

MIPI Display Interface Controller

World's Lowest Power Consumption MIPI 4-lane Transmitter



Pioneering in MIPI solutions for display, Solomon Systech is proud to present a series of proprietary MIPI Bridge Chips that support high-resolution, high-speed and low-power display of smart devices – **SSD2848, SSD2825 and SSD2828**.

The **SSD2848** is a Graphic Controller that has integrated frame buffer to support up to 1200 x 1920 for smartphone and tablet applications. The 27.6Mbit frame buffer supports Panel Self Refresh (PSR), Image Rotation and Scaler features of the devices. The SSD2848 supports MIPI-DSI Rx at 1.5Gbps/lane for 4 lanes and MIPI-DSI Tx at 1.0Gbps/lane.

The **SSD2825** and **SSD2828** convert 24bit RGB interface into 4-lane MIPI-DSI to drive extremely high resolution display modules of up to 1200x1920 for smartphone and tablet applications. The SSD2828, which can transmit up to 1.0Gbps/lane, is the world's lowest power consumption MIPI 4-lane transmitter.

All these solutions support AMOLED, a-Si LCD, metal oxide TFT and LTPS LCD panel technologies for smart device applications.

Applications: Smartphones (Full HD), Tablets (WUXGA), GPS, MID, etc.



Features

SSD2848

- Support 24bit video mode up to 1200 x 1920 (Landscape and Portrait)
- 27.6Mbit memory to support Panel Self Refresh (PSR)
- Support input of DSI command and video mode, 1.5Gbps/lane for 4 lanes
- Support output of DSI command and video mode, 1.0Gbps/lane for 4 lanes
- Support output of 2xDSI clocks for dual display applications
- Support anti-tearing Image Roataion up to WXGA
- Support non-linear scaling up to WUXGA
- Support Color Management including Contrast, Edge, Brightness, SRE and Saturation Enhancement
- Support Content Adaptive Backlight control (CABC)
- Support MIPI standard: DSI (v1.01.00), DCS (v1.02.00), D-PHY (v1.1)

SSD2825/SSD2828

- Support up to total of 2.4Gbps (SSD2825 only), 4Gbps (SSD2828 only) over the serial links
- Support up to 4 data lanes
- Support up to 1366 pixels per display row in video mode (SSD2825 only)
- Support up to 1920 pixels per display row in video mode, up to 60hz refresh rate (SSD2828 only)
- Support up to 2560 pixels per display row in video mode, up to 30hz refresh rate (SSD2828 only)
- Support parallel VISSI interface (DPI 2.0) of up to 24 bits
- Support serial SPI interface (DBI 2.0) of up to 16 bits
- Support CABC function for video mode
- Support MIPI standard: DSI (v1.01.00), DCS (v1.02.00), D-PHY (v1.0)

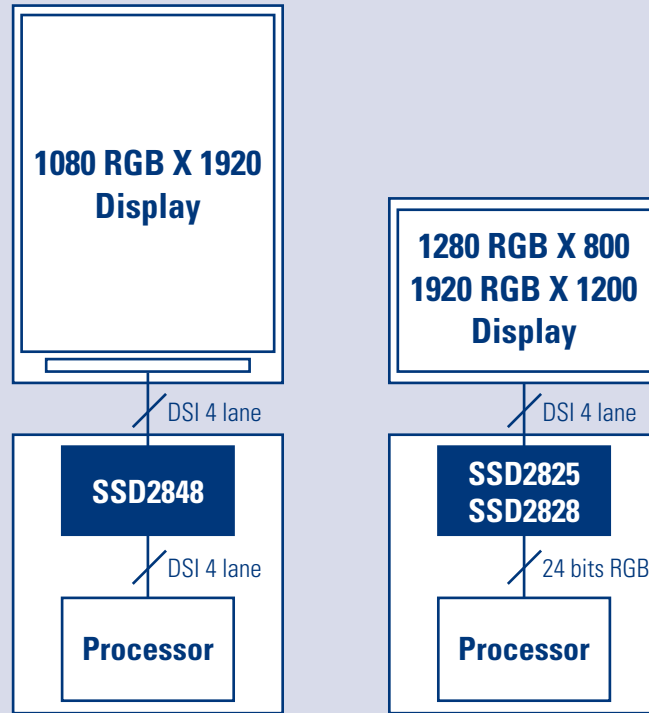


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Application Diagram



Selection Guide

| Part Number | Max Resolution | Rx Input Signal | Tx Output Signal | Application | Package |
|-------------|----------------|--|---|-----------------------|-------------|
| SSD2825G44 | 1280 x 800 | 24 bits RGB | DSI video mode 4 lane, 600Mbps/lane | Smartphone | BGA 4x4 64L |
| SSD2828G44 | 1920 x 1200 | 24 bits RGB | DSI video mode 4 lane, 1.0Gbps/lane | Smartphone | BGA 4x4 64L |
| SSD2828QN4 | 1920 x 1200 | 24 bits RGB | DSI video mode 4 lane, 1.0Gbps/lane | Tablet and Industrial | QFN 8x8 68L |
| SSD2848K1 | 1920 x 1200 | DSI command/ video mode 4 lane, 1.5Gbps/lane | DSI command/ video mode 4 lane, 1.0Gbps/lane | Smartphone/Tablet | WLCSP 84L |

Solomon Systech Limited

Solomon Systech (International) Limited is a leading semiconductor company providing IC products and system solutions that enable a wide range of display applications for smartphones, smart TVs, smart projectors and other smart devices including consumer electronics products, portable devices, industrial appliances and green energy applications such as LED lighting.



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