# EntréPad<sup>®</sup> AES4000

**Fingerprint Sensor** 





### www.DataSheet4U.coIntroducing...

The EntréPad AES4000 is AuthenTec's low-power, mid-sized touch fingerprint sensor. The EntréPad AES4000 uses familiar and reliable  $0.6 \mu$  CMOS technology. This product combines silicon-based image capture with proprietary sensor control and matching algorithms.

AuthenTec's sensors with TruePrint<sup>®</sup> Technology look past the easily obscured outer surface of the skin to the living layer below where the unique ridge and valley patterns of the fingerprint originate.

AuthenTec sensors are the first and only fingerprint-based biometric authentication solutions that work for everyone, everywhere, under the most demanding real-world conditions.

### TruePrint Is...

AuthenTec's unique, patented imaging technology. During imaging, a small signal is generated between the IC and the finger's live layer. The pixels in the sensor matrix form a planar antenna array that receives this signal, creating a digital pattern that very accurately mimics the fingerprint's underlying structure.

A powerful component of TruePrint is Dynamic Optimization. This tool analyzes each frame, controlling up to 15 parameters to optimize the fingerprint image, regardless of unusual skin conditions or surface contamination.

# High Performance...

- Unequalled "Ability to Acquire"
- Patented TruePrint Technology
- Industry's best FAR/FRR

### Small Form Factor...

- 144-pin LQFP package
- 20 x 20 x 1.4 mm

# Robust Packaging...

- Scratch and impact resistant (stress-tested to >40,000 psi)
- Rub-resistant to > 1M rubs
- Impervious to contamination

## Detection Matrix...

- 96 x 96 pixels
- ▶ 9.75 mm x 9.75 mm
- 250 ppi resolution images

#### SelectaBus...

- Asynchronous serial interface
- 8-bit parallel interface
- Universal Serial Bus (USB)

Operating Voltage Range... ▶ 3.3V or 5.0V

### Commercial Temp. Range… ▶ 0°C through +70°C

### Power Dissipation @ 3.3V...

- 11 mW imaging (avg.)
- 66 µW standby
- High-Rate Image Capture... ▶ Up to 52 frames/second

# ESD Resistance...

IEC 61000-4-2 Level 3 (±8KV)

# Supported Operating Systems...

- Microsoft<sup>®</sup> Windows 98<sup>®</sup>, ME<sup>®</sup>, 2000<sup>®</sup>, XP<sup>®</sup>, and NT<sup>®</sup> v4.0
- Intel PIII, P4

# Superior Image Quality...

The result is a high-quality image that creates reliable authentication. These images ensure that we capture everyone, everytime under virtually all conditions.

# Target Applications...

The EntréPad AES4000 is optimized for use in portable and laptop personal computers, Personal Electronic Devices such as cell phones, Internet appliances, and PDAs.

# Convenient Security...

The EntréPad AES4000 is the first fingerprint sensor specifically designed for the demands of the mobile PC market. Its extremely small size and low power requirements make it ideal for applications requiring the security of biometrics with the convenience of one touch access.

# Building On Success...

EntréPad is AuthenTec's second fingerprint sensor family, complementing the FingerLoc<sup>®</sup> security and access control line.

Both product families are built on AuthenTec's well-proven TruePrint Technology to produce the best images in the industry.

#### AES4000 EntréPad by AuthenTec, Inc.



The EntréPad AES4000 sensor incorporates flexible SelectaBus architecture. This feature allows the developer to deploy designs that use not only the popular Universal Serial Bus, but also the familiar asynchronous serial interface, or parallel interface implementation.

- USB Low Power Version 1.1
- Bus choice is pin-selectable
- Optimized for portable PC architecture
- Unique power management system
- High data throughput rates

With SelectaBus, several solutions can be served by a single SKU, simplifying procurement and parts stocking.



The form factor of the EntréPad AES4000 is 144-pin JEDEC-standard Low-profile Quad Flat Package (LQFP)

# In addition to the AuthenTec sensors, let us introduce you to the AuthenTec family of kits...

AuthenTec provides a full range of hardware, software, design services, and support, including advanced sensor control and fingerprint matching algorithms, device driver support for Windows 98, 2000, ME, XP and NT v4.0, and support for the industrystandard biometric Applications Programming Interfaces (APIs). All these features are conveniently bundled into kits:

Technology Evaluation Kits (TEKs) enable quick and easy investigation of our technology. The kit contains a sensor module, matching algorithm, and demonstration software.

Software Developer's Kits (SDKs) are available for Independent Software Developers who wish to develop products that interface with AuthenTec sensors.

Reference Design Kits (RDKs) enable manufacturers of PCs/PC peripherals, mobile and wireless/handheld systems to quickly integrate AuthenTec fingerprint sensors into their products by providing a complete hardware and software reference solution.

Embedded Design Kits (EDKs) enable manufacturers of embedded systems such as door locks, access control systems and time & attendance boxes, to quickly integrate FingerLoc into their products by providing an easy to use modular design.

For more information contact AuthenTec or your local AuthenTec representative.

# ∕luthenTec, Inc.

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