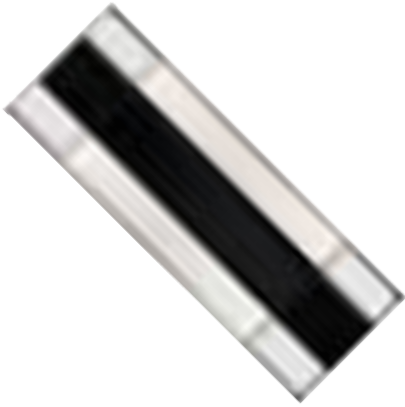


TouchChip® TCS4H Sensor

SPI Silicon Fingerprint Sensor



FEATURES

- Standard SPI slave interface with 8KByte FIFO buffer
- Highly durable black SteelCoat coating
- Highly integrated design enables low bill of materials cost
- Internal current limiter and voltage regulator
- Multiple battery-friendly operating modes
- BGA package

SUPERIOR TECHNOLOGY

- Advanced technology provides the most accurate fingerprint image
- Minutia matching supports different swipe angles
- Anti-spoofing protection
- User navigation features

EASY TO USE

- Able to read a wide range of fingerprints
- Fast swipe speeds up to 38 cm/s
- Rapid response from sleep/suspend states

PRODUCT DESCRIPTION

The TCS4H is an enterprise-friendly solution for device makers looking to add fingerprint authentication via a SPI interface. The TCS4H delivers a wide imaging area, and standards-compatible minutia matching in a power efficient implementation. The TCS4H's wide form factor supports applications requiring excellent usability and accuracy in a cost-effective solution. The minutia matching algorithm includes support for ISO 19794-2 & ANSI/INCITS 378 compatible minutia templates. The solution also supports additional security features including image data signing, encryption and anti-spoofing.

ABOUT CROSSMATCH

Crossmatch helps organizations solve their identity management challenges through biometrics. We empower governments, law enforcement agencies, banks, retailers and other enterprises to mitigate risk, drive productivity and improve service levels. Our solutions are built on consultative expertise, refined best practices and the application of advanced biometrics technologies. Crossmatch understands the forces of change in the markets we serve and we develop solutions that anticipate customer requirements. Our network of consultative and technical service experts collaborate with customers in more than 80 countries worldwide.

Learn more at www.crossmatch.com

TouchChip® TCS4H Sensor

SPI Silicon Fingerprint Sensor



HIGH PERFORMANCE SMART SENSOR FUNCTIONS

Standard SPI slave interface

Proven minutia matcher

Menu, list and document navigation

HIGH DEFINITION 192 X 8 PIXEL ARRAY

192 pixel (9.6 mm) sensing array width

508 pixels per inch horizontal resolution

381 pixels per inch vertical resolution

ENHANCED USABILITY

Supports fast swiping – up to 38 cm/sec.

Rapid wake-up time for reliable authentication - imaging within 20 ms of wake-up

SECURITY FEATURES

Image data encryption

Image data signing

EEPROM MEMORY INTERFACES

Supports EEPROM memory

ADVANCED BGA PACKAGE

33 Ball Grid Array (BGA) package

13.8 mm X 5 mm X 1.7 mm

Integrated drive bezel

RoHS compliant & low halogen

SUPERIOR TECHNOLOGY OFFERING

Uses combination of three sub-surface imaging technologies

Standards-compatible minutia matching technology

Advanced anti-spoofing technology

Responsive cursor and menu navigation

RUGGED SENSOR SURFACE COATING

Scratch & impact resistant

Withstands >10 million rubs

Advanced 6-H hardness durability coating

ESD RESISTANCE

Up to ± 30 kV air discharge

Exceeds IEC 61000-4-2 Level 4

MULTIPLE BATTERY-FRIENDLY OPERATING MODES @ 3.3V

Imaging @ up to 38 cm/s 11 mA typical

Navigation 11 mA typical

Sleep ~ 80 μ A (finger detect active)

OPERATING VOLTAGE

2.4V to 3.6V single supply voltage

ENVIRONMENTAL

Operating temperature: -30°C to $+70^{\circ}\text{C}$

Storage temperature: -40°C to $+125^{\circ}\text{C}$

Humidity (operate and storage): 5% to 93% RH without condensation

ADVANCED SECURITY FEATURES

- Image data encryption/signing
- Sensor to host authentication
- Embedded unique sensor ID number

LOW POWER

- Low power consumption for imaging and sleep (finger detect) modes.

DURABILITY

- Surface coating is highly resilient, withstanding more than 10 million rubs

ROBUST SOFTWARE APPLICATION SUPPORT

- Standard SPI slave mode enables flexible software support options in many usage environments.

Corporate Headquarters:

Crossmatch

3950 RCA Boulevard, Suite 5001
Palm Beach Gardens, FL 33410 USA

www.crossmatch.com