

# HID<sup>®</sup> TouchChip<sup>®</sup> TCET Module

## Capacitive Fingerprint OEM Module

HID TouchChip TCET capacitive fingerprint module provides quick and reliable biometric authentication. The TouchChip TCET uses patented technology to capture fine print details resulting in the ability to capture a wide range of fingerprints.

The TouchChip TCET module is compact 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 100mA during capture and match.

For easy integration, the TCET module is fully assembled and tested — just connect and interface with simple commands. The Enhanced Image Mode (EIM) optimizes image quality over a broad range of skin types and capture conditions. The TCET module eliminates latent images during capture and offers ingress protection from dust and

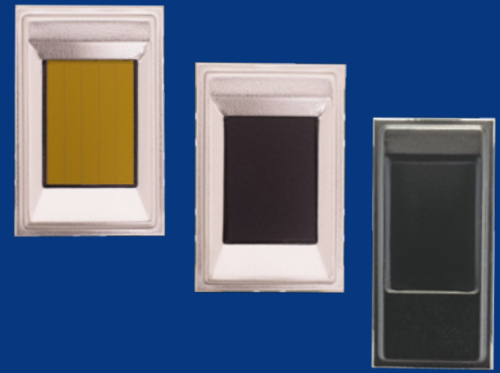
moisture to IP65\*. The module supports WSQ and JPEG2000 compression with the appropriate Software Development Kit.

HID offers various TouchChip TCET module options:

- TCETC1: uses the FAP10 sized TCS1CT sensor to provide FBI PIV certification
- TCETD1: uses the FAP10 sized TCS1ST with SteelCoat for enhanced durability
- TCETD2: uses the reduced sized TCS2ST with SteelCoat for enhanced durability

The TouchChip TCET module includes broad software support from leading algorithm providers, ISV's and system integrators.

Whether you are an OEM or system integrator, HID's biometric identity verification solutions provide a natural extension to your applications.



### FEATURES:

- FBI PIV certified image quality
- SteelCoat<sup>®</sup> provides added durability — a requirement in high traffic applications
- On device processing for template generation, matching and storage
- Low power consumption
- Compact size
- IP65-rated top surface sealed against dust and liquid\*

### APPLICATIONS:

Identity verification for:

- Civil ID/Voting/Benefits Distribution
- Logical & Physical Access Control
- Mobile ID Terminals
- Single Sign-on
- Time and Attendance
- Point of Sale Security
- Patient ID

|   |  |
|---|--|
| <b>Product Name</b>   | <b>TOUCHCHIP® TCET MODULE</b>  |
| <b>Part Number</b>  | <ul style="list-style-type: none"> <li>• TCS1 FBI PIV 3.3v USB/SPI/UART Silver Bezel - <b>TCETC1FF022</b></li> <li>• TCS1 FBI PIV 5v USB only Silver Bezel - <b>TCETC1FG022</b></li> <li>• TCS1 SteelCoat 3.3v USB/SPI/UART Silver Bezel - <b>TCETD1FF022</b></li> <li>• TCS1 SteelCoat 5v USB only Silver Bezel - <b>TCETD1FG022</b></li> <li>• TCS1 FBI PIV 3.3v USB/SPI/UART Black Bezel (Dell) - <b>TCETC1PF022 **</b></li> <li>• TCS1 FBI PIV 3.3v USB/SPI/UART Black Bezel with machine readable label - <b>TCETC1PF023</b></li> <li>• TCS1 FBI PIV 5v USB only Black Bezel - <b>TCETC1PG022</b></li> <li>• TCS2 SteelCoat 3.3V USB/SPI/UART Black Bezel - <b>TCETD2PF322</b></li> <li>• TCS2 SteelCoat 3.3V USB Black Bezel - <b>TCETD2PN322</b></li> </ul> |
| <b>FINGERPRINT IMAGING SYSTEM</b>   |  |
| <b>Technology</b>   | Capacitive silicon, TCS1 or TCS2 HID® TouchChip®   |
| <b>Output image resolution / bit depth</b>  | <ul style="list-style-type: none"> <li>• 508 dpi / 8-bit (256 levels)</li> <li>• Grayscale Image Depth</li> </ul>  |
| <b>Scan Capture Area</b>  | <ul style="list-style-type: none"> <li>• TCETC1 / TCETD1: 12.8 x 18.0 mm (256 x 360 pixels)</li> <li>• TCETD2: 10.4 x 14.4 mm (208 x 288 pixels)</li> </ul>  |
| <b>ENVIRONMENTAL RANGE</b>  |  |
| <b>Temperature, Operating</b>   | -20°C to +70°C   |
| <b>Humidity, Operating</b>  | 5% to 85% RH, non-condensing   |
| <b>ESD Immunity</b>   | IEC 61000-4-2 level 4: (±15 kV air, ±8 kV contact)   |
| <b>INTERFACE</b>  |  |
| <b>Interface</b>  | <ul style="list-style-type: none"> <li>• 12-pin flex: USB, SPI, UART @ 3.3v</li> <li>• 5-solder pads for USB only @ 5v</li> </ul>  |
| <b>Operating systems supported</b>  | Windows®, Linux®, Android® and embedded systems (with and without OS)  |
| <b>FORM FACTOR &amp; DURABILITY</b>   |  |
| <b>Overall dimensions</b>   | <ul style="list-style-type: none"> <li>• TCETC1 / TCETD1: 23 mm x 35 mm x 4.1 mm</li> <li>• TCETD2: 15 mm x 31 mm x 3.35 mm</li> </ul>   |
| <b>Ingress Protection</b>   | IP65 (water/dust protection) *   |
| <b>Life Expectation /Coating</b>  | <ul style="list-style-type: none"> <li>• Min. 4 million touches, SteelCoat</li> <li>• Min. 2 million touches, GoldCoat FBI PIV</li> </ul>  |
| <b>POWER SUPPLY REQUIREMENTS</b>  |  |
| <b>Power Supply Voltage</b>   | 3.0 V to 3.6 V or 4.5 V to 5.5 V based on part   |
| <b>Supply Current - Scanning</b>  | ~ 120 mA   |
| <b>Power Supply Current - Standby</b>   | ~ 1 mA   |
| <b>SOFTWARE DEVELOPMENT KIT OPTIONS</b>   |  |
| DigitalPersona® Biometric SDK supports a variety of thin client and browser plug-in options |  |

Data subject to change without notice.

\* Requires customer to add external gasket.

\*\* TCETC1PF022 may require special ESD considerations.



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