Mobile Display | Mobile Drivers

Highly Integrated, High Resolution, Single-Chip Solution

Solomon Systech offers a series of single-chip **TFT Display Driver IC (DDI)** to support TFT display panels of a wide range of resolutions from QVGA to WQHD, which are ideal for smartphone applications, industrial devices and automotive products. To meet the growing demand for full screen, lower power, higher-resolution display for smart devices, most of our TFT LCD driver ICs are embedded with high speed MIPI bridge IC of up to 1Gbps/lane. Moreover, our TFT LCD driver series can support most TFT display technologies, including a-Si, metal oxide (IGZO) and LTPS.

We have successfully developed **In-Cell Touch Display Driver IC (TDDI)** for smartphone applications. We are also among the first to start mass production of In-Cell TDDI. Solomon Systech's In-Cell TDDI enables a compact-design LCD module to achieve high SNR. It is an ideal solution for high performance smart devices.

Applications

4G/4.5G Smartphones, Tablets, Smart Watches, Automotive Devices, GPS, etc.

*All the images are for reference only.

Features

High Integration

- Support a-Si, LTPS and IGZO TFT panels
- Support In-Cell Touch display panels
- 65K, 262K or 16M color depth
- OTP or MTP Memory for VCOM calibration, ID code and initialization

Ultra Low Power Consumption for System Power Saving

- Knock On Gesture Mode
- Low current Sleep Mode and 8-color Display Mode for power saving
- Content Adaptive Brightness Control (CABC)
- Frame Skipping & Interlaced Mode technologies

Support Commonly Used MCU

- Display Interface: SPI, 8080/6800 PPI, RGB Interface and MIPI
- Touch Interface: I^2C

Advanced Features

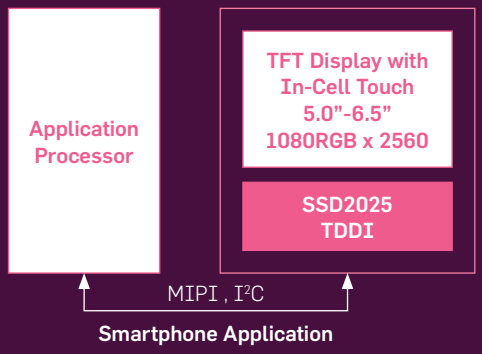
- Support up to 21:9 full screen display design
- Support panels with a wide viewing angle
- Color Enhancement (CE)
- Sunlight Readability Enhancement (SRE)
- Abnormal power off (APO) handling
- With In-Cell touch display technology, high SNR can be achieved by parasitic capacitive compensation

SOLOMON SYSTECH | 20 YEARS OF innovation

Solutions | in Silicon

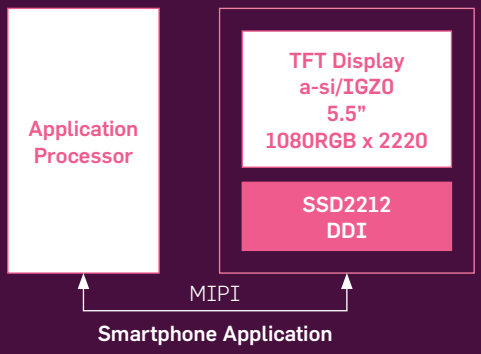
Application Diagram

TDDI



TDDI: In-Cell Touch Display Driver IC

DDI: Display Driver IC



DDI: Display Driver IC

Selection Guide

Mobile / Tablet Application

Part number	Display Size (Source x Gate)	Color Depth	Type	Panel Type			VPU (CABC / CE / SRE)	Interface
				a-Si	IGZO	LTPS		
SSD2068	480RGB x 854	16M	TDDI	✓	✓	–	✓	MIPI 2-lane, SPI
SSD2078A	720RGB x 1706	16M	TDDI	✓	✓	–	✓	MIPI 4-lane, I²C
SSD2092	1080RGB x 2280	16M	TDDI	–	–	✓ (3MUX)	✓	MIPI 4-lane, I²C
SSD2023	1080RGB x 2400	16M	TDDI	–	–	✓ (6MUX)	✓	MIPI 4-lane, I²C
SSD2025	1080RGB x 2560	16M	TDDI	–	–	✓ (3 or 6MUX)	✓	MIPI 4-lane, I²C
SSD2130	1080RGB x 2280	16M	DDI	–	–	✓ (3MUX)	✓	MIPI 4-lane, SPI
SSD2201A	800RGB x 1872	16M	DDI	✓	✓	–	✓	MIPI 4-lane, SPI
SSD2212	1080RGB x 2220	16M	DDI	✓	✓	–	✓	MIPI 4-lane, SPI

Automotive / Industrial / Consumer Application

Part number	Display Size (Source x Gate)	Color Depth	RAM	a-Si TFT	CABC	Interface
SSD1268	240RGB x 320	262K	✓	✓	–	SPI/MCU/RGB
SSD2118	320RGB x 240	262K	–	✓	–	SPI/RGB
SSD2119	320RGB x 240	262K	✓	✓	–	SPI/MCU/RGB
SSD2128	480 x 272RGB	262K	–	✓	✓	SPI/RGB
SSD2165	800 x 480RGB	16M	–	✓	–	SPI/RGB/LVDS

sales@solomon-systech.com
For regional sales contacts, please visit our website.