Solomon Systech offers a series of single-chip **TFT LCD Driver ICs** to support TFT display panels of a wide range of resolutions from QVGA to QHD, which are ideal for smartphone applications, industrial devices and automotive products. To meet the growing demand for 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:** 3G/4G Smartphones, Tablets, Smart Watches, Automotive Devices, GPS, etc.

### 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
- 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: I²C

#### Advanced Features
- 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

### TDDI Application Diagram

![TDDI Application Diagram](image-url)
**Mobile Display Driver IC**

**DDI Application Diagram**

**Selection Guide – Mobile / Tablet Application**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Display Size (Source x Gate)</th>
<th>Color Depth</th>
<th>Type</th>
<th>Panel Type</th>
<th>VPU (CABC / CE / SRE)</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD2061</td>
<td>480RGB x 854</td>
<td>16M</td>
<td>TDDI</td>
<td>a-Si/IGZO</td>
<td></td>
<td>MIPI 2-lane, SPI</td>
</tr>
<tr>
<td>SSD2091</td>
<td>1080RGB x 1920</td>
<td>16M</td>
<td>TDDI</td>
<td>a-Si/IGZO</td>
<td></td>
<td>MIPI 4-lane, FC</td>
</tr>
<tr>
<td>SSD2206</td>
<td>720RGB x 1280</td>
<td>16M</td>
<td>TDDI</td>
<td>a-Si/IGZO</td>
<td></td>
<td>MIPI 4-lane, SPI</td>
</tr>
<tr>
<td>SSD2201</td>
<td>800RGB x 1280</td>
<td>16M</td>
<td>DDI</td>
<td>a-Si/IGZO</td>
<td></td>
<td>Dual MIPI 4-lane, SPI</td>
</tr>
<tr>
<td>SSD2211</td>
<td>1080RGB x 1920</td>
<td>16M</td>
<td>DDI</td>
<td>a-Si/IGZO</td>
<td></td>
<td>MIPI 4-lane, SPI</td>
</tr>
</tbody>
</table>

**Selection Guide – Automotive / Industrial / Consumer Application**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Display Size (Source x Gate)</th>
<th>Color Depth</th>
<th>RAM</th>
<th>a-Si TFT</th>
<th>CABC</th>
<th>Certificate</th>
<th>Interface</th>
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<tbody>
<tr>
<td>SSD1268</td>
<td>240RGB x 320</td>
<td>262K</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>SPI / MCU / RGB</td>
</tr>
<tr>
<td>SSD2118</td>
<td>320RGB x 240</td>
<td>262K</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>SPI / RGB</td>
</tr>
<tr>
<td>SSD2119</td>
<td>320RGB x 240</td>
<td>262K</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>SPI / MCU / RGB</td>
</tr>
<tr>
<td>SSD2128</td>
<td>480 x 272RGB</td>
<td>262K</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>SPI / RGB</td>
</tr>
<tr>
<td>SSD2129</td>
<td>480 x 272RGB</td>
<td>262K</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>AEC-Q100, SPI / RGB</td>
</tr>
<tr>
<td>SSD2165</td>
<td>800 x 480RGB</td>
<td>16M</td>
<td>✓</td>
<td>✓</td>
<td>–</td>
<td>–</td>
<td>SPI / RGB / LVDS</td>
</tr>
</tbody>
</table>

**Solomon Systech Limited**

Solomon Systech Limited is a leading semiconductor company providing display IC products and system solutions that enable a wide range of display applications for smartphones, smart TVs and other smart devices including consumer electronics products, wearables, portable devices and industrial appliances.

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