

# Hands-on with a prototype Intel Mobile Internet Device

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During KDE's [aKademy](#) developer summit in Glasgow, 2007, Ars Technica got an early look at a prototype of the [Intel Mobile Internet Device](#), known as the Intel MID. This prototype was supplied to the French offices of Mandriva, a Linux distribution that was chosen by Intel to help test and develop KDE for this device. I had chance to play with this prototype for a few hours, complete with a working installation of [KDE 4.0 Alpha 2](#).



The particular unit I was looking at had been fitted with a fresh installation of [Mandriva Flash Edition](#) and a fresh build of KDE 4's development series. The device is still considered a technology development prototype, and the final version will not be shipped with the exact same configuration as the prototype. In fact, this prototype was accompanied with warnings that it had not been tested to conform to any FCC regulations or their international counterparts. In its final form, these specifications will differ; however, the system was equipped with the following hardware.

- Celeron 800 Mhz (Santa Rosa) CPU
- 1GB RAM
- Standard notebook IDE drive
- Intel 945GM (with OpenGL support)
- A Logitech webcam with a rotational range of 225 degrees
- A Marvell wireless chipset supporting WiFi and WiMax
- Bluetooth
- 1024x600 touch screen with a rotational range of 90 degrees
- A "double-thumbs" style keyboard
- A "nipple" mouse resembling that of the ThinkPad
- One USB port
- One headphone jack
- Power connector and cord

The prototype included a standard laptop hard drive, but future versions are likely to be purely flash.

The entire system, except the Marvell wireless, ran on open-source drivers based on specifications that Intel has made available to the public. Where intellectual property rights are concerned, Intel provides the specifications to a select few who then assist the development of the open-source drivers. Helio Chissini de Castro told Ars that future devices would likely include Intel-derived chipsets for the wireless components rather than Marvell, which would then also be supported by open drivers.

I tested out a number of different components in the system ranging from the camera to the graphics card and was generally impressed by the quality of the early prototype with the exception of the keyboard.

Granted, the keyboard is a prototype, but it seemed like this early model had not been designed with durability in mind. Keys would often stick or simply not respond. It was impossible to hit certain combinations of keys with the system they had as, for example, ALT and TAB were on the same key. Unless you reconfigured KDE's default key combinations for changing windows, you would be required to use the taskbar on the touch screen to accomplish this task. This, I might add, was difficult to do at the edges of the touch screen since there was a small ridge around the screen which interfered with the ability to reach the very edge using only a finger. However, the idea for the keyboard itself is sound, since the device can be comfortably held with two hands like a (fairly large) cell phone where you type with your thumbs.



The general response of the system was very good, as the CPU seemed up to the tasks I threw at it. It booted as quickly as you would expect a modern laptop to boot and was up and running very quickly. The MID's graphics support also looked solid. I tried two different tests, including running OpenArena (based on the Quake III engine) and watching full-screen television movies loaded off of a USB thumb drive. In both cases there was no lagging, even with the quality settings cranked to their maximum. That said, trying to play OpenArena without a proper mouse is an exercise in futility, as it is pretty much impossible to control a game using the "nipple" mouse.

The screen is best enjoyed using a stylus such as the one I borrowed from my nearby Nintendo DS. With a stylus in hand, using the touch-screen interface to control KDE 4 became a joy. For example, one of KDE 4's new applications is a desktop globe called Marble. This particular program was an ideal candidate for testing the touch screen as I was able to drag the globe around in the view port in much the same way that users of the Nintendo Wii are used to. It rendered fairly smoothly even without OpenGL rendering enabled and was quite enjoyable to use. Dragging the globe around even worked well using just a fingertip since it didn't get too close to the edges of the screen. My fingers did leave their fair share of smudges; a problem that could probably be alleviated with a protective coating in the shipping product.



The screen could be rotated 90 degrees, but rotation is currently not automatically detected by the software interface. I do not think at this early stage that this is a big problem, as the hardware is mostly a proof of concept, and the software is still in alpha stage. In fact, there were quite a few problems with this early edition, including the occasional hard freeze due to overheating and the fact that WiMax seemed to work only when the power cord was attached. (Perhaps the extra power draw was too high for the shipped battery?)

A sticker on the back indicated that this particular device would likely be capable of running Windows, but it doesn't seem to have the power required for all the bells and whistles of Windows Vista. Fortunately for Mandriva, this machine has all the power it needs to run Linux, including graphics, videos, and even servers if one were so inclined.

The Intel MID prototype is a solid device with a few early flaws that should be resolved. Helio said that the devices derived from this prototype will likely be hitting market sometime next year, complete with a faster processor, flash memory, a card reader, and hopefully a stylus or a screen with less of a lip at the edges.