

PerfectPrint® 9.1 Fingerprint SDK

■ Growing fingerprint authentication market

The market for USB fingerprint devices is growing rapidly. Examples include authenticating doctors viewing medical files, bankers moving money, school children getting lunch, or government workers accessing classified data. Market analysts estimate growth for fingerprint solutions at over 50% per year and becoming a multi-billion dollar industry.

■ UPEK PerfectPrint fingerprint software: Proven

When developing fingerprint solutions, you want a proven partner. UPEK has high-quality silicon fingerprint sensors and software with millions of installations, and UPEK has the only silicon sensor certified for FIPS-201.

UPEK's PerfectPrint software with TouchChip® fingerprint sensors controls and optimizes the capture of high-quality fingerprint images for diverse skin types and usage conditions. PerfectPrint software with TouchChip sensors are used in many devices: notebook PCs, mice, keyboards, smart card readers, door locks, POS terminals, handheld devices and more.

■ Key Features

USB controllers for TouchChip sensors:

• STM32 (ST Microelectronics)	new
• CY764215 (Cypress Semiconductor)	new
• TC92163 (UPEK)	improved

Three image capture modes (Standard, EIM-Lite, EIM)	new
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Two sensor coatings	
• Standard coating (gold color)	improved
• SteelCoat (black color)	new

Latent image rejection.	improved
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Supports multiple TouchChip USB devices on one PC	new
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ANSI 381 fingerprint image format	new
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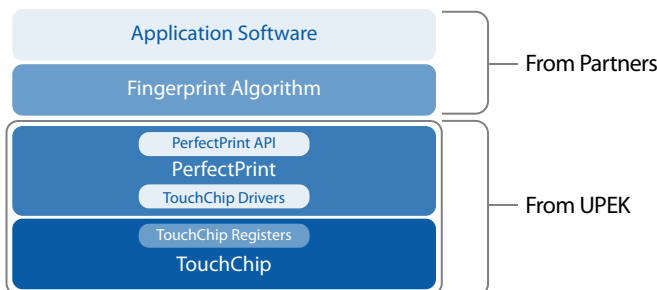
USB data encryption: sensor to host (STM32 only)	new
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USB drivers (WHQL certified)	updated
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Sensor power management	improved
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Sensor calibration and diagnostic tools	updated
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Sample code and project files	updated
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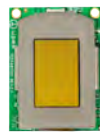




TCS1C



TCS2C



TCEFX1



TCS1S



TCS2S

12.8 x 18 mm
image area

10.4 x 14.4 mm
image area

Supported TouchChip sensors and modules

Flexible Image Capture Options

For today's USB fingerprint products, UPEK offers three image capture modes to meet diverse needs.

- **Standard:** In broad use today. The original TouchChip capture method. Simple & effective.
- **EIM-Lite:** (new) Improves dry finger capture and image quality. Uses bezel and same memory as Standard.
- **EIM:** (new) Meets FIPS 201 image quality with the TCS1. Uses conductive bezel and advanced sensor calibration. (Requires EIM license agreement.)

TouchChip Ordering Information

To help customers design TouchChip USB products, UPEK offers development kits, evaluation kits and fingerprint sensors. Contact UPEK sales for details.

Product	Part Number
• TouchChip USB Development Kit (PerfectPrint 9.1 SW & TouchChip HW design tools)	TCKDU07
• TouchChip FIPS 201 Evaluation Kit (working TCEFC1 module with TouchChip demo SW)	TCKEU07
• TCS1C Fingerprint Sensor (FIPS 201)	TCS1CM6A0
• TCS2C Fingerprint Sensor	TCS2CN6A0
• TCS1S Fingerprint Sensor + SteelCoat	TCS1SM6A0
• TCS2S Fingerprint Sensor + SteelCoat	TCS2SN6A0
• TCEFB1 USB - only module (FIPS 201)	TCEFB1FF011

PerfectPrint Specifications

USB Controllers Supported

TC92163	UPEK controller for legacy TouchChip USB devices (EOL Dec 2008)
STM32 (New)	From ST Microelectronics
CY764215 (New)	From Cypress Semiconductor

Software

PerfectPrint 9.1 DLL	Compiled software library
TouchChip Demo software	Capture and save images
UPEK Evaluator	Image capture and enroll/match
Operating System Support	Windows 2000, XP, Vista, WinCE 5
USB driver support (WHQL)	Windows 2000, XP, Vista, W7 (legacy) 32/64 bit WinCE 4&5 (ARM, SH4, x86) Pocket PC 2003/ARM

USB data encryption: USB controller to host	STM32 only. AES-64 standard. AES-128 on request.
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Project Files and Sample Code	Included
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Documentation

PerfectPrint 9 API	Programmers guide
Application Notes	PerfectPrint license, TouchChip Sensor Cleaning procedure and other documents

Support

1 year membership in UPEK Partner Program	Online tools & documents
HW & SW support	Included via Partner Program membership



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