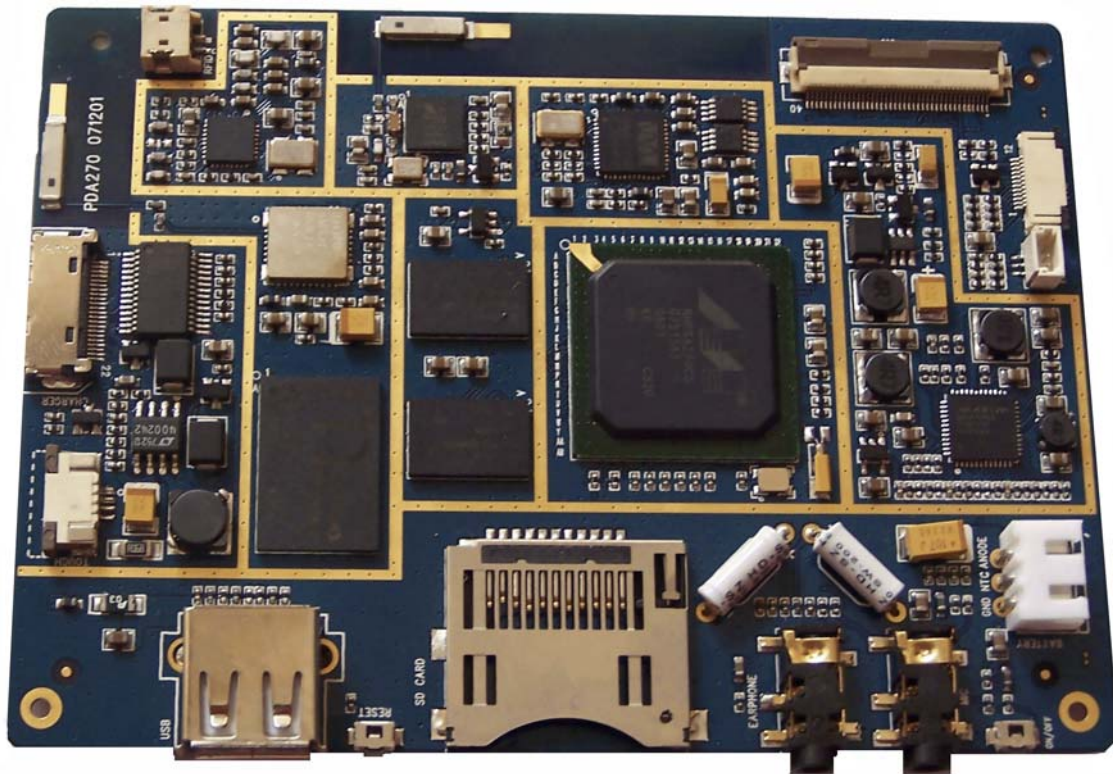


## DevKit270 Development Kit

- Development Kit based on Marvell 520MHz XScale PXA270 Processor
- USB Host/Device, Serial Port, Audio, Bluetooth, Wi-Fi, RFID, Barcode Scanner, LCD/TSP, SD, ...
- Capable of supporting WinCE6.0 OS

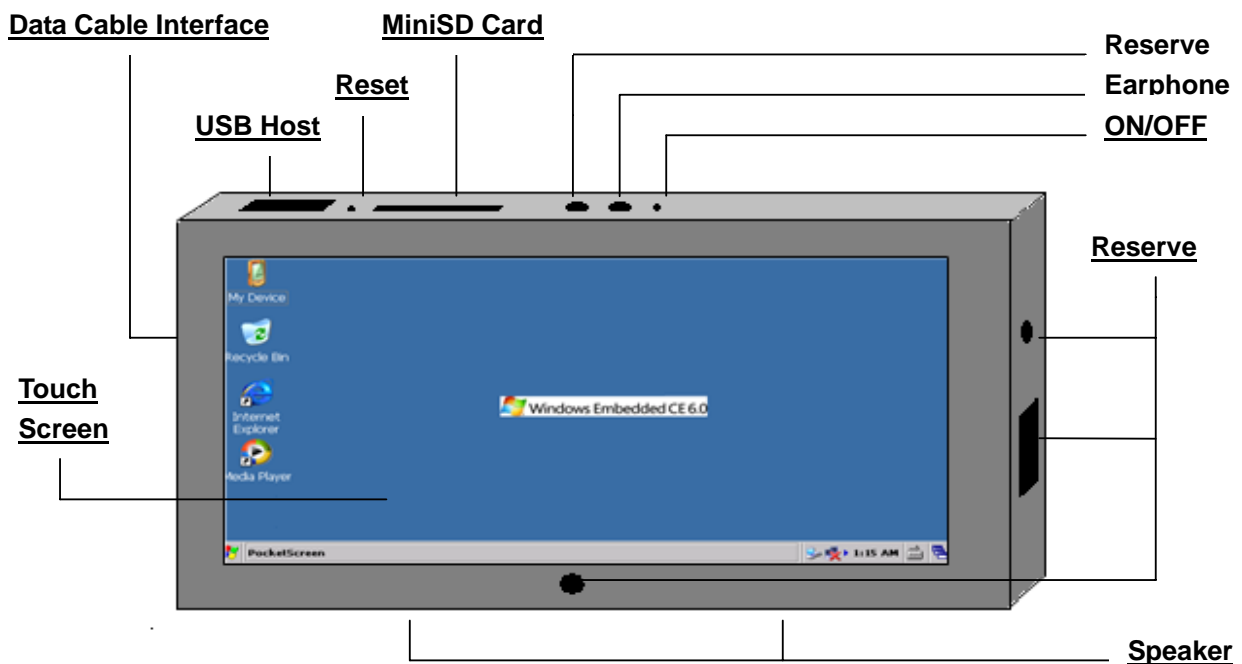


**DevKit270 Main Board**

Embest DevKit270 Main Board is a high-performance compact board based on Marvell XScale 520MHz PXA270 ARM processor, with 1GByte of MDOC flash and 128MByte of SDRAM as well as a MiniSD card slot supporting up to 2GB capacity. It features standard Bluetooth and Wi-Fi and a 3,500 mAH rechargeable Lithium battery. A barcode scanner interface and a RFID antenna interface are also available. The board exposes many other hardware interfaces including RS232 serial port, USB Host/Device, LCD/TSP and Jtag. It mainly targets the development of PDA, Handheld PC, Tablet PC and smart phones.

The DevKit270 main board can support 16-gray STN-LCDs or 256-color STN-LCDs of various size and the maximum virtual screen size in 256 color mode is up to 4096\*1024. It can also support 1, 2, 4 or 8-bpp TFT-LCDs of various size and the maximum virtual screen size in 64K color mode is up to 2048\*1024. Embest offers, as options, a DATA IMAGW 7" TFT LCD with 800\*480 pixels resolution and a tiny RFID antenna board.

The DevKit270 main board is able to support WinCE OS. The software package includes WinCE6.0 BSP and drivers of which many are in source code. Embest also provide user manual, schematic drawing and datasheet documents to help customers better understand the board. This would be an ideal solid basis for your embedded applications.



### Devkit270 Development Kit

Embest Devkit270 Development Kit is designed specially for evaluating the DevKit270 main board. It is housed in a case and preloaded with WinCE6.0 OS for testing. User can display it using a DATA IMAGW 7" TFT LCD and Touch screen. It includes a tiny RFID antenna board inside as well as a 8-pin Jtag connector for reserved extension. The front panel of the case is made of aluminum alloy while the rear panel is designed using engineering plastic. The kit has ebook functions, supporting Microsoft office applications such as WORD, EXCEL, PDF and TXT for viewing documents; it also has synchronizing function, which enables data synchronization between your PC and the kit; it would also be a media player which is capable of playing audio or video files like MP3 or MP4.

## **Hardware Features**

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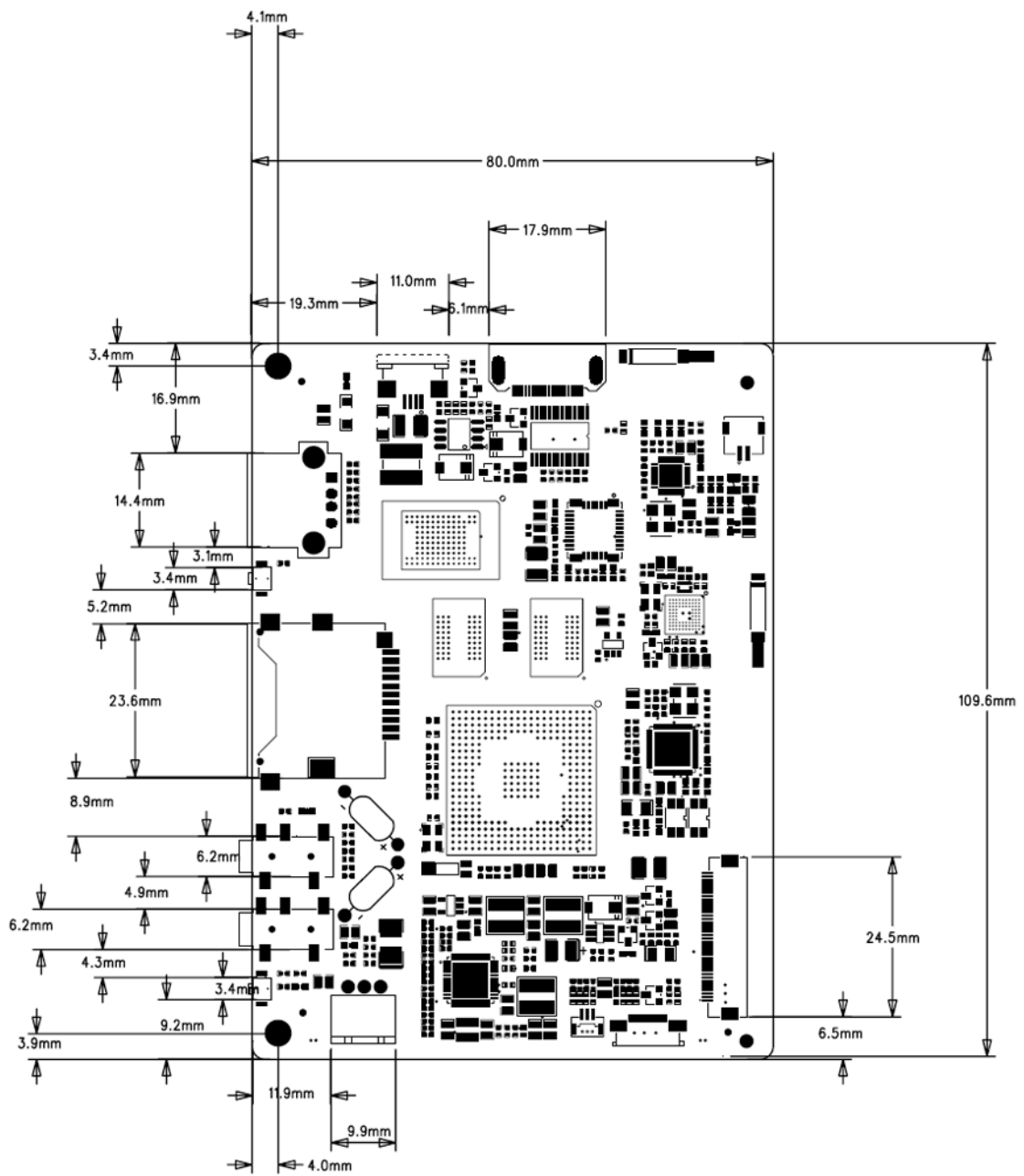
The Marvell PXA270 processor is designed to meet the growing demands of a new generation of leading-edge embedded products and is ideal for the low-power framework of battery-powered devices. It is the first Intel XScale® technology-based processor to include Intel® Wireless MMX™ technology which is able to work up to 520MHz. This featured technology enables high-performance multimedia acceleration with an industry proven instruction set and can better support MPEG4 and MP3 decode. Another innovative feature is the Intel® Quick Capture technology, which provides one of the industry's most flexible and powerful camera interfaces and can support 4+ megapixel cameras for capturing digital images, video and low-power, real-time previews. 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. The processor has 256 KB of on-chip SRAM and supports Intel StrataFlash memory. It supports Baseband interface and USB OTG (on-the-go).

The DevKit270 main board is based on Marvell XScale PXA270 processor and takes full features of the processor. This board is characterized as follows:

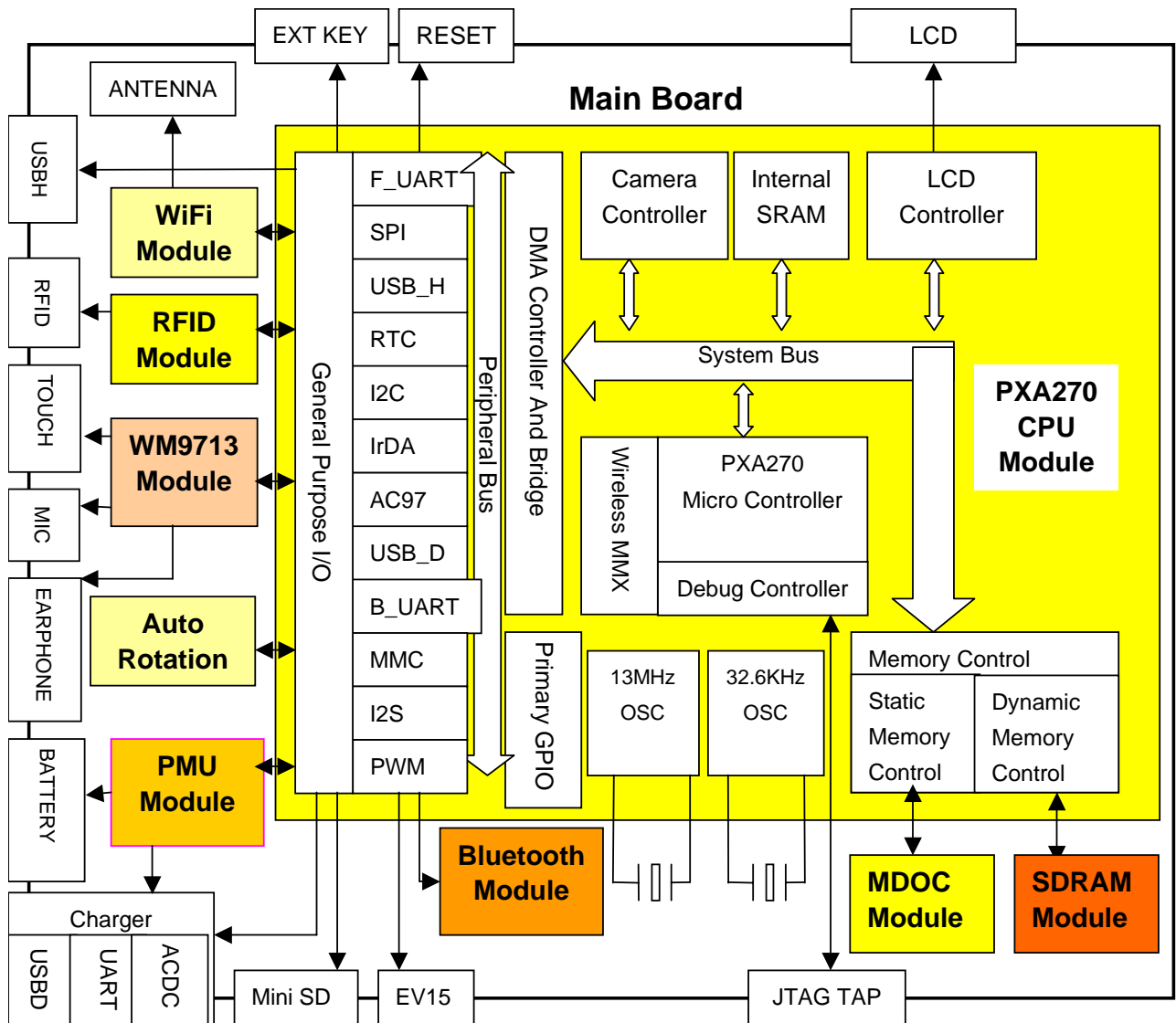
- Dimensions: 109.6 x 80mm
- Working temperature: -20~85 Celsius
- Processor: Marvell XScale PXA270 can work up to 520MHz
- Power supply: 3500mAH Lithium battery
- 3-pin Battery interface (connect to 3,500MAH Lithium battery)
- Power charger interface (included in one 22-pin socket, connecting to 6V~9V DC power)
- 128MByte SDRAM
- 1GByte MDOC (Disk-On-Chip)
- One 9-wire RS232 serial port (included in one 22-pin socket)
- One USB1.1 Host port
- One USB1.1 Device port (included in one 22-pin socket)
- Bluetooth antenna (BC41B143A, support Bluetooth earphone and Bluetooth printer)
- Support wireless LAN (LBWA18HEPZ, WLAN 802.11 b/g)
- LCD interface (STN or TFT)
- 4-wire touch screen interface
- One mini SD card socket (support the maximum capability up to 2Gbyte)
- Audio output port (earphone)
- RFID antenna interface (RFID frequency: 13.56MHz, support ISO15693, 14443A/B)
- RFID antenna (a small RFID antenna board, optional\*)
- Barcode scanner interface
- Two buttons (RESET and ON/OFF)
- One 3-pin EXT KEY interface (two buttons can be extended through the interface for the barcode scanner control)
- 20-pin JTAG interface (led out by test points on the rear of the board)
- Supporting Windows CE.net 6.0

**Note:** The DevKit270 main board has one 22-pin socket surface mounted on it. The socket is compatible with HP PDA. The 9-wire serial port, power charger interface and USB Device port of the DevKit270 main board are all led out from this socket. Embest provides a data cable to connect this board to your needed peripheral device.

# Dimensions



### Function Block Diagram



Block Diagram of DevKit270 Main Board



## Software

Embest DevKit270 provides Window CE 6.0.net BSP and well-round, steady-going drivers, many of which are all in source code. Please refer to below table.

OS	Item	Feature	Description
WinCE6.0	Bootloader	Eboot	Bootloader for WinCE (Supports downloading image through Ethernet or USB or serial port)
	Driver	Autorotation	Windows interface can rotate 90/180/270/360 degree automatically.
		BACKLIGHT	Backlight (If WinCE system is suspended, the backlight will be turned off)
		BATTDRVR	Battery
		BCSP	Bluetooth (use serial port for transferring)
		DOC	Msystem flash MDOC H3
		EV15	EV15 symbol scanner
		gspi_wifi	Marvell 8086 SPI Chipset
		HCD	USB host
		PWRBUTTON	Power management (Change the power status between suspend and wake up)
		KEYPAD	USB mouse and USB Keypad
		SERIAL	Three full-function serial ports: one for Bluetooth, one for scanner and one for EBOOT debugging.
		SDHC	SD (MMC/SDIO)
		TOUCH	Touch Screen
		TRF7960	RFID (Chipset: TI TRF9760)
USBFN	USB Device		
WAVEDEV2	WolfSon: driver for Audio		

## Order Information

Order No.	MH17
Item	Embest DevKit270 Main Board
Price	Please contact us.
Optional Hardware	<ul style="list-style-type: none"> <li>● DATA IMAGW 7" TFT LCD</li> <li>● RFID antenna board</li> </ul>
Order No.	MH18
Item	Devkit270 Development Kit
Accessories	<ul style="list-style-type: none"> <li>● One Touch Pen</li> <li>● One Data cable (connect to the 22-pin socket)</li> <li>● 6V DC power adapter</li> <li>● CD-ROM, including WinCE6.0 BSP, user manual, datasheet, schematic)</li> </ul>
Price	Please contact us.



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