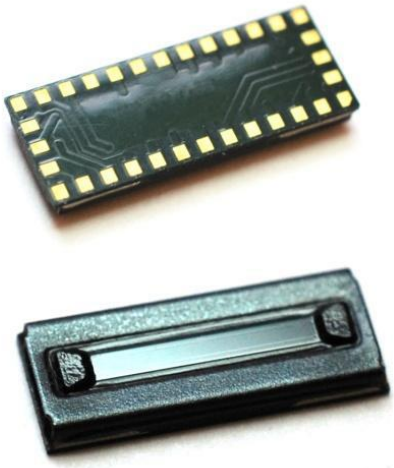
FINGERPRINTS

FPC1080A Swipe Sensor

Product Sheet

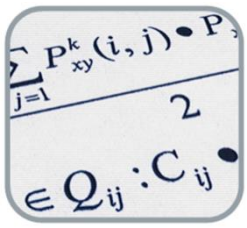
Swipe Fingerprint Sensor FPC1080A

- All new, compactly designed fingerprint swipe sensor
- Superior image quality - 256 pixel levels, 508dpi 3D imaging
- Embedded support for navigation
- Very low power consumption, using 1.8V supply voltage
- Power management functionality via automatic finger detection
- Hard and scratch resistant protective surface coating
- High speed SPI interface
- 32 pin LGA
- >15kV ESD protection
- >10 million wear cycles
- Low cost



Fingerprint Recognition Algorithm

- Proven algorithm supplied to millions of users
- Top ranked in independent tests (NIST)
- Fully ISO/IEC 19794-2 compliant fingerprint matcher and extractor
- Supports ANSI 378 template format
- Easy integration with modular architecture



Application examples

Computer peripherals

Time & attendance

Security applications

Wireless devices

FINGERPRINTS

General description

FPC1080A is a new compact low cost CMOS fingerprint swipe sensor aimed at the portable device segment, with very low power consumption, and hardware integrated support for not only regular image capture, but for navigation (motion estimation) and automatic finger detection mechanisms.

The FPC1080A features an attractive dark colored packaging, with a hard and durable surface coating. The captured images show a superior image quality, with its high resolution 508 dpi pixel array, and 256 gray scale values in every single pixel.

The reflective measurement method sends an electrical signal via the frame directly into the finger, which enables the use of a very thick protective surface coating, protecting the sensor against ESD exceeding 15kV, as well as scratches, impact and everyday wear-and-tear. The sensor with its 3D pixel sensing technology can read virtually any finger; dry or wet.

The FPC1080A is packaged as a standard LGA component, with 32 pads, suitable for surface mounting. The sensor communicates to a host processor via an SPI interface and an interrupt signal.

Quick reference data – Swipe Fingerprint Sensor FPC1080A

PARAMETER	DESCRIPTION	VALUE	UNIT
Interface	Serial SPI + Interrupt	4+1	pin
Supply voltage	VDD, typical	1.8	V
Supply current	Image capture, typical	1.2	mA
	Navigation, typical	1.0	mA
Supply current Sleep Mode	Typical (with active finger detection)	From 6	µA
Supply current Deep Sleep	Typical	<0.5	µA
Clock frequency	Serial SPI	<16	MHz
Read out speed	Serial SPI	<2	Mpixel/s
Active sensing Area	Pixel matrix	6.4 x 0.4	mm
Size sensing array	Pixel matrix (508 dpi)	128 x 8	Pixel
Pixel resolution	256 gray scale values	8	Bit
ESD protection	IEC61000-4-2, level 4 , air discharge	>15	kV
Wear-and-tear	No of wear cycles at 0.6N	>10 million	Cycle

RoHS 2 2011/65/EU

Availability

Engineering samples available in December 2011.
Volume order placements from Q1 2012.

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