Multi-Channel 1080p60 HD

Product Part Number Z3-DM8168-MOD-2x

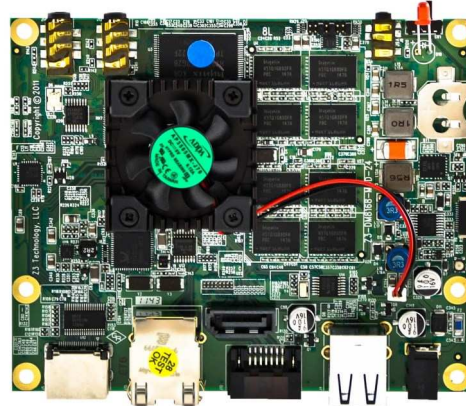## *DON'T REINVENT VIDEO, Z3 SLASHES TIME TO MARKET!*

Applications
Broadcast Video Encoding and Decoding
Real Time Transcoding at 1080p60
Video Security and Industrial DVR
Medical and Industrial Video
Video Conference Terminal and MCU

CE FC

Z3-DM8168-MOD-2x OEM-Ready Module Contains:

Benefits:

- *Cookie-cutter video solution for embedded applications*
- *Fully integrated hardware and software audio/video system*
- *Ready to use, out of the box commands for encoding, decoding and streaming*
- *Cost effective design, ready for manufacturing volumes*
- *Supports H.264 multichannel in all video resolutions from QCIF to 1080p60*
- *Versatile encoding modes such as low latency, high quality, low bit rate, etc.*
- *Full A/V synchronization even after hours of recording*
- *Linux-based system, easy to customize if needed; full source code available*

Hardware: 88mm x 108mm

- One **Z3-DM8168-MOD** OEM-ready video SOM
- 1GB DDR3 (-2X), 256MB Flash
- SATA, Gigabit Ethernet, USB 2.0
- HDMI, YPbPr and Composite Video Out
- Multiple digital video and audio I/O ports
- MPEG-2 transport stream interface
- SD/MMC, UART, I2C, SPI ports

Software:

- Pre-loaded, OEM-ready **Video Application Executable** commands (License available with RPS Starter Kit)
  - **Streaming H.264 encoder up to 1080p60**
    - H.264 video, from QCIF to 1080p/i at 60 fps; AAC or PCM audio
    - Fully controllable parameters: resolution, max bit rate, GOP, on-the-fly bit rate control, … etc.
    - Low latency mode
    - MPEG-2 TS or RTP output
  - **Streaming decoder**
    - H.264 video from QCIF to 1080p/i at up to 60 fps with audio
    - Flexible resizer allows full frame display of smaller resolutions
    - RTP or MPEG-2 TS support
  - **File-based Transcoder** (optional*)
    - MPEG-2 to H.264 up to 1080p60
    - AAC and LPCM audio support
- OpenMAX-IL framework
- Source code license available
- Linux 2.6, u-boot, root file-system, NAND boot, tool chain, flash programming tool
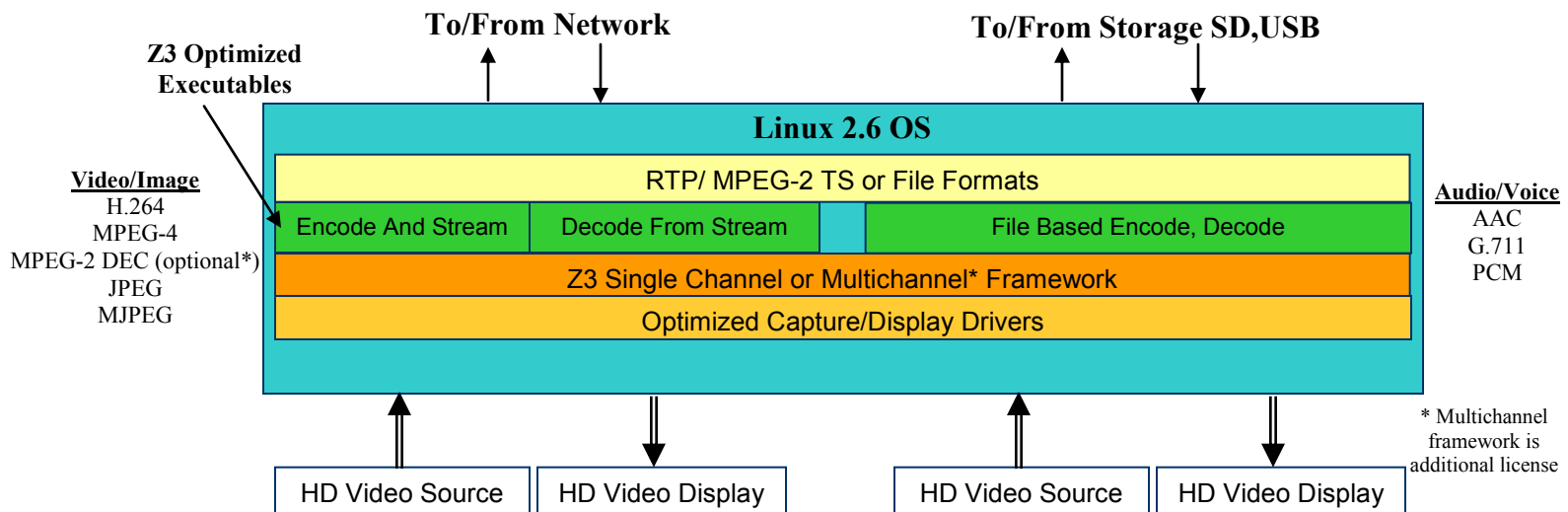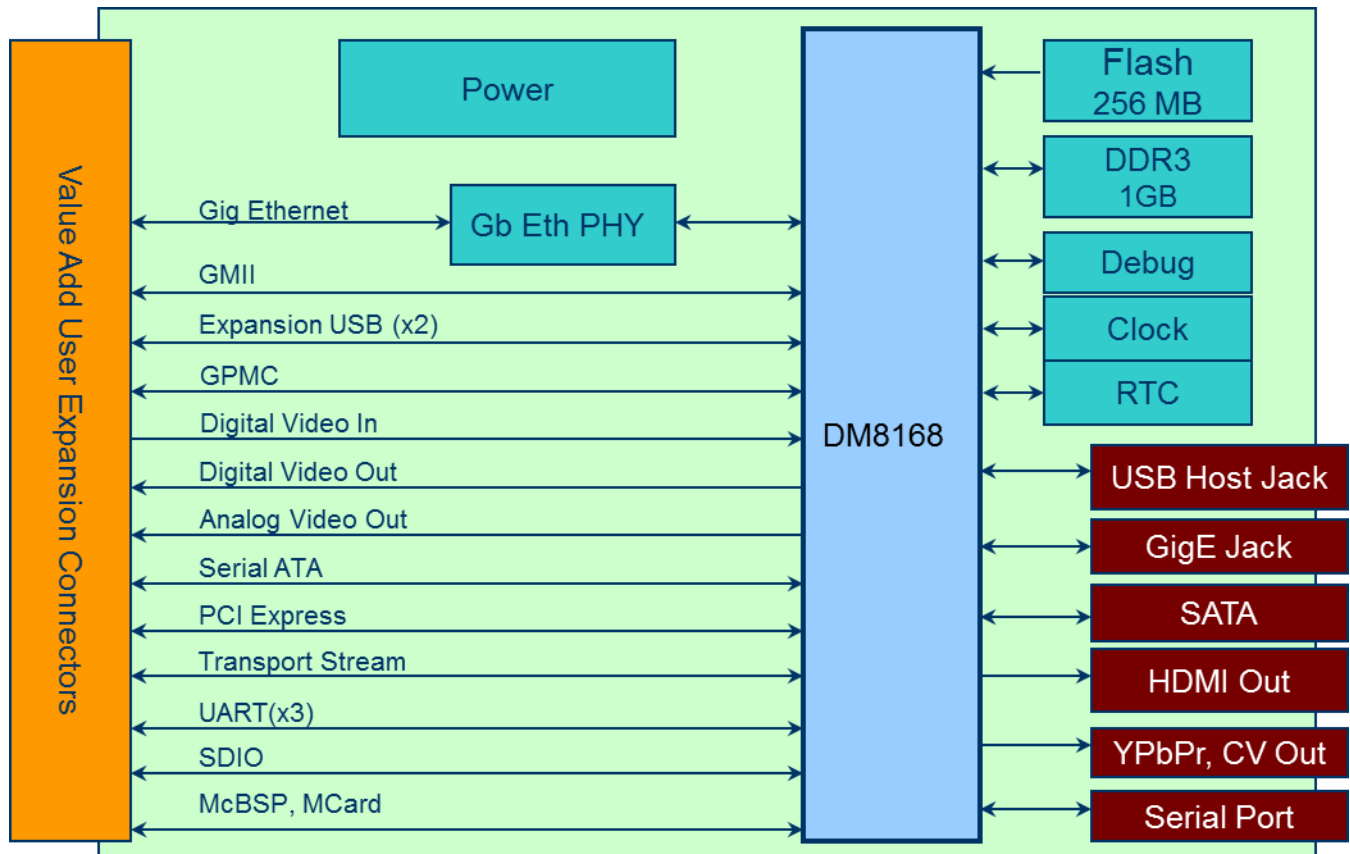
* Contact sales@z3technology.com for details.

Contact Z³ Technology for customized product options

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Z3-DM8168-MOD-2x
HW/SW Block Diagrams

Z3 Technology, LLC

Hardware Block Diagram

Value Add User Expansion Connectors

- Power

- Gig Ethernet → Gb Eth PHY
- GMII
- Expansion USB (x2)
- GPMC
- Digital Video In
- Digital Video Out
- Analog Video Out
- Serial ATA
- PCI Express
- Transport Stream
- UART(x3)
- SDIO
- McBSP, MCard

DM8168

- Flash 256 MB
- DDR3 1GB
- Debug
- Clock
- RTC

- USB Host Jack
- GigE Jack
- SATA
- HDMI Out
- YPbPr, CV Out
- Serial Port

Software Block Diagram

Z3 Optimized Executables

To/From Network

To/From Storage SD,USB

Video/Image
H.264
MPEG-4
MPEG-2 DEC (optional*)
JPEG
MJPEG

Linux 2.6 OS

RTP/ MPEG-2 TS or File Formats

| Encode And Stream | Decode From Stream | | File Based Encode, Decode |

Z3 Single Channel or Multichannel* Framework

Optimized Capture/Display Drivers

Audio/Voice
AAC
G.711
PCM

* Multichannel framework is additional license

HD Video Source

HD Video Display

HD Video Source

HD Video Display

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