FPC1025 Touch Fingerprint Sensor

Product Sheet

- Squared form factor recommended for front or rear-mounted integration for mobile devices
- Optimal combination of sensor size and performance method
- Compact and easy to integrate
- Intelligent programmable wake-up functionality
- Outstanding system performance
- Robust protective coating capable of more than 10 million finger placements
- Ultra-low power consumption
- Customization of sensor module and LGA possible
- Flexible design with different outlines
- Customizable designs including colour options

FPC1025 customized algorithm

The most advanced algorithm to date including:

- Feature-space augmentation and statistical representation
- Hybrid and multi-template matching
- Impairment correction
- Improved sampling and combining
- Intelligent enrolment and enrolment combining
- Resolution enhancement

WWW.FINGERPRINTS.COM
General description

FPC1025 is an evolution of FPC1021, providing increased performance and flexibility, which is suited for front or rear-mounted button integration on mobile devices with navigation. Maintaining the industry’s lowest power consumption and user flexibility, its small-squared form allows 360-degree rotation, unrivalled sensitivity that enables maximum performance without compromising on design aesthetics. FPC1025 offers excellent 3D pixel sensing technology that reads virtually any finger: dry or wet. Touch sensor technology combined with the small size of FPC1025 offers secure and convenient user verification, while a Guided Enrolment software increases the accuracy of captured images for an improved user experience.

Recommended host system spec for Android integration:
- Android version: 5.0, support for future Android versions will be added continuously
- CPU: Cortex A15 or equivalent @2.3GHz with floating-point and NEON extensions enabled
- CPU (minimum): Cortex A7 or equivalent @ 1.3GHz with floating-point extensions enabled
- RAM: 8MB during enroll and fingerprint verification

Quick reference data – Touch Fingerprint Sensor FPC1025

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

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