TLS8201

**Single-chip, Ultra-Low Power 132SEG*65COM Matrix
Passive Mono STN LCD Controller-Driver**

INTRODUCTION

TLS8201 is an advanced high-voltage mixed-signal CMOS IC, especially designed for the display needs of ultra-low power hand-held devices.

TLS8201 consists of 197 high voltage driving output pins for driving maximum 132 Segments, 64 Commons and 1 icon driving-common Mono STN LCD panels. In addition to low power COM and SEG drivers, TLS8201 contains all necessary circuits for high-V LCD power supply, bias voltage generation, timing generation and graphics data memory.

Advanced circuit design techniques are employed to minimize external component counts and reduce connector size while achieving extremely low power consumption.

MAIN APPLICATIONS

➢ Cellular phones and other battary operated hand held devices or portable instruments.

FEATURE HIGHLIGHTS

➢ Single chip controller-driver for 132*64 matrix Mono STN LCD.

➢ Vertical scrolling and programmable data update window to support flexible manipulation of screen data

➢ Support both row-ordered and column-ordered display buffer RAM access

➢ Support 8-bit 6800 series parallel bus, 8-bit 8080 series serial and parallel bus

➢ Fully programmable Mux Rate, partial display window, Bias Ratio and Line Rate allow many flexible power management options

➢ Software programmable temperature compensation coefficients

➢ Flexible data addressing/mapping schemes to support wide ranges of software models and LCD layout placements

➢ Pad layouts support COG application

➢ Low current sleep mode

➢ GDDRAM (Graphic Display Data RAM): 132*65=8580 bits

➢ DC-DC converter: 2X/3X/4X

➢ Internal contrast control: 64 levels

➢ V_{DD} RANGE: 1.8V – 3.6V

➢ Mini. LCD driving output voltage: -12V