

GF9450

10-bit Dual Channel VXP® Video Processor



The GF9450 offers two complete and fully independent channels of professional grade fully adaptive deinterlacing. In addition, it includes adaptive 3D noise reduction, mosquito noise reduction, block artifact reduction, adaptive detail enhancement featuring sharpness and texture enhancement with overshoot control, and adaptive contrast enhancement.

A powerful graphics engine with multiple layers, allows for sophisticated on-screen display generation that is ideal for electronic program guides (EPG) and set-up menus.

In addition, the GF9450 is backwards compatible with system software projects developed for previous generation VXP® video processors. This enables system designers already experienced with VXP® products to greatly reduce time-to-market by re-using existing software and interfaces.

Target Markets

- AV receivers
- Blu-ray players
- Commercial systems

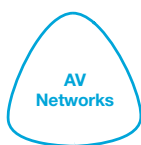
Supported Technologies

- Supports all DTV video and PC graphics formats
- Supports active raster size up to 2048x2048
- High quality motion and speed adaptive deinterlacing
- Multi-tap scaling engine with panoramic scaling and aspect ratio conversion
- Multiple on-screen video display, including picture-in-picture (PIP), picture-on-picture (POP), picture-by-picture (PBP)
- Adaptive 3D noise reduction
- Mosquito noise reduction and block artifact reduction
- Adaptive detail enhancement featuring sharpness and texture enhancement with precise overshoot control
- Adaptive contrast enhancement
- User programmable gamma correction

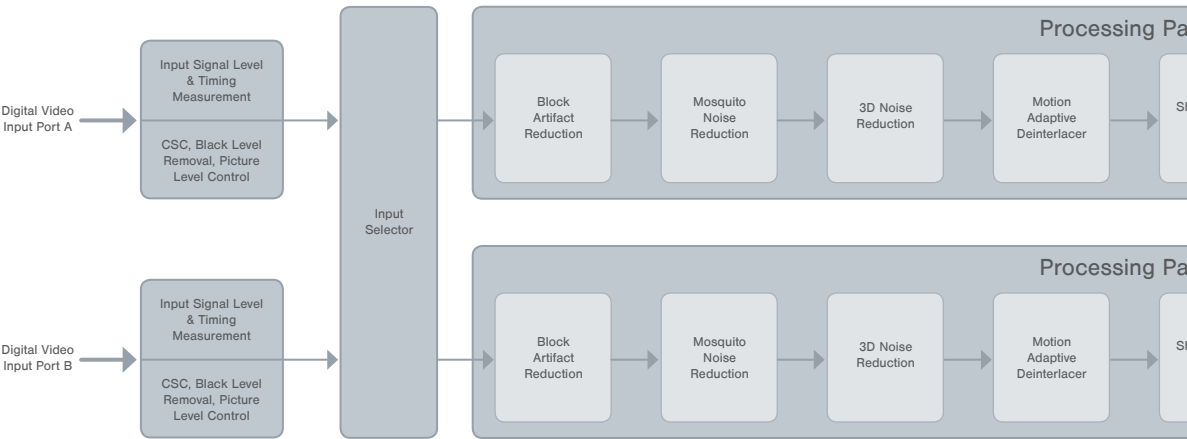
Features

- Two independent channels of VXP® processing
- Provides two flexible 30-bit digital video input ports
- Flexible single or dual pixel digital video output
- Advanced film mode detection and compensation, including support for frame-locked 3:3 (72Hz) and 2:2 (48Hz) output cadence generation
- Frame rate conversion with full support for genlock and frame-lock operation

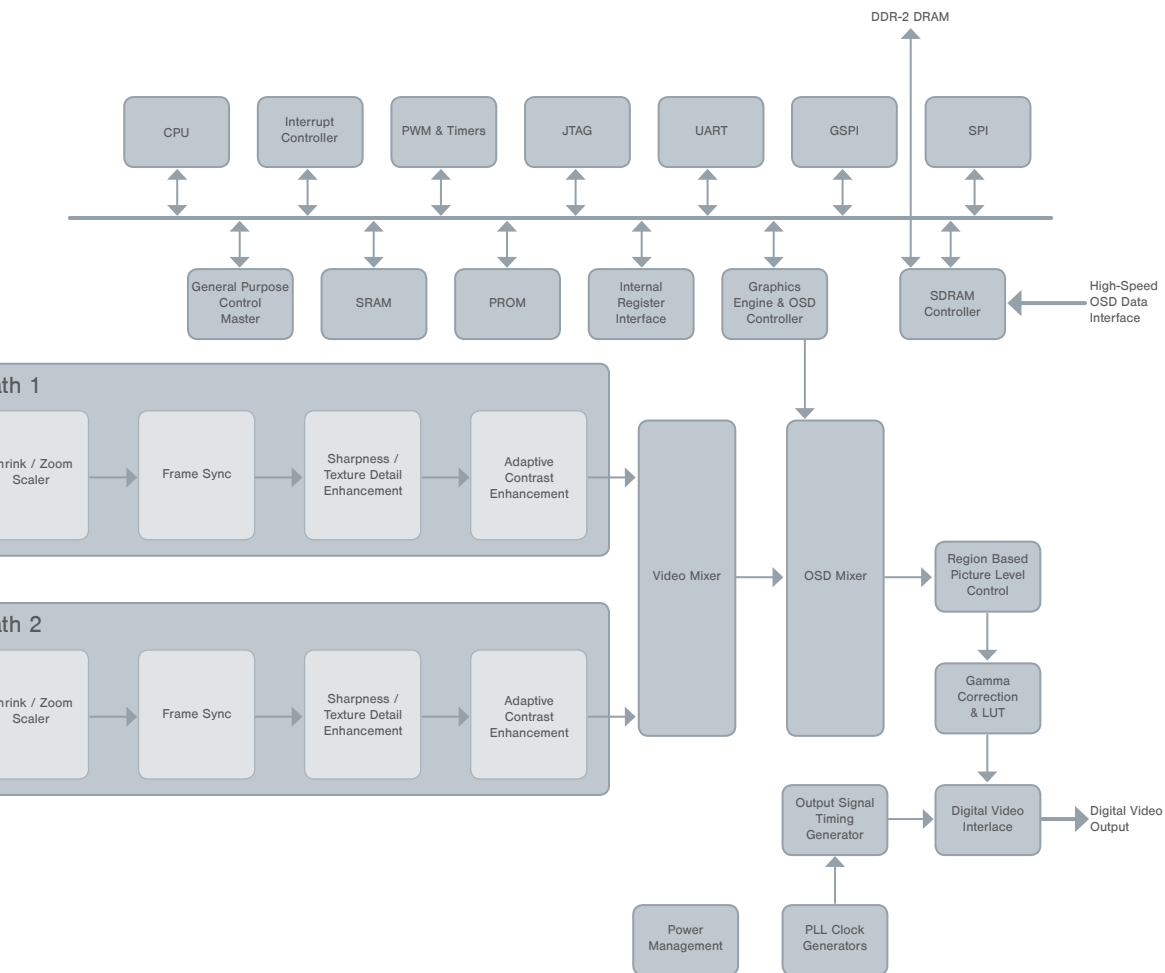
Powering the new digital home



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GF9450	
Video Input Formats	8-/10-bit RGB or 4:2:2/4:4:4 YCbCr 16-/20-bit RGB (G, BR) or 4:2:2/4:4:4 YCbCr (Y, CbCr) 24-/30-bit 4:4:4 YCbCr (Y, Cb, Cr) 24-/30-bit RGB
Video Output Formats	8-/10-bit RGB or 4:2:2/4:4:4 YCbCr 16-/20-bit RGB (G, BR) or 4:2:2/4:4:4 YCbCr (Y, CbCr) 24-/30-bit 4:4:4 YCbCr (Y, Cb, Cr) 24-/30-bit RGB
Host Interface	6-bit address, 16-bit data 4-wire serial
DDR-2 DRAM (DDR667) Support	4 x 512Mb (video + OSD)



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VXP® brings video quality to a new level by offering a complete package of the world's highest quality video processing algorithms for deinterlacing, scaling, image enhancement, and frame rate conversion.

- Mosquito noise reduction recognizes object edges and removes mosquito noise to produce crisp, clear images
- Block artifact reduction identifies block artifacts introduced by source compression, adaptively smoothing the block boundaries
- 3D and 2D noise reduction which adaptively applies both temporal and spatial noise reduction, producing the clearest picture while maintaining fine image details
- Detail enhancement seeks out underlying image detail bringing unprecedented texture, sharpness, and clarity to images
- Motion and edge adaptive deinterlacing which includes directional interpolation to eliminate jaggy artifacts
- 10-bit processing offers superior image precision
- Robust film cadence detection providing fast 3:2/2:2 lock time, bad edit recovery, and support for extended film cadences
- Adaptive contrast enhancement analyzes the brightness level of each frame, producing stunning images with optimal contrast

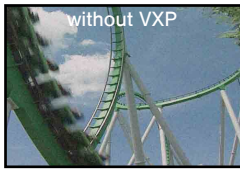
MOSQUITO NOISE REDUCTION



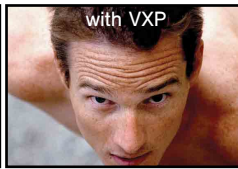
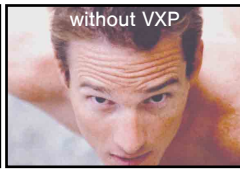
BLOCK ARTIFACT REDUCTION



3D NOISE REDUCTION



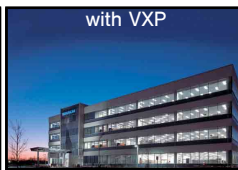
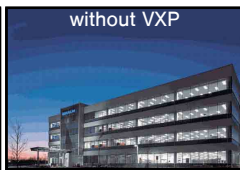
DETAIL ENHANCEMENT



DIRECTIONAL INTERPOLATION



10-BIT REAL TIME PROCESSING



FILM CADENCE RECOVERY



ADAPTIVE CONTRAST ENHANCEMENT



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