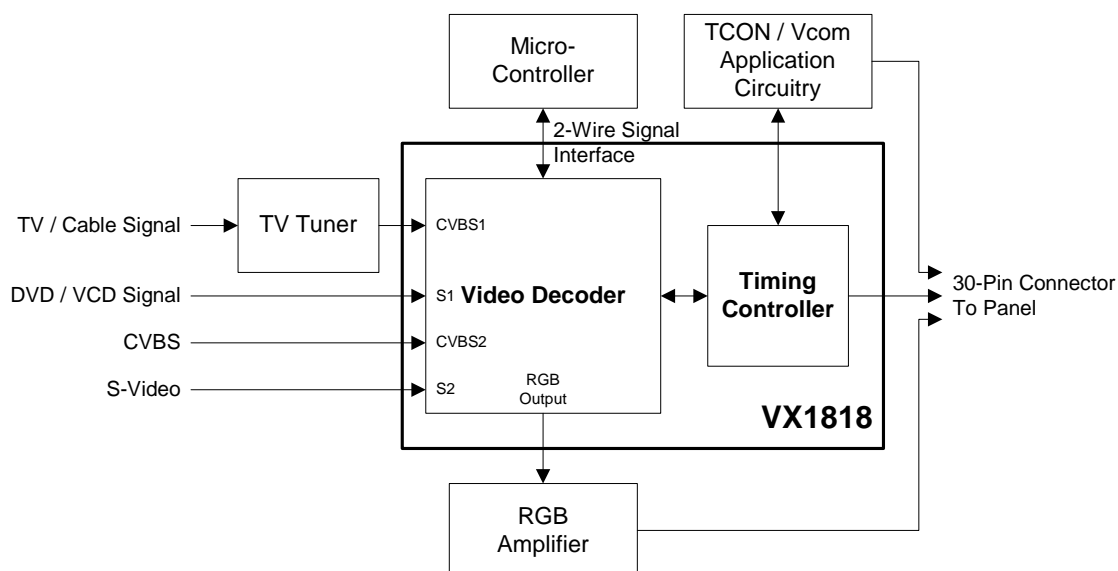


### DESCRIPTION

VX1818 is a high quality video processor IC for middle size LCD panel application inherited from VXIS's successful video decoder IP. The VX1818 transforms and decodes NTSC/PAL video signals from TV tuner, DVD, or VCR sources, including weak and distorted signals, into R/G/B video signals and directly drives the panel with build-in timing controller. The build-in automatic gain control (AGC) and 10-bit 2-channel AD converters maintain high-resolution video quality, and with automatic video source/mode detection, user can freely switch and adjust variety of signal source. The multiple internal adaptive PLLs also can help precisely extract pixel clock from video source and perform sharp-and-keen color demodulation. Adaptive 2-D comb-filter, 2-D sharpening, and synchronization equalizer are implemented with build-in line-buffers. The output format of VX1818 directly supports 960/1200/1440x234 color TFT-LCD modules.

### APPLICATION DIAGRAM



## FEATURES

### VIDEO DECODER

- Composite and S-Video Inputs: NTSC And NTSC-Japan; PAL (B, D, G, H, I, M, N, Nc)
- 6 Analog Inputs: Capable of 2xCVBS+2xS-Video or 4xCVBS+1xS-Video Inputs
- Analog Automatic Gain Control
- 10-Bit 2-Channel A/D Converters with Fixed Sampling Clock
- Require Only One Crystal (20 MHz) for All Standards
- Automatic Source and Mode Detection
- Internal Phase Lock Loop to Generate Video Clock
- 2-D Comb Filter for Luminance and Chrominance Separation
- Precise Chrominance Demodulation
- Internal Buffers for Video Stability Control
- Frequency Directive 2-D Sharpening
- Brightness, Contrast, Color, and Tint Adjustments
- Adaptive Black-Level Extension
- Video Noise Reduction
- Chrominance Transient Improvement
- EZ-Gamma Programming Hardware Support
- MacroVision Copy Right Detection

### OSD

- Built-in 128-Character Font ROM (Including Special Font Characters)
- Alpha-Blending with OSD Content and Video
- Blinking and Highlight Function

### INTERFACE

- Build-in Timing Controller for 5.0", 6.5", 7.0" analog LCD panels
- RGB Independent Output Offset, Ratio Control and Line-Inversion
- Built-In Video DAC for Analog RGB Output
- VXIS Proprietary Serial Host Interface with Two-wire
- Single 3.0V Power Supply
- 5-Volt Tolerant Digital I/O; Optional open-drain panel interface
- 100-Pin LQFP Package

## BLOCK DIAGRAM

