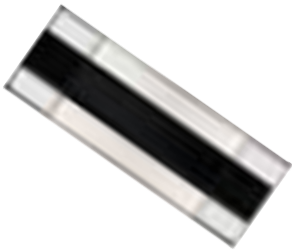


# TouchChip<sup>®</sup> TCS4H Sensor

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
- 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 in a power efficient implementation.

The TCS4H's wide form factor supports applications requiring excellent usability and accuracy in a cost-effective solution. The solution also supports additional security features including image data signing, encryption and anti-spoofing.

## ABOUT CROSSMATCH<sup>®</sup>

Crossmatch helps organizations solve their identity management challenges through biometrics. Our enrollment and authentication solutions are trusted to create, validate and manage identities for a wide range of government, law enforcement, financial institution, retail and commercial applications. Our solutions are designed using proven biometric technologies, flexible enrollment and strong multi-factor authentication software, and deep industry expertise. We offer an experienced professional services capability to assess, design, implement and optimize our identity management solutions for a customer's individual challenges. Our products and solutions are utilized by over 200 million people in more than 80 countries.

Learn more at [www.crossmatch.com](http://www.crossmatch.com)

### SPECIFICATIONS

Operating Power	<ul style="list-style-type: none"><li>• Imaging @ up to 38 cm/s 11 mA typical</li><li>• Navigation 11 mA typical</li><li>• Sleep ~80 <math>\mu</math>A (finger detect active)</li><li>• 2.4V to 3.6V single supply voltage</li></ul>
Advanced BGA Package	<ul style="list-style-type: none"><li>• 33 Ball Grid Array (BGA) package</li><li>• 13.8 mm X 5 mm X 1.7 mm</li><li>• Integrated drive bezel</li><li>• RoHS compliant &amp; low halogen</li></ul>
High Definition Pixel Array	<ul style="list-style-type: none"><li>• 192 pixel (9.6 mm) sensing array width</li><li>• 508 pixels per inch horizontal resolution</li><li>• 381 pixels per inch vertical resolution</li></ul>
Environmental	<ul style="list-style-type: none"><li>• Operating temperature: -30°C to +70°C</li><li>• Storage temperature: -40°C to +125°C</li><li>• Humidity (operate and storage): 5% to 93% RH without condensation</li></ul>
ESD Resistance	<ul style="list-style-type: none"><li>• Up to <math>\pm</math> 30 kV air discharge (Exceeds IEC 61000-4-2 Level 4)</li></ul>
Rugged Sensor Surface	<ul style="list-style-type: none"><li>• Scratch &amp; impact resistant</li><li>• Withstands &gt;10 million rubs</li><li>• Advanced 6-H hardness durability coating</li></ul>

### FEATURES

Superior Technology Offering	<ul style="list-style-type: none"><li>• Uses combination of three sub-surface imaging technologies</li><li>• Advanced anti-spoofing technology</li><li>• Responsive cursor and menu navigation</li><li>• Standard SPI slave interface</li><li>• Menu, list and document navigation</li></ul>
Memory Interfaces	<ul style="list-style-type: none"><li>• Supports EEPROM memory</li></ul>
Security Functions	<ul style="list-style-type: none"><li>• Image data encryption</li><li>• Image data signing</li></ul>
Enhanced Usability	<ul style="list-style-type: none"><li>• Supports fast swiping – up to 38 cm/sec.</li><li>• Rapid wake-up time for reliable authentication - imaging within 20 ms of wake-up</li></ul>

#### Corporate Headquarters:

##### Crossmatch

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