

# Amida Developer FAQ

## PicoPeta Simputers Pvt. Ltd

### 1 Hardware

**Q: Why ARM processor?**

Most generic multi-vendor processor. Prevents our product from being tied to a single vendor. Has enough computing power (206MHz) and peripherals integration and low power consumption to serve the needs of the product.

**Q: As per the latest news from Intel, SA1110 has been discontinued. May I know about the future of Simputer as it is using still older SA1100 processor. As a developer I am worried about this.**

PicoPeta is aware of that. Xscale, a successor to SA1110, which is binary compatible will be used in the future versions of the Simputer. XScale is not pin-for-pin compatible to SA1110 but binary compatible. All the software written for SA1110 will run on XScale. The hardware architecture would undergo some design change. The Simputer user or the developer need not worry about this issue.

**Q: Is the memory (RAM) expandable?**

No. As of now the RAM cannot be expanded but you could always use a chikki to store data and retrieve them back.

**Q: Is the internal flash expandable?**

Yes, USB flash/CDROM/Portable hard disk and any other type of storage device.

**Q: Why PCMCIA was not used?**

Not required. USB is necessary and sufficient for all interfaces.

### 2 Connectivity and Peripherals

**Q: Does Amida have a serial port?**

Yes.

**Q: Does Amida have a parallel port?**

No.

**Q: Does Amida have USB connectivity?**

Yes, Amida has 2 USB Ports, Master USB and a mini(slave) USB. The mini USB can also be configured as a Master USB.

**Q: Does Amida support USB 2.0 protocol?**

Not yet. Future versions will.

**Q: Does Amida support IrDA and printing through IrDA?**

Yes, Amida supports IrDA and you could print your documents through IrDA. You could do this in just a few steps. Tap on the status icon and just select IrDA start. Hold the

Simputer facing the IrDA port in front of a printer that supports IrDA. The Simputer would detect the printer and would pop up a message stating that a printer is detected. Go to the document you wish to print. Launch the retractable tool bar. Tap the first icon. You get a message that says “Beaming” and the document is printed. For example, Citizen CMP - 10 printer works very well with Amida.

**Q: Does Amida support Smartcard?**

Yes. Amida supports smart cards that are really helpful in keeping your private data secure.

**Q: Will the Simputer accept both the micro-processor cards and plain memory (I2C) cards?**

Yes.

**Q: Can a Smartcard be configured to my requirements/applications?**

Yes.

**Q: Can a Simputer be wireless LAN enabled?**

Yes.

**Q: Is it possible to have firewire support?**

No.

**Q: I would like to know if wireless connection like 802.11b be available on the Simputer?**

Yes.

**Q: What about wireless(CDMA/GSM) connectivity on Amida?**

Amida supports wireless connectivity through the USB interface. CDMA wireless connectivity is seamlessly done. For example, with Reliance CDMA phone one connect to the web just by dialing the phone number. Connectivity through GSM wireless is underway. Also check Email and Internet section for more information.

**Q: Can I connect a Reliance (CDMA) phone and a keyboard to my Simputer at the same time?**

Yes, you can connect both these devices to the Simputer at the same time. Connect one of the devices to the Master USB port. Tap on the status icon and select USB master. Now you could connect the other device to the Slave USB using a mini USB cable.

Note: You need USB mini port to USB standard port adapter.

**Q: What is accelerometer and how is it useful from a developer’s perspective?**

Accelerometer is a flip-flop sensor. Amida responds to the users hand movements. Amidas screen adjusts itself in the direction in which the user tilts the device, which makes the user feel very comfortable to use Amida.

Technical Answer: Accelerometer is a transducer that converts change in ”g” into an electrical signal change, in this case a change in duty cycle of it’s output waveform. This duty cycle change is then interpreted as a ”gesture”. User sees the Amida as being ”gesture sensitive” when the accelerometer is in use.

**Q: Does Amida have Real Time Clock?**

Yes.

**Q: Does Amida have a built-in microphone and speaker?**

Some models.

**Q: Can I take the audio output from Amida?**

Yes, some models (at present all but just to be future safe!)

We could connect external speakers to the Amida and we could also use a head set to take the audio output from Amida. Some models are provided with a built-in speaker that allows you to listen to the music on the go.

**Q: How about the Audio input/voice recording on Amida?**

Yes, some models (at present all but just to be future safe!) Amida is provided with a built in voice recorder which could be used to record voices and play them back. You could even record voices and send it through Email.

**Q: How do I connect a printer to Amida and take printouts?**

Serial, IR, USB options for printer interface are supported. One could connect a printer to the Amida using the USB port. When this is done a printer icon is displayed next to the status icon on all the documents that are printable. For example, Address book, photo album, notebook etc. To print these documents just tap on the printer icon. Since Amida supports IrDA the user can always use a printer that supports IrDA to print his/her documents.

**Q: What portable printers can be used with the Amida?**

Citizen CMP - 10 (IR based), AEON 24 col dot matrix printer, Custom Sprint - I portable printers are successfully used with Amida.

**Q: What kinds of printers Amida does support?**

Most HP printers (are Postscript enabled and) will work. For any given printer the driver may have to be installed.

**Q: Will I be able to connect to any ink-jet printer and print my documents?**

If your ink-jet printer supports PCL (Printer Control Language) or PostScript enabled or IR enabled it should be straightforward. If the printer is not PCL compliant Amida may not be able to print using that printer.

**Q: How does the Simputer print from an HP/Canon entry level ink-jet printers?**

See the answer above.

**Q: Does Amida support bar code scanner?**

Any external USB Bar code scanner is supported. For any given bar code scanner the driver may have to be installed. Amida does not have an integrated bar code scanner. E.g., HHP IT 3800(LR-12) bar code scanner works well with Amida.

**Q: Does your Simputer have an in-built 802.11b adapter?**

No.

**Q: Can I connect floppy drives and cd-rom drives?**

As long as one can get a USB interface for these devices, Amida will provide access through its USB interface.

**Q: Can a Webcam be attached to Simputer?**

Yes. On the USB port.

### 3 Power

See the **User FAQ** for the details.

### 4 General

See the **User FAQ** for the details.

### 5 Software Development

**Q: Graphical User Interface on Amida is incredible. What is the window manager used to achieve this?**

Amida runs the window manager Alchemy. Alchemy is PicoPeta's proprietary X window manager designed and implemented from scratch. It conforms to ICCCM and provides necessary controls and interfaces so that the development of client programs can happen at a rapid pace.

**Q: Can I develop an application for Amida? In other words, is there a development tool kit available for Amida?**

Yes. Development platform provides development libraries for the emulator on the PC side as well as for the Amida Simputer. The development kit comes with a detailed documentation and examples. Please visit the quick tour and tutorial pages in the developers section.

**Q: What programming languages are used for developing applications on Amida?**

C language is the primary language used for developing applications for Amida. The GUI for the application is achieved using PicoWidgets, Xlib and other libraries.

An Amida implementation of Tcl/Tk called **ppwish** is also available for rapid prototyping. Since Tcl/Tk programs are interpreted and not compiled into binary, the performance may not be as good as programs written in C. However, the development time will be lot less as compared to C program development.

**Q: Can a Simputer be used for compiling programs written in C, C++. Does it support shell programming?**

Yes. Given the limited power of ARM processor, compiling large programs on Amida is not the right way to do. The cross compilation tool chain available for Linux platforms makes the job easier. However, to make the software work on Amida, the user needs to debug the software on Amida and the debugger for Amida is part of the cross compiler tool chain.

**bash** is shell used on Amida and shell programming is definitely possible on Amida.

**Q: It is clear that the developer cannot key in a program on the Amida, except small programs. Is there a simulator available for the Linux machines so that the developed and tested code can be ported to Amida?**

Yes. Take a look at the quick tour and tutorial pages of the developer section.

**Q: Is there a way to add applications having floating windows on Amida?**

Yes. Such applications would appear as a drop down menu of the star icon on the top bar.

**Q: Amida claims to be a full-fledged Linux development platform besides being a great end-user device? But I am not able to start the standard screen editor *vi* on Amida? Is something wrong?**

Being a small device it has its own limitations. It is not that it can not run *vi*. But the resource required to run *vi* may be overwhelming for Amida. In any case, Amida comes with a micro line editor called *ae*.

**Q: Does Amida support development tools to be run on it?**

Yes.

**Q: Can Amida be connected to a LAN like a normal Linux box?**

Yes.