



STV100 - TV Video Processor

The SmartASIC **STV100** offers superior video processing features to design state of the art digital processing TV. Digital processing TV's display traditional analog broadcast signals with resolution that is twice the resolution of today's standard televisions. Utilizing SmartASIC proprietary adaptive video processing technology, the STV100 is perfect for all your digital progressive scan TV needs.

FEATURES

- ◆ 3D motion adaptive de-interlacing
- ◆ Adaptive noise reduction
- ◆ Color transient improvement provides sharper color transition
- ◆ Dynamic peaking filter greatly compensates the high frequency input.
- ◆ PIP support with arbitrary location and size

Proprietary de-interlacing engine

- _ Programmable 3D motion detection
- _ Motion adaptive de-interlacing
- _ User programmable thresholds

Advanced video enhancement processor

- _ Programmable sharpness enhancement/anti-aliasing
- _ Color transient improvement
- _ Black level expander to enhance contrast
- _ Programmable peaking
- _ Digital brightness, saturation and hue color controls
- _ Background coloring
- _ Frame rate conversion to increase output refresh rate

Picture in picture (PIP)

- _ Supports video over video
- _ Easy switching between main and sub picture
- _ Programmable size and location of sub picture
- _ Picture scan allows up to 16 pictures on the same screen

Video Input

- _ Support two active input videos
- _ One channel input can be programmed with 24 bits RGB or 12/16/24 bit YUV, the other channel supports 16 bit YUV input
- _ Seamless interface with industry standard video decoder

Noise Reduction

- _ Adaptive non-linear spatial noise reduction filter
- _ Programmable filter algorithm
- _ Automatic reduce uniform, Gaussian and Salt/Pepper noise while preserving edge

Color Processing

- _ Build-in color space converter
- _ Programmable gamma correction for different color temperature and contrast

Output Control

- _ Programmable output refresh rate at 60hz progressive
- _ 24 bit RGB
- _ 16 bit 4:2:2 YUV
- _ 8-bit 4:2:2 YUV (CCIR-656)

Miscellaneous

- _ Two wire serial CPU interface
- _ On-chip OSD overlay
- _ Interface for external SDRAM/SGRAM