

## TRITON PXA320 Development Kit 4

- Compatible with the TRITON-320 PXA320 SOM
- Compact Flash type II socket,
- Selectable true-IDE or CF mode
- SD/MMC-card socket
- 3 x RS232 on 10pin flat cable headers
- USB-Device connector
- USB-Host connector
- D-SUB 15 VGA connector
- UCB1400 audio codec & touch screen controller
- 2 x 3.5mm audio connectors, (stereo line in, headphone)
- JTAG interface
- All pins of the TRITON socket are 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 to 24VDC
- Transient protected for automotive applications
- 100mm x 220mm, overall height 17mm
- Schematics of the carrier board are included for reference.



### Overview

The TDK-4 is a ready-to-use development system for creating applications based on the Marvell PXA320 processor running either Windows CE 6 or Linux 2.6.x. The PXA320 combines ultra-low-power operation with outstanding multimedia performance, and features an extended instruction set that includes Wireless MMX instructions for enhanced image processing and graphics capability.

A major advantage of the Kit-4 is that it is based around the TRITON-320 PXA320 module. System-on-Modules (SOM's) like the TRITON-320 are a great way to reduce both time and costs to develop a new product, as the most complicated design areas (processor system and operating system driver development) are already done. In addition, the cost of maintenance is reduced as :

- future software updates are supplied at no cost by simply downloading the latest versions from our website, and
- warranty repair costs are lowered because the SOM can be re-used if a fault occurs on the carrier board.

Furthermore, while one part of the development team is developing software, the hardware engineers can quickly develop a simple 4 or 6-layer custom carrier board that will ultimately form the basis of your new product design.

### Design to Manufacture Services

If you need a custom carrier board designed in the fastest time and manufactured to ISO 9001 quality standards, special drivers developed or Linux/Windows CE optimized for your application, we can help. Please call or email us for more information.

## **What's included in the Kit-4?**

The Kit-4 consists of two main parts. The carrier board (shown above) and the TRITON-320 PXA320 module. This contains a 806 MHz PXA320 processor together with 64 MB mobile SDRAM, 128 MB NAND Flash and Real Time Clock. The memory used is the lowest power consumption available and as a result the TRITON-320 uses only 2mA in sleep mode.

The TRITON-320 module connects to the carrier through the SODIMM 200 connector and is securely held in place using two stand-off's. Please refer to the TRITON-320 datasheet for a list of the signals brought out on the DIMM connector.

The Kit-4 also includes cables, 220/110 VAC power adapter and a CD containing the software and user manual. The carrier board schematics are provided in the manual.

You can either attach a VGA monitor to the VGA connector or use the optional LCD display. If preferred, a different LCD can be connected to the 40-pin header connector. The Kit is connected to the host PC by serial cable and xmodem or Ethernet for uploading to the TRITON-320 modules' RAM/Flash.

Software development is undertaken on the host PC. The tools for Linux are included on the CD. If using Windows CE you can download a 120 day evaluation of Platform Builder from the Microsoft website.

### Summary:

- Triton-320 module with 806 MHz Marvel PXA320, 64 MB mobile SDRAM, 128 MB NAND Flash
- Kit-4 carrier board
- 220/110 VAC power adapter with plugs for most international sockets
- 9 pin serial communications cable
- 9 pin SUB-D to 10 pin flat cable header adaptor
- 25 pin printer port cable (JTAG)
- 25 pin SUB-D to 20 pin flat cable header adapter
- CD including Windows CE 6.0 BSP (no sources), Linux 2.6 (with sources), toolchain, manual with carrier schematics

## **Software**

Apart from the pre-installed U-Boot firmware, the Kit-4 is supplied with pre-installed Linux™ kernel or Windows Embedded CE 6.0 BSP (both are supplied on the CD). The Linux kernel and Windows CE BSP support all of the Development Kit-4 peripherals to ensure that the TRITON-320 module can be easily integrated into existing platforms to minimize the development time and costs. As standard the Linux kernel is supplied with all code sources so that it is possible to modify, compile and install the complete Linux or parts of it. Sources for the Windows CE BSP are available as a cost option. In addition, the customer is able to download free updates from our website at any time.

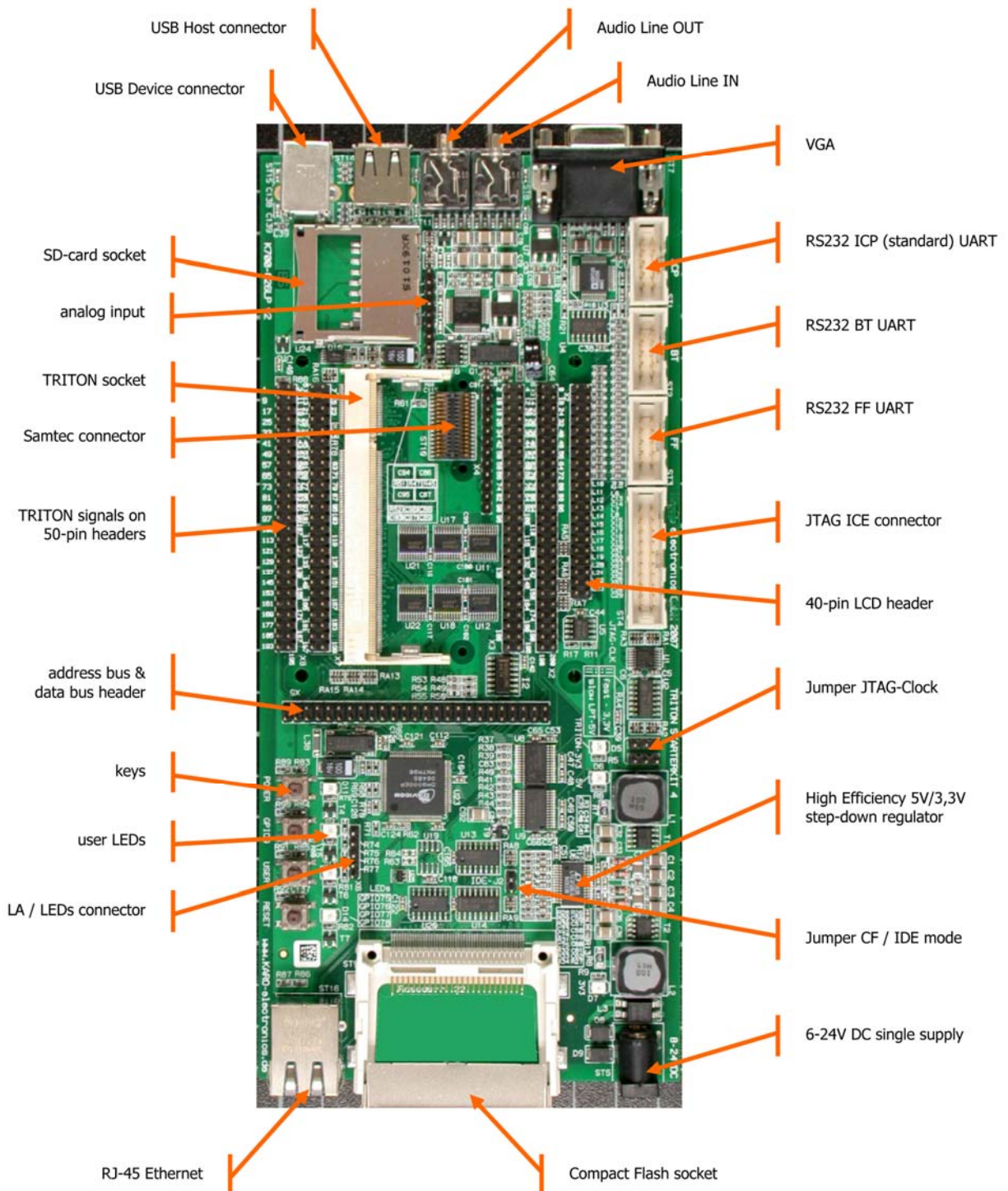
## **U-Boot Bootloader**

The TRITON module is pre-installed with the U-Boot bootloader. In addition to loading the operating system, U-Boot allows you to upload software to RAM/NAND Flash over ethernet using ftp, or xmodem over serial.

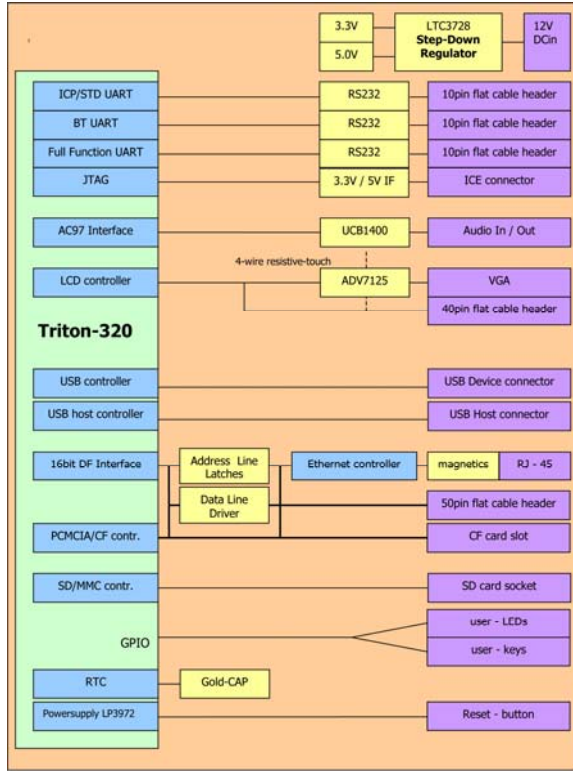
## **Warranty, Technical Support and Software Updates**

Included within the price of each Kit:

- 24 months hardware warranty
- 24 months software and documentation updates, downloadable from customer area on our website



## PXA320 Block Diagram



## Ordering information

Order Number	OS	PXA320	SDRAM	Flash
TDK-5-L-320	Linux 2.6	806 MHz	64MB	128MB
TDK-5-W-320	Windows CE 6.0	806 MHz	64MB	128MB

### Display (option)

The Xenarc display connects to the VGA connector on the carrier and the USB connector for touch.

- XENARC 700TSV™
- 7" TFT LCD Monitor & Touch Screen
- Screen Size: Diagonal 7" (16:9)
- Physical Resolution: 800 (H) x 480 (V)
- Supported Resolution: 640 x 480 ~ 1600 x 1200
- Display Brightness 300 cd/m<sup>2</sup>
- Touch Screen Interface: USB port
- Operating Voltage Range: DC 11V ~ 24V, 1A
- Power Supply: DC 12V
- Power Consumption: <8W
- Operating Temperature: -5°C~70°C
- FCC, CE, E13 Certification
- No dead Pixel Guarantee



Last update: 2007-12-02. Errors and omissions accepted.