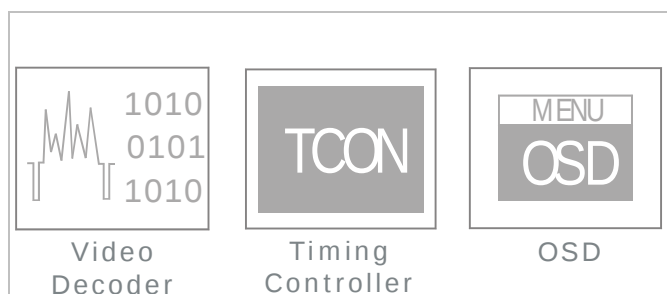




VX1828B

VIDEO PROCESSOR FOR MIDDLE SIZE LCD PANEL



Headquarters

5F-1, No. 9, Prosperity Rd. I, Science Based
Industrial Park, Hsin-Chu 300, Taiwan, R.O.C.
Tel : 886-3-5630888
Fax: 886-3-5630889

Taipei Office

2F-1, No.233-2, Pao-Chiao Rd., Hsin-Tien,
Taipei 231, Taiwan, R.O.C.
Tel : 886-2-29100010
Fax: 886-2-29100012

VXIS Technology Corp.

<http://www.vxis.com>

VXIS Technology Corp., reserves the right to change or modify the information contained herein without notice.
Contact VXIS or visit the website to ensure the most recent revision of the document.

FEATURE

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
- Support CCIR656 Input/Output
- 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 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

- 160-Character Font Memory (128 built-in plus 32 user-defined characters)
- Alpha-Blending with OSD Content and Video
- Blinking and Highlight Function

LCD DISPLAY CONTROL

- Build-in Universal T-CON for 480/960/1200/1440x234 analog LCD panels
- Digital RGB Independent Output Line-Inversion, Offset, and Ratio Control
- Built-In Video DAC for Analog RGB Output

INTERFACE

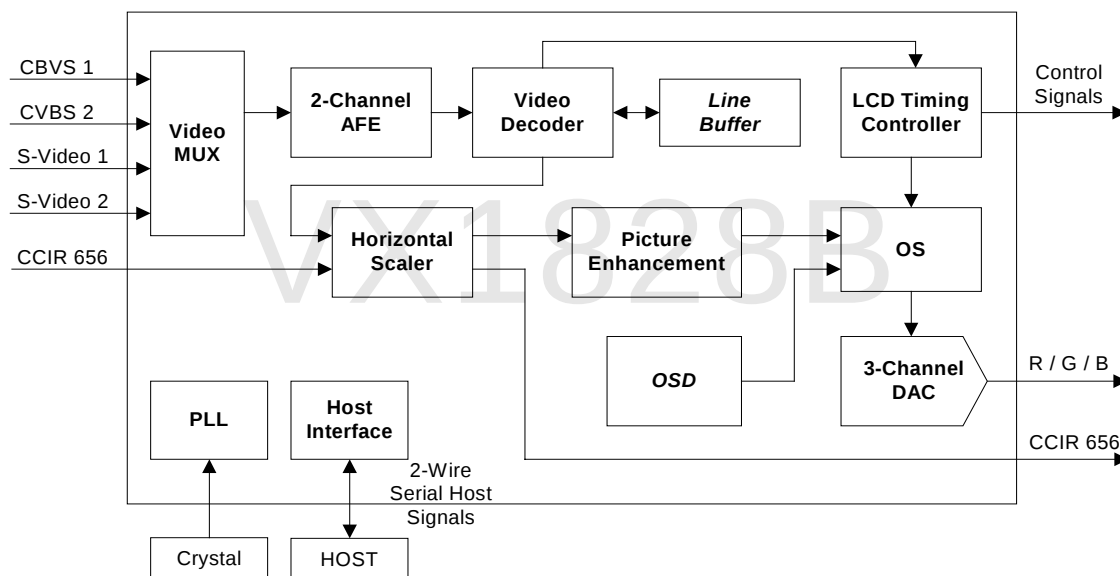
- Two-Wire Serial Host Interface Compatible with IIC Interface
- 2.5/3.3V Power Supply
- 5-Volt Tolerant Digital I/O; Optional open-drain panel interface
- 100-Pin LQFP Package

GENERAL DESCRIPTION

VX1828B is a high quality video processor IC for middle size LCD panel application. VX1828B can accept digital or analog video inputs, then output digital or analog video signals. The digital input is CCIR656 and the analog input is NTSC/PAL video signals from TV tuner, DVD, or VCR sources, including weak and distorted signals. VX1828B decodes these video inputs into R/G/B analog signals or CCIR656 digital format. The R/G/B analog signals directly drive the panel with build-in timing controller.

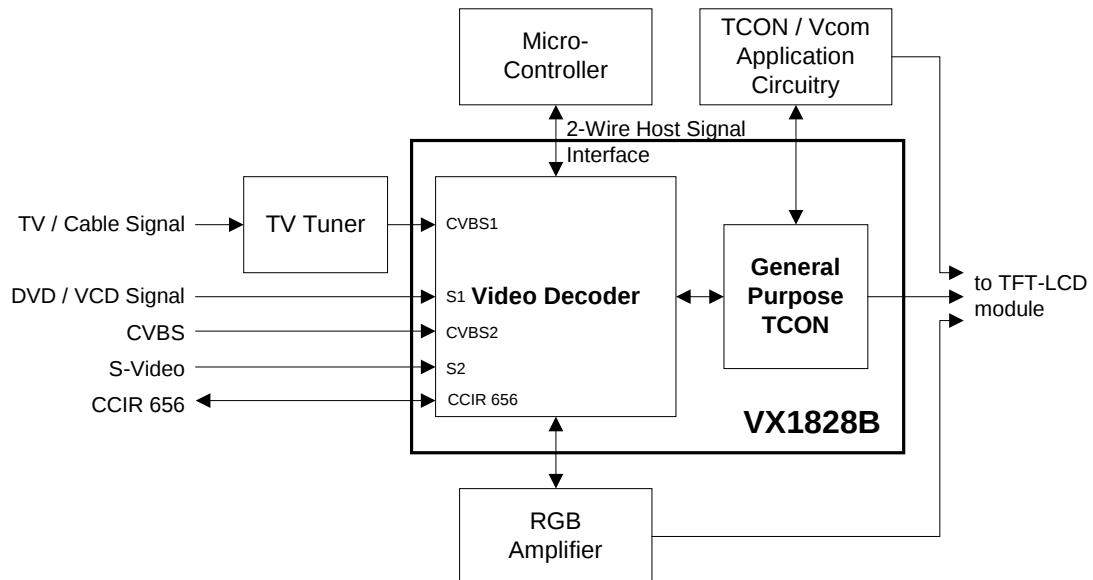
The build-in automatic gain control (AGC) and 10-bit 2-channel AD converters maintain high-resolution video quality, and with automatic video mode detection, user can freely switch and adjust variety of signal source. The multiple internal adaptive PLLs also can help precisely extract pixel clock from video source and perform sharp-and-keen color demodulation. Adaptive 2-D comb-filter, 2-D sharpening, and synchronization are implemented with build-in line-buffers.

The output format of VX1828B directly supports 480/960/1200/1440x234 analog TFT-LCD modules.



Block Diagram

APPLICATION



PINOUT DIAGRAM

LQFP100

