

## Embest XScale PXA270 Evaluation Board

- ARM Evaluation Board based upon Intel XScale PXA270 Processor
- Mic, Headset, LCD, Camera&Keyboard, AC97, IrDA, MMC/SD Card, CF Card, USB, Bluetooth, JTAG...
- Capable of supporting WinCE 4.2 operating system



Embest XScale PXA270 Evaluation Board

### Description

The Intel® PXA270 processor is designed to meet the growing demands of a new generation of leading-edge embedded products and is ideal for the low-power framework of battery-powered devices. It is the first Intel XScale® technology-based processor to include Intel® Wireless MMX™ technology which is able to work up to 520MHz. This featured technology enables high-performance multimedia acceleration with an industry proven instruction set. Another innovative feature is the Intel® Quick Capture technology, which provides one of the industry's most flexible and powerful camera interfaces for capturing digital images and video. The new capabilities of Wireless Intel SpeedStep® Power Manager technology provide a quantum leap forward in low power operation, while maintaining the highest levels of performance.

Embest XScale PXA270 Evaluation Board is another release of high-end ARM development platform after Embest PXA255DB board. The board takes all features of Intel XScale PXA270 processor and full Bus and peripheral signals are expanded through interfaces on board including FFUART, BTUART, SD/MMC/SDIO, CF, UART for TTL, LCD, power, USB, emulator, JTAG, Camera & Keyboard, Bus expansion, etc. The board has a flexible design using a CPU board and an expansion board. This is convenient for users to update and upgrade their boards easily and effectively protects customers' prophase resources. This would be a good solid reference and evaluation board for applications like

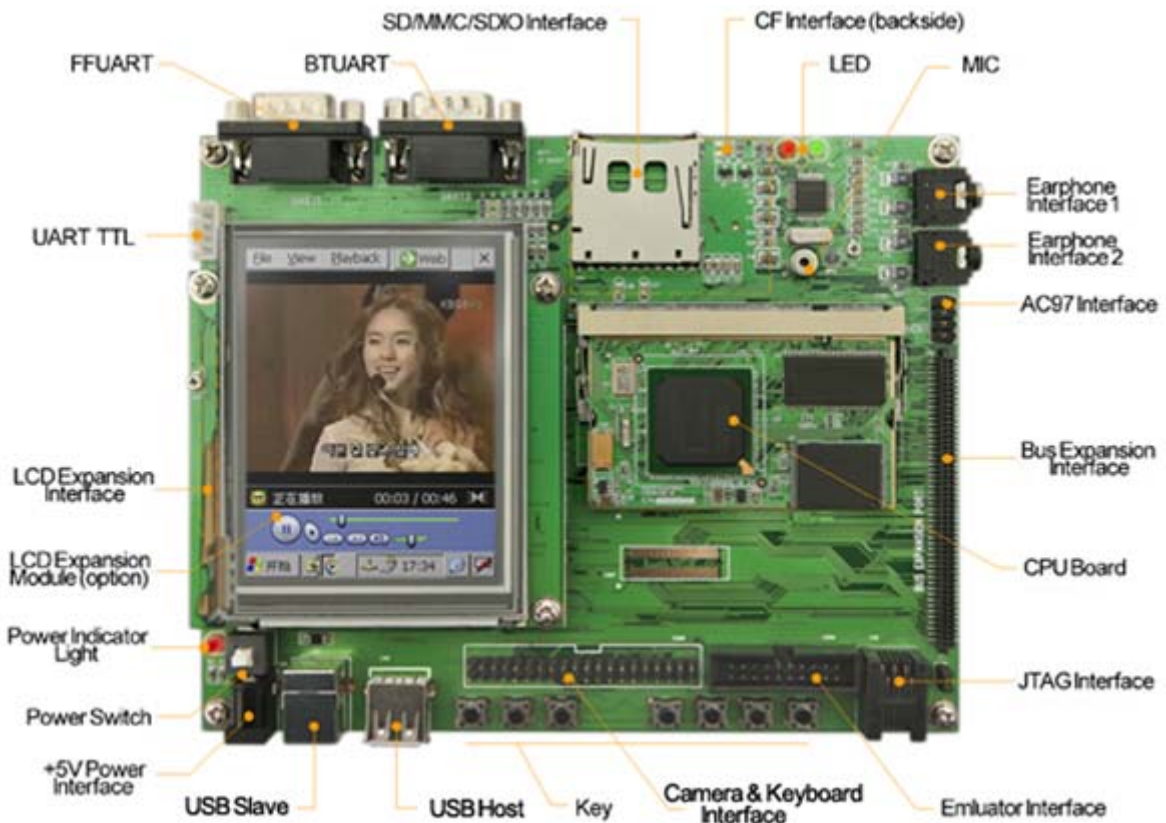
PDA, TPC, PMP, audio system, fingerprint identification, car navigation, media play, industrial control, etc.

## Hardware Specification

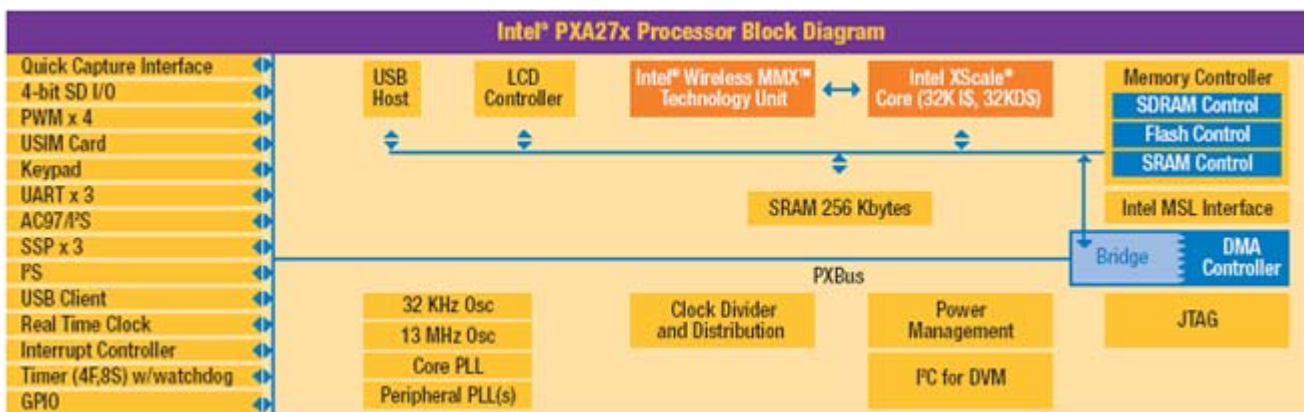
- Dimensions: 67x39mm (CPU board), 167x133 (expansion board)
- Working temperature: -40°C to 85°C ambient temperature range available
- Processor: Intel XScale PXA270 can work up to 520MHz
- Power input: DC +5.0V or USB power supply
- 64M SDRAM, Intel Strata Flash 32MB
- Two-way earphone output and one MIC interface
- 3.5" TFT LCD
- Touch screen
- Three UARTs (one for Full Function UART, one for Bluetooth UART and one for IrDA UART which supported by an optional\* expansion board)
- JTAG interface (support ARM standard JTAG interface and customer-built JTAG interface)
- USB (support USB1.1 slave)
- CF card interface
- SD/MMC, hardware supports SDIO, support SD/MMC Ethernet Image Download
- CS8900 10M Ethernet module (supports Ethernet Debug, Ethernet Image Download)
- 7 keys (one for hardware reset, one for software reset, one for power on/off, the other four for user defined)
- 3 LEDs (one for power, the other two are controlled by two GPIOs)
- Expansion interfaces (LCD, Touch, PWM, BUS, UART, AC97, Camera&Keyboard)



## Function Module Introduction



## Intel® PXA270 Processor Block Diagram



## The Intel® PXA270 Processor Advantage

Feature	Intel® PXA270 Processor For Embedded Computing
Intel XScale® Technology	Highly scalable core up to 520 MHz
Embedded Packaging	23x23 mm with 1.0 mm ball pitch 13x13 mm with 0.5 mm ball pitch also available
Extended Temperature Range	-40°C to 85°C ambient temperature range available
Product Life Cycle	Anticipated five-year life cycle <sup>1</sup>
Incredible Multimedia	Familiar Intel® Wireless MMX™ technology instructions designed for high-performance multimedia, 3-D games and advanced video
Advanced Camera Interface	Intel® Quick Capture technology supports 4+ megapixel cameras for capturing digital images, video and low-power, real-time previews
Enhanced LCD Controller	Dual-panel LCD with up to 24-bit color. Hardware color space conversion with 256 KB of on-chip SRAM for faster video. Two overlays reduce LCD bandwidth. Integrated Intel Quick Capture technology enables fast video preview
Reduced Power Consumption	Wireless Intel SpeedStep® Power Manager technology with five low-power modes can change frequency and voltage dynamically. Wireless Intel SpeedStep Power Manager software enables built-in, intelligent power management
Fast Access to Wireless Data	Intel® Mobile Scalable Link provides up to 416 Mbps link between communications and applications processors
Large Peripheral Set	USB Host/Client USB OTG 4-bit SD I/O MMC/SDCard Memory Stick USIM card interface Keypad controller PCMCIA/CF ICP
Memory Interface	100 MHz memory bus supports a variety of 1.8 V, 2.5 V, 3.0 V and 3.3 V memory

## Software Examples

Embest provides WindowCE 4.2.net BSP and even a well-round and steady-going driver source code for this XScale PXA270 evaluation board. Source code provided includes the following test modules:

Example code	Description
<b>eboot</b>	Device booting code includes WinCE image file programming function
<b>BackLight</b>	LCD backlight driver source code
<b>Display</b>	LCD display driver
<b>PCMCIA</b>	CF Slot driver source code
<b>CF</b>	CF network card code
<b>SD/MMC</b>	SD/MMC driver code
<b>SERIAL</b>	RS232 serial port driver code
<b>TouchP</b>	Touch screen driver code

<b>USB</b>	USB Slave interface driver code
<b>WaveDev</b>	AC97 Audio driver code
<b>NLEDDR</b>	LED driver code
<b>HAL</b>	Hardware Abstraction Layer source code
<b>KBDMOUSE</b>	Keypress driver code
<b>JFlashMM</b>	JTAG tool source code

## Order Information

Order No.	EBD4
Item	Embest XScale PXA270 Evaluation Board
Hardware	PXA270DB board with Sharp 3.5" TFT LCD, CS8900 10M Ethernet module, RS232 electricity level conversion module
CD-ROM	<ul style="list-style-type: none"> <li>● software examples</li> <li>● user manual</li> <li>● circuit schematic drawing</li> <li>● Datasheet</li> </ul>
Others	<ul style="list-style-type: none"> <li>● 1 x Serial cable</li> <li>● DC5V Power Adapter</li> <li>● 1 x USB cable</li> <li>● 1 x JTAG cable</li> </ul>



### **Embest Info&Tech Co., LTD.**

Room 509, Luohu Science&Technology Building,  
 #85 Taining Rd., Shenzhen, Guangdong,  
 China 518020

Tel: +86-755-25635656/25636285

Fax: +86-755-25616057

Email: [market@embedinfo.com](mailto:market@embedinfo.com)

<http://www.embedinfo.com>

<http://www.armkits.com>