

FEATURES

Digital Input:

- CCIR656 compliant 8-bit video input port
- Connects to NTSC/PAL video decoders
- Optional second CCIR656 input port or General Purpose I/O
- Spatial de-interlacing function

Analog Output:

- Supports both stripe and delta panels
- 3-channel 30MHz DAC outputs
- Resolution up to 640 x 3(GB) x 468
- Spread spectrum to disturb clock output for EMI suppression

Scaling Engine/T-CON:

- Support 16:9/4:3 aspect ratio/zoom mode display type
- Horizontal/vertical scaling engine
- Integrates programmable small panel TFT-LCD timing controller

Color Management:

- Digital brightness, contrast, saturation, and hue adjustments
- Sharpness control
- Color Transient Improvement (CTI)
- Black Level Expansion (BLE)
- RGB Gamma Correction

Embedded Micro-Controller:

- Support SPI Flash memory or EEPROM
- Support In-System-Programming (ISP)
- Support 11 General Purpose I/Os
- Internal test pattern generator

I/O Interface:

- Support standard CSC compatible interface (2-wire or 4-wire modes)
- Supports two PWM outputs
- Two 6-Level keypad detectors

On-Chip OSD Controller:

- Font-Base OSD engine with a 32K-bit SRAM Memory
- Fully programmable bitmap and character code mapping
- Eight-colors palette
- 128 fully programmable fonts
- Blinking, transparency and blending

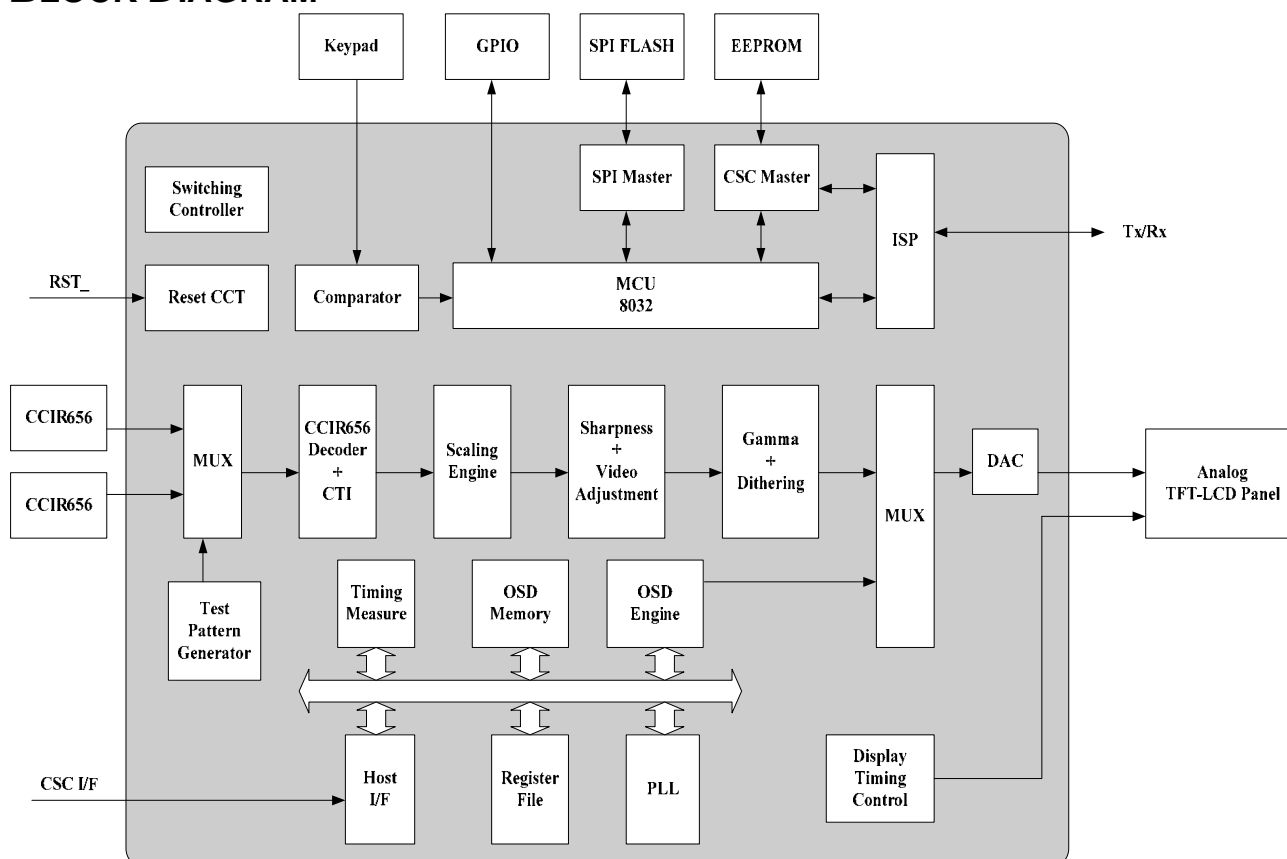
Voltage Generating Circuit:

- Built-in step-up charge-pump circuits (for VGL and VGH)
- Built-in voltage regulator for 1.8V output

Package:

- +3.3V Power Supply
- 64-Pin LQFP package

BLOCK DIAGRAM

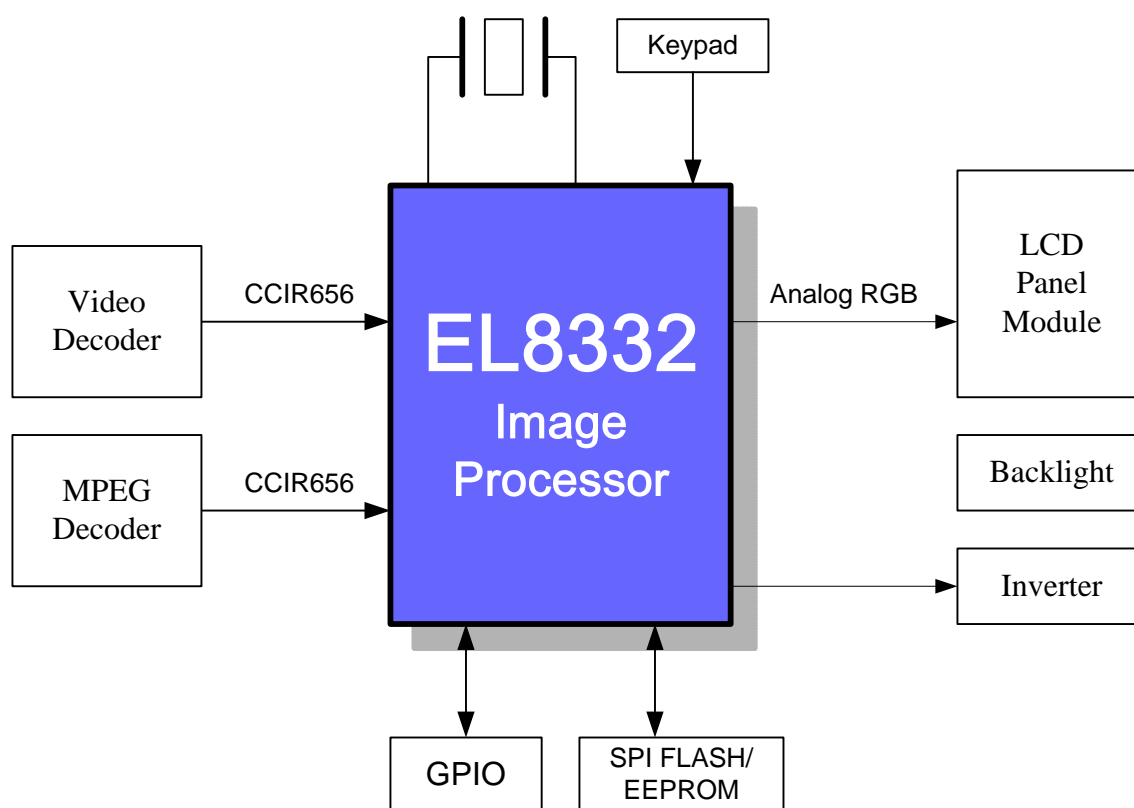


GENERAL DESCRIPTION

The EL8332 is a high-quality image processing IC specifically designed for Portable DVD and Car TV Panels. The EL8332 combines the functionality of scaling and timing control and applies to commercial available panels of various resolutions. The chip has two CCIR656 input channels and an analog output from DAC to support analog panels. The de-interlacing function, sharpness and gamma curve processing features generate vivid images. In addition, the EL8332 supports 16:9/4:3 aspect ratio/zoom mode display type to meet all application requirements.

This high quality and low cost single chip solution includes a CCIR656 decoder, one PLL circuit, one three channel DAC, one internal On Screen Display (OSD), a sophisticated filter, an advanced scaling engine, a versatile timing controller (T-Con) for smart-panel integration and an integrated 8032 compatible microprocessor with ISP capability. With this level of integration, the EL8332 device simplifies and reduces the cost of portable LCD displays while maintaining a high degree of flexibility and quality. The output format of EL8332 supports 2.5" ~ 10" analog TFT-LCD modules.

SYSTEM CONFIGURATION DIAGRAM



Part Number	Input Type	Input Channels	Package (Green)
EL8332TQ-G	ITU-R BT.656	2	64-lead LQFP