

DATASHEET

EDK6446 - High Performance TI DaVinci-Based Dual Core ARM9 + C64x DSP

Empower Development Kit (EDK) 6446 comes with the latest Empower Technologies' Linux Embedded OS (LEOs) for DM6446 operating software. The target hardware development platform includes a SBC board with a TI DaVinci TMS320DM6446 processor and a 4.3" WQVGA (480 x 272) landscape TFT LCD touch panel, ready for 16:9 widescreen movie presentations. The software and hardware are designed to run on DM6441, DM6443 and DM6446.

EDK6446 and LEOs for DM6446 product family are made specifically for media devices in the mobile, set-top-box, and telematic applications. The video processing power enabled by the video/imaging coprocessor and the C64x+ DSP core in the DM6446 is the most powerful feature of this new development platform. It provides major technical advantages in video/image/audio encoding/decoding, video analysis, image processing and sound processing. These technical advantages can be applied in the fields of networked IP security surveillance systems, wired/wireless networked digital media streaming systems, automobile infotainment systems, portable navigation multimedia devices, and videophones.

LEOs for EDK6446 will allow you to more easily and quickly develop digital media applications. Application code can be written, with easy access via LEOs APIs to the C64x+ DSP core. No detailed DSP knowledge is required to access DSP functions.



HARDWARE FEATURES

Development board with the Texas Instruments DM6446 processor; which includes an ARM processor running at 297MHz, and a C64x+ DSP core running up to 594MHz

- 256MB of DDR2 SDRAM
- 32MB NOR Flash, 256MB NAND Flash
- 1 composite video input port
- 1 composite video output port
- Microphone interface
- Stereo Speaker interface
- Stereo Audio Line-in and Stereo Audio line-out interface
- 10/100 Mbps Ethernet
- 3 UART ports (1 RS-232 as console, 1 RX/TX, 1 RX/TX/CTS/RTS)
- 2 PWM ports
- 10 GPIO ports (User defined input or output)
- USB 2.0 host with mini-AB connector
- Media Card Interface (SD slot)
- I²C* Interface
- Rechargeable Li-Polymer battery and circuit
- One reset button and one sleep/wake button
- Single +5V power supply
- JTAG interface
- PCB dimensions: 130mm x 80mm (5.12" x 3.15")
- Outside dimensions (L x W x H):
133.0mm x 89.6mm x 21.5mm (5.24" x 3.53" x 0.85")

4.3" TFT LCD DISPLAY FEATURES

- Wide operating temperature range
- 480 x 272 resolutions at widescreen view (16:9 aspect ratio)
- LED backlight
- Wide viewing angle
- Integrated 4-wire touch panel

3Megapixel DIGITAL CAMERA (Option)

LEOs device driver supports the following resolutions:

2048 x 1536 (QXGA)	1024 x 768 (XGA)
1920 x 1080 (HD 1080i)	800 x 600 (SVGA)
1600 x 1200 (UXGA)	720 x 576 (SD PAL)
1280 x 1024 (SXGA)	720 x 480 (SD NTSC)
1280 x 720 (HD 720p)	640 x 480 (VGA)

LEOs SOFTWARE FEATURES

- Linux 2.6 Kernel
- Device Drivers:
 - 4.3" TFT LCD display driver
 - Touch screen driver
 - Frame buffer driver
 - SD/SDHC card driver (32GB) and other device drivers
- Optional DSP codec(s) are available
- Uboot boot-loader
- GTK+
- Software Development Kit (SDK) for On Screen Display (OSD) programming

Windows CE 5.0 is also available. Please contact Sales for detail.



EDK6446 PACKAGE CONTENTS INCLUDE

- LEOs for EDK6446 operating software pre-loaded on the NOR flash
- CD including LEOs for EDK6446 operating software
- SBC6446 Single Board Computer (SBC)
- Technical Reference Manual
- Quick Start Guide
- End User License Agreement
- Cable set/AC adapter/1800 mAh Li-Polymer battery

* I²C is a register trademark of Philips Corporation

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