

T270

KARO
e l e c t r o n i c s

System On Module

- Processor Marvell® PXA270 (520MHz)
- RAM 64/128MB mobile DDR-SDRAM
- ROM 16/32/64MB NOR Flash
- RTC DS1339 Real Time Clock
- Power supply Single 3.3V
- Size 31mm SO-DIMM
- Temp.-Range -25°C..85°C

Key Features

- Buffered 32-Bit External Memory Interface
- Full Speed USB 1.1 Host/Client
- LCD controller up to 640 x 480, 18bpp
- Camera Interface
- Several Interfaces:
3x UART, SDIO, AC97/I2S,I2C,
3x SSP, Keypad, Compact Flash

OS Support

- Windows Embedded CE 6.0
- Linux 2.6
- RedBoot Bootloader

Development System

- Starter-Kit III



**520 MHz
XScale**

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Board highlights:

- World's smallest PXA270 system on module
- Lowest power solution, down to 2mW in sleep mode
- 32-bit external memory interface
- NOR Flash
- high efficiency programmable power supply
- Single 3.3V supply
- All PXA270 interface signals are available on a standard DIMM200 socket

The TRITON-270 is a complete computer, implemented on a board smaller than a credit card, and ready to be designed into your embedded system. TRITON-270 includes a Intel® / Marvell PXA processor, SDRAM and Flash memory. The integrated LCD-controller enables direct connection of a LCD screen, and the standard PCMCIA interface permits simple extension and integration into a target system.

The TRITON-270 is specifically targeted at embedded applications where size, high cpu-performance and low power consumption are critical factors.

System on module

- Intel® / Marvell® PXA270 (520MHz)
- 64 MByte mobile SDRAM (1.8V ultra low power, 32bit)
- 16/32/64 MByte NOR Flash memory
- 32-bit external memory interface
- Single 3.3V power supply
- RedBoot firmware
- SODIMM-module (67,6mm x 31 mm x 4,2mm)
- Operating temperature range -25°C..85°C
- RoHS compliant

PXA270

The Intel® / Marvell PXA270 processor is designed to meet the growing demands of a new generation of leading-edge embedded products. Featuring advanced technologies that offer high performance, flexibility and robust functionality, the Intel / Marvell PXA270 processor is packaged specifically for the embedded market and is ideal for the low-power framework of battery-powered devices. The Intel / Marvell PXA270 processor is the first Intel / Marvell XScale® technology-based processor to include Intel® Wireless MMX™ technology. This 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.

RedBoot Bootloader

TRITON-270 is delivered with pre-installed RedBoot firmware. RedBoot supports several low-level-debugging options and file download via serial XModem. These files can additionally be stored into the permanent flash-memory to be started by command or power-on.

Features

Intel / Marvell XScale® Technology PXA270 core up to 520 MHz

Embedded Packaging

67,6mm x 31 mm x 4,2mm rugged DIMM-Module with fastener

Extended Temperature Range

-25°C to 85°C ambient temperature range available

Reduced Power Consumption

Wireless Intel SpeedStep® Power Manager technology with four low-power modes can change frequency and voltage dynamically. 1,8V ultra low power memories on-board.

Incredible Multimedia

Familiar Intel® Wireless MMX™ technology instructions designed for high-performance multimedia and advanced video.

Advanced Camera Interface

Intel® Quick Capture technology supports 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.

Fast Access to Wireless Data

Intel® Mobile Scalable Link provides up to 416 Mbps link between communications and applications processors.

Large Peripheral Set

- Quick Capture Interface
- Enhanced LCD controller
- USB 1.1 Host/Client, PWM, 4-bit SD I/O
- USIM card, Keypad controller
- UART x3, AC97/I2C, SSP x3, I2C, JTAG

STARTER-KIT III

The Starter-Kit III is a ready-to-use development system for building applications based on the TRITON-270 embedded processor board.

- DIMM200 TRITON 270 socket
- Compact Flash type II socket
- SD/MMC-card socket
- USB-Device connector
- USB-Host connector
- D-SUB 15 VGA connector
- 2x 3.5mm audio connectors (stereo line in, headphone)
- JTAG interface
- UCB1400 audio codec & touchscreen controller
- 3x RS232 on 10pin flat cable headers
- TRITON pins connected to flat cable headers
- daughter board slot for easy application design-in
- 10/100 Mbit/s Ethernet (SMSC LAN91C111)
- 3,3V single supply design, 5V also available onboard
- Operating Voltage Range: 8-24VDC
- Transient protected for automotive applications
- 100mm x 160mm, overall height 17mm
- Schematics of the base board are included for reference.

Ordering Information

Order Number	PXA270	SDRAM	Flash	Temp.
TRITON-270/520/64S/32F/E85	520MHz	64MB	32MB	-25°C..85°C
TRITON-270/520/128S/64F/E85	520MHz	128MB	64MB	-25°C..85°C
TRITON-270/312/32S/32F/E85	312MHz	32MB	32MB	-25°C..85°C