
Release Notes for Linux on Intel's IXP2000 Network Processor

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1. Overview

Intel's IXP2000 family of NPUs (IXP2400, IXP2800, IXP2850) is designed for high-performance network applications such high-availability telecom systems. In addition to an XScale core, it contains up to 8 "MicroEngines" that run special code, several high-end networking interfaces (UTOPIA, SPI, etc), a PCI host bridge, one serial port, flash interface, and some other odds and ends. For more information, see:

http://developer.intel.com/design/network/products/npfamily/ixp2xxx.htm

2. Linux Support

Linux currently supports the following features on the IXP2000 NPUs:

- On-chip serial
- PCI
- Flash (MTD/JFFS2)
- I2C through GPIO
- Timers (watchdog, OS)

That is about all we can support under Linux ATM b/c the core networking components of the chip are accessed via Intel's closed source SDK. Please contact Intel directly on issues with using those. There is also a mailing list run by some folks at Princeton University that might be of help: https://lists.cs.princeton.edu/mailman/listinfo/ixp2xxx

WHATEVER YOU DO, DO NOT POST EMAIL TO THE LINUX-ARM OR LINUX-ARM-KERNEL MAILING LISTS REGARDING THE INTEL SDK.

3. Supported Platforms

- Intel IXDP2400 Reference Platform
- Intel IXDP2800 Reference Platform
- Intel IXDP2401 Reference Platform
- Intel IXDP2801 Reference Platform
- RadiSys ENP-2611

4. Usage Notes

- The IXP2000 platforms usually have rather complex PCI bus topologies with large memory space requirements. In addition, b/c of the way the Intel SDK is designed, devices are enumerated in a very specific way. B/c of this this, we use "pci=firmware" option in the kernel command line so that we do not re-enumerate the bus.

- IXDP2x01 systems have variable clock tick rates that we cannot determine via HW registers. The "ixdp2x01_clk=XXX" cmd line options allow you to pass the clock rate to the board port.

5. Thanks

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