

PXA270-based reference design runs Linux

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Intrinsyc has added an LCD module and graphics stack based on Opie (open palmtop integrated environment) to its Intel XScale PXA270-based Linux reference design. The CerfBoard 270 with Display for Linux comes with a 2.6.14 kernel and a flexible bootloader, and targets Internet-based devices and appliances, according to the company.

[\(Click for larger image\)](#)

Intrinsyc originally shipped its PXA270-based [CerfBoard 270](#) SBC in December of 2005. The CerfBoard 270 with Display for Linux adds an LCD connector to support Sharp and Optrex displays (DF9B-31P-1V), along with an LCD backlight inverter connector to support Microsemi LXM1623-05-41, Intrinsyc says.

The CerfBoard 270 for Linux comes with a complete file system that includes the open source [Opie](#) graphics stack, dropbear SSH client and server, and boa and tftpd web servers. Also included are cross compilation tools, and a bootloader capable of downloading images via Ethernet, and writing them to flash.

The CerfBoard 270 (pictured at right) incorporates two CompactFlash/CFIO sockets, which can be used to add WiFi, Bluetooth, GSM/GPRS, or other wireless cards, in bridging or remote sensing applications, Intrinsyc says. The board can be easily powered by solar collectors, according to the company.

Intrinsyc lists the following key features and specifications for the CerfBoard 270:

- Processor:
 - PXA270, with scalable core voltage
 - clock rate -- 416 MHz, standard; up to 524 MHz available
- Memory:
 - 64 MB SDRAM, with low-power sleep mode (128 MB option available)
 - 32 MB Intel StrataFlash
- Display support:
 - LCD connector supports Sharp and Optrex displays
 - LCD backlight inverter connector
 - touch panel connector
- Other I/O ports:
 - 10/100 Ethernet
 - Dual USB Host 2.0 with high-speed capability (driver to be added to BSP in later release)
 - USB 1.1 Client and Host

- 2 serial ports -- debug and full-function
- stereo out, mic in audio connectors
- Expansion:
 - 2 Type I or II CompactFlash sockets
 - expansion connector -- 16-bit data bus; address bus; camera interface; 4-wire UART; I2C
- Dimensions -- 4.5 x 4.2 inches (114 x 106 mm)

Availability

The CerfBoard 270 with Display for Linux is available now, [direct](#) from Intrinsic's webstore, priced at \$1,400, including a 6V power supply, cabling, and an ESD wrist strap.