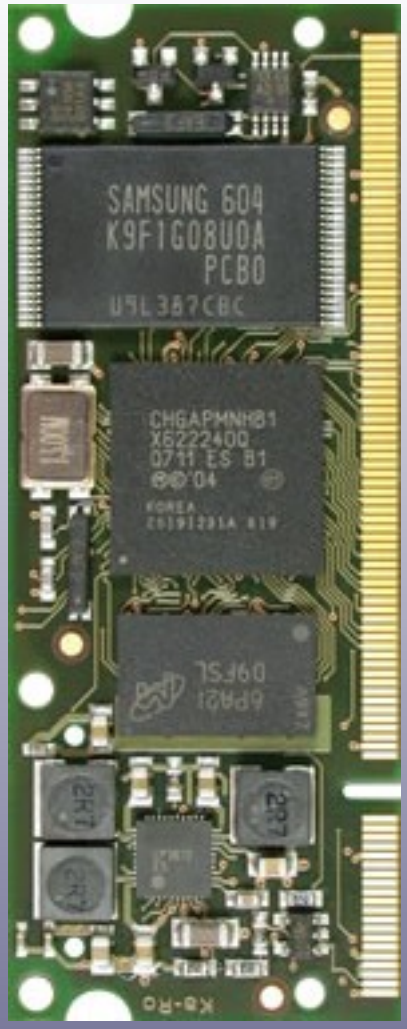
T320

System On Module

- Processor Marvell® PXA320 (806MHz)
- RAM 64/128MB mobile DDR-SDRAM
- ROM 128MB NAND Flash
- RTC DS1339 Real Time Clock
- Power supply Single 3.0V to 5.5V
- Size 26mm SO-DIMM
- Temp.-Range -25°C..85°C



Key Features

- High Speed USB 2.0 Client
- Full Speed USB 1.1 Host
- LCD controller up to 800 x 600, 18bpp
- Camera Interface
- Several Interfaces:
  3x UART, 2x SDIO, AC97/I2S,I2C,
  3x SSP, Keypad, Compact Flash

OS Support

- Windows Embedded CE 6.0
- Linux 2.6
- UBoot Bootloader

Development System

- Starter-Kit IV

806 MHz XScale

Ka-Ro electronics GmbH
Pascalstr. 22, D-52076 Aachen, Germany
Tel.: +49 2408 1402-0 (FAX -10)
www.karo-electronics.de

TRITON-320

Board highlights:

- World's smallest PXA320system on module
- Lowest power solution, down to 2mW in sleep mode
- 16-bit A/A/D multiplexed external memory interface
- NAND Flash
- high efficiency programmable power supply
- Single 3.0V to 5.5V supply
- All Monahans P interface signals are available on a standard DIMM200 socket

The TRITON-320 is a complete computer, implemented on a board smaller than a credit card, and ready to be designed into your embedded system. TRITON-320 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-320 is specifically targeted at embedded applications where size, high cpu-performance and low power consumption are critical factors.

System On Module

- Intel® / Marvell® PXA320 (806MHz)
- 64 MByte mobile DDR-SDRAM (260MHz 1.8V ultra low power, 32bit)
- 128 MByte NAND Flash memory
- 16-bit multiplexed external memory interface
- Single 3.0V to 5.5V power supply
- U-Boot firmware
- Worlds smallest DIMM-module (67,6mm x 26 mm x 4,2mm)
- Operating temperature range -25°C..85°C
- RoHS compliant

PXA320 Monahans
The Intel® / Marvell PXA320 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 PXA320 processor is packaged specifically for the embedded market and is ideal for the low-power framework of battery-powered devices. The Intel / Marvell PXA320 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.

U-Boot Universal Bootloader
TRITON-320 is delivered with pre-installed U-Boot firmware. U-Boot 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 PXA320 core up to 806 MHz

Embedded Packaging
67,6mm x 26 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 768 KB of on-chip SRAM for faster video. Two overlays reduce LCD bandwidth. Integrated Intel Quick Capture technology enables fast video preview.

Large Peripheral Set

- Quick Capture Interface
- USB 1.1 Host/USB 2.0 Client
- PWM x4, 4-bit SD I/O
- USIM card, Keypad controller
- UART x3, AC97/I2C, SSP x3
- Enhanced LCD controller
- I2C, JTAG

STARTER-KIT IV
The Starter-Kit IV is a ready-to-use development system for building applications based on the TRITON 320 embedded processor board.

Base Board

- DIMM200 TRITON 320 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 (DM9000)
- 3,3V single supply design, 5V also available onboard
- Operating Voltage Range: 8-24VDC
- Transient protected for automotive applications
- 100mm x 220mm, overall height 17mm
- Schematics of the base board are included for reference

Ordering Information

Order Number	PXA320	SDRAM	Flash	Temp.
TRITON-320/806/64S/128F/E85	806MHz	64MB	128MB	-25°C..85°C

2009-02-19