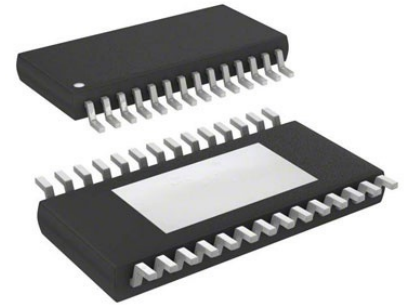


## LCD Driver 3.3V/5V 24-Pin HTSSOP EP Tube



Images are for reference only

[Inquiry](#)

**Manufacturer:** [Texas Instruments, Inc](#)

**Package/Case:** TSSOP

**Product Type:** Optoelectronics

**RoHS:** RoHS Compliant/Lead free 

**Lifecycle:** Active

### General Description

The TPS6510x series offers a compact and small power supply solution that provides all three voltages required by thin film transistor (TFT) LCD displays. The auxiliary linear regulator controller can be used to generate a 3.3-V logic power rail for systems powered by a 5-V supply rail only. The main output VO1, is a 1.6-MHz, fixed-frequency PWM boost converter providing the source drive voltage for the LCD display. The device is available in two versions with different internal switch current limits to allow the use of a smaller external inductor when lower output power is required. The TPS65100/01 has a typical switch current limit of 2.3 A, and the TPS65105 has a typical switch current limit of 1.37 A. A fully integrated adjustable charge pump doubler/tripler provides the positive LCD gate drive voltage. An externally adjustable negative charge pump provides the negative gate drive voltage. Due to the high 1.6-MHz switching frequency of the charge pumps, inexpensive and small 220-nF capacitors can be used. The TPS6510x series has an integrated VCOM buffer to power the LCD backplane. For LCD panels powered by 5 V only, the TPS6510x series has a linear regulator controller using an external transistor to provide a regulated 3.3-V output for the digital circuits. For maximum safety, the TPS65100/05 goes into shutdown as soon as one of the outputs is out of regulation. The device can be enabled again by toggling the input or the enable (EN) pin to GND. The TPS65101 does not enter shutdown when one of the outputs is below its power good threshold.

## Key Features

2.7-V to 5.8-V Input Voltage Range

1.6-MHz Fixed Switching Frequency

3 Independent Adjustable Outputs

Boost Converter Output Voltage VO1 of up to 15 V With < 1% Output Voltage Accuracy

Negative Regulated Charge Pump VO2

Positive Charge Pump VO3

Integrated VCOM Buffer

Virtual Synchronous Converter Technology in Boost Converter

Auxiliary 3.3-V Linear Regulator Controller

Internal Soft Start

Internal Power-On Sequencing

Fault Detection of all Outputs (TPS65100/05)

No Fault Detection (TPS65101)

Thermal Shutdown

Available in TSSOP-24 and VQFN-24 PowerPAD? Packages

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## Recommended For You

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### TPS61196PWRQ1

Texas Instruments, Inc

HTSSOP28

### TPS92391RHBR

Texas Instruments, Inc

VQFN32

### TLC591161TPWRQ1

Texas Instruments, Inc

TSSOP28

### TPS92692QPWFTQ1

Texas Instruments, Inc

HTSSOP20

### TPS92691PWP

Texas Instruments, Inc

HTSSOP-16

### TPS92691PWPR

Texas Instruments, Inc

HTSSOP16

**TPS92633QPWRQ1**

Texas Instruments, Inc  
HTSSOP20

**TPS61161QDRVRQ1**

Texas Instruments, Inc  
WSON-6

**TPS61194PWPRQ1**

Texas Instruments, Inc  
HTSSOP20

**TPS92520QDADRQ1**

Texas Instruments, Inc  
HTSSOP32

**TPS92630QPWRQ1**

Texas Instruments, Inc  
HTSSOP16

**TPS92691QPWRQ1**

Texas Instruments, Inc  
HTSSOP-16

**TPS92692QPWRQ1**

Texas Instruments, Inc  
HTSSOP-20

**TPS65132SYFFR**

Texas Instruments, Inc  
DSBGA-15

**TPS65132B2YFFR**

Texas Instruments, Inc  
DSBGA15