EPD9121 Product Brief

EDP9121 is a 1446-channel outputs source driver with integrated-Stream Protocol (iSP), which is used for driving the source line of TFT LCD panel.

Features

- iSP (integrated-Stream Protocol) interface
- 1446/1440/1368/1356/1284/1230/1206/1086 channels outputs selectable
- Operating frequency: 300Mbps ~ 1.7Gbps
- Digital supply voltage (DVDD): 1.62V ~ 1.98V
- Analog supply voltage (AVDD): 7V ~ 12V
- Output dynamic range: AVSS+0.2V ~ AVDD-0.2V
- 8-bit resolution for 64/256 gray scales
- Half-AVDD architecture
- Capability of outputting 64/256-level gray scales by means of 2 external γ reference voltages
- Programmable gamma function (GMA_S)
  - Optional usage 1) programmable gamma with 2 / 4 external gamma input
    2) 14 external gamma input while disabling programmable gamma
- Applicable to DOT inversion, N-line inversion, Column inversion driving methods
- Clock embedded with 8B/9B coding technique for iSP interface
- Control Function in Source Driver (Register Bit)
  - Shift direction control (SHL)
  - Input terminal control function (TML)
  - De-scrambler function (DS)
  - Charge sharing function (CS)
  - Output channel select function (SEL0/1/2)
  - Determining POL inversion (POLC)
  - Analog power control (PWRC)
  - Horizontal dot inversion function (DOTC)
  - Equalizer function (EQ)
  - Programmable gamma function (GMA_S); 6/8-bit resolution
  - buffer chopper control (CHOP)
  - Saving power consumption mode (STBY_EN)
  - Vertical blanking data function (VBK)
  - iSTB high pulse width control (STBW)
  - Unlock timing control function (UTC)
  - Receiver power control (RPWRC)
- Power ON/OFF Reset Function (XON)
- External STB control function (STB)
- COG packaging

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