



# 5<sup>th</sup> Sense

## Personal Authentication Peripheral

Veridicom

*Veridicom delivers a revolutionary line of fingerprint authentication products and services for e-business*

### *Applications*

- Add-on peripheral for a PC or laptop for secure logon
- Replace inconvenient passwords with easy-to-use fingerprint authentication
- Enhance non-repudiation for digital signatures and PKI with a biometric (not just a password)
- Secure remote access to networks
- Secure accesses to Web services
- Protect sensitive files on a PC



The 5<sup>th</sup>Sense™ is a fingerprint reader for the PC based on Veridicom's direct contact silicon fingerprint sensor. Fingerprint-based authentication is a simple and convenient way to secure access to individual computers as well as networks and the Internet. It is the most secure and trustworthy authentication technology for reliable e-commerce transactions. Built around Veridicom's own FPS110 sensor chip, the 5<sup>th</sup>Sense peripheral brings the security and convenience of fingerprint authentication to a wide range of computer and Internet applications.

### *Compact and Accurate Fingerprint Reader*

The exceptionally rugged sensor surface protects an array of up to 300 x 300 tiny capacitive plates. When a finger contacts the sensor surface, the software driver sequences the sensor to measure the capacitance at each pixel, creating a 90,000-element image of the ridges, valleys, and pores that characterize a fingerprint.

The fingerprint-enabled application then runs the image through several processing stages. The image is enhanced to reduce noise and improve the definition of ridges against valleys. Next, the fingerprint minutiae—the features that are the basis of Veridicom's fingerprint processing algorithms—are extracted from the image. A map, or template, based on the interrelation of the minutia points is then created. The fingerprint image is discarded after the minutiae template is created (a fingerprint image cannot be derived back from a template).

The fingerprint software matches these features against a database of fingerprint templates that have been enrolled as authorized users. Veridicom's industry-leading software can be set to operate at any of several levels of fingerprint matching certainty, depending on the security requirements of the application.

Veridicom's capacitive sensing is inherently more reliable and less prone to deception than other fingerprint recognition devices. Because capacitive response is a characteristic of a real finger, the 5<sup>th</sup>Sense cannot be fooled by an image of a fingerprint obtained by photograph.

### *Ready for Software Integration*

Available in both parallel- and USB-interface versions, the 5<sup>th</sup>Sense includes ready-to-use software drivers that interface to a variety of security applications, including Veridicom's Confirma™ Protector Suite™.

To help software developers create fingerprint-enabled applications, Veridicom offers a separately available Software Development Kit (SDK). It allows customization of operation of the 5<sup>th</sup>Sense module to the needs of a particular application or system integrator.

### *Rugged and Portable*

The 5<sup>th</sup>Sense peripheral is designed with a conductive plastic housing with an excellent electrostatic discharge (ESD) path to ground. A protective sliding door over the fingerprint sensor protects the sensor from accidental damage and harsh environments. The door easily slides up as the finger is placed on the sensor and facilitates proper finger alignment.

### *Complete Product Line*

In addition to 5<sup>th</sup>Sense peripherals, Veridicom offers a complete line of fingerprint sensor chips and authentication software products. To inquire about Veridicom's other products, send an email to [info@veridicom.com](mailto:info@veridicom.com) or visit our Web site at [www.veridicom.com](http://www.veridicom.com).

### *Compatible Software*

- Confirma Software Developer's Kit (SDK)
- Confirma PrivateWeb™ Toolkit
- Confirma Protector Suite
- SecureStart™ for Confirma
- SecureSuite™ for Confirma

### *Environmental Specifications*

- Operating Temperature:  
0° C to +60°
- Storage Temperature:  
-40° C to +70° C
- Operating Humidity:  
5%-95% relative humidity  
non-condensing @ +60° C

### *Performance Specifications*

- Frames per Second:  
USB - up to 4.8 fps  
Parallel - 6 to 10 fps (ECP with DMA)
- Input Voltage:  
USB - Bus powered  
Parallel - +/-5 volts DC through serial port connector
- Peak Current Consumption:  
USB - 155 mA (typical)  
Parallel - 100 mA (typical)
- Certification: CE, FCC, VCCI and UL

### *Ordering Information*

**5<sup>th</sup>Sense USB.** A computer peripheral with a USB interface and two meter cable

**5<sup>th</sup>Sense Parallel.** A computer peripheral with a 1.5-meter cable supporting a parallel interface on a DB25 connector and a PS/2 power connection. ECP mode with DMA recommended (parallel port pass-through is not provided).

**5<sup>th</sup>Sense Evaluation Kit.** Includes either a USB or parallel peripheral, PassPrint software, and a manual. Intended for engineers and scientists who wish to evaluate Veridicom's technology.

**5<sup>th</sup>Sense Development Kit.** Includes either a USB or parallel peripheral, a demonstration program, SDK with Windows DLLs, hardware reference designs, and technical support.

### *About Veridicom*

Veridicom, Inc. is the leader in fingerprint-based technologies and services that enable trusted e-business transactions across networks, intranets and the Internet. The company's extremely accurate, postage stamp size silicon fingerprint sensors and peripherals, advanced recognition algorithms, and authentication software allow users to conduct business online without fraud or fear. Veridicom, the first technology spin-off from Lucent/Bell Labs, is delivering solutions with a distinct advantage over other authentication technologies that rely on passwords and personal identification numbers (PINs), which can be lost, forgotten or stolen. Veridicom's fingerprint sensors are being included in laptops, keyboards and mobile phones to provide secure authenticated access to the authorized users.

### *Key Features and Benefits*

- Convenient add-on peripheral
- USB or parallel interface
- Compact, elegant design
- Clean, high resolution images
- Fast image transfer
- Suitable for harsh environments
- Complete reference designs available

### *Physical Characteristics*

- Peripheral: 106.5 mm x 47 mm x 21.1 mm
- Circuit Board: 66.04 mm x 33.02 mm x 8.53 mm
- Cable: USB - 2 meters; Parallel - 1.5 meters
- Parallel Connection: Interface - DB25; Power - PS/2

