

TLS8501

Single-chip, Ultra-Low Power 96RGB*64COM Passive Matrix Color OLED Controller-Driver

INTRODUCTION

TLS8501 is an advanced high-voltage mixed-signal CMOS IC, especially designed for the display needs of ultra-low power hand-held devices.

TLS8501 drives 132 RGB Segments, 64 Commons OLED panels. In addition to low power COM and SEG drivers, TLS8501 contains all necessary circuits for high-V LCD power supply, bias voltage generation, graphics data memory and graphic acceleration command set.

TLS8501 support 65k display color to achieve vivid colors and natural-looking images while supporting organic light emitting diode material, with advanced design, TLS8501 provides customer multiple SEG/COM scan mode selection to achieve the balance of better optical performance and lower power consumption.

MAIN APPLICATIONS

- Cellular phones and other battery operated hand held devices or portable instruments.

FEATURE HIGHLIGHTS

- Single chip controller-driver for 96*64 matrix OLED with comprehensive support for select color depth: 65k/4k/256
- Programmable data update window to support flexible manipulation of screen data
- Support both row-ordered and column-ordered display buffer RAM access
- Support industry 16-bit/8-bit parallel bus(8080 or 6800)
- Software programmable temperature compensation coefficients
- Pad layouts support COG application
- GDDRAM (Graphic Display Data RAM): 96RGB*64*16=98304 bits
- DC-DC voltage converter
- V_{DD} RANGE: 2.4V – 3.6V
- V_{CI} RANGE: 7 – 18V
- Max. OLED driving output voltage: 16V
- Max. Segment source current: 200uA
- Max. Common sink current: 50mA