



## STV110 – Integrated TV Video Processor

# Preliminary

SmartASIC **STV110** offers superior video processing features to design state of the art digital processing TV. Utilizing SmartASIC fourth-generation video processing technology, the **STV110** is perfect cost effective solution for all your P-Scan TV, LCD TV, PDP TV, Tuner Box and converter box needs.

### FEATURES

- ◆ Enhanced 3D motion adaptive de-interlacing
- ◆ Adaptive scan rate conversion
- ◆ Bi-linear up and down scaler
- ◆ Movie mode support
- ◆ Non-linear programmable 16:9 expansion

#### Video Input

Single 8/16/24 bit digital YUV/RGB input  
 Seamless interface with industry standard video decoder  
 Support 640x480 input  
 Support Video on VGA up to SXGA resolution

#### Video Output

Analog RGBHV and Component YPbPr  
 24 bit digital RGB/YCbCr  
 Programmable output up to 75Hz progressive or 120Hz interlaced with scan rate up to 65KHz  
 Up to SXGA @ 60Hz output  
 1080i output

#### Noise Reduction

Adaptive 3D non-linear noise reduction filter  
 Programmable filter algorithm  
 Automatic reduce uniform, Gaussian and Salt/Pepper noise while preserving edge

#### Channel Scan / PIP

Channel scan with up to 16 channels  
 Choice of 2, 3, 4 channels in both horizontal and vertical directions.  
 Video over external VGA input

#### Proprietary scan rate conversion engine

Programmable 3D motion detection  
 Motion adaptive de-interlacing  
 Adaptive scan rate conversion

#### Proprietary scaling engine

Bi-linear based scaling engine  
 Independent expansion ratio in both horizontal and vertical direction

Support both down scaling and up scaling

#### Advanced video enhancement processor

3:2 pull down for movie input (both automatic mode and manual mode)  
 Non-linear 16:9 conversion  
 Programmable peaking enhancement  
 Background coloring  
 Programmable chroma and luma enhancement

#### Color Processing

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

#### Miscellaneous

Two wire serial CPU interface  
 Built-in 48-to-24 bits digital mux  
 Built-in analog PIP circuitry  
 True 2D mode  
 External OSD overlay  
 Programmable OSD transparent mode  
 16M bits SDRAM  
 Built in internal clock generator with optional external clock source  
 SVM output  
 Built in 10 bits output triple DAC  
 128/160 pin PQFP package