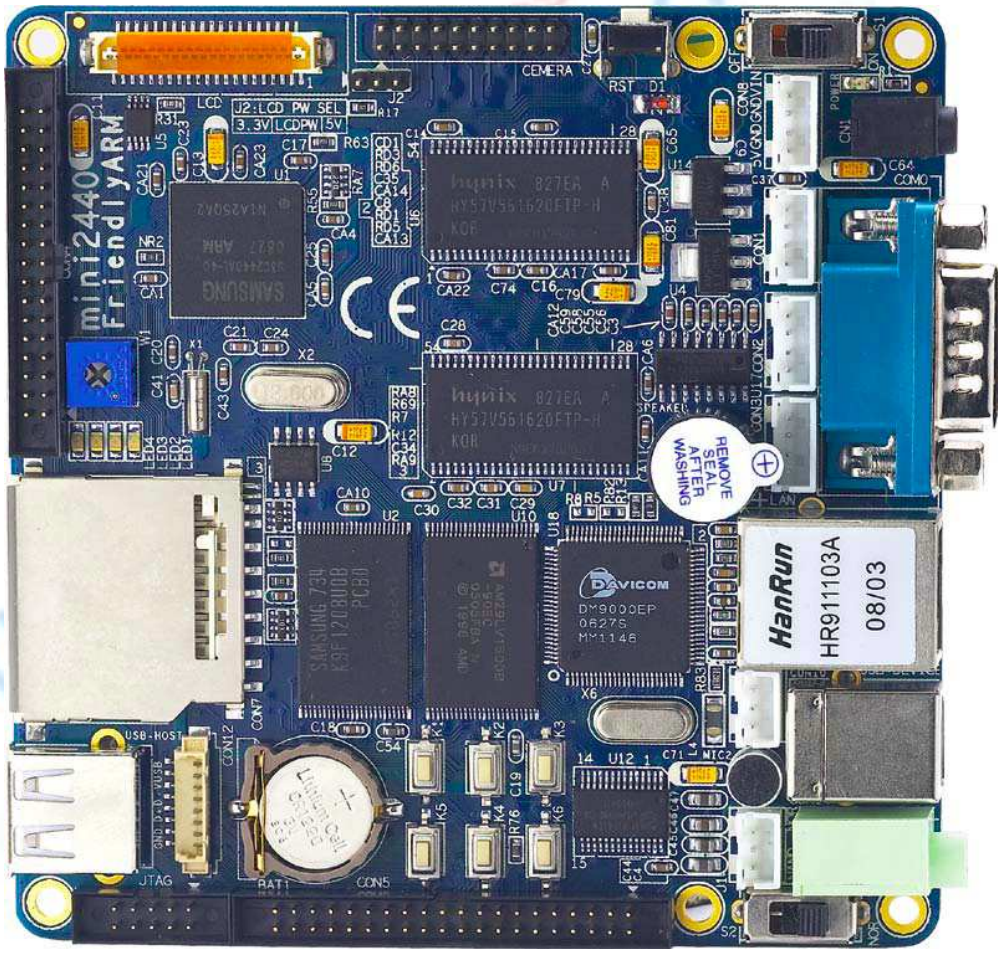
1.1 About Mini2440 Development Board

Mini2440 is a practical low-cost ARM9 development board, is currently the highest in a cost-effective learning board. It is for the Samsung S3C2440 processor and the use of professional power stable core CPU chip to chip and reset security permit system stability. The mini2440 Immersion Gold PCB using the 4-layer board design process, professional, such as long-wiring to ensure that the key signal lines of signal integrity, the production of SMT machine, mass production; the factory have been a strict quality control, with very detailed in this manual can help you quickly master the development of embedded Linux and WinCE process, as long as there is C language based on the general entry to two weeks. Users can go to our website, http://www .arm9.net, and download the latest update to inform the latest manuals and systems.

1.1.1 Mini2440 Development Board Appearance



1.1.2 Mini2440 Development Board Hardware Resources Features

CPU Processor

- Samsung S3C2440A, frequency 400 MHz, the highest 533 MHz

SDRAM Memory

- On-board 64MB SDRAM
- 32-bit data bus
- SDRAM clock frequency up to 100 MHz

FLASH Memory

- On-board 64 MB NAND flash, Power-down non-volatile
- On-board 2 MB NOR flash, Power-down non-volatile, BIOS has been installed

LCD Display

- On-board integrated 4-wire resistive touch screen interface, you can directly connect 4-wire resistive touch screen
- Support for black and white, 4 gray-scale, 16 gray-scale, 256-color, 4096-color STN LCD screen size from 3.5" to 12.1", 1024x768 pixels screen resolution can be achieved
- Support for black and white, 4 gray-scale, 16 gray-scale, 256-color, 64K-color, True Color TFT LCD screen size from 3.5" to 12.1", 1024x768 pixels screen resolution can be achieved.
- Standard configuration for the NEC 256K-color 240x320/3.5" TFT True Color LCD screen with touchscreen.
- Leads to a 12 V power supply on-board interface, for the large-size TFT LCD 12 V CCFL backlight module (inverting) power supply

Interfaces and Resources

- 1 100 Mbps Fast Ethernet RJ-45 interface (used network chips DM9000)
- 3 Serial ports
- 1 USB host
- 1 USB slave (B-type interface)
- 1 SD card storage interface
- 1 channel stereo audio output interface, all the way microphone interface
- 1 2.0mm pitch 10-pin JTAG interface
- 4 User LEDs

- 6 User buttons (with lead blocks)
- 1 buzzer PWM control
- 1 adjustable resistor, analog-to-digital converter for A/D test
- 1 I2C-bus AT24C08 chip for I2C-bus test
- 1 2.0 mm pitch 20-pin camera interface
- On-board real-time clock battery
- Power interface (5 V), with power switch and indicator light

System Clock Source

- 12 MHz passive crystal

Real-Time Clock

- Internal real-time clock (with lithium battery back-up)

Expansion Interface

- 1 34-pin 2.0 mm GPIO interface
- 1 40-pin 2.0 mm system bus interface

Dimension

- 100 mm x 100 mm

Operating System Support

- Linux 2.6.29
- Windows CE .NET 5.0

1.1.3 CD-ROM Resources

(1) ADS 1.2 Setup

(2) H-JTAG debugging programmer software

(3) SJF2440 Flash programmer software under Windows

(4) Jflash-2440 NAND Flash programmer software under Linux (with source code)

(5) Serial tools CRT, DNW

(6) C language array image tools

(7) USB driver (install under Windows XP/2000)

(8) Vivi source code, the bootloader for Linux

(9) Most simple test program (included in the project documents of ADS 1.2) for the lighting of the LED lights on the board.

(10) 2440test test procedures (including ADS 1.2 project document, all the source code), test items include: interruption of the way by key test, RTC real-time clock test, ADC test digital-to-analog conversion, IIS test wav audio player, IIS audio recording test, touch-screen test, I2C bus to read and write AT24C08 test, Samsung 3.5 "LCD, 640x480 true color LCD test

(11) Windows CE BSP and sample project files

(12) Linux development tools and kernel source code package:

- Arm-linux-gcc-4.3.2 with EABI: a unified cross-compiler
- Yaffs2 filesystem mapping tool mkyaffs2image
- Linux-2.6.29 kernel source code (including the DM9000 driver, all kinds of TFT LCD drivers, audio input and output driver, touchscreen driver, YAFFS2 source code, high-speed large-capacity SD card driver, RTC driver, watchdog driver, 3 serial port driver, Universal USB camera driver, USB mouse and keyboard driver, etc.)

(13) Embedded graphical interface Qtopia-2.2.0 source code package, embedded browser source code package

(14) Development board schematic diagram (Protel99SE format / PDF format)

(15) User's Manual (PDF format)