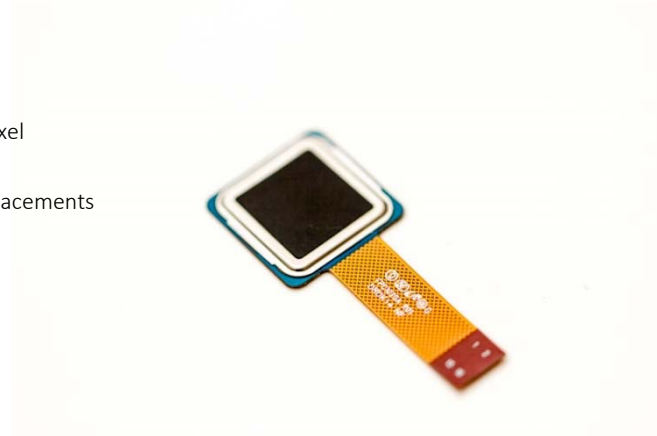


FPC1020 Touch Fingerprint Sensor

Product Sheet

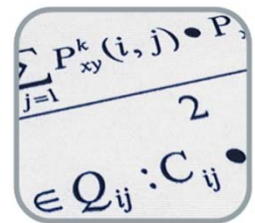
Touch Fingerprint Sensor FPC1020

- Complete fingerprint sensor module. No external components
- Superior imaging quality with 256 true grey scale values in every pixel
- Thin, compact and easy to integrate including navigation function
- Robust protective coating capable of more than 10 million finger placements
- Full ESD protection to more than $\pm 30\text{kV}$
- Ultra-low power consumption
- 1.8 Volt operation
- High speed SPI interface
- Pixel matrix 192x192 pixels @508 dpi
- Intelligent programmable wake up functionality



Fingerprint Recognition Algorithm

- Proven algorithm supplied to millions of users
- Top ranked in independent tests (NIST)
- Optimized to take advantage of FPC1020 touch fingerprint sensor with 3D imaging
- 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

Based experiences from fifteen years of touch fingerprint sensor deployments and patented capacitive sensor technology. FPC1020 is prepared for FIDO and Global Platform compliance. This biometric product consists of touch fingerprint sensor FPC1020 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 is captured in three dimensions (3D) delivering superior image quality at 508 dpi resolution. The fingerprint recognition algorithm is top ranked in independent tests and together with the touch

fingerprint sensor FPC1020, it performs fast fingerprint matching with highest security level and optimal user convenience. The algorithm features standardized extractor and matcher technology (ISO 19794-2) and has achieved excellent results in the Ongoing MINEX and MINEX II evaluations.

The FPC1020 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. FPC1020 is also available for other embedded environments.

Typical Host Processor Requirements:

- Processor ARM9TDMI type
- Clock speed ~400 MHz
- Memory = 1MByte RAM with 16-bit access
- Typical program size for running algorithm = 120 kB

Quick reference data – Touch Fingerprint Sensor FPC1020AM

PARAMETER	DESCRIPTION	VALUE	UNIT
Dimension	Sensor body (W x D x H)	11.4 x 12.2 x 0.7	mm
Interface	Serial SPI	4+1	pin
Supply voltage	VDD, typical	1.8	V
Supply current	Image capture, typical	5	mA
Supply current Sleep Mode	Typical (with finger detection)	10	µA
Pixel matrix	Resolution 508 dpi	192 x 192	pixels
ESD protection	IEC61000-4-2, level 4, air discharge	± 30	kV
Protective coating	Finger placements	> 10 million	times

Availability

Engineering samples available in December 2013.
Volume order placements from Q1 2014.

Contact info

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