

PDA's for Linux

PERSONAL ASSISTANTS

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Small, practical and functional: A PDA is a work device and a cool toy at the same time. Apart from the successful efforts to make the free operating system presentable on common handhelds, in the past few months some genuine Linux PDAs have come out. This article gives an overview.



Yopy

At the last CeBIT the Yopy caused quite a stir for the two Korean companies, GMate and Samsung. This device did not just introduce the first pure Linux PDA. Yopy makes the competition look outdated, with its ample memory and a fast processor as well as features such as colour display, MP3 player, organiser software by the ton, Compact-Flash slot for digital cameras and a microdrive.

Yet for a long time these devices could not be bought in Europe. Now Gmate is answering back with the Yopy Development Kit, which is intended to aid developers in controlling the wide ranging functions, for example MPEG-video/audio playback and speech input.

Gmate wants to enthruse natural gamers with a Gameboy emulator and the first-person shooter Heretic. Like many other Linux PDA manufacturers, GMate also feels indebted to the open source philosophy. Which is why a large part of the

GMate Yopy

Manufacturer:	GMate/Samsung
Controller:	Intel StrongARM SA1110/206MHz
RAM, Flash:	16Mb, 32/64Mb
Display:	4" TFT
Resolution:	240 x 320 pixels
Colour depth:	64k colours
Ports:	RS232, Irda, USB, CF-II, mike, loudspeaker
Power supply:	1400 mAh Li-Ion
On sale:	Q1/2001
Price:	£220 to £300
URL:	http://www.gmate.co.kr



Yopy: MP3 player, video decoder and speech input are just the tip of the iceberg in terms of features.

FEATURE

WORK DEVICE OVERVIEW

application and development software will be available free, or at least free of charge.

Agenda VR3

Agenda Computing with its Agenda VR3 is a newcomer to the PDA sector. At the heart of this rounded device is a highly-integrated controller with a MIPS kernel, which is surely enough for mobile requirements. The back lit LCD is software-driven by the Flat Light Tool Kit (FLTK).

The manufacturer has already developed a whole range of applications with the help of this: the PDA can offer address book, scheduler, memo book, pocket calculator, e-mail client, terminal, games and diverse utilities ex works. Together with Quick-Sync software for Linux (and Windows) which is also part of the package, on CD-Rom, all basic requirements are certainly met.

Additional applications can quickly be ported for the Agenda using the free basic software (FLTK and Linux-VR). The manufacturer is enticing free developers with a price discount for the limited VR3 Developer Edition, which costs £120 instead of the usual £170. For further information, go to developer.agendacomputing.com

IMT2000: Game console, Mobile-Web Telephone, Digital camera and PDA rolled into one

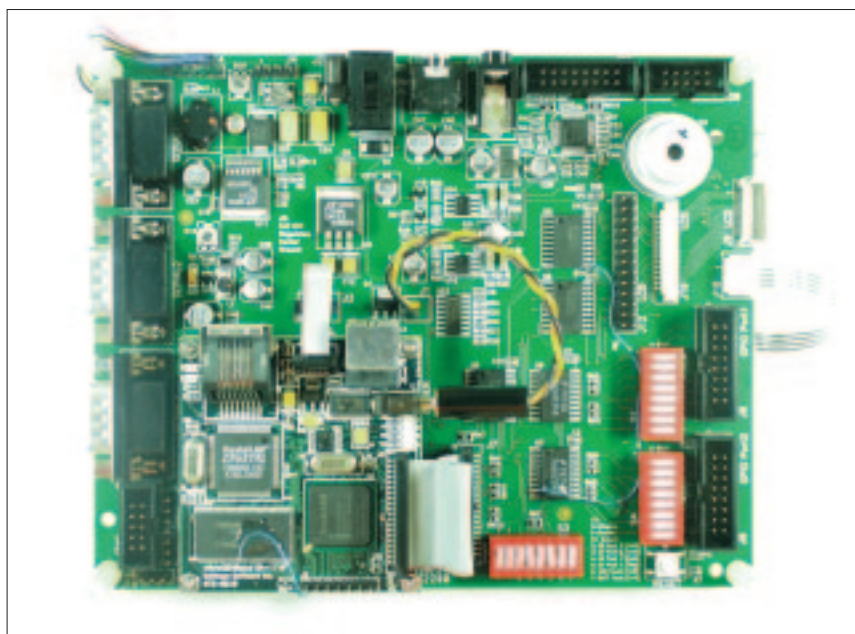


IMT2000

Like the Yopy, the IMT2000 also comes from Korea and is not dissimilar to its compatriot. Based on the Strong-ARM SA1110, the companies PalmPalm and M-dream want to turn the IMT2000 into the ultimate Gameboy clone including mobile telephone.

Apart from Kernel 2.4, Qt/Embedded and Opera the PDA will be equipped with the usual organiser software. The telephone function covers VoIP as well as H.323 for the direct line. Anyone who finds it too fiddly to hold the PDA to their ear to make a phone call can also use a headset. With so many audio functions there simply has to be an MP3 player too. One other special feature is the built-in CCD camera, with which applications such as digital camera, webcam and video telephony are feasible.

Anyone who would like to develop applications right now for the IMT2000 can find the Tynux Box on the Web site of the manufacturer, a prototyping board with a similar range of functions to the IMT2000, as well as the appropriate Tynux Package with development tools and organiser software. PalmPalm will also be mainly giving away its software suite free, as far as licensing law allows.



Agenda VR3: MIPS Kernel, FLTK and any amount of software



Agenda VR3

Manufacturer:	Agenda Computing
Controller:	NEC VR4181/66MHz
RAM, Flash:	8Mb, 2/4/8Mb
Display:	5.7cm x 8.2cm
Resolution:	160 x 240 pixels
Colour depth:	16 grey shades
Ports:	RS232, Irda
Power supply:	2 x AAA batteries
On sale:	Q1/2001
Price (planned):	approx. £250 to £350
URL:	http://www.agendacomputing.de

IMT2000

Manufacturer:	PalmPalm and M-dream
Controller:	Intel StrongARM SA1110/206MHz
RAM, Flash:	32Mb, 32Mb
Display:	4" TFT
Resolution:	240 x 320 pixels
Colour depth:	64 k colours
Ports:	RS232, Irda, USB, mike, camera, loudspeaker
On sale:	not yet known
Price:	not yet known
URL:	http://www.palmpalm.co.kr

Compaq iPAQ

The iPAQ has a certain technical similarity to the Yopy and the IMT2000. But it is the offspring of the legendary Itsy from Digital Equipment. At that time the device was simply a PDA experimentation platform. After the take-over by Compaq it turned into something more – but with a different operating system.

The manufacturer has now however revived the original Linux line and on the product side of the pocket PC is now offering the basic software kernel and TinyX-Server. The development of the obligatory organiser software, however, is something that Compaq is leaving to the Open Source community. Although these devices are neither especially cheap nor widely bought, development is progressing in giant steps. An everyday organiser suite is not yet available,

however. This is somewhere that third party manufacturers could make their name, for example Trolltech with the Qt Palmtop Environment (QPE), which promises simple adaptation to existing Qt/KDE applications.

VTech Helio

VTech may be familiar to you as the manufacturer of children's educational computers. With the Helio, the company is now entering new sales territory. Like the iPAQ, this device is not delivered ex works with Linux, it has to be installed later. Here, too, Pocket Linux is certainly the best-developed approach. At just £150 the Helio is the cheapest Linux-compatible PDA. But the 2Mb Flash will not accommodate too many applications and apart from the RS232 port there are no expansion slots.



iPAQ 3630: Unfortunately not yet available ex works with Linux, but is a highly promising platform – here with Pocket Linux



Helio: This is cheap, but has little scope for expansion. Nevertheless the 75MHz CPU is perfectly adequate for MP3 decoding

iPAQ 3630

Manufacturer:	Compaq
Controller:	Intel StrongARM, SA1110/206MHz
RAM, Flash:	32Mb, 16Mb
Display:	3.8" TFT
Resolution:	240 x 320 pixels
Colour depth:	64k colours
Ports:	RS232, Irda, USB, PCMCIA, mike, loudspeaker
Power supply:	950 mAh Li-Ion
URL:	http://www.compaq.com/products/iPAQ http://www.handhelds.org http://www.pocketlinux.com
Price:	£400 to £550

Helio

Manufacturer:	VTech
Controller:	TMPR3912AU 75MHz
RAM, Flash:	8Mb, 2Mb
Display:	5.9 cm x 5.9 cm
Resolution:	160 x 160 pixels
Colour depth:	16 grey shades
Ports:	RS232, mike, loudspeaker
Power supply:	2 x AAA batteries
URL:	http://www.vtech.com http://www.pocketlinux.com
Price:	approx. £150