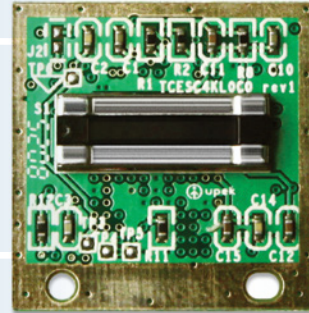


## TouchChip® TCESC4K Module



### APPLICATIONS

Embedded systems, such as:

- Garage door openers
- USB flash drives
- Car alarms and more

### SILICON SWIPE FINGERPRINT MODULE

The TouchChip TCESC4K swipe module is compact, cost-effective and easy to integrate. The on-board processor is used for capture and match, delivering fast and accurate results. It can store up to approximately 100 user templates and supports USB, SPI or UART interfaces. Power consumption is less than 80ma during capture and match, and a low power auto-wake feature detects when a finger is on the module, making the TCESC4K module ideal for battery applications.

For easy integration, the TCESC4K module is fully assembled and

tested—just connect and interface with simple commands. The TCESC4K module also offers a convenient user experience based on proprietary technology that senses 3-D ridges and valleys of a fingerprint and captures the highest image quality for a swipe sensor.

The TCESC4K swipe module is designed for use with the TouchChip Module Development Kit. Whether you are an OEM or system integrator, biometric identity verification solutions from HID Global provide a natural extension to your applications.

## FEATURES

- USB, UART and SPI
- Low power consumption
- Compact size
- High durability silicon surface
- Windows® 32-bit and 64-bit, Linux® x86, embedded systems (with and without OS)



## SPECIFICATIONS

<b>Product Name</b>	<b>TouchChip TCESC4K Module</b>
<b>Part Numbers</b>	<ul style="list-style-type: none"> <li>• TouchChip Embedded Module (TCS4K sensor, TCD58E processor, USB/SPI/UART): <b>TCESC4KSO</b></li> <li>• TCESC4K Starter Kit (80 TCESC4K modules) MOQ for bulk orders: 400: <b>TCKT06</b></li> </ul>
<b>Fingerprint Sensor</b>	TSC4K (192 pixels), 508 or 381 dpi, 9.6 x 25 mm image size, SteelCoat protective layer
<b>Processor</b>	TCD58E, 32-bit RISC, 144 MIPS
<b>Fingerprint Template Database Size</b>	Up to ~100 templates (typical)
<b>ESD</b>	IEC 61000-4-2 level 4 +/- 15KV air, +/- 8KV contact
<b>Power (typical)</b>	<ul style="list-style-type: none"> <li>• 3.0V to 3.6V, 78 mA (capture, match, navigate)</li> <li>• Standby (USB): 1350uA</li> <li>• Standby (UART/SPI): 1150uA</li> </ul>
<b>Finger Detection Option</b>	Wakes from low power state with user's touch
<b>Dimensions</b>	20.0 x 19.7 x 3.6 mm
<b>Environmental</b>	<ul style="list-style-type: none"> <li>• Operating temp: -30 to +70 C</li> <li>• Storage temp: -30 to +125 C</li> <li>• Humidity: 5% - 93% no condensation</li> <li>• ROHS, low halogen</li> </ul>
<b>Connector</b>	ZIF FFC, 12 pos x 0.5mm x 0.3mm (cable not provided)
<b>BIOMETRIC / CREDENTIAL CAPTURE</b>	
<b>Swipe Speed</b>	~ 40cm/sec
<b>Match Time</b>	<ul style="list-style-type: none"> <li>• 1 finger: &lt; 0.4 sec (from finger liftoff)</li> <li>• 15 fingers: &lt; 0.75 sec</li> <li>• 100 fingers: ~2.5 sec</li> </ul>
<b>SENSOR DURABILITY</b>	
<b>Swipe Resistance</b>	> 2 million swipes
<b>Pen Scratch Resistance</b>	6H hardness with 20N force
<b>Pen Drop Resistance</b>	60 cm
<b>Call Drop Resistance</b>	60 cm
<b>Waterproof</b>	24h water soak
<b>Chemical Resistance</b>	24h contamination with over 20 chemicals
<b>SOFTWARE AND TOOLS</b>	
<b>PerfectTrust API (PTAPI) Embedded</b>	Image capture and transfer, enrollment, match
<b>Platform Support</b>	<ul style="list-style-type: none"> <li>• UART and SPI interface libraries: reference implementation for 32-bit MCUs in C source code</li> <li>• USB: Windows® to 8.1, Linux® x86/x64 and Android™ 3.1 (API Level 12) or newer</li> </ul>

Data subject to change without notice.



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For more information, please [click here](#).

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