Pro
- HP OmniBook 2100 (CS4236)
- Home Studio 64 (analog audio only)
- IBM Audio Feature (CS423x)
- Logitech SoundMan Games (SBPro, 44kHz stereo support)
- Logitech SoundMan Wave (Jazz16/OPL4)
- Logitech SoundMan 16 (PAS−16 compatible)
- MED3201 audio card
- Maxi Sound 32 PnP (analog audio only)
- Maxi Sound 64 Dynamic 3D (analog audio only)
- Media Sound SW/32 (non PnP mode)
- MediaTriX AudioTriX Pro, 3D XG
- Media Vision Premium 3D (Jazz16)
- Media Vision Pro Sonic 16 (Jazz)
- Media Vision Pro Audio Spectrum 16 (PAS−16)
- Media Vision Pro Audio Studio 16
- Media Vision Thunderboard
- Microsoft Windows Sound System board (AD1848)
- MiroSound PCM!−pro
- MultiWave AudioWave Green 16
- Music Quest MIDI connector card (MCC)
- Music Quest MQX−16, MQX−16S MIDI adapter
- Music Quest MQX−32, MQX−32M MIDI adapter
- Music Quest PC MIDI card
- NEC Harmony
- Orchid SoundDrive 16EZ
- Pine PT201
- Primax SoundStorm FM 16, SoundStorm Wave
- Pro Audio Spectrum 16, Studio 16
- RME Digi32, Digi32 Pro, Digi32/8
- Reveal SC300
- Reveal WaveExtreme Pro (with RAM)
- Roland MPU IPC−T MIDI adapter
- S3 SonicVibes
- Shark Mako
- Sharp PC8800
- Shuttle Sound System 48
- Spacewalker HOT−255 PCI 3D (*PCI*)
- TerraTec Maestro 32/96
- Terratec EWS64XL (audio only)
- Terratec Sound System Base 1 (AD1816)
- Terratec Sound System Base 64 (AD1816)
- Tomato Sound System (OPTi 82C930)
- Trust Sound Expert De Luxe Wave 32
- Turtle Beach Classic/Tahiti/Monterey
- Turtle Beach Maui
- Turtle Beach Monte Carlo 928, Monte Carlo 929
- Turtle Beach Pinnacle/Fiji

- Turtle Beach Tropez, Tropez Plus (audio only)
- Turtle Beach Daytona (audio only)
- Wearnes Classic 16
- Yamaha Sound Edge SW20−PC
- Zefiro Acoustics ZA2 (NOT RECOMMENDED)
- Zenith Z−Player

- AWE32/64 supports is started in kernel series 2.1.x (check the SoundBlaster AWE mini−HOWTO by Marcus Brinkmann for installation details)
- MPU−401 MIDI Intelligent mode (don't enable blindly)

    - MPU IPC−T
    - MQX−32M
- MPU−401 MIDI UART only dumb port (don't enable blindly)
- Yamaha FM synthesizers (OPL2, OPL3, OPL3−SAx (since kernel series 2.1.x) and OPL4)

OSS supports all MIDI daughter cards including Wave Blaster, TB Rio and Yamaha DB50XG. The only requirement is that the "host" card is supported by OSS. Note that only the "host" card needs to be configured using soundconf. The daughter card will be automatically accessible through the MIDI of the "host" card.

14.2. Alpha, Beta drivers

- 4Front Tech. Waveloop loopback audio device
- Acer FX−3D (AD1816 based)
- AVM Apex Pro card (AD1816 based)
- Aztech AZT1008, AZT2320, AZT3000
- Aztech SC−16 3D (AD1816 based)
- Creative Sound Blaster Vibra16x
- Creative Sound Blaster Live! and Live! Value Edition Creative Labs has beta driver for this card. They work with kernels 2.0.36 and 2.2.5 (and most probably newer kernels in these series). The drivers can be downloaded under the software download area at Creative's web site.
- Highscreen Sound−Boostar 32 Wave 3D (AD1816 based)
- Highscreen Sound−Boostar 16 (AD1816 based)
- HP Kayak (AD1816 based)
- IBM MWave
- Newcom SC−16 3D (AD1816 based)
- PC speaker / Parallel port DAC (driver)
- Rockwell WaveArtist chipset
- Sonorus STUDI/O
- SY−1816 (AD1816 based)
- Terratec Base 1, Base 64 (AD1816 based)
- Terratec EWS64S (AD1816 based)
- Turtle Beach Malibu (driver)

For the AD1816 sound chip based sound cards isapnptools is needed for configuration.

14.3. Unsupported

Please note that this section has not been updated recently. It is most likely incorrect.

- A−Trend Harmony 3DS724 (*PCI*)
- Actech PCI 388−A3D q
- Adaptec AME−1570
- Aureal Vortex (*PCI*)
- Cardinal DSP 16
- Contributed lowlevel drivers
- Crystal CS4614 (*PCI*)
- Cyrix MediaGX builtin audio
- Diamond Monster Sound MX300
- Diamond Sonic Impact
- Dream 94PnP Home Studio
- EON Bach SP901 (A3D)
- ESS (*PCI*)
- ESS Maestro−1 (*PCI*), Maestro−2 (*PCI*)
- ESS Solo−1 (*PCI*)
- Echo Personal Sound System
- Generic ALS007, ALS100 based soundcard
- Orchid NuSound 3D
- Orchid SoundWave 32
- Paradise DSP−16
- Quicknet Internet LineJACK
- Terratec XLerate (A3D)
- Turtle Beach Montego
- Turtle Beach TBS−2000
- Videologic SonicStorm
- Wearnes Beethoven ADSP−16
- Western Digital Paradise DSP−16
- Yamaha YMF724 (*PCI*)

The ASP chip on Sound Blaster 16 series is not supported. AWE32's onboard E−mu MIDI synthesizer is not supported.

Nathan Laredo < laredo@gnu.ai.mit.edu> is willing to write AWE32 drivers if you send him a complimentary card. He is also willing to write drivers for almost any hardware if you send him free samples of your hardware.

Sound Blaster 16's with DSP 4.11 and 4.12 have a hardware bug that causes hung/stuck notes when playing MIDI and digital audio at the same time. The problem can happen with either Wave Blaster daughterboards or MIDI devices attached to the MIDI port. There is no known fix.

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15. Hard drives

All hard drives should work if the controller is supported.

(From the SCSI HOWTO) All direct access SCSI devices with a block size of 256, 512, or 1024 bytes should work. Other block sizes will not work (Note that this can often be fixed by changing the block and/or sector sizes using the MODE SELECT SCSI command).

Large IDE (EIDE) drives work fine with newer kernels. The boot partition must lie in the first 1024 cylinders due to PC BIOS limitations.

Some Conner CFP1060S drives may have problems with Linux and ext2fs. The symptoms are inode errors during `e2fsck` and corrupt file systems. Conner has released a firmware upgrade to fix this problem, contact Conner at 1−800−4CONNER (US) or +44−1294−315333 (Europe). Have the microcode version (found on the drive label, 9WA1.6x) handy when you call.

Many Maxtor and Western Digital IDE drives are reported to not happily co−exist on the same IDE cable with the other manufacturers drive. Usually one of the drives will fail during operation. Solution is to put them on different IDE cables.

Certain Micropolis drives have problems with Adaptec and BusLogic cards, contact the drive manufacturers for firmware upgrades if you suspect problems.

- Multiple device driver (RAID−0, RAID−1) (driver)

15.1. Unsupported

The following hard drives are mentioned as not supported by Linux. Read the bug report available.

- NEC D3817, D3825, D3827, D3847 "These drives are slightly non−SCSI−2 compliant in the values reported in Mode Sense Page 3. In Mode Sense Page 3 all NEC D38x7 drives report their sector size as zero. The NEC drives are the first brand of drive we have ever encountered that reported the sector size as zero. Unfortunately, that field in Mode Sense Page 3 is not modifiable and there is no way to update the firmware on the D38x7 drives to correct this problem." Problems are mentioned for D3825 and D3827 (both revision 0407). Revision 0410 of these two hard drives seems to solve this problem.

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16. Tape drives

16.1. Supported

- SCSI tape drives (From the SCSI HOWTO) Drives using both fixed and variable length blocks smaller than the driver buffer length (set to 32k in the distribution sources) are supported. Virtually all drives should work. (Send mail if you know of any incompatible drives.)
    - ♦ Seagate Sidewinder 50 AIT (on ICP 6527 RAID−controller)
- QIC−02 drives
- Iomega Ditto internal (ftape 3.04c and newer)

16.2. Alpha, Beta drivers

- QIC−117, QIC−40/80, QIC−3010/3020 (QIC−WIDE) drives Most tape drives using the floppy controller should work. Various dedicated controllers (Colorado FC−10/FC−20, Mountain Mach−2, Iomega Tape Controller II) are also supported here
- ATAPI tape drives For these an alpha driver (ide−tape.c) is available in the kernel. ATAPI tape drives supported are
    - ♦ Seagate TapeStor 8000
    - ♦ Conner CTMA 4000 IDE ATAPI Streaming tape drive

16.3. Unsupported

- Emerald and Tecmar QIC−02 tape controller cards – Chris Ulrich < insom@math.ucr.edu >
- Drives that connect to the parallel port (eg: Colorado Trakker)
- Some high speed tape controllers (Colorado TC−15)
- Irwin AX250L/Accutrak 250 (not QIC−80)
- IBM Internal Tape Backup Unit (not QIC−80)
- COREtape Light

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17. CD−ROM drives

For more information on CD−ROM drives check the CDROM−HOWTO.

17.1. Supported

Common CD−ROM drives

- SCSI CD−ROM drives (From the CD−ROM HOWTO) Any SCSI CD−ROM drive with a block size of 512 or 2048 bytes should work under Linux; this includes the vast majority of CD−ROM drives on the market.
- EIDE (ATAPI) CD−ROM drives (IDECD) Almost all double, quad and six speed drives are supported, including

    - Mitsumi FX400
    - Nec−260
    - Sony 55E

Proprietary CD−ROM drives

- Aztech CDA268−01A, Orchid CDS−3110, Okano/Wearnes CDD−110, Conrad TXC, CyCDROM CR520ie/CR540ie/CR940ie (AZTCD)
- Creative Labs CD−200(F) (SBPCD)
- Funai E2550UA/MK4015 (SBPCD)
- GoldStar R420 (GSCD)
- IBM External ISA (SBPCD)
- Kotobuki (SBPCD)
- Lasermate CR328A (OPTCD)
- LMS Philips CM 206 (CM206)
- Longshine LCS−7260 (SBPCD)
- Matsushita/Panasonic CR−521/522/523/562/563 (SBPCD)
- MicroSolutions Backpack parallel portdrive (BPCD)
- Mitsumi CR DC LU05S (MCD/MCDX)
- Mitsumi FX001D/F (MCD/MCDX)
- Optics Storage Dolphin 8000AT (OPTCD)
- Sanyo CDR−H94A (SJCD)
- Sony CDU31A/CDU33A (CDU31A)
- Sony CDU−510/CDU−515 (SOMYCD535)
- Sony CDU−535/CDU−531 (SONYCD535)
- Teac CD−55A SuperQuad (SBPCD)

17.2. Alpha, Beta drivers

- LMS/Philips CM 205/225/202 here
- NEC CDR−35D (old) here
- Sony SCSI multisession CD−XA here

- Parallel Port Driver here

17.3. Notes

All CD−ROM drives should work similarly for reading data. There are various compatibility problems with audio CD playing utilities. (Especially with newer low−end NEC drives.) Some alpha drivers may not have audio support yet.

Early (single speed) NEC CD−ROM drives may have trouble with currently available SCSI controllers.

PhotoCD (XA) is supported. The hpcdtoppm program by Hadmut Danisch converts PhotoCD files to the portable pixmap format. The program can be obtained from here or as part of the PBM utilities.

Also, reading video CD is supported in kernel series 2.1.3x and later. A patch is available for kernel 2.0.30.

Finally, most IDE CD−ROM Changers are supported.

18. CD−Writers

Many CD−Writers are supported by Linux now. For an up to date list of CD−Writers supported check the CD−Writing HOWTO, check here or check here. Cdwrite here and cdrecord here can be used for writing CD's. The X−CD−Roast package for Linux is a graphical front−end for using CD writers. The package can be found at here.

- Grundig CDR 100 IPW
- HP CD−Writer+ 7100
- HP SureStore 4020i
- HP SureStore 6020es/i
- JVC XR−W2010
- Kodak PCD 225
- Mitsubishi CDRW−226
- Mitsumi CR−2600TE
- Olympus CDS 620E
- Philips CDD−521/10,522,2000,2600,3610
- Pinnacle Micro RCD−5020/5040
- Plextor CDR PX−24CS
- Ricoh MP 1420C
- Ricoh MP 6200S/6201S
- Sanyo CRD−R24S
- Smart and Friendly Internal 2006 Plus 2.05
- Sony CDU 920S/924/926S
- Taiyo Yuden EW−50
- TEAC CD−R50S
- WPI(Wearnes) CDR−632P
- WPI(Wearnes) CDRW−622
- Yamaha CDR−100
- Yamaha CDR−200/200t/200tx
- Yamaha CDR−400t/400tx

19. Removable drives

All SCSI drives should work if the controller is supported, including optical (MO), WORM, floptical, Bernoulli, Zip, Jaz, SyQuest, PD, and others.

- Panasonic MO (combines a CD−ROM drive and an optical removable disk). You have to set a switch when configuring the kernel to get both part work at the same time.
- Parallel port Zip drives here
- Parallel port Avatar Shark−250 here

Removable drives work like hard disks and floppies, just `fdisk` / `mkfs` and mount the disks. Linux provides drive locking if your drives support it. `mtools` can also be used if the disks are in MS−DOS format.

CD−R drives require special software to work. Read the CD−R Mini−HOWTO.

Linux supports both 512 and 1024 bytes/sector disks. Starting with kernel 2.1.32 Linux also supports 2048 bytes/sector. A patch to kernel 2.0.30 is available at here.

The 2048 bytes/sector support is needed for

- Fujitsu magneto−optical disk drives M2513

Starting with pre−patch−2.0.31−3 IDE/ATAPI internal Zip drives, flopticals and PD's are supported.

- LS−120 floptical
- PD−CD

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20. Mice

20.1. Supported

- Microsoft serial mouse
- Mouse Systems serial mouse
- Logitech Mouseman serial mouse
- Logitech serial mouse
- ATI XL Inport busmouse
- C&T 82C710 (QuickPort) (Toshiba, TI Travelmate)
- Microsoft busmouse
- Logitech busmouse
- PS/2 (auxiliary device) mouse

20.2. Alpha, Beta drivers

- Sejin J–mouse here
- MultiMouse – use multiple mouse devices as single mouse here
- Microsoft Intellimouse

20.3. Notes

Touchpad devices like Alps Glidepoint also work, so long they're compatible with another mouse protocol.

Newer Logitech mice (except the Mouseman) use the Microsoft protocol and all three buttons do work. Eventhough Microsoft's mice have only two buttons, the protocol allows three buttons.

The mouse port on the ATI Graphics Ultra and Ultra Pro use the Logitech busmouse protocol. (See the Busmouse HOWTO for details.)

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21. Modems

All external modems connected via a RS−232 serial port should work. This includes external ISDN adapters, although some of the extended features of external ISDN adapaters (such as multilink) may or may not work.

Internal modems are another story, however. There are many so−called "winmodems" available now. In fact, it seems that most PCI modems are winmodems. Some of them do have drivers for Linux now, but many of the drivers are often binary−only. (See the note on binary−only drivers.) See Linmodems.org for more information on Linux−supported winmodems.

Note that there are external USB winmodems on the market now, so be very careful when shopping for external modems.

Furthermore, many flash upgradable modems only have flash programs for Win95/NT. These modems cannot be upgraded under Linux.

A small number of modems come with DOS software that downloads the control program at runtime. These can normally be used by loading the program under DOS and doing a warm boot. Such modems are probably best avoided as you won't be able to use them with non PC hardware in the future.

Most 16−bit PCMCIA modems should work with the PCMCIA drivers. CardBus modems are usually winmodems much like PCI modems. Your best bet for now is to find a card that lists compatibility with DOS and Windows 3.1.

All that said, if a modem is known to have a real UART (or hardware UART emulation), whether it is ISA, PCMCIA, etc., it should work under Linux.

Fax modems need appropriated fax software to operate. Also be sure that the fax part of the modem supports Class 2 or Class 2.0. It seems to be generally true for any fax software on unix that support for Class 1.0 is not available.

An exception to this is the Linux efax program which supports both Class 1 and Class 2 fax modems. In some cases there can be a few (minor) technical problems with Class 1 modems. If you have a choice it is recommend to get a Class 2 modem.

See Appendix E Linux Incompatible Hardware for specific cards known not to work with Linux.

The following are other good resources for finding Linux−compatible modems:

- Rob Clark's "Winmodems are not modems" page
- Andrew Comech's "PCI modems and Linux" page
- Andrew Comech's "Cheap /Linux/ Box" section on modems
- Linmodems.org

Most of the information below is from those sites.

Other useful documents include the following:

- Modem HOWTO
- Linmodem HOWTO
- Winmodems and Linux HOWTO (may be superceded by the Linmodem HOWTO)

Below is a *very* incomplete list of modems currently known to work under Linux.

Manufacturer	Model name	Chipset	Bus	Driver	Notes
Actiontec	PCI56012−01	CW	PCI		
Multitech	MultiModem MT5634ZPX−PCI		PCI		
IBM	33L4618		PCI		
Topic	FM−56PCI−TP		PCI		
3Com	3CP5610		PCI		
3Com	3CP5613 Internet Gaming Modem		PCI		
3Com	3CP2976		PCI		
3Com	3CP2977		PCI		
Archtek	Smartlink 5634PCV		PCI		
Zoom	2920		PCI		
Well Communications	FM−56PCI−TP		PCI		

The following is old information and may not be entirely correct. It may be removed in a future revision of this document.

- Digicom Connection 96+/14.4+ − DSP code downloading program here
- Motorola ModemSURFR internal 56K. Add a couple of line to RC.SERIAL to account for IRQ and ports if they are non−standard.
- ZyXEL U−1496 series − ZyXEL 1.4, modem/fax/voice control program here
- ZyXEL Elite 2864 series − modem/fax/voice control program here
- ZyXEL Omni TA 128 − modem/fax/voice control program here

Also multimodem cards are supported by Linux.

- Moreton Bay RAStel multimodem card Check here for Linux drivers.

The following modem is mentioned not to be supported

- Aztech MDP3858 56.6 (PCI)

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22. Printers/Plotters

The following is a list of printers from the linuxprinting.org database. See their web site and the Linux Printing HOWTO for more information.

Manufacturer	Model Number	Functionality
Alps	MD−1000	Works mostly
Alps	MD−1300	Works mostly
Alps	MD−1500	Works mostly
Alps	MD−2000	Works mostly
Alps	MD−2010	Works mostly
Alps	MD−2300	Works mostly
Alps	MD−4000	Works mostly
Alps	MD−5000	Works mostly
Alps	MD−5500	Works mostly
Anitech	M24	Works perfectly
Apollo	P−1200	Works perfectly
Apollo	P−1220 Barbie	Works perfectly
Apollo	P−1250	Works perfectly
Apollo	P−2100	Works perfectly
Apollo	P−2150	Works perfectly
Apollo	P−2200	Works perfectly
Apollo	P−2250	Works perfectly
Apollo	P−2500	Works

		perfectly
Apollo	P−2550	Works perfectly
Apollo	P−2600	Works perfectly
Apollo	P−2650	Works perfectly
Apple	12/640ps	Works perfectly
Apple	Color StyleWriter 1500	Works mostly
Apple	Color StyleWriter 2200	Works mostly
Apple	Color StyleWriter 2400	Works mostly
Apple	Color StyleWriter 2500	Works mostly
Apple	Dot Matrix	Works perfectly
Apple	ImageWriter	Works perfectly
Apple	ImageWriter II	Works mostly
Apple	ImageWriter LQ	Works perfectly
Apple	LaserWriter 16/600	Works perfectly
Apple	LaserWriter 4/600	Works perfectly
Apple	LaserWriter IINTX	Works perfectly
Apple	LaserWriter IIg	Works perfectly
Apple	LaserWriter NT	Works mostly
Apple	LaserWriter Pro 630	Works perfectly
Apple	LaserWriter Select 360	Works perfectly
Apple	StyleWriter 1200	Works mostly

Apple	StyleWriter I	Works mostly
Apple	StyleWriter II	Works mostly
Avery	Personal Label Printer	Works mostly
Avery	Personal Label Printer+	Works perfectly
Brother	4550	None – Paperweight
Brother	DCP–1200	Works partially
Brother	HJ–400	Works mostly
Brother	HL–1020	Works perfectly
Brother	HL–1030	Works mostly
Brother	HL–1040	Works perfectly
Brother	HL–1050	Works mostly
Brother	HL–1060	Works mostly
Brother	HL–1070	Works perfectly
Brother	HL–10V	Works perfectly
Brother	HL–10h	Works perfectly
Brother	HL–1240	Works mostly
Brother	HL–1250	Works perfectly
Brother	HL–1260	Works perfectly
Brother	HL–1270N	Works perfectly
Brother	HL–1440	Works perfectly
Brother	HL–1450	Works

		perfectly
Brother	HL−1470N	Works perfectly
Brother	HL−1650	Works perfectly
Brother	HL−1660e	Works perfectly
Brother	HL−1670N	Works perfectly
Brother	HL−2060	Works perfectly
Brother	HL−2400CeN	Works perfectly
Brother	HL−2460	Works perfectly
Brother	HL−2460N	Works perfectly
Brother	HL−3400CN	Works perfectly
Brother	HL−4Ve	Works perfectly
Brother	HL−630	Works perfectly
Brother	HL−660	Works perfectly
Brother	HL−720	Works perfectly
Brother	HL−730	Works perfectly
Brother	HL−760	Works perfectly
Brother	HL−8	Works perfectly
Brother	HL−820	Works perfectly
Brother	HL−960	Works perfectly
Brother	MC−3000	Works partially
Brother	MFC 7150C	Works partially

Brother	MFC−4350	Works partially
Brother	MFC−6550MC	Works partially
Brother	MFC−8300	Works partially
Brother	MFC−9050	Works partially
Brother	MFC−9100c	Works partially
Brother	MFC−9500	Works partially
Brother	MFC−9600	Works partially
Brother	MFC−P2500	Works partially
Brother	MP−21C	None − Paperweight
CItoh	M8510	Works perfectly
CalComp	Artisan 1023 penplotter	Works perfectly
Canon	BJ−100	Works perfectly
Canon	BJ−10e	Works perfectly
Canon	BJ−10v	Works perfectly
Canon	BJ−15v	Works perfectly
Canon	BJ−20	Works perfectly
Canon	BJ−200	Works perfectly
Canon	BJ−30	Works perfectly
Canon	BJ−300	Works partially
Canon	BJ−330	Works perfectly
Canon	BJ−35v	Works

		perfectly
Canon	BJ−5	Works perfectly
Canon	BJC−1000	Works mostly
Canon	BJC−2000	Works mostly
Canon	BJC−2010	Works mostly
Canon	BJC−210	Works perfectly
Canon	BJC−2100	Works mostly
Canon	BJC−210SP	Works partially
Canon	BJC−2110	Works mostly
Canon	BJC−240	Works mostly
Canon	BJC−250	Works perfectly
Canon	BJC−250ex	Works perfectly
Canon	BJC−255SP	Works perfectly
Canon	BJC−265SP	Works perfectly
Canon	BJC−3000	Works mostly
Canon	BJC−4000	Works perfectly
Canon	BJC−4100	Works perfectly
Canon	BJC−4200	Works perfectly
Canon	BJC−4300	Works perfectly
Canon	BJC−4310SP	Works mostly
Canon	BJC−4400	Works perfectly

Canon	BJC−4550	Works perfectly
Canon	BJC−50	Works mostly
Canon	BJC−5000	None − Paperweight
Canon	BJC−5100	None − Paperweight
Canon	BJC−55	Works mostly
Canon	BJC−600	Works perfectly
Canon	BJC−6000	Works mostly
Canon	BJC−610	Works perfectly
Canon	BJC−6100	Works partially
Canon	BJC−620	Works perfectly
Canon	BJC−6200	Works partially
Canon	BJC−6500	Works partially
Canon	BJC−680J	Works perfectly
Canon	BJC−70	Works perfectly
Canon	BJC−7000	Works partially
Canon	BJC−7004	Works mostly
Canon	BJC−7100	Works partially
Canon	BJC−80	Works mostly
Canon	BJC−800	Works perfectly
Canon	BJC−8200	Works mostly
Canon	BJC−85	Works

		mostly
Canon	BJC−8500	None − Paperweight
Canon	BJC−880J	Works perfectly
Canon	GP 335	Works perfectly
Canon	GP 405	Works perfectly
Canon	LBP−1000	Works perfectly
Canon	LBP−1260	Works perfectly
Canon	LBP−1760	Works perfectly
Canon	LBP−310	Works perfectly
Canon	LBP−320 Pro	Works perfectly
Canon	LBP−350	Works perfectly
Canon	LBP−4+	Works perfectly
Canon	LBP−430	Works perfectly
Canon	LBP−460	None − Paperweight
Canon	LBP−4U	Works perfectly
Canon	LBP−4sx	Works mostly
Canon	LBP−600	None − Paperweight
Canon	LBP−660	None − Paperweight
Canon	LBP−800	None − Paperweight
Canon	LBP−8A1	Works perfectly
Canon	LIPS−II+	Works perfectly

Canon	LIPS−III	Works perfectly
Canon	LIPS−IV	Works perfectly
Canon	LIPS−IVv	Works perfectly
Canon	MultiPASS C2500	Works partially
Canon	MultiPASS C3000	Works partially
Canon	MultiPASS C3500	Works partially
Canon	MultiPASS C5000	Works partially
Canon	MultiPASS C5500	Works partially
Canon	Multipass C50	Unknown
Canon	Multipass L6000	None − Paperweight
Canon	S100	Works mostly
Canon	S200	None − Paperweight
Canon	S300	Works partially
Canon	S400	Works mostly
Canon	S450	Works partially
Canon	S4500	Works partially
Canon	S500	Works partially
Canon	S600	Works partially
Canon	S630	Works partially
Canon	S800	Works partially
Canon	imageRunner 330s	Works mostly

Citizen	ProJet II	Works perfectly
Citizen	ProJet IIc	Works perfectly
Citizen	printiva1700	Works mostly
Citizen	printiva600C	Works perfectly
Citizen	printiva600U	Works perfectly
Citizen	printiva700	Works mostly
Compaq	A900	Unknown
Compaq	IJ1200	Works mostly
Compaq	IJ300	None – Paperweight
Compaq	IJ750	Works mostly
Compaq	IJ900	Works partially
DEC	1800	Works mostly
DEC	DECWriter 500i	Works perfectly
DEC	DECwriter 110i	Works perfectly
DEC	DECwriter 520ic	Works perfectly
DEC	LA50	Works perfectly
DEC	LA70	Works perfectly
DEC	LA75	Works perfectly
DEC	LA75 Plus	Works perfectly
DEC	LJ250	Works perfectly
DEC	LN03	Works perfectly

DEC	LN07	Works perfectly
DEC	LN17	Works mostly
Dymo−CoStar	ASCII 250	Works perfectly
Dymo−CoStar	ASCII+	Works perfectly
Dymo−CoStar	EL40	Works perfectly
Dymo−CoStar	EL60	Works perfectly
Dymo−CoStar	LabelWriter II	Works perfectly
Dymo−CoStar	LabelWriter XL	Works perfectly
Dymo−CoStar	LabelWriter XL+	Works perfectly
Dymo−CoStar	SE250	Works perfectly
Dymo−CoStar	SE250+	Works perfectly
Dymo−CoStar	Turbo	Works perfectly
Epson	ActionLaser 1100	Works perfectly
Epson	ActionLaser II	Works perfectly
Epson	ActionPrinter 3250	Works perfectly
Epson	AcuLaser C1000	None − Paperweight
Epson	AcuLaser C2000	Works perfectly
Epson	AcuLaser C2000PS	Works perfectly
Epson	AcuLaser C8500	Works perfectly
Epson	AcuLaser C8500PS	Works perfectly
Epson	Dot Matrix	Works

		perfectly
Epson	EPL−5200	Works perfectly
Epson	EPL−5200+	Works perfectly
Epson	EPL−5500W	None − Paperweight
Epson	EPL−5700	Works mostly
Epson	EPL−5700L	None − Paperweight
Epson	EPL−5800	Works perfectly
Epson	EPL−5800L	None − Paperweight
Epson	EPL−5800PS	Works perfectly
Epson	EPL−5900	Works perfectly
Epson	EPL−5900PS	Works perfectly
Epson	EPL−7100	Works perfectly
Epson	EPL−N1600	Works perfectly
Epson	EPL−N1600PS	Works perfectly
Epson	EPL−N2050	Works perfectly
Epson	EPL−N2050+	Works perfectly
Epson	EPL−N2050PS	Works perfectly
Epson	EPL−N2050PS+	Works perfectly
Epson	EPL−N2120	Works perfectly
Epson	EPL−N2750	Works perfectly
Epson	EPL−N2750PS	Works perfectly

Epson	L−1000	Works perfectly
Epson	LP 8000	Works perfectly
Epson	LP−2000	Works perfectly
Epson	LP−2000	Unknown
Epson	LP−3000	Works perfectly
Epson	LP−7000	Works perfectly
Epson	LP−7000G	Works perfectly
Epson	LP−xx00	Works perfectly
Epson	LQ−24	Works perfectly
Epson	LQ−2550	Works perfectly
Epson	LQ−500	Works perfectly
Epson	LQ−570+	Works perfectly
Epson	LQ−850	Works perfectly
Epson	LX−1050	Works perfectly
Epson	MachJet	Works perfectly
Epson	PM−760C	Works mostly
Epson	PM−770C	Works mostly
Epson	PM−800C	Works mostly
Epson	PM−820C/3300C	Works mostly
Epson	SQ 1170	Works perfectly
Epson	Stylus	Works perfectly

Epson	Stylus 800	Works perfectly
Epson	Stylus B/W 820	Unknown
Epson	Stylus C20SX	Works mostly
Epson	Stylus C20UX	Works mostly
Epson	Stylus C40SX	Works mostly
Epson	Stylus C40UX	Works mostly
Epson	Stylus C60	Works perfectly
Epson	Stylus C70	Works perfectly
Epson	Stylus C80	Works perfectly
Epson	Stylus Color	Works perfectly
Epson	Stylus Color 1160	Works perfectly
Epson	Stylus Color 1500	Works perfectly
Epson	Stylus Color 1520	Works perfectly
Epson	Stylus Color 200	Works mostly
Epson	Stylus Color 300	Works mostly
Epson	Stylus Color 3000	Works perfectly
Epson	Stylus Color 400	Works perfectly
Epson	Stylus Color 440	Works perfectly
Epson	Stylus Color 460	Works perfectly
Epson	Stylus Color 480	Works partially
Epson	Stylus Color 500	Works perfectly

Epson	Stylus Color 580	Works partially
Epson	Stylus Color 600	Works perfectly
Epson	Stylus Color 640	Works perfectly
Epson	Stylus Color 660	Works perfectly
Epson	Stylus Color 670	Works perfectly
Epson	Stylus Color 680	Works mostly
Epson	Stylus Color 740	Works perfectly
Epson	Stylus Color 760	Works perfectly
Epson	Stylus Color 777	Works perfectly
Epson	Stylus Color 8 3	Works mostly
Epson	Stylus Color 800	Works perfectly
Epson	Stylus Color 850	Works perfectly
Epson	Stylus Color 860	Works perfectly
Epson	Stylus Color 880	Works mostly
Epson	Stylus Color 900	Works perfectly
Epson	Stylus Color 980	Works mostly
Epson	Stylus Color I	Works perfectly
Epson	Stylus Color II	Works mostly
Epson	Stylus Color IIs	Works mostly
Epson	Stylus Color PRO	Works perfectly
Epson	Stylus Photo	Works

		perfectly
Epson	Stylus Photo 1200	Works perfectly
Epson	Stylus Photo 1270	Works perfectly
Epson	Stylus Photo 1280	Works perfectly
Epson	Stylus Photo 1290	Works perfectly
Epson	Stylus Photo 2000P	Works partially
Epson	Stylus Photo 700	Works perfectly
Epson	Stylus Photo 720	Works perfectly
Epson	Stylus Photo 750	Works perfectly
Epson	Stylus Photo 780	Works perfectly
Epson	Stylus Photo 785	Works perfectly
Epson	Stylus Photo 790	Works perfectly
Epson	Stylus Photo 810	Works perfectly
Epson	Stylus Photo 820	Works perfectly
Epson	Stylus Photo 870	Works perfectly
Epson	Stylus Photo 875	Works perfectly
Epson	Stylus Photo 890	Works perfectly
Epson	Stylus Photo 895	Works perfectly
Epson	Stylus Photo EX	Works perfectly
Epson	Stylus Photo PM760	Works perfectly
Epson	Stylus Photo PM820	Works perfectly

Epson	Stylus Pro 10000	Works partially
Epson	Stylus Pro 5000	Works mostly
Epson	Stylus Pro 5500	Works mostly
Epson	Stylus Pro 7000	Works perfectly
Epson	Stylus Pro 7500	Works mostly
Epson	Stylus Pro 9000	Works partially
Epson	Stylus Pro 9500	Works partially
Epson	Stylus Pro XL	Works mostly
Epson	Stylus Scan 2000	Works perfectly
Epson	Stylus Scan 2500	Works perfectly
Fujitsu	1200	Works perfectly
Fujitsu	2400	Works perfectly
Fujitsu	3400	Works perfectly
Fujitsu	FMLBP2xx Page Printer	Works perfectly
Fujitsu	FMPR	Works perfectly
Fujitsu	PrintPartner 10V	Works perfectly
Fujitsu	PrintPartner 16DV	Works perfectly
Fujitsu	PrintPartner 20W	Works perfectly
Fujitsu	PrintPartner 8000	Works perfectly
HP	2000C	Works perfectly
HP	2500C	Works

		perfectly
HP	2563	Works perfectly
HP	Business Inkjet 2200	Works perfectly
HP	Business Inkjet 2250	Works perfectly
HP	Business Inkjet 2250TN	Works perfectly
HP	Color Inkjet Printer CP1160	Works perfectly
HP	Color Inkjet Printer CP1700	Works perfectly
HP	Color LaserJet 4500	Works perfectly
HP	Color LaserJet 4550	Works perfectly
HP	Color LaserJet 5	Works mostly
HP	Color LaserJet 5000	Works partially
HP	Color LaserJet 8550GN	Works perfectly
HP	DesignJet 230	Works mostly
HP	DesignJet 3500CP	Works perfectly
HP	DesignJet 350C	Works mostly
HP	DesignJet 650C	Works mostly
HP	DesignJet 750C	Works mostly
HP	DesignJet 750C Plus	Works mostly
HP	DesignJet ColorPro CAD	Works mostly
HP	DeskJet	Works perfectly
HP	DeskJet 1000C	Works mostly

HP	DeskJet 1100C	Works mostly
HP	DeskJet 1120C	Works perfectly
HP	DeskJet 1125C	Works perfectly
HP	DeskJet 1200C	Works perfectly
HP	DeskJet 1220C	Works mostly
HP	DeskJet 1600C	Works perfectly
HP	DeskJet 1600CM	Works perfectly
HP	DeskJet 200	Works perfectly
HP	DeskJet 310	Works perfectly
HP	DeskJet 320	Works perfectly
HP	DeskJet 340C	Works perfectly
HP	DeskJet 350C	Works mostly
HP	DeskJet 400	Works perfectly
HP	DeskJet 420C	Works perfectly
HP	DeskJet 500	Works perfectly
HP	DeskJet 500C	Works perfectly
HP	DeskJet 505J Plus	Works perfectly
HP	DeskJet 510	Works perfectly
HP	DeskJet 520	Works perfectly
HP	DeskJet 540C	Works perfectly
HP	DeskJet 550C	Works

		perfectly
HP	DeskJet 560C	Works perfectly
HP	DeskJet 600	Works perfectly
HP	DeskJet 610C	Works perfectly
HP	DeskJet 610CL	Works perfectly
HP	DeskJet 612C	Works perfectly
HP	DeskJet 630C	Works perfectly
HP	DeskJet 632C	Works perfectly
HP	DeskJet 640C	Unknown
HP	DeskJet 640C	Works perfectly
HP	DeskJet 648C	Works perfectly
HP	DeskJet 656C	Works mostly
HP	DeskJet 660C	Works perfectly
HP	DeskJet 670C	Works perfectly
HP	DeskJet 672C	Works perfectly
HP	DeskJet 680C	Works perfectly
HP	DeskJet 682C	Works perfectly
HP	DeskJet 690C	Works perfectly
HP	DeskJet 692C	Works perfectly
HP	DeskJet 693C	Works perfectly
HP	DeskJet 694C	Works perfectly
HP	DeskJet 695C	

		Works perfectly
HP	DeskJet 697C	Works perfectly
HP	DeskJet 710C	Works mostly
HP	DeskJet 712C	Works mostly
HP	DeskJet 720C	Works mostly
HP	DeskJet 722C	Works mostly
HP	DeskJet 810C	Works perfectly
HP	DeskJet 812C	Works perfectly
HP	DeskJet 815C	Works perfectly
HP	DeskJet 816C	Works perfectly
HP	DeskJet 820C	Works mostly
HP	DeskJet 825C	Works perfectly
HP	DeskJet 830C	Works perfectly
HP	DeskJet 832C	Works perfectly
HP	DeskJet 840C	Works perfectly
HP	DeskJet 841C	Works perfectly
HP	DeskJet 842C	Works perfectly
HP	DeskJet 845C	Works perfectly
HP	DeskJet 850C	Works mostly
HP	DeskJet 855C	Works mostly
HP	DeskJet 870C	Works

		mostly
HP	DeskJet 880C	Works perfectly
HP	DeskJet 882C	Works perfectly
HP	DeskJet 890C	Works mostly
HP	DeskJet 895C	Works perfectly
HP	DeskJet 920C	Works mostly
HP	DeskJet 930C	Works mostly
HP	DeskJet 932C	Works mostly
HP	DeskJet 940C	Works mostly
HP	DeskJet 948C	Works mostly
HP	DeskJet 950C	Works mostly
HP	DeskJet 952C	Works mostly
HP	DeskJet 955C	Works mostly
HP	DeskJet 960C	Works perfectly
HP	DeskJet 970C	Works mostly
HP	DeskJet 980C	Works perfectly
HP	DeskJet 990C	Works perfectly
HP	DeskJet 995C	Works perfectly
HP	DeskJet Plus	Works perfectly
HP	DeskJet Portable	Works perfectly
HP	LaserJet	Works perfectly

HP	LaserJet 1000	None – Paperweight
HP	LaserJet 1100	Works perfectly
HP	LaserJet 1100A	Works perfectly
HP	LaserJet 1200	Works perfectly
HP	LaserJet 1220	Works perfectly
HP	LaserJet 2	Works perfectly
HP	LaserJet 2 w/PS	Works perfectly
HP	LaserJet 2100	Works perfectly
HP	LaserJet 2100M	Works perfectly
HP	LaserJet 2200	Works perfectly
HP	LaserJet 2D	Works perfectly
HP	LaserJet 2P	Works perfectly
HP	LaserJet 2P Plus	Works perfectly
HP	LaserJet 3	Works perfectly
HP	LaserJet 3100	None – Paperweight
HP	LaserJet 3150	None – Paperweight
HP	LaserJet 3200	Works mostly
HP	LaserJet 3200m	Works mostly
HP	LaserJet 3200se	Works mostly
HP	LaserJet 3300 MFP	Works perfectly
HP	LaserJet 3310 MFP	Works

		perfectly
HP	LaserJet 3320 MFP	Works perfectly
HP	LaserJet 3320N MFP	Works perfectly
HP	LaserJet 3330 MFP	Works mostly
HP	LaserJet 3D	Works perfectly
HP	LaserJet 3P w/ PCL5	Works perfectly
HP	LaserJet 3P w/PS	Works perfectly
HP	LaserJet 4	Works perfectly
HP	LaserJet 4 Plus	Works perfectly
HP	LaserJet 4000	Works perfectly
HP	LaserJet 4050	Works perfectly
HP	LaserJet 4100	Works perfectly
HP	LaserJet 4L	Works perfectly
HP	LaserJet 4M	Works perfectly
HP	LaserJet 4ML	Works perfectly
HP	LaserJet 4P	Works perfectly
HP	LaserJet 4Si	Works perfectly
HP	LaserJet 4V	Works perfectly
HP	LaserJet 4V/4LJ Pro	Works perfectly
HP	LaserJet 5	Works perfectly
HP	LaserJet 5000	Works perfectly

HP	LaserJet 5L	Works perfectly
HP	LaserJet 5M	Works perfectly
HP	LaserJet 5MP	Works perfectly
HP	LaserJet 5P	Works perfectly
HP	LaserJet 5Si	Works perfectly
HP	LaserJet 6	Works perfectly
HP	LaserJet 6L	Works perfectly
HP	LaserJet 6MP	Works perfectly
HP	LaserJet 6P	Works perfectly
HP	LaserJet 8000	Works perfectly
HP	LaserJet 8100	Works perfectly
HP	LaserJet 8150	Works perfectly
HP	LaserJet 9000	Works perfectly
HP	LaserJet Plus	Works perfectly
HP	Mopier 240	Works perfectly
HP	Mopier 320	Works perfectly
HP	OfficeJet 500	Works mostly
HP	OfficeJet 600	Works mostly
HP	OfficeJet 625	Works mostly
HP	OfficeJet 635	Works mostly
HP	OfficeJet 710	Works

		mostly
HP	OfficeJet D125	Works perfectly
HP	OfficeJet D135	Works mostly
HP	OfficeJet D145	Works mostly
HP	OfficeJet D155	Works mostly
HP	OfficeJet G55	Works mostly
HP	OfficeJet G85	Works mostly
HP	OfficeJet G95	Works mostly
HP	OfficeJet K60	Works mostly
HP	OfficeJet K80	Works mostly
HP	OfficeJet Pro 1150C	Works mostly
HP	OfficeJet Pro 1170C	Works perfectly
HP	OfficeJet Pro 1175C	Works perfectly
HP	OfficeJet R45	Works perfectly
HP	OfficeJet R60	Works perfectly
HP	OfficeJet R65	Works perfectly
HP	OfficeJet R80	Works perfectly
HP	OfficeJet T45	Works mostly
HP	OfficeJet T65	Works mostly
HP	OfficeJet V40	Works mostly
HP	Officejet LX	Unknown
HP	PSC 300	

		Works perfectly
HP	PSC 500	Works perfectly
HP	PSC 750	Works mostly
HP	PSC 950	Works mostly
HP	PaintJet	Works perfectly
HP	PaintJet XL	Works perfectly
HP	PaintJet XL300	Works perfectly
HP	PhotoSmart P100	Works mostly
HP	PhotoSmart P1000	Works mostly
HP	PhotoSmart P1100	Works mostly
HP	PhotoSmart P1115	Works perfectly
HP	PhotoSmart P1215	Works perfectly
HP	PhotoSmart P1218	Works perfectly
HP	PhotoSmart P1315	Works perfectly
HP	ThinkJet	Works partially
HP	e−printer e20	Works perfectly
Heidelberg	Digimaster 9110	Works perfectly
Hitachi	DDP 70 (with MicroPress)	Works perfectly
IBM	3853 JetPrinter	Works perfectly
IBM	4019	Works perfectly
IBM	4029 030 LaserPrinter	Works

	10	partially
IBM	4029 10P	Works perfectly
IBM	4303 Network Color Printer	Works perfectly
IBM	Execjet 4072	Works perfectly
IBM	Infoprint 12	Works perfectly
IBM	Page Printer 3112	Works perfectly
IBM	ProPrinterII	Works perfectly
Imagen	ImPress	Works perfectly
Infotec	4651 MF	Works perfectly
Kodak	DigiSource 9110	Works perfectly
Kodak	IS 70 CPII	Works perfectly
Kyocera	F−1010	Works perfectly
Kyocera	F−1200	Unknown
Kyocera	F−3300	Works perfectly
Kyocera	F−800T	Works perfectly
Kyocera	FS−1000	Works perfectly
Kyocera	FS−1200	Works perfectly
Kyocera	FS−1700+	Works perfectly
Kyocera	FS−1750	Works perfectly
Kyocera	FS−3500	Works mostly
Kyocera	FS−3700+	Unknown
Kyocera	FS−3750	Works perfectly

Kyocera	FS−5900C	Works perfectly
Kyocera	FS−600	Works perfectly
Kyocera	FS−600 (KPDL−2)	Works perfectly
Kyocera	FS−680	Works perfectly
Kyocera	FS−800	Works perfectly
Kyocera	P−2000	Works perfectly
LaserMaster	LM 1000	None − Paperweight
Lexmark	1000	Works partially
Lexmark	1020	Works partially
Lexmark	1020 Business	Works mostly
Lexmark	1100	Works partially
Lexmark	2030	Works partially
Lexmark	2050	Works partially
Lexmark	2070	Works partially
Lexmark	3000	Works mostly
Lexmark	3200	Works mostly
Lexmark	4039 10plus	Works perfectly
Lexmark	4076	Works mostly
Lexmark	5000	Works partially
Lexmark	5700	Works partially
Lexmark	7000	Works

		partially
Lexmark	7200	Works partially
Lexmark	E210	Works perfectly
Lexmark	Optra C710	Works perfectly
Lexmark	Optra Color 1200	Works perfectly
Lexmark	Optra Color 1275	Works perfectly
Lexmark	Optra Color 40	Works perfectly
Lexmark	Optra Color 45	Works perfectly
Lexmark	Optra E	Works perfectly
Lexmark	Optra E+	Works perfectly
Lexmark	Optra E310	Works perfectly
Lexmark	Optra E312	Works perfectly
Lexmark	Optra Ep	Works perfectly
Lexmark	Optra K 1220	Works perfectly
Lexmark	Optra M410	Works perfectly
Lexmark	Optra M412	Works perfectly
Lexmark	Optra R+	Works perfectly
Lexmark	Optra S 1250	Works perfectly
Lexmark	Optra S 1855	Works perfectly
Lexmark	Optra S1650	Unknown
Lexmark	Optra Se 3455	Works perfectly
Lexmark	Optra T610	

		Works perfectly
Lexmark	Optra T612	Works perfectly
Lexmark	Optra T614	Works perfectly
Lexmark	Optra T616	Works perfectly
Lexmark	Optra W810	Works perfectly
Lexmark	Valuewriter 300	Works perfectly
Lexmark	Winwriter 100	None – Paperweight
Lexmark	Winwriter 150c	None – Paperweight
Lexmark	Winwriter 200	None – Paperweight
Lexmark	Winwriter 400	Works partially
Lexmark	X73	Works partially
Lexmark	Z11	Works partially
Lexmark	Z12	None – Paperweight
Lexmark	Z22	Works partially
Lexmark	Z23	None – Paperweight
Lexmark	Z31	Works partially
Lexmark	Z32	Works partially
Lexmark	Z33	None – Paperweight
Lexmark	Z42	Works mostly
Lexmark	Z43	Works partially
Lexmark	Z51	Works

		partially
Lexmark	Z52	Works perfectly
Lexmark	Z53	Works perfectly
Lexmark	Z82	Works partially
Minolta	PagePro 1100	Works perfectly
Minolta	PagePro 1100L	None – Paperweight
Minolta	PagePro 6	Works perfectly
Minolta	PagePro 6L	None – Paperweight
Minolta	PagePro 6e	Works perfectly
Minolta	PagePro 6ex	Works perfectly
Minolta	PagePro 8	Works perfectly
Minolta	PagePro 8L	Works partially
Mitsubishi	CP50 Color Printer	Works perfectly
NEC	MultiWriter	Works perfectly
NEC	P2X	Works perfectly
NEC	PC−PR1000	Works perfectly
NEC	PC−PR150	Works perfectly
NEC	PC−PR2000	Works perfectly
NEC	PC−PR201	Works perfectly
NEC	PICTY180	Works perfectly
NEC	PinWriter P6	Works perfectly

NEC	PinWriter P6 plus	Works perfectly
NEC	PinWriter P60	Works perfectly
NEC	PinWriter P7	Works perfectly
NEC	PinWriter P7 plus	Works perfectly
NEC	PinWriter P70	Works perfectly
NEC	Pinwriter P20	Works perfectly
NEC	SilentWriter LC 890	Works perfectly
NEC	Silentwriter 95f	Works perfectly
NEC	Silentwriter2 S60P	Works perfectly
NEC	Silentwriter2 model 290	Works perfectly
NEC	SuperScript 100C	Works partially
NEC	SuperScript 1260	Works partially
NEC	SuperScript 150C	Works partially
NEC	SuperScript 1800	Works perfectly
NEC	SuperScript 4600N	Works perfectly
NEC	SuperScript 610plus	None – Paperweight
NEC	SuperScript 650C	Works partially
NEC	SuperScript 660	None – Paperweight
NEC	SuperScript 660i	Works perfectly
NEC	SuperScript 660plus	None – Paperweight
NEC	SuperScript 750C	Works

		partially
NEC	SuperScript 860	Works partially
NEC	SuperScript 870	Works partially
Oce	3165	Works perfectly
Oce	9050	Works perfectly
Okidata	6e	Unknown
Okidata	6w	Unknown
Okidata	DP 5000	Works mostly
Okidata	ML 320	Works perfectly
Okidata	ML 321	Works perfectly
Okidata	ML 380	Works perfectly
Okidata	Microline 182	Works mostly
Okidata	Microline 192+	Works partially
Okidata	Microline 600CL	Works perfectly
Okidata	Microline 620CL	Works perfectly
Okidata	Microline IBM compatible 9 pin	Works perfectly
Okidata	OL400	Works perfectly
Okidata	OL400e	Works perfectly
Okidata	OL400e	Unknown
Okidata	OL400ex	Works perfectly
Okidata	OL400w	Works mostly
Okidata	OL410e	Works mostly

Okidata	OL600e	Works perfectly
Okidata	OL610e/PS	Works perfectly
Okidata	OL610e/S	Works mostly
Okidata	OL800	Works perfectly
Okidata	OL810e/PS	Works perfectly
Okidata	OL810ex	Works perfectly
Okidata	OL820	Works partially
Okidata	OL830Plus	Works perfectly
Okidata	Okijet 2010	None – Paperweight
Okidata	Okijet 2500	Works mostly
Okidata	Okipage 10e	Works perfectly
Okidata	Okipage 10ex	Works perfectly
Okidata	Okipage 12i	Works perfectly
Okidata	Okipage 14ex	Works perfectly
Okidata	Okipage 20DXn	Works perfectly
Okidata	Okipage 4w	Works mostly
Okidata	Okipage 4w+	Works mostly
Okidata	Okipage 6e	Works perfectly
Okidata	Okipage 6ex	Works perfectly
Okidata	Okipage 6w	Works mostly
Okidata	Okipage 8c	Works

		perfectly
Okidata	Okipage 8p	Works perfectly
Okidata	Okipage 8w	Works mostly
Okidata	Okipage 8w Lite	Works mostly
Okidata	Okipage 8z	Works mostly
Okidata	Super 6e	Works mostly
Olivetti	JP350S	Works perfectly
Olivetti	JP450	Works mostly
Olivetti	JP470	Works perfectly
Olivetti	PG 306	Works perfectly
PCPI	1030	Works perfectly
Panasonic	KX−P1123	Works perfectly
Panasonic	KX−P1124	Works perfectly
Panasonic	KX−P1150	Works perfectly
Panasonic	KX−P1180i	Works partially
Panasonic	KX−P1624	Works partially
Panasonic	KX−P2023	Works perfectly
Panasonic	KX−P2123	Works mostly
Panasonic	KX−P2135	Works perfectly
Panasonic	KX−P2150	Works perfectly
Panasonic	KX−P4410	Works perfectly

Panasonic	KX−P4450	Works perfectly
Panasonic	KX−P5400	Works perfectly
Panasonic	KX−P6100	None − Paperweight
Panasonic	KX−P6150	Works mostly
Panasonic	KX−P6300 GDI	None − Paperweight
Panasonic	KX−P6500	Works partially
Panasonic	KX−P8410	None − Paperweight
Panasonic	KX−P8420	Works perfectly
Panasonic	KX−P8475	Works perfectly
Panasonic	KX−PS600	Works partially
Panasonic	KX−Pxxxx 24−pin	Works partially
Panasonic	KXP−2624	Unknown
Pentax	PocketJet 200	Works perfectly
Pentax	PocketJet II	Works perfectly
Printrex	820 DL	Works partially
QMS	2425 Turbo EX	Works perfectly
QMS	LPK−100	Works perfectly
QMS	magicolor 2	None − Paperweight
QMS	magicolor 2+	Works perfectly
QMS	ps−810	Works mostly
Raven	LP−410	Works mostly

Ricoh	4081	Works perfectly
Ricoh	4801	Works perfectly
Ricoh	6000	Works perfectly
Ricoh	Aficio 220	Works perfectly
Ricoh	Aficio 401	Works mostly
Ricoh	Aficio 700	Works perfectly
Ricoh	Aficio AP2000	Works perfectly
Ricoh	Aficio Color 2206	None – Paperweight
Ricoh	Afico FX10	None – Paperweight
Ricoh	RPDL I Laser Printer	Works perfectly
Ricoh	RPDL II Laser Printer	Works perfectly
Ricoh	RPDL III Laser Printer	Works perfectly
Ricoh	RPDL IV Laser Printer	Works perfectly
Samsung	ML−1000	Works perfectly
Samsung	ML−1010	Works perfectly
Samsung	ML−1020	Works perfectly
Samsung	ML−1200	Works perfectly
Samsung	ML−1210	Works perfectly
Samsung	ML−1220	Works perfectly
Samsung	ML−200	Works perfectly
Samsung	ML−210	Works

		perfectly
Samsung	ML−4500	Works perfectly
Samsung	ML−4600	Works perfectly
Samsung	ML−5000a	Works perfectly
Samsung	ML−5050G	None − Paperweight
Samsung	ML−5080	Works perfectly
Samsung	ML−6000/6100	Works perfectly
Samsung	ML−6040	Works perfectly
Samsung	ML−7000/7000P/7000N	Works perfectly
Samsung	ML−7050	Works perfectly
Samsung	ML−85	Works perfectly
Samsung	ML−85G	Works mostly
Samsung	QL−5100A	Works perfectly
Samsung	QL−6050	Works perfectly
Samsung	QL−85G	Works mostly
Samsung	SF/MSYS/MJ−4700/4800/4500C	None − Paperweight
Samsung	SI−630A	Works perfectly
Seiko	SLP	Works mostly
Seiko	SLP 120	Works mostly
Seiko	SLP 220	Works mostly
Seiko	SLP EZ30	Works mostly

Seiko	SLP Plus	Works mostly
Seiko	SLP Pro	Works mostly
Seiko	SLP−100	Works mostly
Seiko	SLP−200	Works mostly
Seiko	SLP−240	Works mostly
Seiko	SpeedJET 200	Works perfectly
Sharp	AJ−1800	Works mostly
Sharp	AJ−1805	Works mostly
Sharp	AJ−2000	Works mostly
Sharp	AJ−2005	Works mostly
Sharp	AJ−2100	None − Paperweight
Sharp	AR−161	Works perfectly
Star	JJ−100	Works perfectly
Star	LC 90	Works mostly
Star	LC24−100	Works perfectly
Star	LC24−200	Works mostly
Star	LS−04	Works perfectly
Star	LaserPrinter 8	Works mostly
Star	NL−10	Works perfectly
Star	NX−1001	Works mostly
Star	StarJet 48	Works

		mostly
Star	WinType 4000	None – Paperweight
Tally	MT908	Works perfectly
Tektronix	3693d color printer, 8–bit mode	Works perfectly
Tektronix	4693d color printer, 2–bit mode	Works perfectly
Tektronix	4693d color printer, 4–bit mode	Works perfectly
Tektronix	4695	Works perfectly
Tektronix	4696	Works perfectly
Tektronix	4697	Works perfectly
Tektronix	Phaser 350	Works mostly
Tektronix	Phaser 780	Works perfectly
Tektronix	Phaser 850	Works perfectly
Tektronix	Phaser IISX	Works perfectly
Tektronix	Phaser PX	Works perfectly
Xerox	2700 XES	Works perfectly
Xerox	3700 XES	Works perfectly
Xerox	4045 XES	Works perfectly
Xerox	Able 1406	Works mostly
Xerox	DocuPrint 4508	Works perfectly
Xerox	DocuPrint C11	Works partially
Xerox	DocuPrint C20	Works perfectly

Xerox	DocuPrint C55	Works perfectly
Xerox	DocuPrint C6	Works mostly
Xerox	DocuPrint C8	Works partially
Xerox	DocuPrint M750	Works mostly
Xerox	DocuPrint M760	Works mostly
Xerox	DocuPrint N17	Works perfectly
Xerox	DocuPrint N32	Works perfectly
Xerox	DocuPrint N4512	Works perfectly
Xerox	DocuPrint N4512 PS	Works perfectly
Xerox	DocuPrint P12	Works mostly
Xerox	DocuPrint P1202	Works mostly
Xerox	DocuPrint P8	None – Paperweight
Xerox	DocuPrint P8e	Works mostly
Xerox	DocuPrint XJ6C	Works partially
Xerox	DocuPrint XJ8C	Works partially
Xerox	Document Centre 400	Works perfectly
Xerox	Document Homecentre	Works partially
Xerox	WorkCentre 385	None – Paperweight
Xerox	WorkCentre 450cp	Works partially
Xerox	WorkCentre 470cx	Works partially
Xerox	WorkCentre XD120f	None –

		Paperweight
Xerox	WorkCentre XE80	None – Paperweight
Xerox	WorkCentre XE90fx	None – Paperweight
Xerox	WorkCentre XK35c	Works partially

The following is old information and will be removed in a future revision of this document:

- HP LaserJet 4 series – free–lj4, printing modes control program here
- BiTronics parallel port interface here
- Epson Stylus Color 850. Use Magicfilter with either of the filters 'stylus800–filter', 'stylus_color_360dpi–filter' or 'stylus_color_720dpi–filter'.

22.1. Ghostscript

Many Linux programs output PostScript files. Non–PostScript printers can emulate PostScript Level 2 using Ghostscript.

- Ghostscript here

22.1.1. Ghostscript 5.1 supported printers

- Apple Imagewriter
- Apple Dot Matrix printer
- Apple StyleWriter 2x00 (*bjc600*)
- Brother HL–660 (*ljet4*)
- C. Itoh M8510
- Canon BubbleJet BJ10e, BJ20 (*bj10e*)
- Canon BubbleJet BJ100, BJ200, BJC–210 (B/W only), BJC–240 (B/W only), BJC–250 (B/W only), BJC–70 (B/W only) (*bj200*)
- Canon BubbleJet BJC–600, BJC–610, BJC–4000, BJC–4100 (B/W only), BJC–4200, BJC–4300, BJC–4400, BJC–4550, BJC–210, BJC–450, MultiPASS C2500, BJC–240, BJC–70 (*bjc600*)
- Canon BubbleJet BJC–800, BJC–7000 (*bjc800*)
- Canon Bubblejet BJC–610 (*uniprint*)
- Canon LBP–8II, LIPS III
- DEC LA50/70/75/75plus
- DEC LN03, LJ250 (*decl250*)
- Epson 9 pin, 24 pin, LQ series, AP3250
- Epson Stylus Color/Color II/400/500/600/800 (*stcolor*)
- Epson Stylus Color/Color II/500/600/800/1520 (*uniprint*)
- Fujitsu 3400,2400,1200
- HP 2563B
- HP DesignJet 650C
- HP DeskJet, Deskjet Plus (*deskjet*)

- HP Deskjet 500, Deskjet Portable (*djet500*)
- HP Deskjet 500C (*cdeskjet*)
- HP Deskjet 550C (*uniprint*)
- HP DeskJet 400/500C/520C/540C/690C/693C (*cdj500*)
- HP DeskJet 550C/560C/600/660C/660Cse/682C/683C/693C/694C/695C/850/870Cse (*cdj550*)
- HP DeskJet 850/855/870Cse/870Cxi/890C/672C/680/1100C (*cdj850*)
- HP DeskJet 500C/510/520/5540C/693C printing black only (*cdjmono*)
- HP DeskJet 600 (*lj4dith*)
- HP DeskJet 600/870Cse, LaserJet 5/5L/6L (*ljet4*)
- HP Deskjet 600/1200C/1600C (*pjxl300*)
- HP Deskjet 500/500C/510/520/540/550C/560C/850C/855C and other PCL3 printers here
- HP Deskjet 710, 720, 820 and 1000 series here
- HP Paintjet (*pjtest*)
- HP Paintjet XL (*pjxltest*)
- HP PaintJet XL300 (*pjxl300*)
- HP LaserJet/Plus/II/III/4/5/6
- IBM 3853 Jetprinter color
- IBM Proprinter
- Imagen ImPress
- Lexmark Optra E+ (*ljet4*)
- Mitsubishi CP50 color
- NEC P6/P6+/P60
- NEC Pinwriter P2X (*uniprint*)
- NEC SuperScript 860 (*ljetplus*)
- Oki OL410ex LED (*ljet4*)
- Okidata MicroLine 182
- Ricoh 4081/6000 (*r4081*)
- SPARCprinter
- StarJet 48 inkjet printer
- Tektronix 4693d color 2/4/8 bit
- Tektronix 4695/4696 inkjet plotter
- Xerox XES printers (2700, 3700, 4045, etc.)

22.1.2. Alpha, Beta drivers

- Epson Stylus Color 440

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23. Scanners

For scanner support there is the package SANE (Scanner Access Now Easy). Information can be found at here. It can be downloaded from here. This is a universal scanner interface. It comes complete with documentation and several frontends and backends.

More information on handheld scanners can be found at here

Many scanners also have their own, scanner specific, software packages which include drivers.

23.1. Supported

- A4 Tech AC 4096 / AS 8000P (*a4scan*) here
- Adara Image Star I ??? here ??? here
- Conrad Personal Scanner 64, P105 handheld scanners (*scan−driver*) here
- Epson GT−5500 (*SANE epson*)
- Epson GT−6000 here
- Escom Image Scanner 256 (*SANE umax*)
- Fujitsu SCSI−2 scanners contact Dr. G.W. Wettstein `< greg%wind.UUCP@plains.nodak.edu>`
- Genius ColorPage−SP2 ??? here ??? here
- Genius GS−B105G handheld scanner (*gs105*) here
- Genius GeniScan GS−4500, GS−4500A handheld scanners (*gs4500*) here
- HighScreen Greyscan 256 handheld scanner (BW only) (*gs4500*) here
- HP ScanJet II series SCSI here
- HP ScanJet IIc, IIcx, IIp, 3c, 4c, 4p, 5p, 5pse, plus here
- Linotype Hell Jade, Jade2 (*SANE umax*)
- Logitech Scanman+, Scanman 32, Scanman 256 handheld scanners (*logiscan*) here
- Microtek ScanMaker E3, E6, II, IIXE, III and 35t models ??? here ??? here E3 and E6 scanners are also supported by here
- Mustek M105 handheld scanner (*scan−driver*) here
- Mustek HT800 Turbo, Matador 105, Matador 256 handheld scanners (*scan−driver*) here
- Mustek Paragon 6000CX here
- Nikon Coolscan SCSI 35mm film scanner here
- Nikon AX−210 (*SANE umax*)
- Pearl 256 handheld scanner (*scan−driver*) here
- Polaroid DMC (*SANE dmc*)
- Vobis/Highscreen Scanboostar Premium (*SANE umax*)
- UMAX SCSI scanners here
- UMAX Vista S6, S6E, T630, Supervista S−12 (*SANE umax*)
- UMAX S−6E, S−6EG, S−12, S−12G (*SANE umax*)
- UMAX Astra 600S, 610S, 1200S, 1220S (*SANE umax*)
- UMAX UC 630, 840, 1200S, 1200SE (*SANE umax*)
- UMAX UG 80, 630 (*SANE umax*)
- UMAX PSD, Gemini D−16 (*SANE umax*)

NOTE: The Mustek drivers work only with GI1904 interface cards. Eric Chang eric.chang@chrysalis.org has created a patch to use them with IF960 interface cards.

23.2. Alpha, Beta drivers

- Abaton Scan 300/S (*SANE abaton*)
- Abaton Scan 300/GS (*SANE abaton*)
- Agfa Focus, Focus II (*SANE agfafocus*)
- Agfa Focus Color, Focus Color Plus (*SANE agfafocus*)
- Agfa Focus Lineart (*SANE agfafocus*)
- Agfa Arcus II (*SANE microtek*)
- Agfa StudioScan II, IIsi (*SANE microtek*)
- Agfa SnapScan 300, 310, 600 (*SANE snapscan*)
- Apple Scanner, OneScanner, ColorOneScanner (*SANE apple*)
- Artec/Ultima AT3, AT6, AT12 (*SANE artec*)
- Artec A6000C+ (*SANE artec*)
- Canon CanoScan 300, CanoScan 600, CanoScan 2700F (*SANE canon*)
- Genius Colorpage−Vivid+ Info can be found on here. The driver can also be found here.
- Genius GS−4000, ScanMate/32, ScanMate/GS handheld scanners (*gs4500*) here
- HP ScanJet IIc, IIp, IIcx, 3c, 4c, 3p, 4p, 5p, 6100c, 6200c (*SANE hp*)
- HP PhotoSmart PhotoScanner (*SANE hp*)
- Kodak DC210 (*SANE dc210*)
- Kodak DC20, DC25 (*SANE dc25*)
- Microtek Scanmaker E2, E3, E6, II, IIG, IIHR, IISP, III, 35t+, 600Z(S), 600G(S) (*SANE microtek*)
- Microtek ScanMaker E3plus, 330, 630, 636, X6 (*SANE microtek2*)
- Microtek Phantom 636 (*SANE microtek2*)
- Mustek MFC−600S, MFC−600CD, MFC−800S (*SANE mustek*)
- Mustek MFS−6000CX, MFS−6000SP, MFS−8000SP, MFS−1200SP, MFS−12000CX (*SANE mustek*)
- Mustek SE−6000SP, SE−12000SP (*SANE mustek*)
- Mustek HT105, M800 handheld scanners (*scan−driver*) here
- Nework Scanny MM100 Info can be found on here. The driver can also be found here.
- Nikon LS−20, LS−30, LS−1000 (*SANE Coolscan*)
- Plustek OpticPro 4830P, OpticPro 4831P, OpticPro 9630P/PL, OpticPro 600P, OpticPro FBIII, OpticPro FBIV (*SANE plustek*) The sane driver can be found at here
- Primax Colorado Direct 300, Colorado Direct 600/30bit, Storm Totalscan Info can be found on here. The driver can also be found here.
- Siemens S9036 (*SANE agfafocus*)
- Tamarack Artiscan 6000C, 8000C, 12000C (*SANE tamarack*)
- UMAX Vista−S8, UC−1260, Mirage IIse, PL−II (*SANE umax*)
- Vobis HighScan (*SANE microtek2*)
- Voelkner Personal Scanner 64 handheld scanner (*scan−driver*) here
- Vuego 310S (*SANE snapscan*)

23.3. Unsupported

- Acer scanners. Acer is not releasing any programming information.
- Escom 256 (Primax Lector Premier 256) handheld scanner
- Genius ScanMate/256, ScanMate/Color, EasyScan handheld scanners

- Mustek CG 8000 handheld scanner
- Primax Colorado Direct 9600, Colorado 1200p, Colorado USB 19200 Info can be found on here
- Trust Ami Scan handheld scanner
- UMAX parallel scanners

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24. USB

USB is supported in all 2.4.x kernels, as well as 2.2.18 and higher. The kernel driver supports both the Universal Host Controller Interface (UHCI, used by Intel and Via motherboard chipsets) and the Open Host Controller Interface (OHCI, used by Compaq, Apple, SiS, OPTi, Lucent and ALi chipsets).

For more information, see linux−usb.org.

Below is a *very* incomplete list of USB hardware known to work with the Linux USB driver.

24.1. Digital Cameras

Manufacturer	Model Name	Driver	Notes
Sony	DSC−F505V	usb−storage	Information from www.cybershotcentral.com/oses.asp?os
Sony	DSC−S70	usb−storage	Information from www.cybershotcentral.com/oses.asp?os
Sony	DSC−S50	usb−storage	Information from www.cybershotcentral.com/oses.asp?os
Sony	DSC−S30	usb−storage	Information from www.cybershotcentral.com/oses.asp?os
Sony	DSC−P1	usb−storage	Information from www.cybershotcentral.com/oses.asp?os

24.2. Miscellaneous

Manufacturer	Model Name	Description	Driver	Notes
SanDisk	ImageMate	CompactFlash reader	Flash storage	
Sony	MSAC−US1	Memory Stick Standalone USB Adaptor	usb−storage	Information from www.cybershotcentral.com/oses.asp

25. Other hardware

25.1. Amateur Radio

The following cards etc. are supported:

- KISS based Terminal Node Controllers
- Ottawa PI card
- Gracilis PacketTwin card
- Other Z8530 SCC based cards
- Parallel and serial port Baycom modems
- Soundblaster cards
- Soundcards based on the Crystal chipset

25.2. VESA Power Savings Protocol (DPMS) monitors

Support for power savings is included in the Linux kernel. Use `setterm` to enable support in the Linux console, and `xset` to enable support under X.

25.3. Touch screens

The Metro−X X−server is supporting the following touch screen controllers:

- Carrol Touch serial touch screen here
- EloGraphics
- Lucas Deeco
- MicroTouch

25.4. Terminals on serial port

Old terminals can easily be used under Linux by connecting them to the serial port of your system. At least the following terminals will be supported:

- VT52
- VT100
- VT220
- VT320
- VT420

25.5. Joysticks

Joystick support is in the latest XFree86 distributions (3.3.x) and in kernel versions 2.1.xx and 2.2.xx. For older kernels the links below are usefull.

- Joystick driver For information check here. An FTP archive can be found at here.

Currently supported joysticks are:

- Amiga joysticks on Amiga
- CH Flightstick Pro compatibles with additional two hats and two buttons
- DirectPad Pro parallel port joystick interfaces (here)
- FP Gaming Assasin 3D (here)
- Gamepads with 6 and 8 buttons
- Genius Flight2000 Digital F−23 (here)
- Gravis Blackhawk Digital (here)
- Gravis GamePad Pro (here)
- Gravis Xterminator GamePad (here)
- Logitech CyberMan 2 (here)
- Logitech ThunderPad Digital
- Logitech WingMan Extreme Digital (here)
- MadCatz Panther (here)
- MadCatz Panther XL (here)
- Microsoft SideWinder 3D Pro (here)
- Microsoft SideWinder Force Feedback Pro (here)
- Microsoft SideWinder GamePad (here)
- Microsoft SideWinder Precision Pro (here)
- Multisystem joysticks (Atari, Amiga, Commodore, Amstrad)
- Multisystem joysticks using 0.8.0.2 hw interface
- Nintendo Entertainment System (and clone − SVI, Pegasus ...) gamepads
- PDPI Lightning L4 gamecard (here)
- Sega Genesis (MegaDrive) gamepads
- Sega Master System gamepads
- Sega Saturn gamepads
- SNESKey parallel port joystick interfaces
- Sony PlayStation gamepads
- Standard joysticks with 2, 3 or 4 axes, and up to 4 buttons
- Super Nintendo Entertainment System gamepads
- ThrustMaster FCS compatibles with additional hat
- ThrustMaster Millenium 3D Inceptor (here)
- ThrustMaster Rage 3D (here)
- TurboGraFX parallel port joystick interface (here)

25.6. Video capture boards / Frame Grabbers / TV tuner

A couple of programs are available that support TV tuners. These are:

- BTTV here
- Xawtv
- Xtvscreen

All cards with Bt848/Bt848a/Bt849/Bt878/Bt879 and normal Composite/S−VHS inputs are supported. Teletext and Intercast support (PAL only) via VBI samples decoding in software.

- Adlink 7200 Digital I/O device here
- Adlink 7300A Digital I/O device here
- CMOS Video Conferencing Kit. The video capture card has a Bt849 chipset. It comes with a CCD camera.
- Data Translation DT2803
- Data Translation DT2851 Frame Grabber here
- Data Translation DT3155 here
- Diamond DTV2000 (based on Bt848)
- Dipix XPG1000/FPG/PPMAPA (based on TI C40 DSP). Most add−on cards are supported. here or here. The driver can be found at here
- Epix SVM
- Epix Silicon Video MUX series of video frame grabbing boards here
- FAST Screen Machine II here
- Hauppage Wincast TV PCI (based on Bt848) here
- Imaging Technology ITI/IC−PCI here
- ImageNation Cortex I here
- ImageNation CX100 here
- ImageNation PX500 here
- ImageNation PXC200 here
- Imaging Technology Inc. IC−PCI frame grabber board here
- Matrix Vision MV−Delta here
- Matrox Meteor here
- Matrox PIP−1024 here
- MaxiTV/PCI (based on ZR36120) here
- Miro PCTV (based on Bt848) here
- MuTech MV1000 PCI here
- MuTech MV200 here
- Philips PCA10TV (not in production anymore) here
- Pinnacle PCTV (based on Bt848)
- Pro Movie Studio here
- Quanta WinVision B&W video capture card here
- Quickcam here
- Nomadic Technologies Sensus 700 here for common information. Alas, Nomadic Technologies has removed the page about the Sensus 700.
- Smart Video Recoder III (based on Bt848) here
- STB TV PCI Television Tuner (based on Bt848) here
- Tekram C210 (based on ZR36120) here
- Video Blaster, Rombo Media Pro+ here
- VT1500 TV cards here

25.7. Digital Camera

Currently there are five programs which can be used in combination with digital cameras.

- Camediaplay (here) You can download it from here
- Photopc (here) It can be downloaded from here
- Qvplay (here) It can be downloaded from here
- JCAM, a Java application which allows digital camera owners to access and download pictures from a wide variety of popular digital cameras (here) It can be downloaded from here

- gPhoto (here) It can be downloaded from here

Photopc can be extended with a graphical Tk frontend. This can be found at here. Also Qvplay cab be extended with a graphical Tk frontend, which can be found at here

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25.7.1. Supported

- Agfa ePhoto line of cameras (*photopc, camediaplay, JCAM*)
- Apple QuickTake 200 (*JCAM*)
- Casio QV10, QV−10A, QV−11, QV−30, QV−70, QV−100, QV−200, QV−300, QV−700, QV−770 (*qvplay*) here
- Casio QV−10A, QV−11, QV−30, QV−70, QV−100, QV−300, QV−700, QV−770 (*JCAM*)
- Chinon ES−1000 (same hardware, protocol and image format as Kodak DC20) (*JCAM*) here
- Epson "Colorio Photo" CP−100 (PhotoPC) (*photopc, camediaplay*) here
- Epson "Colorio Photo" CP−200 (PhotoPC 500) (*photopc, camediaplay, JCAM*) here
- Epson "Colorio Photo" CP−200 (PhotoPC 550) (*JCAM*)
- Epson "Colorio Photo" CP−500 (PhotoPC 600) (*photopc, camediaplay, JCAM*) here
- Epson "Colorio Photo" CP−500 (PhotoPC 700) (*JCAM*)
- Epson PhotoPC 550 (photopc, camediaplay) here
- Fuji DS−7, DX−5 (DS−10), DX−7 (DS−20), DX−9 (DS−30), DS−300, MX−700 (*JCAM*)
- HP Photo Smart Digital Camera (Some people say it is supported, others say it isn't !!??)
- Kodak DC−20, DC−25, DC−200/210 (*JCAM*) here
- Olympus C−300L, C−320L, C−420L, C−800L, C−840L, C−1000L, C−1400L (*JCAM*) here
- Olympus "Camedia" C−400L (D−200L) (*photopc, camediaplay, JCAM*) here
- Olympus "Camedia" C−820L (D−320L) (*photopc, camediaplay, JCAM*) here
- Olympus C2000Z (*photocd*)
- Sanyo VPC−G200/G200EX (*photopc, camediaplay*) here
- Sanyo DSC−V1 (VPC−G200E) (*photopc, camediaplay*) here
- Sanyo DSC−X1 (VPC−X300) (*JCAM*)
- Sanyo DSC−X300 (*photopc, camediaplay*) here
- Nikon Coolpix 600/900 (Coolpix 600 untested) (*photopc*) here and here
- Sierra Imaging SD640 (*photopc*) here
- Toshiba PDR−2 (not sure: *photopc*) here

25.7.2. Unsupported

- Casio QV−120, QV−5000SX, QV−7000SX
- Kodak DC40, DC50, DC120

25.8. UPS

Various other UPS's are supported, read the UPS HOWTO

- APC SmartUPS here
- APC−BackUPS 400/600, APC−SmartUPS SU700/1400RM here
- Fenton PowerPal here for downloads and manuals. Web site information can be found at here

- Fenton Tele−UPS here for downloads and manuals. Web site information can be found at here
- Fenton PowerOn here for downloads and manuals. Web site information can be found at here
- UPS's with RS−232 monitoring port (genpower package) here
- MGE UPS's here and here
- A daemon to shut down and up computers connected to ups's. It's network aware and allows server− and client−mode here

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25.9. Multifunction boards

- Pro Audio Spectrum 16 SCSI / Sound interface card

25.10. Data acquisition

The Linux Lab Project site collects drivers for hardware dealing with data acquisition, they also maintain some mailing lists dealing with the subject. I have no experience with data acquisition so please check the site for more details.

- Linux Lab Project here

- CED 1401
- DBCC CAMAC
- IEEE−488 (GPIB, HPIB) boards
- Keithley DAS−1200
- National Instruments AT−MIO−16F / Lab−PC+

- Analog Devices RTI−800/815 ADC/DAC board contact Paul Gortmaker < gpg109@anu.edu.au >

25.11. Watchdog timer interfaces

- Berkshire Products PC Watchdog Card (ISA cards rev. A and C) Check here for the PC Watchdog program. A driver is included in recent kernels. More information on this product can be found at here
- ICS WDT500−P here
- ICS WDT501−P (with and without fan tachometer) here
- Outsource Engineering & Manufacturing Inc. Basic Watchdog Timer Board (ISA) Information can be found at here. Drivers currently running on 2.0.29, 2.0.33 and 2.0.36 kernels

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25.12. Miscellaneous

- Mattel Powerglove
- AIMS Labs RadioTrack FM radio card here
- Reveal FM Radio card here
- Videotext cards here

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26. Appendix A. S3 cards supported by XFree86 3.3.x.

CHIPSET	RAMDAC	CLOCKCHIP	BIP	CARD
801/805	AT&T 20C490		16	Actix GE 32 / 32+ 2Mb
				Orchid Fahrenheit 1280(+)
801/805	AT&T 20C490	ICD2061A	16	STB PowerGraph X.24
801/805				Del S3 805
				Miro Crystal 8S
				Orchid Fahrenheit VA
				VL−41
805	S3 GENDAC		16	Miro 10SD VLB/PCI
				SPEA Mirage VLB
801/805	SS2410	ICD2061A	8	Diamond Stealth 24 VLB/ISA
801/805	AT&T 20C490	Ch8391	16	JAX 8231/8241, SPEA Mirage
801/805	S3 GENDAC			Miro Crystal 10SD
805i				Actix GE 32i

				ELSA Winner 1000 ISA
928	AT&T 20C490		16	Actix Ultra
928	Sierra SC15025	ICD2061A	32	ELSA Winner 1000 ISA/VLB/EISA
928	Bt485	ICD2061A	32	STB Pegasus VL
928	Bt485	SC11412	16	SPEA(/V7) Mercury VLB
928	Bt485	ICD2061A	32	#9 GXE Level 10/11/12
928	Ti3020	ICD2061A	32	#9 GXE Level 14/16
928				928Movie
				Diamond Stealth Pro
				ELSA Winner 1000TwinBus
				ELSA Winner 1000VL
				ELSA Winner 2000
				Miro Crystal 16S
864		ICD2061A		Miro Crystal 20SD (BIOS 2.xx)
864	AT&T 20C498	ICS2494	32	Miro (Crystal)

				20SD (BIOS 1.xx)
864	AT&T 20C498/	ICD2061A	32	ELSA Winner 1000 PRO VLB/PCI
864	STG1700	ICS9161		MIRO 20SD (BIOS 2.x)
				ELAS Winner 1000 PRO
864	STG1700	ICD2061A	32	Actix GE 64 VLB
864	AT&T 20C498/	ICS2595	16	SPEA(/V7) Mirage P64 DRAM (BIOS 3.x)
	AT&T 21C498			
864	S3 86C716 SDAC		32	ELSA Winner 1000 PRO
				Miro 20SD (BIOS 3.x)
				SPEA Mirage P64 DRAM (BIOS 4.x)
				Diamond Stealth 64 DRAM
				Genoa Phantom 64i

				Miro Crystal 20SD VLB (BIOS 3.xx)
864	ICS5342	ICS5342	32	Diamond Stealth 64 DRAM (some)
864	SDAC			Diamond Stealth 64 Graphics 2001
864	AT&T 20C498−13	ICD2061A	32	#9 GXE64 PCI
864				ASUS Video Magic PCI V864
				VidTech FastMax P20

CHIPSET	RAMDAC	CLOCKCHIP	BUS	CARD
964				ELSA Winner 2000 PRO−2,4
				spider Tarantula 64
964	AT&T 20C505	ICD2061A	32	Miro Crystal 20SV PCI/40SV
964	Bt485	ICD2061A	32	Diamond Stealth 64
964	Bt9485	ICS9161A	32	SPEA Mercury 64
964	Ti3020	ICD2061A	8	ELSA Winner 2000 PRO PCI
964	Ti3025	Ti3025	32	#9 GXE64 Pro VLB/PCI

				Miro Crystal 40SV
964	IBM RGB		32	Hercules Graphite Terminator 64
868	S3 86C716 SDAC		32	ELSA Winner 1000AVI
				Miro Crystal 20SD PCI
868	AT&T 29C409			ELSA Winner 1000AVI
868				Diamond Stealth Video DRAM
				Diamond Stealth 64 Video 2120/2200
				ELSA Winner 1000PRO/X
				#9 FX Motion 531
				VideoLogic GrafixStar 500
968				Diamond Stealth 64 Video 3200
				ELSA Gloria−4/8
				ELSA Winner 2000AVI
				ELSA Winner 2000PRO/X−2/X−4/X−8
				Genoa VideoBlitz III AV
				Hercules Graphite Terminator Pro 64
				LeadTek WinFast S430

				LeadTek WinFast S510
				Miro Crystal 80SV
				Miro Crystal 20SV
				#9 FX Motion 771
				VideoLogic GrafixStar 700
				WinFast S430/S510
968	TVP3026		32	ELSA Winner 2000PRO/X
				Diamond Stealth 64 Video VRAM
968	IBM RGB		32	Genoa VideoBlitz III AVI
				Hercules Terminator Pro 64
				STB Velocity 64 Video
				#9 FX Motion 771
				Diamond Stealth 64 Video 3240/3400
968	TI RAMDAC			Diamond Stealth 64 Video 3240/3400
732	(Trio32)		32	Diamond Stealth 64 DRAM SE
				(all Trio32 based cards)
764	(Trio64)		32	SPEA Mirage P64 (BIOS 5.x)

				Diamond Stealth 64 DRAM
				Diamond Stealth 64 Graphics 2xx0
				#9 FX Vision 330
				STB PowerGraph 64
				(all Trio64 based cards)

CHIPSET	RAMDA	CLOCKC	HP	CARD
	(Trio64V+)			DSV3326
				Diamond Stealth 64 Video 2001
				DataExpert DSV3365
				ExpertColor DSV3365
				MAXColor S3 Trio64V+
				ELSA Winner 1000TRIO/V
				Hercules Terminator 64/Video
				#9 FX Motion 331
				STB Powergraph 64 Video
				VideoLogic GrafixStar 400

	(Trio64V2)			ELSA Winner 1000/T2D
	(ViRGE)			Canopus Co. Power Window 3DV
				DSV3325
				DataExpert DSV3325
				Diamond Multimedia Stealth 3D 2000
				Diamond Multimedia Stealth 3D 2000 PRO
				Diamond Stealth 3D 2000
				Diamond Stealth 3D 2000 PRO
				Diamond Stealth 3D 3000
				ELSA Victory 3D
				ELSA Victory 3DX
				ELSA Winner 3000−S
				Expertcolor DSV3325
				Hercules Terminator 64/3D
				LeadTek WinFast 3D S600
				MELCO WGP−VG4S

				#9 FX Motion 332
				Orchid Tech. Fahrenheit Video 3D
				STB systems Powergraph 3D
				WinFast 3D S600
	(ViRGE/DX)			Hercules Terminator 3D/DX
	(ViRGE/GX)			STB Nitro 3D
	(ViRGE/VX)			ELSA Winner 2000AVI/3D
				ELSA Winner 3000
				ELSA Winner 3000−L−42/−M−22
				MELCO WGP−VX8
				STB Systems Velocity 3D
911/924				Diamond Stealth VRAM
924	SC1148 DAC			

NOTE: for the ViRGE/VX,DX,GX,GX2 chipsets you need XFree86 3.3.1 or newer. You should use the XF86_SVGA server.

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27. Appendix B. Supported PCMCIA cards

These cards are supported by David Hinds' PCMCIA package and this list is taken from his web page (here).

CardBus cards are listed at the end of each section. At this time, all CardBus drivers should be treated as experimental. Beware that some cards have 16−bit and CardBus versions with very similar names. If the CardBus version is not specifically listed as supported here, then you should not expect it to work.

27.1. Ethernet cards

- SMC, Megahertz and Ositech cards use the smc91c92_cs driver
- 3Com and Farallon cards use the 3c589_cs driver
- Fujitsu, TDK, RATOC, CONTEC, Eagle and Nextcom cards use the fmvj18x_cs driver

All other cards use the pcnet_cs driver. Other NE2000−compatible cards that are not on the list are also likely to work with pcnet_cs.

- 3Com 3c589, 3c589B, 3c589C, 3c589D (3c589_cs)
- 3Com Megahertz 3CCE589E, 3CXE589D, 3CXE589EC (3c589_cs)
- Accton EN2212, EN2216 EtherCard (pcnet_cs)
- Accton SOHO BASIC EN220 (pcnet_cs)
- Addtron Ethernet (pcnet_cs)
- AIBrain EPCM−T (pcnet_cs)
- Allied Telesis CentreCOM CE6001, LA−PCM, LA−PCM V2 (pcnet_cs)
- AmbiCom AMB8002, AMB8002T (pcnet_cs)
- AnyCom ECO Ethernet (pcnet_cs)
- Apollo RE450CT (pcnet_cs)
- Argosy EN210 (pcnet_cs)
- Asante FriendlyNet (pcnet_cs) (new cards seem not to work!!)
- AST 1082 Ethernet (pcnet_cs)
- Billionton LNT−10TB, LNT−10TN (pcnet_cs)
- Californiа Access LAN Adapter
- CeLAN EPCMCIA (pcnet_cs)
- CNet CN30BC, CN40BC Ethernet (pcnet_cs)
- Compaq Ethernet Adapter (xirc2ps_cs)
- Compex/ReadyLINK Ethernet Combo (pcnet_cs)
- Compex Linkport Ethernet (pcnet_cs)
- COMPU−SHACK BASEline Ethernet (pcnet_cs)
- Connectware LANdingGear Adapter (pcnet_cs)
- Corega Ether PCC−T, PCM−T (pcnet_cs)
- CyQ've ELA−010 10baseT (pcnet_cs)
- CONTEC C−NET(PC)C (fmvj18x_cs)
- Danpex EN−6200P2 Ethernet (pcnet_cs)
- Datatrek NetCard (pcnet_cs)
- Dayna Communications CommuniCard E (pcnet_cs)
- Digital DEPCM−AA, PCP78−AC Ethernet (pcnet_cs)
- Digital EtherWORKS Turbo Ethernet (pcnet_cs)
- D−Link DE−650, DE−660 (pcnet_cs)
- DynaLink L10C Ethernet (pcnet_cs)

- Eagle NE200 Ethernet (fmvj18x_cs)
- Edimax Technology Ethernet Combo (pcnet_cs)
- EFA InfoExpress 205, 207 Combo (pcnet_cs)
- Eiger Labs EPX−ET10T2 Combo (pcnet_cs)
- Eiger Labs EPX−10BT, EPX−ET 10BT EPX−ET 10TZ (fmvj18x_cs)
- ELECOM Laneed LD−CDWA, LD−CDX, LD−CDNIA, LD−CDY, LD−CDF (pcnet_cs)
- EP−210 Ethernet (pcnet_cs)
- Epson Ethernet (pcnet_cs)
- EtherPRIME Ethernet (pcnet_cs)
- Explorer NE−10000 Ethernet (pcnet_cs)
- EZLink 4109 Ethernet (pcnet_cs)
- Farallon Etherwave, EtherMac (3c589_cs)
- Fiberline FL−4680 (pcnet_cs)
- Fujitsu FMV−J181, FMV−J182, FMV−J182A, FMV−J183 (fmvj18x_cs)
- Fujitsu Towa LA501, FMV−1080, FM50N−183 (fmvj18x_cs)
- Gateway 2000 Ethernet (pcnet_cs)
- Genius ME3000II Ethernet (pcnet_cs)
- Grey Cell Ethernet (pcnet_cs)
- GVC NIC−2000P Ethernet Combo (pcnet_cs)
- Hitachi HT−4840−11 EtherCard (fmvj18x_cs)
- Hypertec HyperNet (pcnet_cs)
- IBM CreditCard Ethernet Adapter (pcnet_cs)
- IC−Card Ethernet (pcnet_cs)
- Infotel IN650ct Ethernet (pcnet_cs)
- I−O Data PCLA/T, PCLA/TE (pcnet_cs)
- Katron PE−520 Ethernet (pcnet_cs)
- KingMax Technology EN10−T2 Ethernet (pcnet_cs)
- Kingston KNE−PCM/M, KNE−PC2, KNE−PC2T (pcnet_cs)
- KTI PE−520 Plus (pcnet_cs)
- LANEED LD−CDW Ethernet (pcnet_cs)
- LanPro EP4000A (pcnet_cs)
- Lantech Ethernet (pcnet_cs)
- Level One EPC−0100TB (pcnet_cs)
- Linksys EtherCard (pcnet_cs)
- Logitec LPM−LN10T, LPM−LN10BA, LPM−LN20T Ethernet (pcnet_cs)
- Longshine ShineNet LCS−8534TB Ethernet (pcnet_cs)
- Macnica ME−1 Ethernet (pcnet_cs)
- Maxtech PCN2000 Ethernet (pcnet_cs)
- Megahertz XJ10BT, XJ10BC, CC10BT Ethernet (smc91c92_cs)
- Melco LPC−TJ, LPC−TS, LPC−T, LPC2−T (pcnet_cs)
- Microdyne NE4200 Ethernet (pcnet_cs)
- Midori LANNER LT−PCMT (pcnet_cs)
- Micronet Etherfast Adapter (pcnet_cs)
- NDC Instant−Link (pcnet_cs)
- Network General ``Sniffer'' (pcnet_cs)
- New Media EtherLAN (nmclan_cs)
- New Media LanSurfer (pcnet_cs)
- New Media LiveWire (NOT the LiveWire+) (nmclan_cs)
- New Media BASICS Ethernet (smc91c92_cs)
- NextCom NC5310 (fmvj18x_cs)
- Novell/National NE4100 InfoMover (pcnet_cs)

- Ositech Four of Diamonds (smc91c92_cs)
- OvisLink Ethernet (pcnet_cs)
- Panasonic CF−VEL211P−B (pcnet_cs)
- Planet SmartCom 2000, 3500, ENW−3501−T, ENW−3502−T (pcnet_cs)
- Pretec Ethernet (pcnet_cs)
- PreMax PE−200 Ethernet (pcnet_cs)
- Proteon Ethernet (pcnet_cs)
- Ratoc REX−9822, REX−5588A/W, REX−R280 (fmvj18x_cs)
- Relia RE2408T Ethernet (pcnet_cs)
- Reliasys 2400A Ethernet (pcnet_cs)
- RPTI EP400, EP401 Ethernet (pcnet_cs)
- SCM Ethernet (pcnet_cs)
- Sky Link Express (pcnet_cs)
- SMC 8020BT EtherEZ (not the EliteCard) (smc91c92_cs)
- SMC 8022 EZCard−10 (pcnet_cs)
- Socket Communications EA LAN Adapter (pcnet_cs)
- Socket Communications LPE Low Power Ethernet (pcnet_cs)
- SOHOware Ethernet (pcnet_cs)
- SuperSocket RE450T (pcnet_cs)
- Surecom Ethernet (pcnet_cs)
- SVEC PN605C (pcnet_cs)
- TDK LAC−CD02x, LAK−CD021, LAK−CD022A, LAK−CD021AX, LAK−CD021BX (fmvj18x_cs)
- Thomas−Conrad Ethernet (pcnet_cs)
- Trust Ethernet Combo (pcnet_cs)
- UNEX NexNIC MA010 (pcnet_cs)
- Volktek NPL−402CT Ethernet (pcnet_cs)
- Xircom CreditCard CE2 (xirc2ps_cs)

27.2. Fast Ethernet (10/100baseT) adapters

epic_cb and tulip_cb drivers are experimental and need a 2.2.x or newer kernel

- 3Com 3c574TX, 3CCFE574BT (3c574_cs)
- 3Com 3c575TX, 3CCFE575BT, 3CXFE575BT CardBus (3c575_cb, performance problem)
- Abocom LinkMate FE1000 (pcnet_cs)
- Accton Fast EtherCard−16 (xirc2ps_cs)
- Accton EN2220 CardBus (tulip_cb)
- Allied Telesyn AT−2800 (tulip_cb)
- AmbiCom AMB8100 (tulip_cb)
- AnyCom ECO Ethernet 10/100 (pcnet_cs)
- Apollo Fast Ethernet (pcnet_cs)
- Argosy EN220 (smc91c92_cs)
- Compaq Netelligent 10/100 (xirc2ps_cs)
- Compex Linkport TX (tulip_cb)
- COMPU−SHACK FASTline 10/100 (pcnet_cs)
- Corega FastEther PCC−TX (pcnet_cs)
- D−Link DFE−650 (pcnet_cs)
- D−Link DFE−660TX (tulip_cb)

- Dynalink L100C (smc91c92_cs)
- EXP ThinLan 100 (pcnet_cs)
- Fiberline Fast Ethernet (pcnet_cs)
- Hamlet FE1000 10/100 (pcnet_cs)
- Intel EtherExpress PRO/100 (xirc2ps_cs, 16−bit NOT 32−bit)
- IO DATA PCET/TX (pcnet_cs)
- Kingston KNE−CB4TX (tulip_cb)
- KTI KF−C16 (pcnet_cs)
- Laneed LD−10/100CD (pcnet_cs)
- Lantech FastNet/TX (smc91c92_cs)
- LevelOne FPC−0100TX (pcnet_cs)
- LevelOne FPC−0101TX 10/100Mbps CardBus (tulip_cb)
- Linksys PCMPC100 EtherFast 10/100 (pcnet_cs)
- Linksys PCMPC200 EtherFast CardBus (tulip_cb)
- Logitec LPM−LN100TX (pcnet_cs)
- Melco LPC2−TX (pcnet_cs)
- Melco/SMC LPC−TX (smc91c92_cs)
- Microcom TravelCard 10/100 (pcnet_cs)
- Micronet EtherFast Adapter (pcnet_cs)
- NetGear FA410TXC (pcnet_cs)
- Ositech Seven of Diamonds (smc91c92_cs)
- Ositech Seven of Spades CardBus (epic_cb)
- Planet FNW−3600T (pcnet_cs)
- SMC EZ CardBus 10/100 Ethernet (tulip_cb)
- SVEC FD606 10/100 Ethernet (tulip_cb)
- TDK NetworkFlyer LAK−CB100X, LAK−CB100AX CardBus (tulip_cb)
- Toshiba IPC5008A, Advanced Network 10/100 (xirc2ps_cs)
- UMAX Technologies UMAX250 (tulip_cb)
- WiseCom WC−PC400 (smc91c92_cs)
- Xircom CBEII−10/100 (tulip_cb)
- Xircom CreditCard CE3 (xirc2ps_cs, new cards may not work !!)

27.3. Token−ring adapters

You should at least have kernel 1.3.72

- 3Com 3c389 Tokenlink Velocity (ibmtr_cs)
- 3Com 3c689 TokenLink III (ibmtr_cs)
- IBM Token ring Adapter (ibmtr_cs)
- IBM Turbo 16/4 Token Ring (ibmtr_cs)

27.4. Wireless network adapters

- Aironet PC4500, PC4800 wireless network adapters (airco_cs) (Ben Reed breed@almaden.ibm.com)
- AT&T / NCR / Lucent WaveLAN version 2.0 (wavelan_cs)
- DEC RoamAbout/DS (wavelan_cs)
- Harris PRISM/AM79C930 IEEE 802.11 wireless LAN here (Mark Mathews mark@absoval.com)

- Lucent WaveLAN/IEEE wireless network adapter (wavelan2_cs) (Lucent Technologies betasupport@wavelan.com)
- ORiNOCO Silver and Gold adapters from Lucent/Agere and Avaya. (orinoco_cs/wvlan_cs)
- Raylink Wireless Network here (Corey Thomas corey@world.std.com)
- WaveLAN/IEEE wireless network adapter here (Andreas Neuhaus andy@fasta.fh−dortmund.de)
- Xircom CreditCard Netwave (netwave_cs)

27.5. ISDN

- Elsa MicroLink ISDN adapter (elsa_cs) (Klaus Lichtenwalder Klaus.Lichtenwalder@WebForum.DE)
- MPS ISLINEnote ISDN adapter (mpsuni_cs) (Detlef Glaschick glaschick@mps−software.de)
- Sedlbauer Speed Star ISDN adapter (sedl_cs) (Marcus Niemann niemann@www−bib.fh−bielefeld.de)
- Teles ISDN adapter (teles_cs) (Christof Petig ea0141@uni−wuppertal.de)

27.6. Modem and serial cards

Virtually all modem cards, simple serial port cards, and digital cellular modems should work. Also ISDN modems that emulate a standard UART are supported.

- Advantech COMpad−32/85 dual serial (serial_cs)
- Argosy dual serial (serial_cs)
- Black Box I114A RS−422/485 (serial_cs)
- National Instruments PCMCIA−232, PCMCIA−232/2, PCMCIA−232/4 (serial_cs)
- National Instruments PCMCIA−485, PCMCIA−485/2 (serial_cs)
- Omega Engineering QSP−100 (serial_cs)
- Quatech, IOTech dual RS−232 cards (serial_cs)
- Quatech quad RS−232 card (serial_cs)
- Socket Communications dual RS−232 card (serial_cs)
- Trimble Mobile GPS (serial_cs)

27.7. Memory cards

All SRAM cards should work. Unsupported flash cards can be read but not written.

- Epson 2MB SRAM
- IBM 8MB Flash (memory_cs)
- Intel Series 2, Series 2+ and Value Series 100 Flash (memory_cs)
- Maxtor MobileMax 16MB Flash (memory_cs)
- New Media SRAM
- RATOC SmartMedia Adapter (memory_cs)
- TDK Flash Memory SFM20W/C 20MB (memory_cs)

27.8. SCSI adapters

Be careful. Many vendors, particularly CD−ROM vendors, seem to switch controller chips at will. Generally, They will use a different product code, but not always: older (supported) New Media Bus Toaster cards are not easily distinguishable from the current (unsupported) Bus Toaster cards.

- Adaptec APA−1450A, APA−1460, APA−1460A/B/C/D SlimSCSI (aha152x_cs)
- Adaptec SlimSCSI 1480 Cardbus (apa1480_cb, experimental, requires kernel 2.2.2.x or later)
- Digital SCSI II adapter
- Eiger Labs SCSI (qlogic_cs)
- Epson SC200 (qlogic_cs)
- Future Domain SCSI2GO (fdomain_cs)
- IBM SCSI (fdomain_cs)
- Iomega ZIP and JAZ Cards (PPA3) (aha152x_cs)
- IO−DATA PCSC−II, PCSC−II−L
- IO−DATA CDG−PX44/PCSC CD−ROM
- Logitec LPM−SCSI2
- Logitec LCD−601 CD−ROM
- MACNICA mPS110, mPS110−LP SCSI (qlogic_cs)
- Melco IFC−SC2, IFC−DC
- Midori CN−SC43 (qlogic_cs)
- NEC PC−9801N−J03R (qlogic_cs)
- New Media Bus Toaster SCSI (older cards only) (aha152x_cs)
- New Media Toast 'n Jam (SCSI only) (aha152x_cs)
- Noteworthy Bus Toaster SCSI (aha152x_cs)
- Panasonic KXL−D740, KXL−DN740A, KXL−DN740A−NB 4X CD−ROM
- Pioneer PCP−PR1W, PCP−PR2W CD−ROM
- Qlogic FastSCSI (qlogic_cs)
- Raven CD−Note 4X (qlogic_cs)
- RATOC REX−9530 SCSI−2 (qlogic_cs)
- Simple Technologies SCSI (fdomain_cs)
- Sony CD−ROM Discman PRD−250
- Taxan ICD−400PN
- Toshiba NWB0107ABK, SCSC200A, SCSC200B (qlogic_cs)

27.9. ATA/IDE CD−ROM adapters

You should at least have kernel 1.3.72

- Argosy EIDE CD−ROM (ide_cs)
- Caravelle CD−36N (ide_cs)
- CNF CARDport CD−ROM (ide_cs)
- Creative Technology CD−ROM (ide_cs)
- Digital Mobile Media CD−ROM (ide_cs)
- EXP CD940 CD−ROM (ide_cs, Some work, some do not)
- EXP Traveler 620 CD−ROM (ide_cs)
- H45 Technologies Quick 2x CD−ROM (ide_cs)
- H45 Technologies QuickCD 16X (ide_cs)

- IBM Max 20X CD−ROM (ide_cs)
- IO DATA CDP−TX4/PCIDE, CDP−TX6/PCIDE, CDV−HDN6/PCIDE (ide_cs)
- IO DATA CDP−TX10/PCIDE, CDP−FX24/CBIDE, MOP−230/PCIDE (ide_cs)
- IO DATA HDP−1G/PCIDE, HDP−1.6G/PCIDE (ide_cs)
- Microtech International MicroCD (ide_cs)
- Microtech Mii Zip 100 (ide_cs)
- NOVAC NV−CD410 (ide_cs)
- Sony PCGA−CD5 CD−ROM (ide_cs)
- TEAC IDE Card/II (ide_cs)

27.10. Multifunction cards

You should at least have kernel 1.3.73

- 3Com 3c562, 3c562B/C/D, 3c563B/C/D (3c589_cs)
- 3Com Megahertz 3CCEM556, 3CXEM556, 3CCEM556B (3c589_cs)
- 3Com Megahertz 3CCFEM556 (3c574_cs)
- 3Com 3CCFEM656B (3c575_cb, ethernet only!!)
- Accton UE2218 (pcnet_cs)
- ActionTex ComNet 33.6 (pcnet_cs)
- AnyCom Fast Ethernet + 56K Combo (pcnet_cs)
- Asus combo card (pcnet_cs)
- Billionton LM5LT−10B (pcnet_cs)
- Compaq Microcom CPQ550 Modem + 10/100 LAN (xirc2ps_cs)
- Dayna Communicard (pcnet_cs)
- D−Link DME336T, DMF560TX (pcnet_cs)
- Gateway Telepath Combo (smc91c92_cs)
- Grey Cell GCS3400 (pcnet_cs)
- GVC LAN modem (pcnet_cs)
- IBM Home and Away, Home and Away 28.8 (pcnet_cs)
- IO DATA PCEM−336T (pcnet_cs)
- Intel EtherExpress PRO/100 LAN/Modem (xirc2ps_cs)
- Linksys LANmodem 28.8 (PCMLM28), 33.6 (PCMLM336) (pcnet_cs)
- Linksys EtherFast LANmodem 56K (PCMLM56) (pcnet_cs)
- Megahertz/U.S. Robotics EM1144, EM3288, EM3336 (smc91c92_cs)
- Motorola Mariner (smc91c92_cs)
- Motorola Marquis (3c589_cs)
- Ositech Jack of Diamonds, Jack of Hearts (smc91c92_cs)
- Ositech Jack of Spades CardBus (epic_cb, experimental, requires kernel 2.2.x or later)
- PREMAX LAN modem (pcnet_cs)
- Psion V.34 Gold Card (pcnet_cs)
- Psion Gold Card Netglobal 56K+10Mb (pcnet_cs)
- Rover ComboCard 33.6 (pcnet_cs)
- TDK 3000/3400/5670 (pcnet_cs)
- Telecom Device SuperSocket LM336 (pcnet_cs)
- Xircom CreditCard CEM28, CEM33, CEM56 (xirc2ps_cs)
- Xircom RealPort REM10BT, REM56G−100 (xirc2ps_cs)
- Xircom RBEM56G−100BTX, CBEM56G−100BTX (tulip_cb, experimental, requires kernel 2.2.x or later)

27.11. ATA/IDE card drives

These card drives are supported starting with kernel 1.3.72. Both Flash−ATA cards and rotating−media cards are supported. The very old Western Digital 40MB drives are not supported, because they do not conform to the PCMCIA ATA specifications.

27.12. ATA/IDE Interface Cards

- Archos Zip100 MiniDrive (ide_cs)
- Microtech International XpressDock (ide_cs)
- DataStor Technology PCMCIA ATA/ATAPI Card (ide_cs)
- Creo DNBoy (ide_cs)
- GREYSTONE DD−25 (ide_cs)
- Shining Technology CitiDISK 250PE (ide_cs)
- Sicon Periperal Micro Mate (ide_cs)

27.13. Parallel port cards:

See the appendix on supported parallel port devices

27.14. Miscellaneous cards

- GemPlus GPR400 Smart Card Reader here (Wolf Geldmacher wgeldmacher@paus.ch)
- IBM Smart Capture (iscc_cs) (Koji Okamura oka@ec.kyushu−u.ac.jp)
- IBM Etherjet (cs89x0_cs) (Danilo Beuche danili@cs.uni−magdeburg.de)
- National Instruments DAQcard700 here (Oleg Subbotin)
- Netwave AirSurfer Plus (asplus_cs) here (Jay Moorman jrmoorma@uiuc.edu)
- New Media Bus Toaster SCSI (new version) (sym53c500_cs) (Tim Corner tcorner@via.at)
- New Media BASICS SCSI (sym53c500_cs) (Tim Corner tcorner@via.at)
- Nokia/InTalk ST−500A here (Mark Mathews mark@absoval.com)
- Proxim RangeLAN2 and Symphony wireless LAN cards here (Dave Koberstein davek@komacke.com)
- RATOC REX−9590 (iscc_cs) (Koji Okamura oka@nanotsu.kobe−u.ac.jp)
- Samsung MagicWave SWL−1000N here (Mark Mathews mark@absoval.com)
- Silicom SPE ethernet, SEM EtherModem, SES EtherSerial here
- SIMA TECH SCSI9000 (sym53c500_cs) (Tim Corner tcorner@via.at)
- SST 5136−DN−PC DeviceNet Interface (ss5136_cs) here (Mark Sutton Mark.Sutton@laitram.com)
- Trimble Mobile GPS (uses serial/modem driver)
- Y−E Data FlashBuster floppy drive adapter (floppy_cs) (David Bateman dbateman@eng.uts.edu.au)
- Zoom Telephonics ZoomAir 4000 here (Mark Mathews mark@absoval.com)

27.15. Working on ...

People are working on the following cards:

- Roland SCP−55 MIDI (Toshiaki Nakatsu ir9k−nkt@asahi.net.or.jp)
- CyberRom CD−ROM (David Rowntree rowntree@dircon.co.uk)
- IO DATA PCSC−II (Katayama Nobuhiro kata−n@po.iijnet.or.jp)
- Macnica mPS−1x0 (Katayama Nobuhiro kata−n@po.iijnet.or.jp)
- Proxim RangeLAN/2 here
- TView Preso (Brenden Tuck friar@zendragon.com)

27.16. Unsupported

- Adaptec/Trantor APA−460 SlimSCSI
- Eiger Labs SCSI w/FCC ID K36..
- New Media .WAVjammer and all other sound cards
- New Media LiveWire+
- Nikon CoolPix100
- Panasonic KXL−D720, KXL−D745, KXL−D783 (Note: SCSI controller of KXL−D745 is supported as a Qlogic FAS adapter.)
- SMC 8016 EliteCard
- Xircom CE II Ethernet/Modem
- Xircom CE−10BT Ethernet

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28. Appendix C. Supported Parallel Port devices

More and more, the parallel port is used to connect other devices than printers. To support this parallel port drivers are written for the devicesto work. This appendix presents devices for which parallel port support is written.

To be clear: printers are not presented in this appendix as they are not supported by parallel port support projects.

Also, check the Linux Parallel Port support pages for more information here. Here you can find

- paride subsystem for parallel port IDE devices (here)
- support for parallel port SCSI devices (here)

28.1. Ethernet

- Accton EtherPocket adapter
- AT−Lan−Tec/RealTek parallel port ethernet adapter
- D−Link DE600/DE620 parallel port ethernet adapter

28.2. Hard drives

- H45 Quick HD
- KingByte IDE/ATAPI disks
- KT Technologies PHd portable hard disk
- MicroSolutions backpack hard−drives
- SyQuest EZ−135
- SyQuest EZ−230
- SyQuest SparQ
- ValueStor external hard−drive

28.3. Tape drives

- Hewlett−Packard Colorado Tracker 250 tape drive (all except the T1000e)
- Hewlett−Packard HP Colorado 5GB tape drive
- Iomega Ditto tape drive
- MicroSolutions backpack 8000t, 8000td tape drives

28.4. CD−ROM drives

- Freecom Power CD
- Freecom Traveller CD−ROM
- H45 Quick CD

- Hewlett−Packard HP 7100e/7200e CD−R
- KingByte IDE/ATAPI CD−ROMs
- MicroSolutions backpack CD−ROM. Models 163550 and later are supported by the paride driver. For models 160550 and 162550 seperate drivers are availavble.
- MicroSolutions backpack PD/CD drive
- SyQuest SyJet

28.5. Removable drives

- Avatar Shark 250
- Imation Superdisk
- Iomega ZIP, ZIP Plus drives

28.6. IDE Adapter

- Arista ParaDrive products
- DataStor Commuter disks
- Fidelity International Technologies TransDisk products
- Freecom IQ Cable Parallel
- Shuttle Technology EPAT/EPEZ parallel port IDE adapter
- Shuttle Technology EPIA parallel port IDE adapter

28.7. SCSI Adapters

- Adaptec APA−348 mini−SCSI plus adapter cable Driver available at here
- Adaptec APA−358 mini−SCSI EPP adapter cable Driver available at here
- Shuttle Technology EPSA−2 parallel port SCSI adapter Driver available at here
- Shuttle Technology EPST parallel port SCSI adapter Driver available at here

28.8. Digital Camera

- Connectix QuickCam

28.9. PCMCIA parallel port cards

The parport_cs driver requires kernel 2.2.x or later

- Quatech SPP−100
- IOtech DBK35, WBK20A

29. Appendix D. Plug and Play devices

For people having trouble getting Plug and Play devices to work, the ISA PnP utilities written by Peter Fox are available. Quote from the README:

These programs allow ISA Plug−And−Play devices to be configured on a Linux machine. This program is suitable for all systems, whether or not they include a PnP BIOS.

Commands have been taken from the Plug and Play ISA specification Version 1.0a.

More information on ISA PnP utilities can be found on the website of Peter Fox: here

Please let me know about hardware (not normally supported under Linux) which can be put to work with the aid of these utilities. A list of this hardware will be put in this appendix.

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30. Appendix E. Linux incompatible Hardware

Some hardware manufacturers have created devices which are compatible with MS−DOS and Windows 95/98 only. They seem to emulate part of the normally available hardware in the devices by software packages sold together with the device. Specification on these devices are not presented to the world so it is almost impossible to write drivers for these devices. Below a list of devices reported as being Linux incompatible will be given.

Simply put, it is best to avoid hardware which states things like "Needs Windows" or "Windows only".

- Printers

Manufacturer	Model Number	Functionality
Brother	4550	None – Paperweight
Brother	MP−21C	None – Paperweight
Canon	BJC−5000	None – Paperweight
Canon	BJC−5100	None – Paperweight
Canon	BJC−8500	None – Paperweight
Canon	LBP−460	None – Paperweight
Canon	LBP−600	None – Paperweight
Canon	LBP−660	None – Paperweight
Canon	LBP−800	None – Paperweight
Canon	Multipass C50	Unknown
Canon	Multipass L6000	None – Paperweight
Canon	S200	None – Paperweight
Compaq	A900	Unknown
Compaq	IJ300	None – Paperweight
Epson	AcuLaser C1000	None – Paperweight
Epson	EPL−5500W	None –

		Paperweight
Epson	EPL−5700L	None − Paperweight
Epson	EPL−5800L	None − Paperweight
Epson	LP−2000	Unknown
Epson	Stylus B/W 820	Unknown
HP	DeskJet 640C	Unknown
HP	LaserJet 1000	None − Paperweight
HP	LaserJet 3100	None − Paperweight
HP	LaserJet 3150	None − Paperweight
HP	Officejet LX	Unknown
Kyocera	F−1200	Unknown
Kyocera	FS−3700+	Unknown
LaserMaster	LM 1000	None − Paperweight
Lexmark	Optra S1650	Unknown
Lexmark	Winwriter 100	None − Paperweight
Lexmark	Winwriter 150c	None − Paperweight
Lexmark	Winwriter 200	None − Paperweight
Lexmark	Z12	None − Paperweight
Lexmark	Z23	None − Paperweight
Lexmark	Z33	None − Paperweight
Minolta	PagePro 1100L	None − Paperweight
Minolta	PagePro 6L	None − Paperweight
NEC	SuperScript 610plus	None − Paperweight
NEC	SuperScript 660	None − Paperweight

NEC	SuperScript 660plus	None – Paperweight
Okidata	6e	Unknown
Okidata	6w	Unknown
Okidata	OL400e	Unknown
Okidata	Okijet 2010	None – Paperweight
Panasonic	KX–P6100	None – Paperweight
Panasonic	KX–P6300 GDI	None – Paperweight
Panasonic	KX–P8410	None – Paperweight
Panasonic	KXP–2624	Unknown
QMS	magicolor 2	None – Paperweight
Ricoh	Aficio Color 2206	None – Paperweight
Ricoh	Afico FX10	None – Paperweight
Samsung	ML–5050G	None – Paperweight
Samsung	SF/MSYS/MJ–4700/4800/4500C	None – Paperweight
Sharp	AJ–2100	None – Paperweight
Star	WinType 4000	None – Paperweight
Xerox	DocuPrint P8	None – Paperweight
Xerox	WorkCentre 385	None – Paperweight
Xerox	WorkCentre XD120f	None – Paperweight
Xerox	WorkCentre XE80	None – Paperweight
Xerox	WorkCentre XE90fx	None – Paperweight

The following is old information and will be removed in a future version of this document:

- ♦ Canon LBP−465 printer
- ♦ Sharp JX−9210 printer

• Modems

- ♦ 3Com 3CXM356/3CCM356 and 3CXM656/3CCM656 PCMCIA
- ♦ AOpen FM56−P and FM56−H
- ♦ Boca Research 28.8 internal modem (model MV34AI)
- ♦ Boca Research 33.6 internal modem (model MV34)(Joe Harjung has succeeded in configuring the modem under Win95 and then soft booting into Linux with the modem still working. Filippo is using this modem under Linux directly without any problems and without soft booting from Windows. I definitely need more info on these Boca Research modems.) The Boca Research 33.6 modem (model M336I) is mentioned to work with Linux. The only thing that needed to be done was diabling Plug and Play. Here are the specs of the modem
  - ◊ Three stickers saying "MC2920A−3.3", "E6030D 4035−01" and "1721 8011 A"
  - ◊ Chips etc on the board
    - · Cirrus Logic CL−MD3450D−SC−B
    - · Cirrus Logic MD1724−11VC−D
    - · Datatronic VLM301−1??
    - · Omron G5V−1 (2 of them)
    - · AST (?) M628032−20E1
    - · Cirrus Logic CL−MD4450C−SC−A
    - · Abracon 23−040−20
    - · two empty places for additional chips, one of which might be a Cirrus Logic CL−MD1724D
  - ◊ 4 jumpers for COM port selection
  - ◊ 10 jumpers for IRQ selection
  - ◊ other unknown jumpers
- ♦ Compaq 192 PCMCIA modem/serial card
- ♦ HP Fastmodem D4810B
- ♦ Multiwave Innovation CommWave V.34 modem
- ♦ Megahertz XJ/CC2560 PCMCIA
- ♦ New Media Winsurfer PCMCIA modem/serial card
- ♦ Rockwell SoftK56
- ♦ US Robotics WinModem series
- ♦ Zoltrix 33.6 Win HSP Voice/Speaker Phone modem

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31. Glossary

AGP

Accelerated Graphics Port. A bus interconnect mechanism designed to improve performance of 3D graphics applications. AGP is a dedicated bus from the graphics subsystem to the core−logic chipset. here

ATAPI

AT Attachment Packet Interface. A new protocol for controlling mass storage devices similar to SCSI protocols. It builds on the ATA (AT Attachment) interface, the official ANSI Standard name for the IDE interface developed for hard disk drives. ATAPI is commonly used for hard disks, CD−ROM drives, tape drives, and other devices.

ATM

Asynchronous Transfer Mode

CDDA

Compact Disk Digital Audio. Capability of CD−ROM/Writer to read out audio tracks.

DMA

Direct Memory Access

EGA

Enhanced Graphics Adapter

EIDE

Enhanced IDE

EISA

Extended Industry System Architecture

FDDI

Fiber Distributed Data Interface. High−speed ring local area network.

IDE

Integrated Drive Electronics. Each drive has a built−in controller.

ISA

Industry System Architecture

ISDN

Integrated Services Digital Network

MCA

MicroChannel Architecture

MFM

Modified Frequency Modulation

MMX

Multimedia Extensions. Extra instructions meant to speed multimedia.

PCI

Pheripheral Component Interconnect. 32−bit bus designed by Intel. Information can be found here.

RAID

Redudant Arrays of Inexpensive Disks. The basic idea of RAID is to combine multiple small, inexpensive disk drives into an array of disk drives which yields performance exceeding that of a single large expensive drive. There are five types of redundant array Architectures; RAID−1 through RAID−5. A non−redudant array of disk drives is referred to as RAID−0. Some RAID systems can mix formats. (more info)

PPA

Printing Performance Architecture. Protocol developed by Hewlett Packard for their series of Deskjet printers. In essence, the protocol moves the low−level processing of the data to the host computer rather than the printer. This allows for a low−cost printer with a small amount of memory and computing power and a flexible driver. However, this comes at the price of compatibility. HP's decision was to develop drivers only for Windows 95 for this printer.

RLL

Run Length Limited

SCSI

Small Computer Systems Interface. A standerd interface defined for all devices in a computer. It make it possible to use a single adapter for all devices. (more info)

SVGA

Super Video Graphics Adapter

UART

Universal Asynchronous Receiver Transmitter

USB

Universal Serial Bus.

VGA

Video Graphics Adapter

VLB

VESA Local Bus. Used in some 486 PC's.

WORM

Write Once Read Many