

Vantage-HD gives your home theatre a new image make-over

In contrast to conventional CRT televisions, fixed pixel displays now dominate today's home theatre market place, from front projection to large flat panel direct-view LCD and Plasma monitors.

Few people realize when they purchase their first hi-definition TV set that the majority of TV programming is still delivered as standard definition (SD) 480 line interlaced video through composite, S-Video or component connections from cable TV set-top boxes, DVD players, VHS machines and camcorders.

Even true HDTV transmissions, Blu-Ray and HD-DVD sources are often still interlaced or have significant noise and artifacts present.

To make matters worse, in order to fill a high resolution HDTV screen, the SD image has to be enlarged but then all the flaws in the original image are enlarged too. This is why so many home theatre viewers find that their new projector, plasma or LCD doesn't provide the expected increase in image quality and may even appear more noisy or less clear than their old SD system or CRT set.

It's now time to say goodbye to low resolution, poor quality images, experience Hollywood Quality Video™ in your very own home theatre even from SD NTSC signals

The video processing circuits built into most home theatre displays and progressive-scan DVD players have limited processing ability and run basic algorithms. These cannot match the awesome power of **Vantage-HD's** 1T-flop DSP with 30-bit 4:4:4 scaler datapath for maximum image clarity, 12-bit component video ADCs and studio quality 10-bit video decoder with super-adaptive comb filter and 4 x ITU656 oversampling.

Even conventional external scalers don't fix all picture defects. All scalers are not equal, even those considered benchmarks in home theatre cannot reduce MPEG noise and cannot run their full de-interlace algorithms on HD signals due to a lack of real-time processing power.

Vantage-HD's powerful DSP overcomes these limitations to bring Hollywood Quality Video™ into your home.

One particular problem with scalers and modern displays is that the video becomes delayed compared with the audio due to the video processing time. This leads to lip-sync errors which significantly degrade the home theatre viewing experience.

Vantage-HD's multi-channel audio processing automatically adjusts the audio time-line to suit its internal video processing delay. This can be manually fine-tuned by the user to compensate for delays elsewhere in the home theatre system such as in the display device or through a surround-sound processor. Audio time-line correction operates on all audio channels—digital coaxial, digital fiber-optic, analog and HDMI audio. It's easy to see that **Vantage-HD** is far more than just another scaler.

Audio re-synchronisation to maintain lip-sync for analog, digital, optical and HDMI audio

Vantage-HD provides a level of image enhancement and picture clean-up previously only found in film/TV post processing studios on equipment costing from \$50K up to \$250K, way outside the budget of most home theatre users. Now Calibre have harnessed Silicon Optix' Realta HQV™ processor to make this technology affordable for the first time to home theatre users.

Vantage-HD even improves the quality of 720p and 1080i, not just SD. Only **Vantage-HD's** tremendously powerful, highest quality real-time image processing can de-interlace both SD and HD, reduce noise and artifacts, scale the picture and still retain all of the fine detail and content of the original source.

Vantage-HD includes multiple low-angle aperture-adjusted motion-adaptive de-interlacing of both SD and HD images, far exceeding the performance achieved by competitor technologies with full de-interlace performance on 1080i formats as well as 480i and 576i, unlike the benchmark competitor product which cannot perform this degree of de-interlace perfection.

Film-based material is expertly processed with fully automatic detection of all pull-down cadences including broken cadences and non-standard cadences typically found in animation sequences, as well as the common 3:2 and 2:2 formats, all with automatic scene change detection to ensure clean cuts between scenes and the ability to process mixed scenes where film and video are overlaid. For DVD and digital cable/satellite users **Vantage-HD** provides real-time SD MPEG artifact reduction while leaving picture detail intact.

There is no other home theatre image processing technology which comes even close to the Hollywood Quality Video™ performance of **Vantage-HD**

