FPC1021 Touch Fingerprint Sensor

Product Sheet

- Complete fingerprint sensor module. No external components
- Excellent 3D image quality
- Thin, compact and easy to integrate including navigation function
- Robust protective coating capable of more than 10 million finger placements
- Excellent balanced between size and biometric performance
- Compact and easy to integrate

FPC1021AP

- LGA component only requires five passive components.
- Possible for module companies to design custom module with custom bezel and flex
- FPC1020AP available as tape ‘n reel or tray
- Available in different colors

Security Applications | Time & Attendance | Computer Peripherals | Wireless Devices
**General description**

With extensive experiences from fifteen years of touch fingerprint sensor deployments and patented capacitive sensor technology, FPC1021 is primed for FIDO and Global Platform compliance. This biometric product consists of touch fingerprint sensor FPC1021 and fingerprint recognition algorithm optimized for integration into consumer electronics such as mobile phones and tablets.

Compact size and ultra-low power consumption makes it very attractive to use in battery-powered units. Fingerprint image data captured in three dimensions (3D), delivers superior image quality at 508 dpi resolution. The fingerprint recognition algorithm is top ranked in independent tests and together with the touch fingerprint sensor FPC1021, it performs fast fingerprint matching with highest security level and optimal user convenience.

The FPC1021 comes with different software configurations, one dedicated for Android products targeting mobile phones and tablets including all necessary software. It also comes with a version for Windows Biometrics Framework (WBF) for laptop consumer products. FPC1021 is also available for other embedded environments.

Recommended host system spec for Android integration:
- Android version: 4.3 or 4.4, support for future Android versions will be added continuously
- CPU (minimum): CortexA7 or equivalent @ 1.3GHz with floating-point extensions enabled
- CPU (recommended): Cortex A15 or equivalent @2.3GHz with floating-point and NEON extensions enabled
- RAM: 8MB during enroll and fingerprint verification

**Quick reference data – Touch Fingerprint Sensor FPC1021**

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIPTION</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>SPI</td>
<td>4+1 pin</td>
<td></td>
</tr>
<tr>
<td>Supply voltage</td>
<td>VDD voltage, typical</td>
<td>1.8 V</td>
<td></td>
</tr>
<tr>
<td>Supply current</td>
<td>Image capture, typical</td>
<td>5 mA</td>
<td></td>
</tr>
<tr>
<td>Supply current Sleep Mode</td>
<td>Typical (with finger detection)</td>
<td>6 µA</td>
<td></td>
</tr>
<tr>
<td>Pixel matrix</td>
<td>508dpi resolution</td>
<td>160 x 160</td>
<td>pixels</td>
</tr>
<tr>
<td>ESD protection</td>
<td>IEC61000-4-2, level X, air discharge</td>
<td>±30 kV</td>
<td></td>
</tr>
<tr>
<td>Wear-and-tear</td>
<td>No of wear cycles at 0.6N</td>
<td>&gt;10 million</td>
<td>times</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40 to +85</td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

**Contact info**

Email: sales@fingerprints.com
Web: www.fingerprints.com