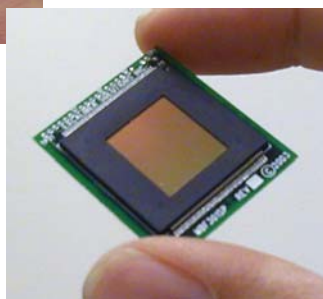


# Fujitsu Biometric Offerings



**Palm vein authentication systems**



**Capacitive fingerprint sensors and solutions**

## Which biometric technologies are being promoted by Fujitsu in the U.S.?

Fujitsu is promoting two complimentary biometric technologies for the US market:

- *Palm vein authentication systems*
- *Capacitive fingerprint sensors and solutions*

Fujitsu recently announced the palm vein authentication system, which is based on Fujitsu optical sensing technology and visual recognition intelligence.

In addition, Fujitsu has manufactured fingerprint sensors for over 5 years, and these sensors are shipping in many products today.

## How does the Fujitsu palm vein technology work and what are the benefits?

The Fujitsu palm vein scanner captures the hand's vein pattern using near-infrared light to create a "vein map". Over 140,000 palm vein patterns have been tested by Fujitsu, resulting in a false acceptance rate of <0.00008% and false rejection rate of <0.01%. The key benefits include:

- *Difficult to forge: Vein patterns are difficult to recreate because veins are inside the hand and blood needs to flow to register an image.*
- *Contact-less: Users do not touch the sensing surface, which improves hygiene concerns and user acceptance.*
- *Uses: Deployed in ATMs, hospitals and universities in Japan. Applications include ID verification, high security physical access control, high security network data access, POS access control, etc.*
- *Capable of 1:1 and 1:many matching. Users' palms are matched against personalized ID cards/smart cards or against a database of many scanned palms.*

## How does Fujitsu fingerprint technology work and what are the benefits?

Fujitsu fingerprint sensors are small silicon devices that measure the varying capacitance of skin to capture the fingerprint data. The key benefits include:

- *Size: MBF310 sweep smaller than a key hole (0.035 x 0.24 x 0.63in)*  
*MBF200 touch smaller than a postage stamp (0.6 x 0.94 x 0.94in)*

- *Low cost*
- *Industry Standard Resolution: Meets US Government 500 dpi.*  
*Works with leading algorithms: Cogent, NEC, Motorola, & others.*
- *Low power: <10 ma during active scanning (sweep sensor).*
- *Image quality: Reliable image capture for many finger types including dry fingers and fine ridges.*
- *Proven applications: USB flash drives, cell phones, notebook PC's, PDA's, door locks, keyboards, ID cards and many other devices.*

**How do the palm vein and fingerprint technologies compare?**

The Fujitsu palm vein sensors are best for high-security, multi-user applications such as ATM's and kiosks, door lock and integrated building security systems and other security systems where throughput, low false-rejection rate and improved forgery protection are important.



**ATM's and kiosks**



**Security systems**



**Log-In Control**

The Fujitsu fingerprint sensors are best for devices such as cell phones, USB flash drives, notebook computers and other applications where price, size, cost and low power are key requirements.



**Mobile access applications**



**USB flash drives**



**Computer peripherals and physical access systems**

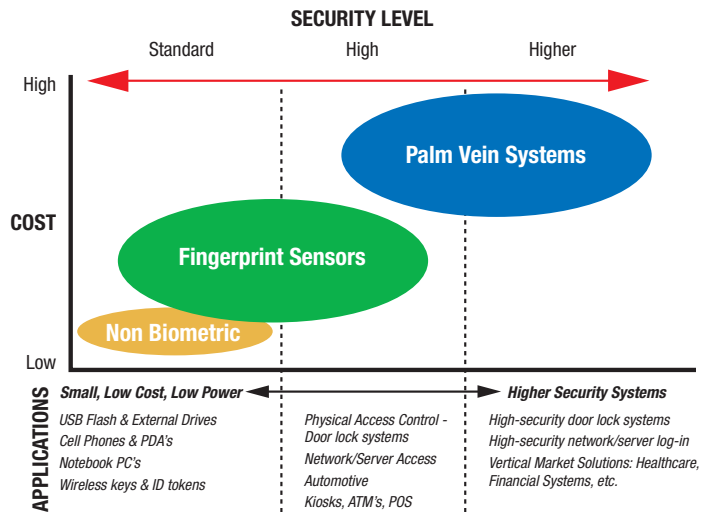
**What are the advantages for Fujitsu having these two biometric offerings?**

Having two technology offerings, Fujitsu is able to address wider biometric needs and applications.

These two offerings show the commitment made by Fujitsu to biometric technologies and solutions.

Fujitsu is able to address multi-biometric solutions that require two or more different biometric technologies to increase security levels.

**Fujitsu Biometric Solution Map**



**Where can I find more information on Fujitsu fingerprint sensors and palm vein sensors?**

Fujitsu fingerprint sensors are marketed in the US by Fujitsu Microelectronics America (FMA).  
Web: [www.fma.fujitsu.com](http://www.fma.fujitsu.com) and select "biometric sensors" or [www.fujitsu.com.us/services/edevices/microelectronics/biometricsensors/](http://www.fujitsu.com.us/services/edevices/microelectronics/biometricsensors/)

Fujitsu palm vein sensors are marketed in the US by Fujitsu Computer Products of America. (FCPA)  
Web: [www.fcpa.fujitsu.com/products/new-technologies/](http://www.fcpa.fujitsu.com/products/new-technologies/)

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**About Fujitsu Microelectronics America, Inc.**

Fujitsu Microelectronics America, Inc. (FMA) leads the industry in innovation. FMA provides high-quality, reliable semiconductor products and services for the networking, communications, automotive, security and other markets throughout North and South America. For more information about biometric sensor ICs please see <http://us.fujitsu.com/micro/biometricsensors> or please address e-mail to [inquiry@fma.fujitsu.com](mailto:inquiry@fma.fujitsu.com)

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