

**Ruiva-dm6446-0012** is a compact, universal video analytics platform. Based on Texas Instruments DaVinci digital media system-on-chip, it is particularly well fit for intelligent video processing applications. The dual-core architecture of the DM6446 provides benefits of both DSP and Reduced Instruction Set Computer (RISC) technologies, incorporating a high-performance TMS320C64x+™ DSP core and an ARM926EJ-S core. This powerful combination makes the chip a great choice for high performance networked video applications (encoding and decoding, embedded video playback, recording, transcoding and analytics).

The industrial version of this board can operate in extended thermal range from -40°C to 85°C (-40°F to 185°F) and in 98% humidity, making it a perfect candidate for heavy duty applications. It has been designed to comply with environmental requirements (EMI, EMC).

## ■ Highlights

- On board prebuilt security chip, which can protect your software ip
- Compact size, only 105mm X 72mm

## ■ Hardware Specifications

- One channel composite Video input, BNC connector (NTSC, PAL, SECAM support at D1

resolution)

- One channel composite Video output, BNC connectors
- Audio input & output
- ATA/IDE interface, (with UDMA)
- Micro SD card Slot, on bottom side
- Two USB 2.0 Host ports
- Network, 10M/100M Ethernet interface, RJ45 connector
- System
  - TMS320DM6446-594 processor
  - TMS320DM6446AZWTA, -40 to 105
  - 256MB NAND Flash
  - 256 MB DDR2 SDRAM
  - JTAG Emulator for ARM & DSP
- On board security chip, MSP430F2370
- Communication ports
  - 1 RS232
  - 1 RS232 On Terminal Block, Selection of RS232 port is Configurable through software
  - 1 RS422 On Terminal Block, Selection of RS422 port is Configurable through software
  - 1 RS485 On Terminal Block, Selection of RS485 port is Configurable through software
- Status
  - Two three status LEDs
- Reset button
- Power input: wide input range from 9V to 35V
- Digital Inputs/Outputs
  - 2 Digital Inputs On Terminal Block
  - 2 Digital outputs On Terminal Block
- One I2C Slave port
- Mechanical
  - Board size 105mm X 72mm

## ■ Software

The DM6446 Production Board runs pre-programmed MontaVista Linux with Video Encode and Decode Demos. It provides the following software and source code:

- MontaVista Linux 2.6 with TI DaVinci™ Board Support Package Source Code
- Linux Target File System
- Bootloader Source Code
- ARM & DSP GEL files
- Board Support Library

- Hardware Driver and Test Source Code
- Compilers, Linkers, and Related Build tools
- Quick Start Guide
- Software Developer's Guide
- Optional DSP codec(s) are available

## ■ Applications

### Development tools

- DM6446 DSP starter kit
- DM6446 development kit
- Hardware for embedded video analytics development

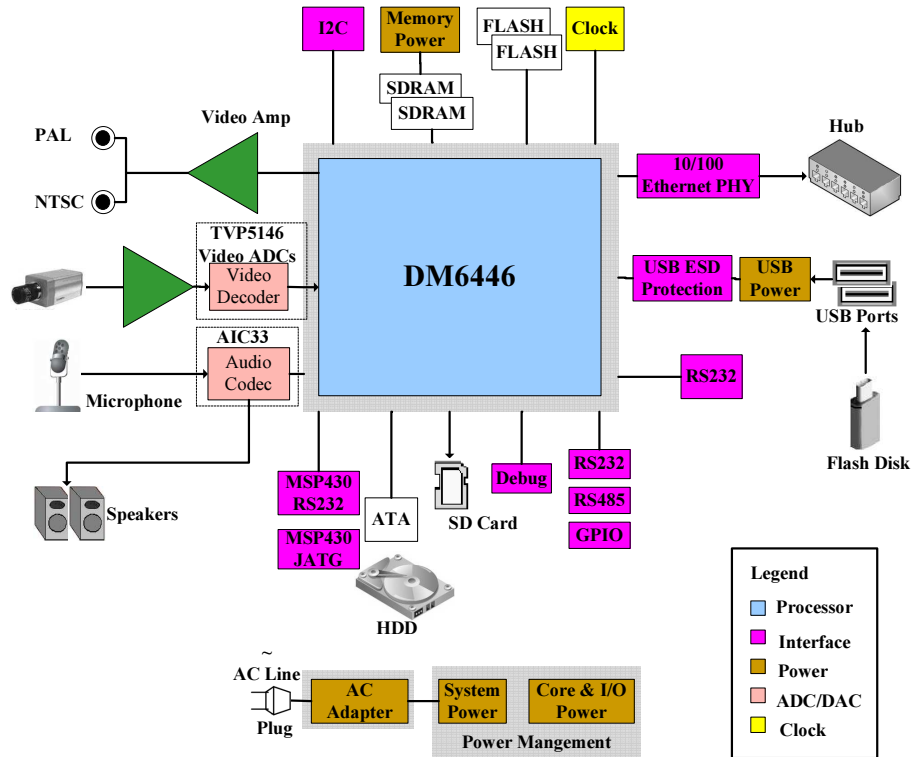
### High quality multimedia

- IP Network streaming server
- IP Network video module
- IP Video converter box
- IP network cameras (e.g. video surveillance)
- IP set-top boxes, digital TV
- IP-based video phones, video conferencing terminals
- Intelligent kiosk/point of sale
- Entertainment platform

### Automotive

- Car entertainment
- Navigation systems

Electronic Driving Aids  
(parktronic, road sign recognition, collision avoidance)



### Industrial

- Traffic monitoring and control
- Traffic surveillance
- Computer recognition systems
- Replace DM6437 in video analytics applications
- Machine-vision and process control

## ■ Services

The DM6446 Development Board Package includes 1-Year hardware warranty.

## ■ Contact Us

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