ESS Technology, Inc.

The Phoenix™ ES8380/ES8381 family of processors are single-chip HD Enhanced™ DVD processors with an integrated servo controller and RF amplifier. It provides standard DVD decoding with options to support MPEG-4 ASP decoding, DivX® Home Theater/Ultra playback, HMDI transmitter and Class D power bridges. Phoenix incorporates advanced video enhancement features such as an HDTV encoder that can display JPEG pictures at full HD resolution, video up-scaling and de-interlacing to display video at full HD resolution. A USB full-speed host controller is built-in for connection to thumb drives and memory card readers.

Features	Benefits
Integrated servo controller and RF amplifier	Simplifies system design while reducing system cost
HD video encoder	Displays JPEG pictures at full 720p/1080i HD resolution
SD→HD video scaler	Up converts SD content to HD display resolution
DivX Home Theater Profile/Ultra decoding	Displays DivX encoded video at full screen
MP3 audio encoding	Archives favorite CD-DA tracks
PWM controller for Class D power bridges	Provides high quality and high performance audio at reduced system cost
USB full speed host controller	Enables interface to thumb drives and memory card readers
Host/ATAPI port	Interface to network controllers, hard drive or flash memory cards

SD Resolution   HD Resolution   **HD⁺** Enhanced

Phoenix DVD Development Kit

The Phoenix DVD Development Kit comes with a complete set of tools:

- DVD reference design
- Data sheet and schematics
- User Interface software source code
- ROM emulator for code development

Additionally ESS provides FAE support for:

- Customer prototype design
- Firmware customization
- Servo tuning assistance

Applications

- Standalone DVD players
- DVD/VCR or TV/DVD Combo
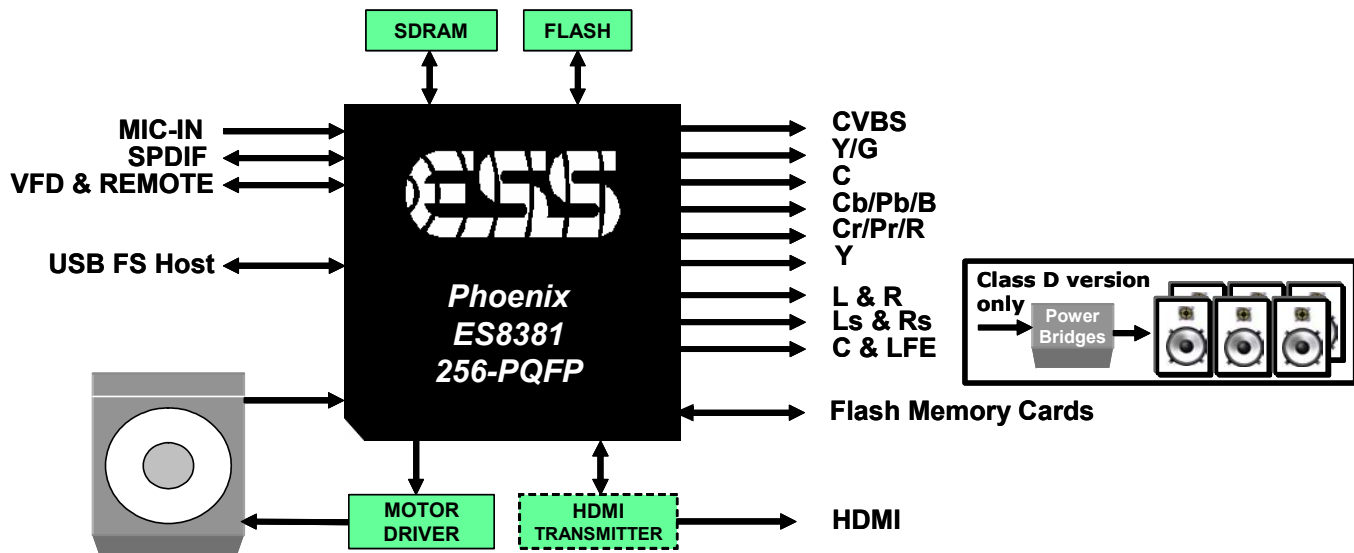- DVD receivers and A/V mini component systems

Figure 1 Phoenix ES8381 Based DVD Player Block Diagram

MPEG is the Moving Picture Experts Group of the ISO/IEC. References to MPEG in this document refer to the ISO/IEC JTC1 SC29 committee draft ISO 11172 dated January 9, 1992.

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