Z3 Technology, LLC

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

Applications
Broadcast Video
Video Security and Industrial Video
Digital Signage and Video Kiosks
Internet Gaming
Networked Multimedia Appliance

CE FC

Z3-DM368-RPS Rapid Product Design System 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 in all video resolutions from QCIF to 1080p30*
- *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:

- One **Z3-DM368-MOD** (44x67mm) OEM-ready video module
- One **Z3-DM365-APP** Reference Application Board
    - Analog component and composite video I/O for DM368-MOD
    - YPbPr video capture ADC at up to 1080i30
    - HDMI 1.3 output, USB Host, Ethernet, microSD and SD Card, serial port, 130x100mm
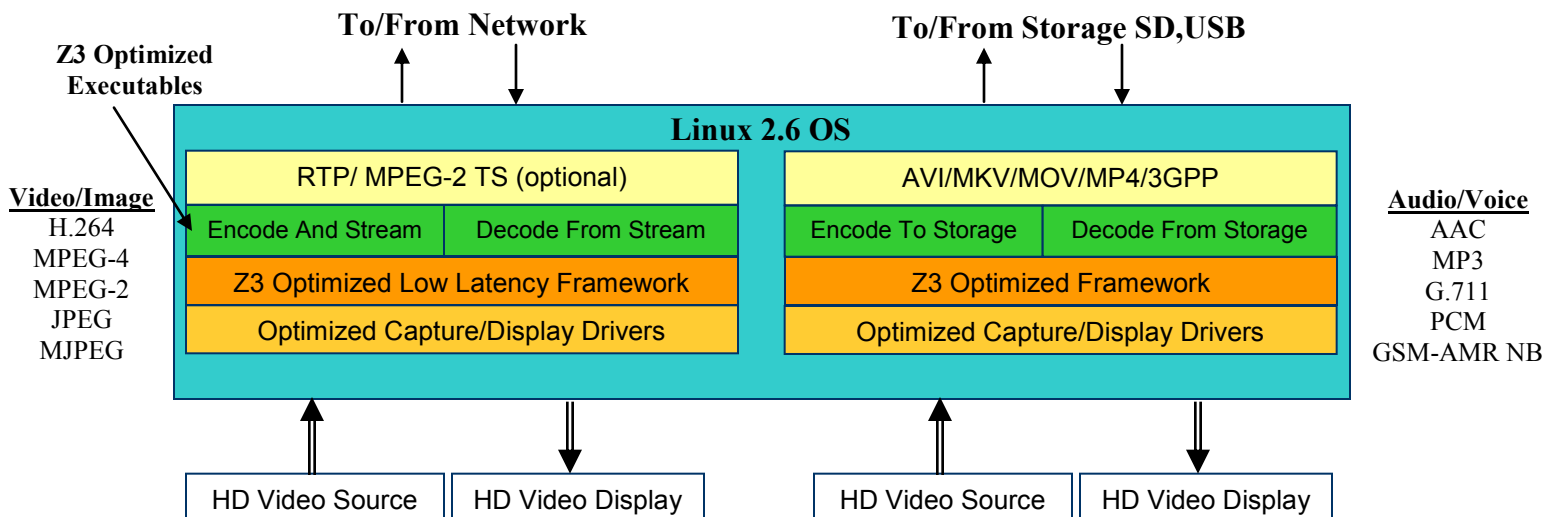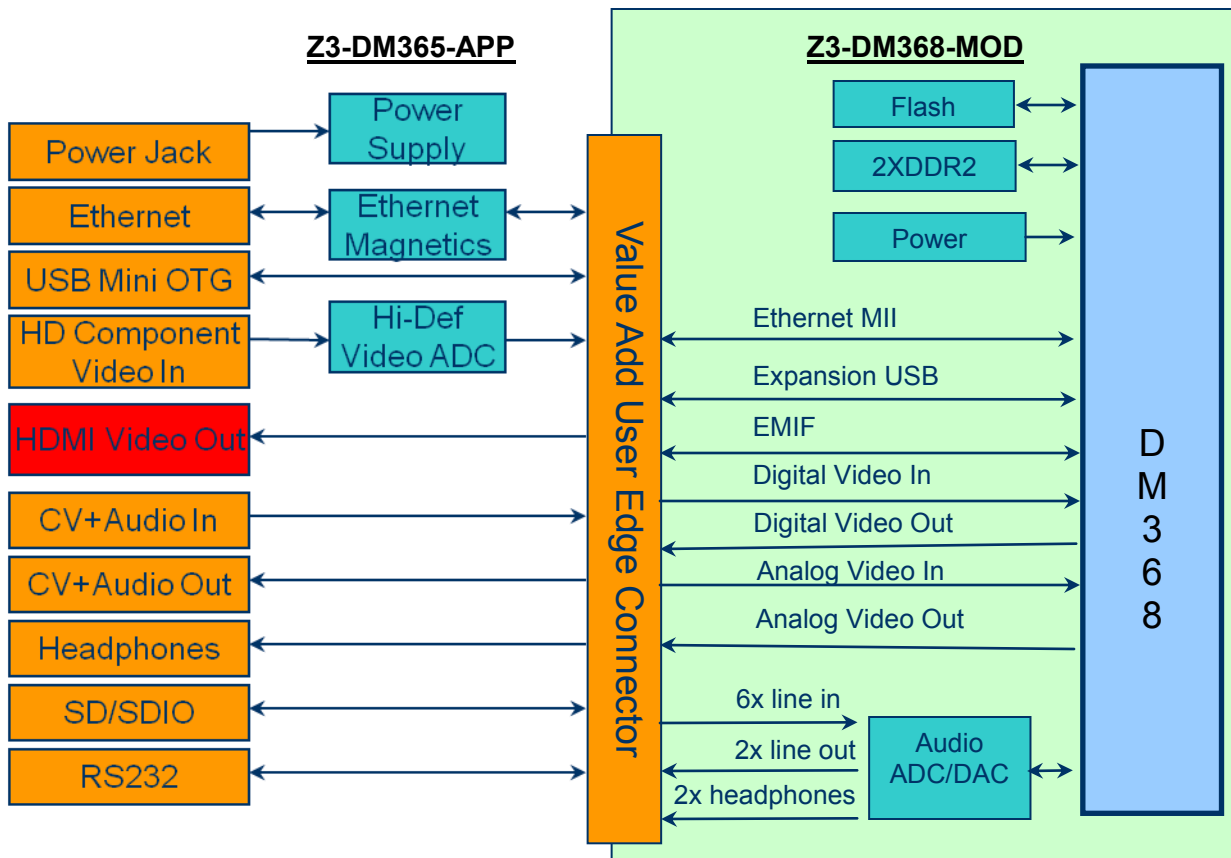
Software:

- Pre-loaded, OEM-ready **Video Application Executable** commands
    - **Streaming RTP encoder**
        - H.264 video, from QCIF to 1080p/i at 30 fps; AAC or PCM audio
        - Fully controllable parameters: resolution, max bit rate, GOP, on-the-fly bit rate control, … etc.
        - Low latency mode
    - **Streaming RTP decoder**
        - H.264 video from QCIF to 1080p/i at 30 fps with audio
        - Flexible resizer allows full frame display of smaller resolutions
        - Low latency mode to match with DM368-MOD based transmitter
    - **File-based GStreamer player/decoder & trick play**
        - Up to 1080p/i at 30 fps video and stereo audio
        - H.264BP, MP and HP; MPEG-2 and MJPEG video
        - AAC, MP3, MPEG-1, 2 Layer 1, 2, LPCM, G.711
        - AVI, Quicktime MOV, MP4 and MKV file formats
    - **File-based GStreamer encoder/recorder**
        - H.264 up to 1080p/i at 30 fps recording to file
        - AAC and LPCM audio support
- DVR application available for license
- Source code license available
- UBL, Linux 2.6.18, u-boot, root file-system, NAND boot, tool chain, flash programming tool

Contact Z³ Technology for customized product options

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HW/SW Block Diagrams

Z3-DM365-APP

Z3-DM368-MOD

Power Jack → Power Supply

Ethernet ↔ Ethernet Magnetics

USB Mini OTG

HD Component Video In → Hi-Def Video ADC

HDMI Video Out

CV+Audio In

CV+Audio Out

Headphones

SD/SDIO

RS232

Value Add User Edge Connector

Flash

2XDDR2

Power

Ethernet MII

Expansion USB

EMIF

Digital Video In

Digital Video Out

Analog Video In

Analog Video Out

6x line in

2x line out

2x headphones

Audio ADC/DAC

DM368

To/From Network

To/From Storage SD,USB

Z3 Optimized Executables

Linux 2.6 OS

RTP/ MPEG-2 TS (optional)

Encode And Stream | Decode From Stream

Z3 Optimized Low Latency Framework

Optimized Capture/Display Drivers

AVI/MKV/MOV/MP4/3GPP

Encode To Storage | Decode From Storage

Z3 Optimized Framework

Optimized Capture/Display Drivers

Video/Image
H.264
MPEG-4
MPEG-2
JPEG
MJPEG

Audio/Voice
AAC
MP3
G.711
PCM
GSM-AMR NB

HD Video Source | HD Video Display

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