

## Product Brief

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## Description

The COACH 10 highly integrated digital camera processor supports high ISO-6400 while maintaining image details, jitter stabilization for both video and still photos, high definition video capture, Advanced Video Coding (H.264), MPEG-4, DivX, and still picture capture of over five frames per second at eight megapixels, using Zoran's

patent-pending still and video processing technologies.

The COACH 10 family enables platforms from entry and mid-level to DSLR-grade performance and picture quality while also enabling true video recording at high definition resolution.

## COACH 10 Family

- **COACH 10D** (part # ZR36487BGCF) – For entry to mid range DSLR
- **COACH 10P** (part # ZR36482BGCF) – For high performance still and video cameras supporting HD (high definition) video capture and HDMI interface
- **COACH 10M** (part # ZR36480BGCF) – For mainstream still and video cameras supporting standard definition video capture
- **COACH 10S** (part # ZR36483BGCF) – For entry level still cameras

## Feature List

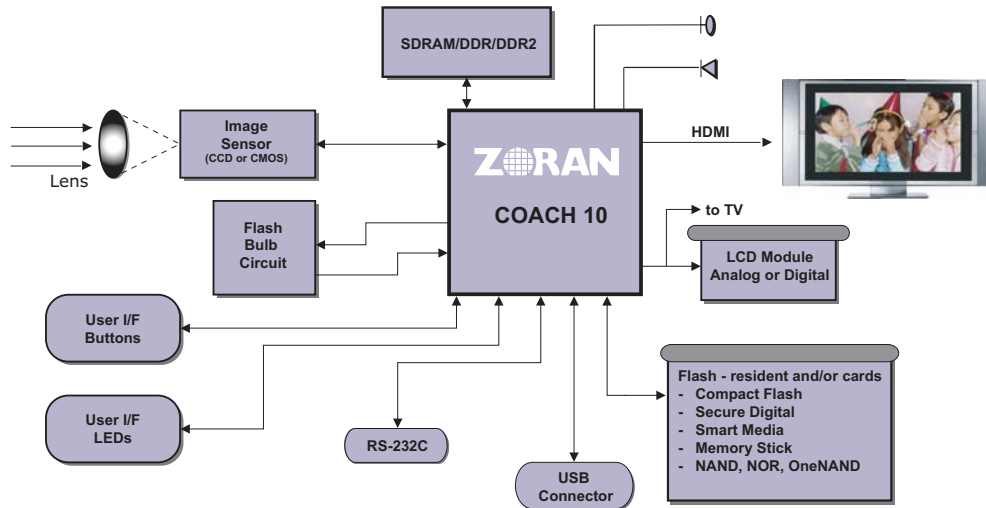
- Up to 16MP image capture resolution
- 16-bit image processing for highest quality
- Click-to-click performance of over 5 frames per second at 8MP resolution with single buffer
- Dual CPU architecture for advanced image processing algorithms
- Enhanced noise suppression and color reproduction
- Real-time dynamic range enhancement (Z-Light+)
- H.264 video capture and playback of HD (720P) resolution at 30 frames per second
- MPEG-4 encoding uses I, P and B frames for true video quality
- Digital Image Stabilization Technology (DIST) to correct handshaking and object movement
- Digital Video Motion Stabilization Technology to compensate unwanted camera movement
- Stereo microphone and audio playback to headphone; mono to speaker and line out
- On-chip CD quality audio codec
- On-chip HDMI transmitter for native HD (1080i) display support
- Rich color On-Screen Display (OSD) with transparency levels
- Hardware Picture-in-Picture (PIP) with blending support
- Direct output to LCD and TV monitor, on-chip NTSC/PAL encoder and video DAC
- Direct interface to resident flash memory (NAND, OneNAND, NOR) and/or removable memory card support of CompactFlash (CF), SmartMedia (SM), Secure Digital (SD), Secure Digital High Capacity (SDHC), MultiMediaCard (MMC), xD, Memory Stick (MS), Memory Stick Pro (MS-Pro) and ATA-6 hard disks
- Second storage interface to SD, SDIO, MS and MS-Pro
- 16-bit data SDRAM/DDR/DDR2 interface supporting sizes of 128Mbit, 256Mbit, 512Mbit and 1Gbit
- On-chip High Speed USB 2.0 OTG interface
- CCIR-601 input port for capturing from an external TV decoder
- Micro stepping motor control for fast and quiet lens movement
- Generic serial port for interfacing with peripheral hardware units

## Firmware Highlights

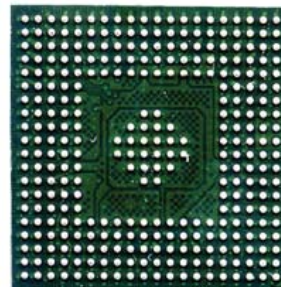
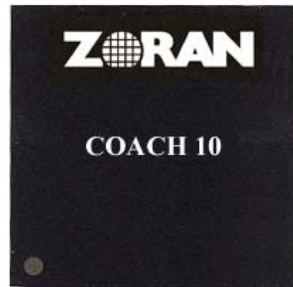
- Embedded host control (HCE) software architecture enables customer creation of DSC applications with minimal effort
- Backward compatibility with previous COACH software API set
- Open firmware architecture for easy customer modification
- All standard camera operation modes
- Advanced bit rate control (BRC) guarantees size of compressed video clips at maximum visual quality
- Advanced GUI support including rich OSD, bitmaps, picture in picture and more
- Variety of protocols for USB interface supported including:
  - PC Video Capture mode, for capturing real time video to PC
  - WIA, Twain, and Twain 2 protocol for direct retrieving of images and live video
  - Bulk-Only mass storage, for representing camera as a PC drive. No drivers required for most operating systems
  - PTP & MTP
  - Pictbridge



### Block Diagram



### COACH 10 Package



C10d/C10p: 15mm x 15mm  
C10m/C10s: 13mm x 13mm

### For more information, contact Zoran's Sunnyvale office or the office nearest you:

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