#### CONFIDENTIAL ADVANCE INFORMATION



# Phoenix II Series HD Enhanced DVD Processor Product Brief

#### **OVERVIEW**

The Phoenix<sup>™</sup> II ES8390/ES8391 family of HD Enhanced DVD processors is a 2<sup>nd</sup> generation solution built upon ESS's highly successful Phoenix<sup>™</sup> series of single-chip DVD controllers.

P/N	Description	Package	Analog HD (up to 1080i)	HDMI output (up to 1080p)
ES8390	Phoenix II HD Enhanced Processor	176-LQFP	$\sqrt{}$	×
ES8391	Phoenix II HD Enhanced Processor with HDMI support	216-LQFP	V	with ES7108
ES7108	Phoenix II Companion 1080p Video Scaler with built-in HDMI Transmitter	80-LQFP	×	V

The Phoenix<sup>™</sup> II integrates a reliable front-end servo/ECC controller with a proven backend that supports standard DVD decoding with options for DivX® Home Theater playback, HMDI transmitter and Class D power bridges. A USB 2.0 FS host controller is also included for thumb drive connectivity.

The Phoenix™ II incorporates advanced video enhancement features such as de-interlacing, up-scaling and an HDTV encoder that can display JPEG pictures or up-converted video at 720p/1080i resolution.

Together with the ES7108 Video Scaler companion, the Phoenix™ II ES8391 also supports HDMI output with the emerging 1080p scaler up-conversion.

## **KEY FEATURES**

Feature	Benefit		
Video	<ul> <li>Separate output for CVBS, S and Component</li> <li>Analog 720p/1080i output without HDMI for HD JPEG</li> <li>Up-conversion of video content to HD</li> <li>Display JPEG pictures in HD resolution</li> <li>Display DivX HTP video at full screen</li> <li>Support 1080p up-conversion via companion ES7108 Video Scaler with integrated HDMI transmitter</li> </ul>		
Audio     Stereo ADC     6ch Audio DAC     6ch PWM option	<ul> <li>Karaoke or Line-in at reduced cost</li> <li>Eliminates external multi-channel audio DAC</li> <li>6ch Class D amplifier at reduced cost plus downmix I2S</li> </ul>		
Interface	<ul> <li>Reduce PCB foot-print</li> <li>Connect USB thumb-drives and card readers</li> <li>Connect network controllers, hard drives, CF</li> <li>Supports HDMI via external transmitter</li> </ul>		

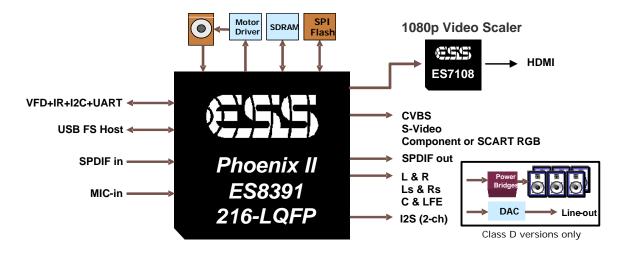






# **APPLICATIONS**

- Standalone DVD players
- DVD/VCR or TV/DVD Combo
- DVD receivers and A/V mini component systems
- DVD home theater in a box



### **DEVELOPMENT KIT**



The Phoenix II 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



