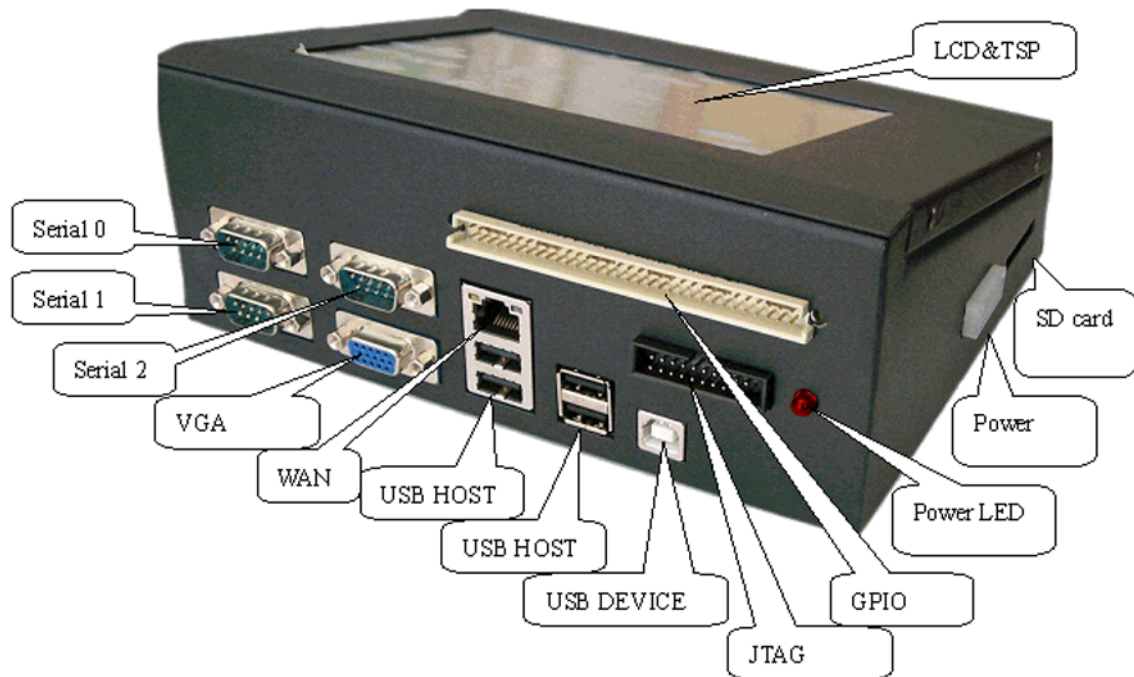


SBC2442-I Single Board Computer

- Single-board Computer based upon Samsung SC32442A43 ARM920T Processor
- USB Host/Device, Ethernet, Serial Ports, Parallel Port, LCD, VGA, SD, Jtag...
- Capable of supporting WinCE5.0 OS



Devkit2442-I for Evaluating SBC2442-I Single Board Computer

Note: The SBC2442-I board can support **PVI 6.4" TFT LCD (PDT064V5)**, **Sharp 6.4" TFT LCD (LQ064V3DG01)**, **Mitsubishi 8.4" TFT LCD (AA084VC03)**, **Sharp 8.4" TFT LCD (LQ084V1DG21)** and **Sharp 10.4" TFT LCD (LQ104V1DG21/51/61)**, of which you do not need to modify the drivers any more and the resolution is 640 x 480 pixels.

Description

The SBC2442-I is a low-power, high-performance single board computer based on Samsung SC32442A43 MSP ARM920T microprocessor, designed especially for smart phone/handheld device solutions. The board integrates rich peripherals including serial ports, Ethernet port, USB Host/Device, LCD/TSP, VGA, printer parallel port, SD card slot, battery backed RTC, JTAG interface, ADC and 34 CPU IOs are extended out. It uses 5V and 12V standard 4-port power supply.

Above picture shows an evaluation kit Devkit2442-I that designed specially for evaluating the SBC2442-I single board computer. It is built in a metal case and preloaded with WinCE5.0 OS for testing. User can display it using a 6.4" TFT LCD and Touch screen.

Hardware Features

SC32442 MSP product is a proprietary solution provided exclusively by Samsung Electronics. SC32442 includes an S3C2442 AP (Application Processor) and a memory MCP (Multiple Chip Package). SC32442 is a best fit solution for smart phones, wireless PDAs, and other mobile handheld devices, providing them and their general applications with a cost-effective, low-power, and high-performance solution all incorporated in one tiny MSP. This allows companies to fully utilize the form-factor of their products via a smaller footprint on the PCB (Printed Circuit Board).

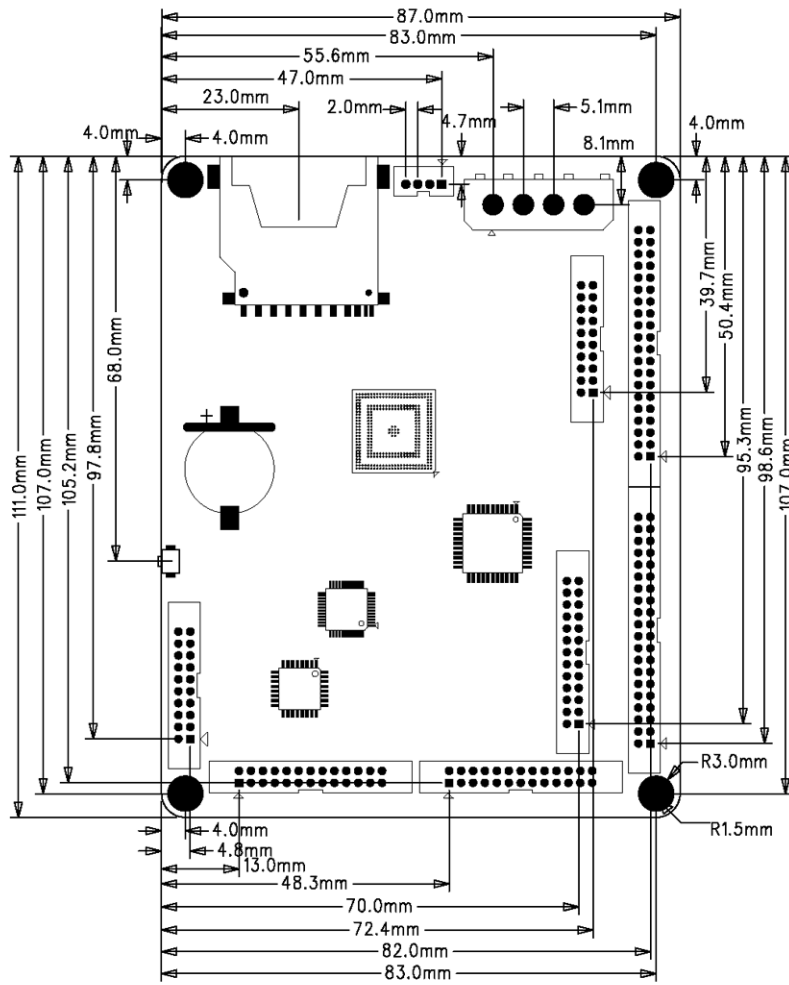
S3C2442 AP features an ARM920T core, a 16/32-bit RISC microprocessor, to provide the general applications of smart phones/hand-held devices with low-power and a high-performance micro-controller solution. S3C2442 is developed using 0.13um CMOS standard cells and a memory compiler. Especially, the S3C2442's power consumption was dramatically reduced by using an MTCMOS library. By providing a comprehensive set of common system peripherals, the S3C2442 saves overall system cost and eliminates the need to configure additional components.

S3C2442 includes the following components: separate 16 KB instruction cache and 16 KB data cache, MMU to handle virtual memory management, TFT and STN LCD controller, NAND flash boot loader, system manager (chip select logic and SDRAM controller), 3-ch UART, 4-ch DMA, 4-ch timers with PWM, I/O ports, RTC, 8-ch 10-bit ADC and touch screen interface, camera interface, IIC-BUS interface, IIS-BUS interface, USB host, USB device, SD host and multimedia card interface, 2-ch SPI and PLL for clock generation.

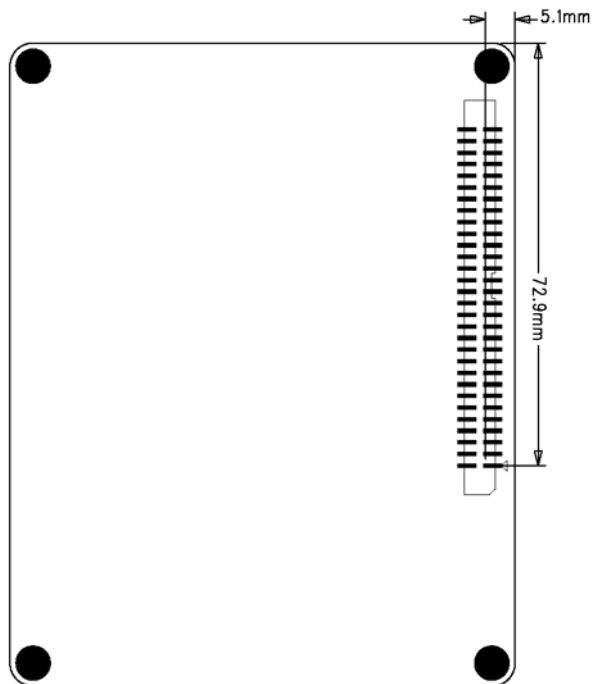
The SBC2442-I is based on Samsung SC32442A43 MSP ARM920T microprocessor and takes full features of the processor. This board is characterized as follows:

- Dimensions: 111 x 87mm
- Working temperature: 0~70 Celsius
- Power supply: standard 4 port power supply (+5V, GND, GND, +12V)
- Samsung SC32442A43 processor with embedded 64MB 32-bit SDRAM, 128MB 8-bit Nandflash, operating frequency 400MHz @1.33V
- One standard parallel port (for printer)
- Two 3-wire RS232 serial ports
- One 5-wire RS232 serial port
- One 10/100Mbps Ethernet port
- Standard VGA display port (CH7005)
- One TFT-LCD interface and touch screen interface
- Four USB1.1 Host ports
- One USB1.1 Device port
- Four programmable LEDs
- SD card slot
- 34 GPIOs and four-channel ADC input ports
- RTC with a backup battery
- Supporting Windows CE.net 5.0
 - STEPLDR image
 - EBOOT image
 - Starting up LOGO
 - Windows CE 5.0 BSP with DLL file
 - Windows CE 5.0 Sample OS Project
 - Windows CE 5.0 Sample OS Image
 - Sample applications for WinCE with source code

Dimensions

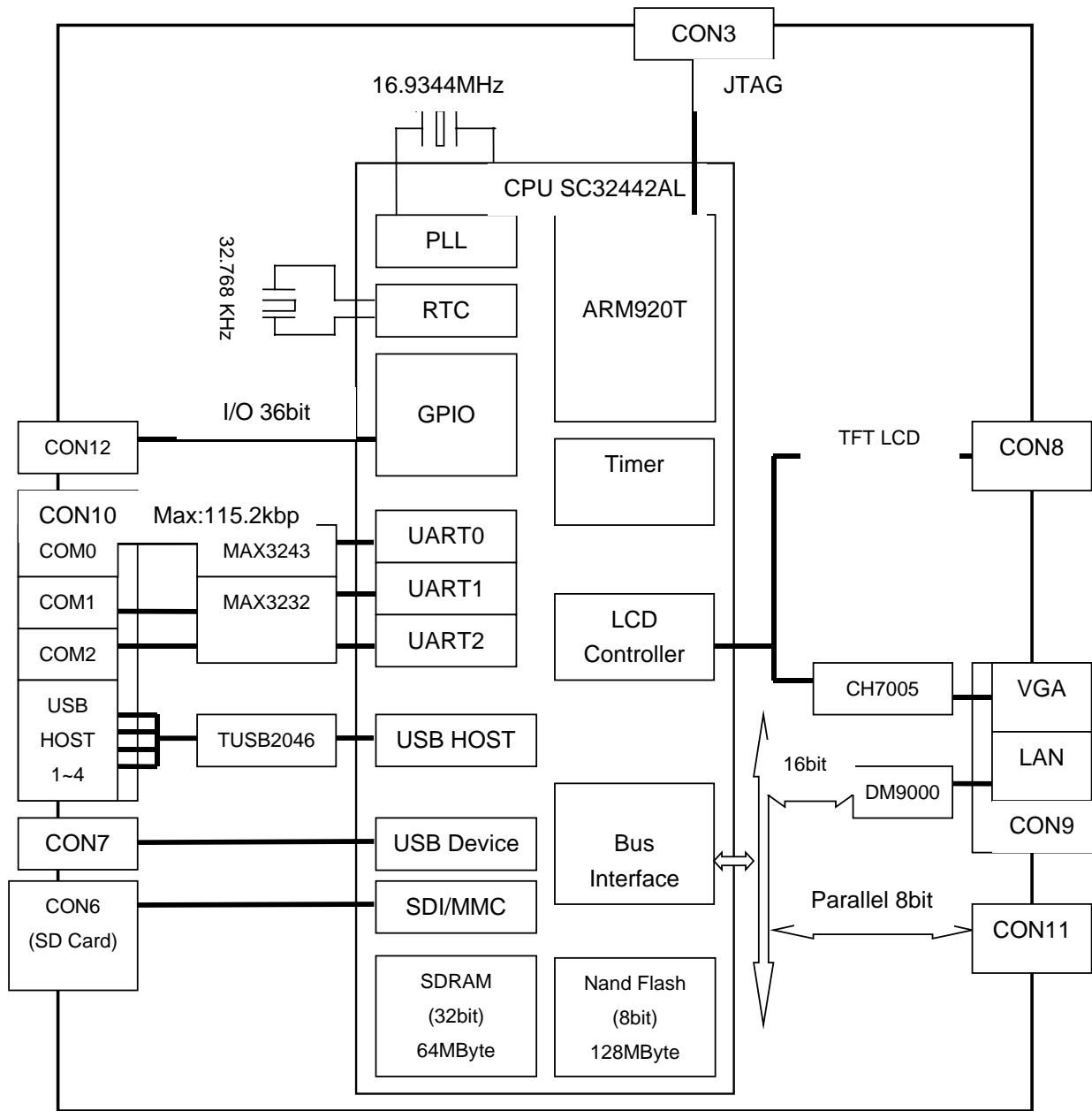


Top View

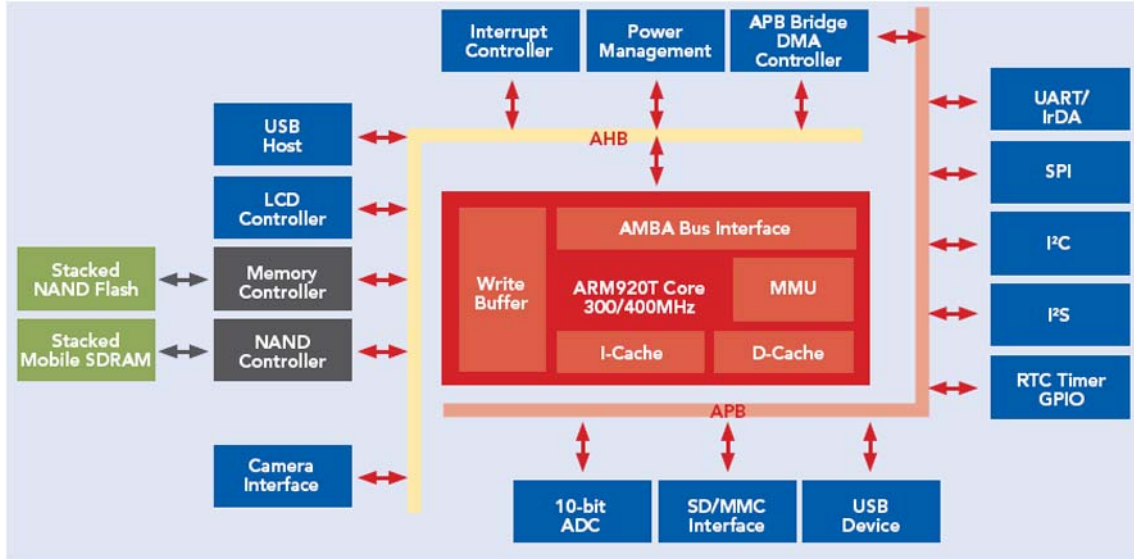


Bottom View

Function Block Diagram



Block Diagram of SBC2442-I



SC32442 MSP Block Diagram

Order Information

| | |
|------------------------------|---|
| Order No. | MH15 |
| Item | SBC2442-I Single Board Computer |
| Software/Price | Please contact us for detailed information. |
| Order No. | MH16 |
| Devkit2442-I Development Kit | <ul style="list-style-type: none"> ● Devkit2442-I Evaluation Kit (preloaded with WinCE5.0 for testing) ● One PVI 6.4" TFT LCD & Touch Screen ● One A/B type USB cable ● One Ethernet cable ● One serial RS232 cable ● Embest EasyICE JTAG cable ● CD-ROM, including development tools, user manuals. |
| Price | Please refer to Embest website. |



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