

LMC7532

LMC7532 Low EMI, Low Power XGA/SVGA TFT-LCD Column Driver



Literature Number: SNOS030A

LMC7532

Low EMI, Low Power XGA/SVGA TFT-LCD Column Driver

General description

The LMC7532 is a Column Driver suitable for National's Reduced Swing Differential Signalling (RSDS) digital interface. It converts this 18-bit digital data into analog voltage for 300 or 309 columns, charging each sub-pixel to the correct gray level corresponding to the digital value.

The RSDS path to the panel timing controller contributes toward lowering radiated EMI, reducing system power consumption and eliminates one of the two pixel busses used in typical XGA TFT-LCD panels today. This single 9-bit differential bus conveys the 18-bit color data for XGA panels at 130Mb/s when using VESA 60 Hz standard timing.

With the addition of a single National DS90CF364 or '564 FPD-Link™ chip, and the FPD63310 Universal Interface XGA/SVGA Timing controller, the entire data path is optimized for reduced EMI, power consumption and width.

Feature

- Reduced Swing Differential Signalling (RSDS)™ digital bus reduces power, EMI and width from timing controller.
- Selectable 300/309 outputs provides ability to drive SVGA and XGA TFT-LCD systems.
- Switched reference type DAC gives high accuracy with low reference current requirements.
- Clock Frequency up to: 65MHZ
- Typical Accuracy: +/-5 mV
- Narrow bus.
- 64 gray scales.
- Receive RSDS @ 130Mb/s width @ 65MHz clock from FPD 63310.

System Diagram

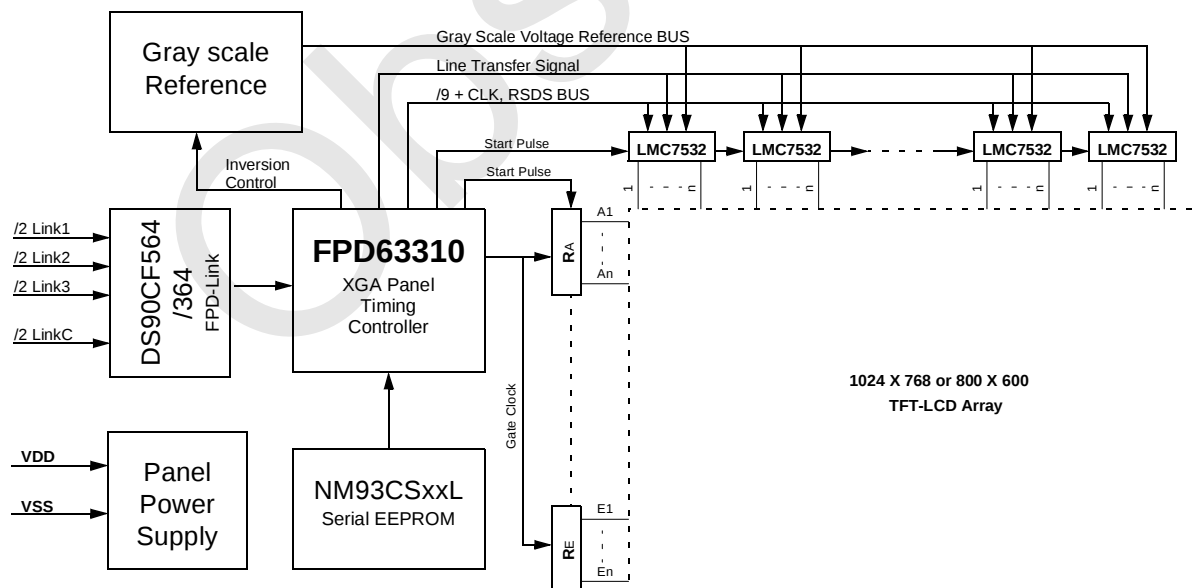


FIGURE 1. Block diagram of the LCD module

FPD-Link™ is a trademark of National Semiconductor

Package Information

COM1	COM1
COM1	COM1
AVSS	DUMMY
AVDD	DUMMY
VOP	DUMMY
VREF1	DUMMY
VREF9	OUT309
VREF7	OUT308
VREF5	OUT307
VREF3	OUT306
VREF1	OUT305
DVDD	OUT304
DGND	OUT303
NOULT309	OUT302
DVDD	OUT301
RL	OUT300
D20P	OUT299
D20N	OUT298
D21P	
D21N	
D22P	
D22N	
TP1	
EIO2	
DVDD	
CLKN	
CLKP	
DGND	
EIO1	
D10P	
D10N	
D11P	
D11N	
D12P	
D12N	
D00P	
D00N	
D01P	OUT012
D01N	OUT011
D02P	OUT010
D02N	OUT009
D03P	OUT008
D03N	OUT007
DGND	OUT006
DVDD	OUT005
DVDD	OUT004
VREF2	OUT003
VREF4	OUT002
VREF6	OUT001
VREF8	DUMMY
VOP	DUMMY
AVDD	DUMMY
AVSS	DUMMY
COM2	COM2
COM2	COM2

LMC7532

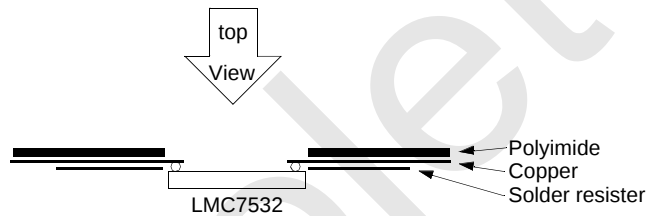


FIGURE 10. TCP pin assignment
Order number LMC7532CTxx
xx = customer package designator.

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