Vein Recognition Technology Offers Robust Biometric Authentication to Enhance Physical Access Security

The Fujitsu PalmEntry access control system available from PCSC, is a robust authentication system that utilizes vascular pattern biometric technology to deliver fast and convenient identification. This award-winning innovation offers secure physical and logical access control to customers in healthcare, financial services, government, retail, education and other industries.

- Contactless palm vein authentication is fast, hygienic and non-invasive
- No biometric footprint or residual trace left behind
- Advanced biometric authentication algorithm produces a high level of accuracy with low FAR (false accept rate) and FRR (false reject rate)
- Fast and easy enrollment, virtually no registration failure
- Robust biometric controller can be mounted remotely in secure area
- Encrypted template repository
- Compact design with flexible integration for easy installation into existing access control systems via Wiegand or IP interfaces

Contact your PCSC Representative for further details  800.899.PCSC  Sales@1pcsc.com  PCSCsecurity.com
Award-Winning biometric authentication technology for secure access

PalmSecure Vein Recognition Technology Offers Robust Biometric Authentication to Enhance Physical Access Security

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- No biometric footprint or residual trace left behind after authentication
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- Fast and easy enrollment for all users with virtually no registration failure
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- Compact design with flexible integration for easy installation into existing access control systems via Wiegand or IP interfaces

Note: This product is EOL.
Award-Winning biometric authentication technology for secure access

The Fujitsu PalmEntry access control system, a robust authentication system that utilizes vascular pattern biometric technology to deliver fast and convenient identification. This award-winning innovation offers secure physical and logical access control to customers in healthcare, financial services, government, retail, education and other industries with a highly reliable, contactless biometric authentication solution that is non-intrusive and easy to use.

The Fujitsu PalmSecure sensor uses near-infrared light to capture a person’s palm vein pattern, generating a unique biometric template that is matched against pre-registered user palm vein patterns. The palm vein device can only recognize the pattern if the blood is actively flowing within the individual’s veins, which means that forgery is virtually impossible. This advanced, vascular pattern recognition technology not only provides highly reliable authentication with low false accept and reject rates, but also generates fast and easy enrollment.

Compared to fingerprint and other biometric authentication technologies, the Fujitsu PalmEntry Access Control system is a hygienic, contactless solution that is highly applicable to all users including children. PalmSecure authentication is not affected by the presence of hand lotions, chemicals, abrasions, skin conditions or effects of cold environments. PalmEntry access control provides enterprises with a superior security alternative and users will enjoy the fast, simple, and non-intrusive access. It is the ideal solution for secure areas, schools, daycare centers and medical facilities.

The Fujitsu PalmEntry Physical Access Control technology delivers advanced biometric authentication that is easy to integrate into existing hardware infrastructures. To meet multi-factor authentication requirements, the system can be integrated with other modalities including pin pad, magnetic swipe, proximity card, and smart card technologies. Its flexible and scalable PalmEntry Access Control Software can be easily configured to interface with existing access control systems.

PalmEntry Access Control Specifications

**Authentication Support**
- PalmEntry controller can support up to 20,000 templates locally
- PalmEntry Server Software can support unlimited templates

**Interface IO**
- Two USB 2.0, CAT-5, Wiegand IN / OUT, LED cable

**Ethernet**
- 10/100Base-T, SMCS PHY

**Wiegand Inputs / Outputs**
- Supports 26 bit, Corporate 1000™
- Wiegand input for secondary authentication device

**Palm Capture Distance**
- 2 inches from the surface of the sensor (+/- a half inch)

**Reliability**
- MTBF (mean time between failure): 830,000 hours for sensor only, 250,000 hours for controller only

**LED's**
- 4 LED’s (Ready, Busy, Access granted, Access denied)

**Supply voltage**
- 12V to 24V external supply, PoE (if available)
- PoE 802.3af (12.5W)

**Power consumption**
- 6W

**Operating temperature**
- 0°C to 50°C

**Outer dimensions (DxWxH)**
- Controller: 106 x 95 x 28 mm, Handguide: 180 x 111 x 30 mm*

**Supported OS**
- Windows XP

**Safety / Agency Approvals**
- UL 60950-1, CE (EN 55022, EN 55024), FCC (Class A, Part 15)

* excluding optional wall mount bracket

Available through PCSC
Visit http://www.PCSCsecurity.com/PalmEntry
Phone: +1-310-303-3600

Fujitsu Frontech North America

shaping tomorrow with you
Biometric Access Control System Delivers Secure, Convenient Access

PalmSecure Vein Recognition Technology Offers Robust Biometric Authentication to Enhance Physical Access Security

- Contactless palm vein authentication is fast, hygienic and non-invasive
- No biometric footprint or residual trace left behind after authentication
- Fast and easy enrollment for all users with virtually no registration failure
- Robust biometric controller can be mounted remotely in secure area
- Encrypted template repository secures user information
- Compact design for easy installation into standard single or 2-Gang Box
- Configurable as a standalone system or integrated to your existing access control solution via Wiegand or IP interfaces

Benefits

- Eliminate fraud associated with shared PIN numbers and cards
- Improve user convenience (no PIN number or cards to worry about forgetting)
- Slash ongoing support costs by replacing keys, PINs and cards
- Enhance Security- easily integrates into existing or new systems
- Easily configurable for single or two factor solutions

Note: This product is EOL.
Award-Winning biometric authentication technology for secure access control

The Fujitsu PalmEntryXS access control system, is a robust authentication system that utilizes vascular pattern biometric technology to deliver fast and convenient identification. This award-winning innovation offers secure physical and logical access control with a highly reliable, contactless biometric authentication solution.

The Fujitsu PalmSecure sensor uses near-infrared light to capture a person’s palm vein pattern, generating a unique biometric template that is matched against pre-registered user palm vein patterns. The palm vein device can only recognize the pattern if the blood is actively flowing within the individual’s veins, which means that forgery is virtually impossible. This advanced, vascular pattern recognition technology not only provides highly reliable authentication with low false accept and reject rates, but also generates fast and easy enrollment.

It is the ideal solution for secure areas, data centers, manufacturing labs, schools, daycare centers and medical facilities.

Unlike other biometric technologies, Fujitsu’s PalmSecure does not rely on capturing a surface feature (such as a fingerprint, iris, face or voice image).

As a result, Fujitsu PalmSecure technology is:

- **Highly accurate**
- **Significantly harder to spoof or counterfeit** since no ‘biometric footprint’ is left behind (unlike a latent fingerprint, face, or iris picture or voice recording).
- A non-contact, hygienic technology (extremely important in hospitals and ‘public use’ applications).
- ‘Non-intrusive’ and easy to use, (simply place the palm approximately 2” above the reader).
- **Not subject to surface conditions** that cause other biometrics to perform poorly (such as dry skin, cuts or abrasions, facial hair, glasses, contacts, or sore throat).

Available through PCSC
Visit [http://www.PCSCsecurity.com/PalmEntry](http://www.PCSCsecurity.com/PalmEntry)
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**Note:** This product is EOL.
Palm vein authentication is an authentication technology that verifies an individual’s identity by recognizing the vein pattern in the palm. PalmSecure™ by FUJITSU FRONTECH adopts this technology. The palm vein device captures a person’s vein pattern using near-infrared rays. This captured vein pattern is verified against a pre-enrolled pattern to authenticate the individual.

**Feature**

- **Contactless**
  Because of its contactless feature, it is very hygienic and stress free for public use.

- **Easy to Use**
  Just hold your palm over the device, it captures your vein pattern instantly.

- **Non traceable**
  Because of contactless operation, leaves no biometric footprint behind.

- **Advanced Authentication Accuracy**
  Our palm vein authentication realize advanced authentication accuracy because the palm vein pattern has many and large size of blood vessels.
  False Rejection Rate : 1.00%(No retry), False Acceptance Rate : 0.00001%

- **High Security and Applicability Rate**
  Difficult to forgery the palm vein data because it is inside the body.
  Almost everyone can use it.
### Specifications of PalmSecure™ Sensor

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading system</td>
<td>Reading by near-infrared light</td>
</tr>
<tr>
<td>Capturing distance</td>
<td>40 to 60mm</td>
</tr>
<tr>
<td>Dimensions</td>
<td>35(W) x 35(D) x 27(H) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Below 35g</td>
</tr>
<tr>
<td>Voltage of Power supply</td>
<td>4.4 to 5.4V (USB bus power)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>2.5W (Max)</td>
</tr>
<tr>
<td>Host interface</td>
<td>USB2.0 (only Hi Speed).</td>
</tr>
<tr>
<td>Interface connector</td>
<td>Series “mini-B” plug (with 5 pins)</td>
</tr>
<tr>
<td>Interface cable</td>
<td>Maximum operable length of cable: 4m</td>
</tr>
<tr>
<td></td>
<td>&lt;Recommended connector at the sensor side&gt;</td>
</tr>
<tr>
<td></td>
<td>ACON brand: MNC12-5K5210 or equivalent</td>
</tr>
<tr>
<td>OS</td>
<td></td>
</tr>
<tr>
<td>OS</td>
<td>Professional Edition</td>
</tr>
<tr>
<td></td>
<td>- Windows 7 SP1 (x86 and x64) Professional</td>
</tr>
<tr>
<td></td>
<td>- Windows 8.1 Update (x86 and x64) Pro</td>
</tr>
<tr>
<td></td>
<td>- Windows 10 (x86 and x64) Pro</td>
</tr>
<tr>
<td></td>
<td>- Linux (x64)</td>
</tr>
<tr>
<td></td>
<td>(kernel 2.6.32 or later)</td>
</tr>
<tr>
<td></td>
<td>*1</td>
</tr>
<tr>
<td></td>
<td>Enterprise Edition</td>
</tr>
<tr>
<td></td>
<td>- Windows Server 2008 R2 SP1 (x64)</td>
</tr>
<tr>
<td></td>
<td>- Windows Server 2012 (x64)</td>
</tr>
<tr>
<td></td>
<td>- Windows Server 2012 R2 Update (x64)</td>
</tr>
<tr>
<td></td>
<td>- Linux (x64)</td>
</tr>
<tr>
<td></td>
<td>(kernel 2.6.32 or later)</td>
</tr>
<tr>
<td></td>
<td>*2</td>
</tr>
<tr>
<td>Encryption scheme</td>
<td>AES (Length of cryptography key more than 128 bit)</td>
</tr>
<tr>
<td>Temperature</td>
<td>0 to 60 degrees Celsius</td>
</tr>
<tr>
<td>Humidity</td>
<td>10 to 90%RH (Non-condensing)</td>
</tr>
<tr>
<td>Lighting environment</td>
<td>Authentication</td>
</tr>
<tr>
<td></td>
<td>- Natural light (sunlight) : Below 3000 lux</td>
</tr>
<tr>
<td></td>
<td>- Fluorescent lamp, LED : Below 3000 lux</td>
</tr>
<tr>
<td></td>
<td>- Incandescent/Halogen lamps : Below 700 lux</td>
</tr>
<tr>
<td>Enrollment</td>
<td>Authentication</td>
</tr>
<tr>
<td></td>
<td>- Natural light (sunlight) : Below 2000 lux</td>
</tr>
<tr>
<td></td>
<td>- Fluorescent lamp, LED : Below 2000 lux</td>
</tr>
<tr>
<td></td>
<td>- Incandescent/Halogen lamps : Below 500 lux</td>
</tr>
<tr>
<td></td>
<td>(Avoid direct light on the surface of sensor unit)</td>
</tr>
</tbody>
</table>

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# Specifications of PalmSecure™ Sensor

## Item Specifications

### Authentication rate
- FRR: 1.00% (No Retry), FAR: Below 0.00001% *3

### Authentication time
- **<Conditions>**
  - Intel® Core i5 3.60GHz
  - Authentication library SDK V02

  - Verification (1:1) : 1 second.
    * Capture: 0.85 Sec. Verify: 0.15 Sec.

  - Identification (1:N) : 4 seconds
    * Capture: 0.85 Sec. Identify: 3.2 Sec.

- New F33 method N=5000 hands (2500 people) *4

### Reliability
- MTBF : 1,000,000 hours
- Life of unit : 5 years

### Applicable standard
- Electromagnetic wave standard : VCCI ClassB, FCC ClassB, EN ClassB
- Safety standard : UL60950-1, EN60950-1
- Environmental regulation : Conforms to RoHS and WEEE

*1: Sensor connected to client devices will be able to perform enrollment, identification, authentication function.
*2: Only to perform authentication by request of sensor from client side.
*3: Verifying (1 to 1 authentication) with new I33-format type. Measuring method conforming to ISO/IEC 19795-1.
*4: Authentication time depends on the operating environment.
  Customers are responsible for confirming authentication time in their operating environment.

* PalmSecure and the logo of PalmSecure is a trademark.
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