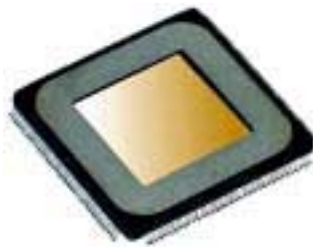# AES4000

EntréPad
Fingerprint Sensor

AuthenTec, Inc.
Personal Security for the Real World™

Introducing…

The all-new *AES4000™ EntréPad™* is AuthenTec's latest, low-power, small form-factor fingerprint identification sensor IC. The AES4000 uses familiar and reliable 0.6 µ CMOS technology.

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

AuthenTec devices are the first and only fingerprint-based biometric authentication solutions that can 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 coupled onto the finger's living layer. More than 9000 individual elements in the sensor matrix form a planar antenna array that receives this signal, creating a digital pattern that mimics very accurately the fingerprint's underlying structure.

A powerful complementary utility within TruePrint is called Dynamic Optimization™. This tool analyzes each image, controlling up to 15 parameters to optimize the fingerprint image, without regard to unusual skin conditions or surface contamination.

High performance…
► 99% "Ability to Acquire"
► Industry's best FAR/FRR

High-rate frame capture…
► USB - 13.3 frames/second
► Parallel - 52 frames/second

Image Density…
► 250 -1000 dpi, selectable

Ultra-Small Form Factor…
► 144-pin LQFP package
► 20 x 20 x 1.4 mm
   (.79 x .79 x .055 in)

SelectaBus™…
► RS-232 serial interface
► 8-bit parallel interface
► Universal Serial Bus (USB)

Detection matrix…
► 11.43 x 11.43 mm
   (450 x 450 mils)
► 96 x 96 pixels

Operating Temperature range…
► -20°C through +45°C

Voltage Choices…
► 3.3Vdc
► 5Vdc

Power Dissipation @ 3.3Vdc…
► 11 mW (Imaging mode)
► 39.6 µW (Standby mode)

Robust Packaging…
► Scratch and impact resistant
   (stress-tested to 41,000 psi)
► Impervious to contamination

ESD Resistance…
► IEC 61000-4-2 Lvl 4 (15KV)

Supported operating systems…
► Microsoft® Windows® 95, 98, 2000, Millennium, and NT v4.0.

Superior image quality…

The result is a high-quality image that other approaches simply can't equal. This means that AuthenTec's sensors acquire fingerprints when other methods just can't cut it.

Target Applications…

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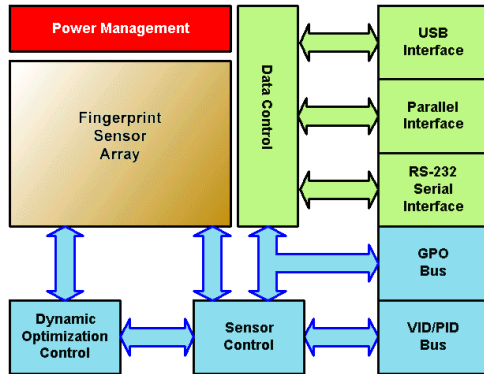
Convenient Security…

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 secure and convenient access to such equipment.

Building on Success…

EntréPad is AuthenTec's second fingerprint sensor family, complementing the FingerLoc™ security and access control line.

Both products build on AuthenTec's well-proven TruePrint™ Technology to produce the best imaging in the industry. These products combine silicon-based image capture sensors with proprietary sensor control and matching algorithms.

AES4000 EntréPad sensors incorporate flexible *SelectaBus* architecture. This new feature allows the developer to deploy designs that use not only the popular Universal Serial Bus, but also the familiar RS-232 asynchronous serial interface, or a parallel interface implementation.

- ◆ USB Low Power Version 1.1
- ◆ Bus choice is pin-selectable
- ◆ Optimized for 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.
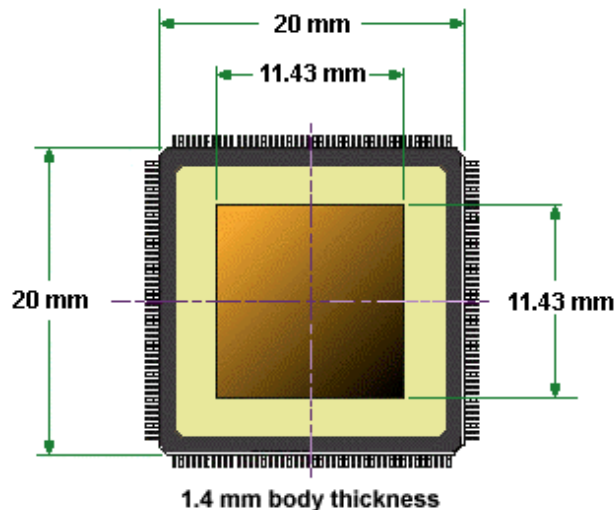
Launching your design - Fast!

AuthenTec provides a full range of hardware, software, design services, and support. A full range of software and software support tools are available, including advanced sensor control and fingerprint matching algorithms, device driver support for Windows 95, 98, 2000 and NT v4.0, and support for the industry-standard biometric Applications Programming Interfaces. All these features are conveniently bundled into developer kits:

► Technology Evaluation Kits (**TEK**s) are low cost introductions to this exciting line of AuthenTec semiconductor products.

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

► Reference Design Kits (**RDK**s) enable manufacturers of PCs, peripherals, and Personal Electronic Devices (PEDs) to quickly integrate EntréPad into their products by providing a complete hardware and software reference solution.

AuthenTec has established technology alliances with key application software developers through its world-wide Solution Providers Network (SPN). This gives instant 100% application software compatibility with all of the leading biometric PC applications.

For more information contact AuthenTec or your AuthenTec representative.

1.4 mm body thickness

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