**MOBILE SYSTEM**

**Applications**
- Energy applications such as LED lighting.
- Portable devices, industrial appliances and green devices including consumer electronics products, smart TVs, smart projectors and other smart devices.
- Range of display applications for smartphones, tablets, and other end products.

**Display Controllers**
- **SSD1960/61/63** Display Controllers are ideal for mobile and handheld applications that require high-resolution display. These controllers contain an embedded SRAM which serves as a frame buffer between the host processor and the LCD panel. The chips support 8/9/16/18-bit indirect CPU interface and 16/24-bit RGB LCD interface. The feature set includes hardware display rotation (0°, 90°, 180° and 270°), mirroring and windowing, and display enhancement such as brightness, contrast and saturation control.

**Power Consumption**
- Power consumption is one of the most pressing challenges in designing consumer electronics, especially for battery-operated devices such as mobile phones, personal navigation devices and portable media players. As the LCD display increases in size and resolution, the backlight becomes the most power consuming part in the system. The SSD1960/61/63 controllers feature Solomon Systech’s Dynamic Backlight Control (DBC) technology which brings added value to portable device manufacturers without sacrificing the display quality of the end products.

**Applications**
- Mobiles, Smartphones, Smart Devices, Security Systems, Equipment, Diagnostic Tools

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**Selection Guide**

<table>
<thead>
<tr>
<th>SSD1905</th>
<th>SSD1906</th>
<th>*SSD1921</th>
<th>SSD1926</th>
<th>*SSD1928</th>
<th>SSD1960</th>
<th>SSD1961</th>
<th>*SSD1963</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Support</td>
<td>160x160 / 18b</td>
<td>320x240 / 16b</td>
<td>320x420 / 16b</td>
<td>320x420 / 16b</td>
<td>640x480 / 18b</td>
<td>864x480 / 24b</td>
<td></td>
</tr>
<tr>
<td>Internal RAM</td>
<td>80KB</td>
<td>256KB</td>
<td>256KB</td>
<td>170KB</td>
<td>675KB</td>
<td>1215KB</td>
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<tr>
<td>MCU Interface</td>
<td>Direct Addressing</td>
<td>Direct or Indirect Addressing (8 / 16-bit, 68000, 80800)</td>
<td>8 / 9 / 16 / 18-bit (68000, 80800)</td>
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<tr>
<td>LCD Interface</td>
<td>STN or CSTN, Parallel TFT 9 / 12 / 18-bit</td>
<td>STN or CSTN, Parallel TFT 8-bit</td>
<td>STN or CSTN, Parallel TFT 8-bit</td>
<td>STN or CSTN, Parallel TFT 8-bit</td>
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<tr>
<td>Features</td>
<td>Display Rotation, Color Invert, Multi-page Buffering, Color Look-Up Table, Floating Window, Virtual Display, Hardware Cursor</td>
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<td>Package</td>
<td>TQFP - 100</td>
<td>TQFP - 100</td>
<td>LQFP - 144</td>
<td>LQFP - 128</td>
<td>LQFP - 128</td>
<td>TFBGA - 64</td>
<td>TFBGA - 64</td>
</tr>
</tbody>
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**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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**Display Controller**

Image Rendering, Rich Content & Low Power Consumption Reducing Main CPU Loading & Software Manipulation

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**Solomon Systech**

solutions in silicon

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Graphic Controller
Solomon Systech’s SSD1905/1906 LCD Graphic Controllers can handle the entire image rendering and STN/TFT display interfaces to provide a content rich display. Both ICs can interface with nearly any kind of MCU, including low-cost 8-bit MCUs. An embedded SRAM frame buffer memory can support from 1 bit-per-pixel with 2 gray shades up to 16 bit-per-pixel colors with 64 gray shades. To reduce software manipulation for animation display, the on-chip graphic engine provides command type graphic manipulation such as display rotation, window mode, cursor mode, and so on.

Applications: Office Appliances, Coffee Machines, Equipment, Lottery Machines

Image Processor
Display contents including animated graphics, OSD menus with customized fonts/icons, DVD movies, and JPEG photos have now become an essential factor in handheld electronic devices. Solomon Systech’s SSD1921/1926/1928 Image Processors are powerful imaging engines that bring the above dreams to reality. These system solutions enable lower power consumption, stable display performance and flexible platform component selection.

Applications: Baby Monitors, Camera Phones, IP Cameras, Security Systems