

1. PRODUCT DESCRIPTION

The CL-FP6840 is a 6-bit, 309-channel signal driver designed for low power XGA TFT-LCD panel applications. The CL-FP6840's minimum form factor and optimized layout permit the implementation of high-display-quality, low-power 6-bit TFT-LCDs with minimum bezel area.

The CL-FP6840's internal architecture includes a resistor-string DAC with the value of the individual resistor segments weighted to reduce signal driver power dissipation by as much as 20% to 60% when compared to non-weighted resistor string DAC architectures.

The following new features have been incorporated into the CL-FP6840 to further reduce EMI and power dissipation:

- 2.5 Volt Logic Interface
- 2xCLK circuit to allow DCLK input to operate at half dot clock frequency
- Data Inversion circuit to enable data transition reduction schemes

Signal Driver 309-Channel, 6-Bit Signal Driver for TFT-LCD Applications

Features
<ul style="list-style-type: none"> • Weighted R-String: Reduces Power Dissipation 20-40% or more
<ul style="list-style-type: none"> • Low-power operation <ul style="list-style-type: none"> • Logic Supply: 2.5V, 3.3 V or 5.0 V • Analog Supply: 3.3 V \pm 0.3 to 5.0 V \pm 0.5
<ul style="list-style-type: none"> • Minimum Form Factor <ul style="list-style-type: none"> • 20.19 mm x 1.13 mm • 64 μm output pitch
<ul style="list-style-type: none"> • High Speed Operation <ul style="list-style-type: none"> • 65 MHz (3.3 V and 5.0V logic supply) • 40 MHz 2.5V operation
<ul style="list-style-type: none"> • Data Inversion Feature
<ul style="list-style-type: none"> • Double Edge Clocking Feature (2xCLK pin)
<ul style="list-style-type: none"> • E/O Pin Eases Use of 2xCLK Feature
<ul style="list-style-type: none"> • Program channels w/ MODE300 Pin
<ul style="list-style-type: none"> • 9 or 11 Voltage References
<ul style="list-style-type: none"> • High Integration <ul style="list-style-type: none"> • 309 output voltage channels • Bi-directional shift register
<ul style="list-style-type: none"> • Excellent Output Uniformity • Output Error = 0.15 LSB

