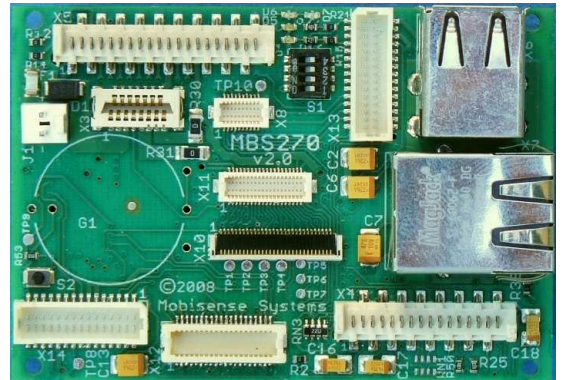


Embedded vision system

MBS270 V2

- **High performance XScale PXA270 processor**
- **Multimedia: camera, LCD, touchscreen ,audio**
- **Many peripherals**
- **Easy to use and reliable connectors**
- **Low power, small size, low weight**
- **Low cost, customizable**



Actual size 72 x 50mm (2.8 x 2")

General description

MBS270 V2 is a ready to run embedded system dedicated to computer vision and robotics. It offers very high processing power while maintaining very low power consumption.

Its design is optimized for applications requiring small form factor and extremely low weight. It embeds perfectly in UAVs, mobile robots, humanoids or any other mobile system.

Intel/Marvell PXA270 processor provides industry-leading computing and communicating capabilities. The Quick Capture interface allows color and gray-level image real-time acquisition with very high resolution (up to 2048 x 2048) without using CPU thanks to Direct Memory Access (DMA). The *whole* image is accessible in SDRAM memory. Executed with Intel Wireless MMX SIMD instruction set, data processing is parallelized up to 8 times.

Multimedia interfaces let you build robots that see, talk, hear and display their mood on an LCD.

Software support

MBS270 runs with Linux 2.6 kernel, bringing high performance and much functionality to embedded applications.

Development is made easy with:

- Full Linux kernel source code
- C/C++ GNU EABI cross compilation tool chain
- V4L2 API for image acquisition
- Extra Mobisense Systems robotics drivers: GPIO, RC servos, ADC, timer
- Multithread applications, Posix standard
- Eclipse IDE and gdb debugger
- Open Source community: Open Embedded, Angstrom...

Signal processing is optimized with powerful IPP: Intel/Marvell Integrated Performance Primitives based on WMMX instruction set.

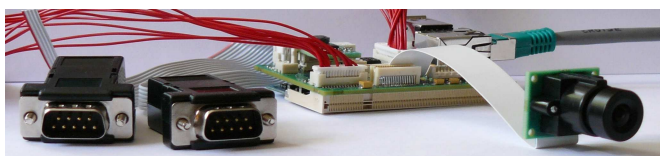
Applications

- Vision guidance
- Mobile robots: humanoid, UAVs
- Service robots navigation system: agriculture, industrial cleaning, AGVs
- Embedded vision
- Wireless camera, network sensors
- Multimedia portable device

Accessories

Check out these products for MBS270:

- Camera modules: MBS7720, MBS032C/M
- Power modules: MBSPOW-xx
- Wiring kit: MBSWK



Key specifications

CPU

Marvell PXA270 @ 520MHz
64MB SDRAM, 32MB FLASH
WMMX technology

Multimedia

10 bits camera interface with FFC connection
LCD and touchscreen
20 bits audio: stereo inputs and outputs + mic

Communication

Ethernet 10/100
2 x USB 1.1
3 x UARTs: Full function, Bluetooth and Std
2 x SSP/SPI/Microwire/PSP compatible
I2C
SDIO

Additional peripherals

SDcard
4 x PWM
4 x 10 bits ADC inputs
Battery saved RTC
Up to 31 GPIOs, 4 LEDs, 4 micro switches
RC servo on any free GPIO
Power supervision signals

Power consumption

About 1W @ full image processing
Multiple supply possibilities
SpeedStep technology

Mechanical

Dimensions: 72 x 50 x 25 mm
Weight: 46g

Operating System

Linux 2.6.20

Ordering Information

MBS270-520 Standard board with PXA270@520MHz

MBS270-520L Weight optimized board with PXA270@520MHz