The LDS700x family of devices (LDS7000 and LDS7001) are the world’s first true single layer, full-touch capacitance screen devices, with multi-touch capabilities. These devices help to enhance the human-machine interface experience by supporting advanced features such as swipe, gestures, expand and squeeze. Employing a capacitance-to-digital convertor coupled with a unique and proprietary Indium-Tin-Oxide (ITO) pattern, the LDS7000 products offer best-in-class linearity and signal to noise ratio performance for all types of applications. The LDS7000 has unique built-in firmware which provides true x/y data and eliminates multi-touch ghosting effects.

Automatic on-chip calibration takes into account the effects of environmental changes such as temperature, humidity and dust and ensures to establish an accurate baseline capacitance for each sensor to ensure maximum responsiveness to true touch events.

The 40-pin LDS7000 supports 30 sensors and uses an I2C interface for communicating with the host. The 48-pin LDS7001 supports 35 sensors and is configurable to use either I2C or SPI interfaces for communicating with the host.

The LDS700x family supports supply voltages from 2.7 to 3.6V. The 48-pin LDS7001 offers General Purpose I/O (GPIO). The I2C clock and data lines support a 1.8V to 3.6V voltage interface using the VDDIO pin. The SPI interface supports 2.7 to 3.6V operation and VDDIO voltage must be the same as VDD.
True Single-Layer Multi-Touch Projected Capacitive Touch Screen Solution

APPLICATIONS
• Mobile handsets, personal media players
• Portable navigation devices
• Remote controls
• Office equipment, multi-function printers
• Set top boxes
• Home appliances
• Brown goods
• Industrial controls
• Digital cameras
• Consumer products

FUNCTIONAL BLOCK DIAGRAMS

PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Touch Sensors</th>
<th>SPI Interface</th>
<th>I2C Interface</th>
<th>GPIO’s</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDS7000</td>
<td>30</td>
<td>-</td>
<td>Yes</td>
<td>0</td>
<td>5 x 5 x 0.75mm 40-pin TQFN</td>
</tr>
<tr>
<td>LDS7001</td>
<td>35</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>6 x 6 x 0.75mm 48-pin TQFN</td>
</tr>
</tbody>
</table>

Discover what IDT know-how can do for you:
www.IDT.com/go/Touch