

MVIP2002: Adaptive Three Line Video Decoder

The MVIP2002 Video Decoder Core converts composite or S-Video input signals to component YUV outputs, with optional further conversion to YCbCr or RGB. It interfaces with an analog input section to clamp and automatically control the gain of the incoming signal prior to digitization. This control guarantees full utilization of the resolution of the analog to digital converter.

This core utilizes MetaVideo's proprietary adaptive three line comb filter algorithm to separate NTSC or PAL composite video into Luma and Chroma. The result is virtually free of common decoding artifacts such as cross color (rainbow patterns) and errors at transitions (hanging or crawling dots).

Sync locked timing, close attention to bandwidth preservation, and noise reduction provide crisp Luma detail which is further enhanced for optimal appearance. The gain of Chroma is automatically adjusted and it is demodulated into its color components under burst lock with automatic phase control, providing consistently accurate color rendition.

Path width options include 8, 9, and 10 bits, parallel or multiplexed. Output timing is 4FSC / 8FSC with 13.5 MHz / 27 MHz available. With our library of other video modules, and staff of experienced video engineers, MetaVideo stands ready to customize this module to your precise needs.

Features:

- Detection of Input Format;
- Automatic Control of Input Gain to achieve maximum resolution at ADC;
- Variable Chroma Delay to insure proper signal alignment;
- Automatic Chroma Gain to Compensate for Weak Signals;
- Detection and Pass Through of VBI Data;
- Digital Luma Enhancement;

Applications:

- Digital TV;
- LCD Display Front End;
- PC Video Capture;

Specifications:

- NTSC or PAL (B,D,G,H,I,M,N,Nc) Composite or S-Video Input Formats;
- 4FSC YUV Output standard;
- Output Options include YUV, YCbCr, and RGB color spaces and ITU-BR BT.601 timing and resolution;

