Opterna-mobile device manager

I. Introduction

XSBASE270-S platform is a multifunctional embedded developing plate that based on the Intel ® PXA270 processor, and supports high-performance embedded Linux / WinCE system for teaching and experiments. This plate based on strong power and the rich interfaces by Intel PXA270, through further expansion, achieve a complete, adaptive reference designs and test systems for variety embedded applications to help users understand the fastest Intel PXA270 performance/features and the basic methods and techniques for embedded system.

The platform includes CPU, FLASH, SDRAM, CPLD core and peripheral parts of the system interface, the core chip PXA270 is a highly integrated system-on-chip microprocessor developed by Intel. Linking with the Intel XScale technology, it takes on a dynamic voltage scaling, dynamic frequency scaling and sophisticated power management, provides leading MIPs and performance of mW. Using FW (NH) PXA270C5C520, 520MHz frequency, the operating temperature range -40 ℃ ~ 85 ℃ as the Specific models, it completes the run. Resource allocation, memory management, interrupt handling, control the entire system running. 5V external power supply connected to a separate power can run the work, it also has a 3500mA / h battery can individually supply more than 5 hours of power, support power charging and USB charging. Therefore it is very suitable for mobile devices. This platform uses Microsoft's Windows CE 5.0. The operating system is now recognized as the most popular embedded system, the user can use both systems to provide a rich variety of software applications and resource development functions.

II. Product List

Name and NO.	picture	Name and NO.	picture
XSBASE270-S platformX1		Serial interfaceX1	

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JTAG interfaceX1		USB interfaceX1	
Ethernet interface X1		5V power supply lineX1	
Resource diskX1		Touch panelX1	

III. The hardware resources

CPU: Intel / Marvell Xscale PXA270 520MHz

SDRAM: 64 M Byte user data storage space

FLASH: 32M Byte System Storage

CPLD: for interface expansion

PM: LP3971, National Semiconductor power management chips for multi-voltage output system

Ethernet: LAN91C111

audio: UCB1400BE, AC'97 standard audio input and output

display: 5.6 'widescreen, 640 ×480, TFT true color LCD screen, folding screen

touch screen: UCB1400BE, 12-bit high precision touch screen

debug interface: a JTAG interface for debugging emulator can be connected

fully functional serial port: 1, 38400 baud rate support, print debug information

BT Serial Port: 1, available to users

infrared port: 1, available to users

USB HOST: 1 a main-side interfaces, USB-HOST 1.1

USB CLIENT: 1 USB interfaces from the terminal, USB-SLAVE 2.0

LED lights: 8 LED lights

Key: 9 keys

speaker: 1 External Speaker

microphone / audio interface: a microphone input port, support for voice recording function

headphone jack: a headphone output interface

battery: built a 3500mA / h lithium battery, can supply about 3 hours alone to support the power supply and USB charger

IV. Software resource

WinCE5.0

Driver Source: LAN 91C111 Ethernet Driver、AC'97 stereo audio Driver、Frame Buffer Device Driver、UCB1400 touch screen Driver、USB Slave Port Driver、USB HOST Port Driver、CF Driver、Serial Port Driver、Real Time Clock Driver、Keyboard Driver 、IrDA Driver、MMC Driver

Boot Loader Download Tool: JFLASH for PXA270

Synchronization tools: Active Sync 4.5

Linux2.6.9

Driver Source: LAN 91C111 Ethernet Driver、AC'97 stereo audio Driver、Frame Buffer Device Driver、UCB1400 touch screen Driver、USB Slave Port Driver、USB HOST Port Driver、CF Driver、Serial Port Driver、Real Time Clock Driver、Keyboard Driver 、IrDA Driver、MMC Driver

BootLoader：Blob for PXA70 (source code)

Toolchain：GNU for PXA270

Boot Loader Download Tool: JFLASH for PXA270

File System package tools: Mkfs.Jffs

GUI: QT / TinyX