



Preliminary

I·Control

Personal Digital Security for the Wireless World

Capacitive Fingerprint Sweep Sensor: ICS-3000

Key Features

Low Cost

- 8 Rows x 192 Columns Swipe Sensor Array
- 363-DPI Resolution (70 um pitch)
- Integrated Analog-to-Digital Converter
- Integrated Surface-Contact-Detector
- Automatic Gain Control for Gray-Scale Image

Low Power

- 2.5 V to 3.3 V Operating Voltage
- 1 mA to 25 mA in Operation
- < 50 uA in Sleep Mode
(Surface-Contact- Detection enabled)
- < 5 uA in Full Power-Down

Fast

- 40 ns Access Time
- >3700 Frames per Second

Rugged

- 15 kV ESD Tolerance

Compact

- 0.56 mm x 13.44 mm Active Sensing Area
- 2.85 mm x 16.65 mm x 0.3mm Sensor Size
- 8-bit Peripheral Bus Interface
- 50mm Flexible Printed Circuit Ribbon Cable

Personal Authentication for the Wireless World

The I-Control Fingerprint Sweep Sensor ICS-3000 is specially designed to meet the demanding requirements of mobile device security and convenience (Figure 1).

Low Cost - Low Power - 0.3mm Thin

I-Control's capacitive, solid-state sensor captures a fingerprint image frame-by-frame as a finger is swiped over the small, linear sensing area (Figure 2, page 2).

I-Control's proprietary reconstruction software and automatic gain control (AGC) re-assembles a complete fingerprint image from the received frames while maximizing contrast and sensitivity across various environmental conditions. This approach dramatically reduces sensor size, lowering cost and reducing power.

The sensor's compact size is ideal for integration into next-generation multi-function devices such as smart phones and PDA-Communicators.

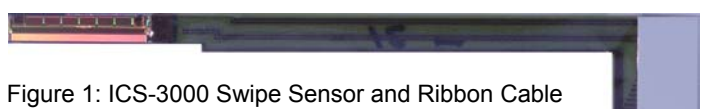
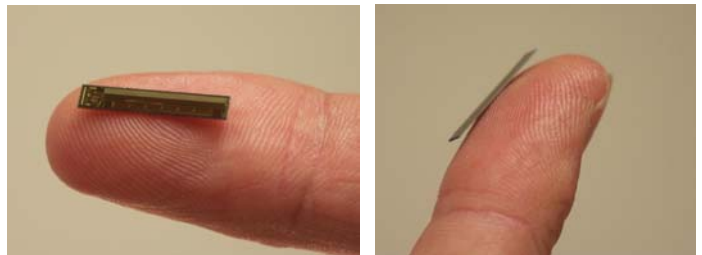


Figure 1: ICS-3000 Swipe Sensor and Ribbon Cable

Capacitive Fingerprint Sweep Sensor: ICS-3000

Target Devices and Applications

Optimized design for low cost, small physical size and minimal power consumption, the ICS-3000 is especially suited for embedded mobile devices such as:

Mobile Phones
Smart Phones
Personal Digital Assistants (PDA's)
Laptop / Notebook Computers
Smart Cards

These characteristics also make the I-Control ICS-3000 Fingerprint Swipe Sensor an ideal solution for many other devices and applications, such as:

PC Peripheral's:
USB devices and tokens, Keyboards, Mice, PCMCIA, Compact Flash, Smart Card Readers and more...
Point-of-Sale Terminals

Availability

First samples of the I-Control ICS-3000 are available. Volume shipments are expected in Q4/2002.



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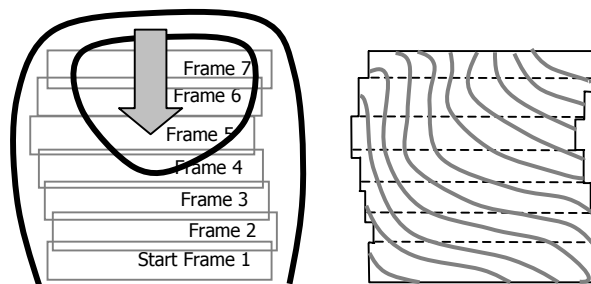
I-Control

Personal Digital Security for the Wireless World

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Finger during Swipe
(Image Frames)

Reconstructed
Fingerprint Image

Figure 2: Fingerprint Swipe & Reconstruct

Other I-Control Products

I-Swipe (Fingerprint Algorithms)

I-Control's highly portable, small footprint, fast and accurate fingerprint algorithms (including swipe image reconstruction, minutiae extraction and verification) are optimized for the processors and memory of portable devices.

I-Logon (Device Logon Software)

I-Control's software package for PDA's and Smart Phones protects sensitive personal or corporate data stored on portable devices. Information such as contact database, calendar information, emails and other private data. Prevents unauthorized access to the mobile devices and its local data.

I-Access (Authentication Server Overlay)

I-Control's network infrastructure for secure mobile authentication and transaction signing. I-Access goes beyond server-to-browser authentication, beyond local protection of the user's private key, and beyond password replacement. I-Access takes mobile authentication to a new level, through end-to-end authentication of a human being to the network service they are accessing.