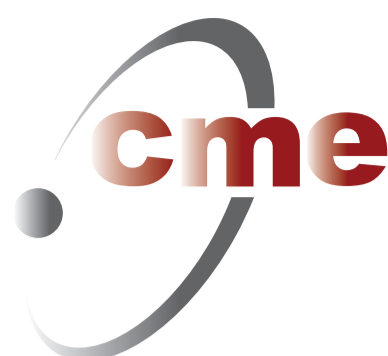


# Access and Time & Attendance Control Solution with Vein recognition Biometric System



## Finger Vein

### Why FingerVein is a better option...

#### Highly Reliable

The Vein pattern is inside the body and is difficult to steal or damage.  
 FingerVein pattern right from the time of birth till death remains unique and unchanged  
 High accuracy deters fraud  
 No age factor decides quality of FingerVein pattern

#### Easy to Use

Clean Contactless capturing of patterns with near infrared light  
 Easy to use for everyone just by placing a finger on the device  
 Speed of Vein pattern recognition is within a second  
 Device shape designed for handicapped persons to easily find the correct position of the finger

**“ A human being is a single being. Unique and unrepeatable ”**

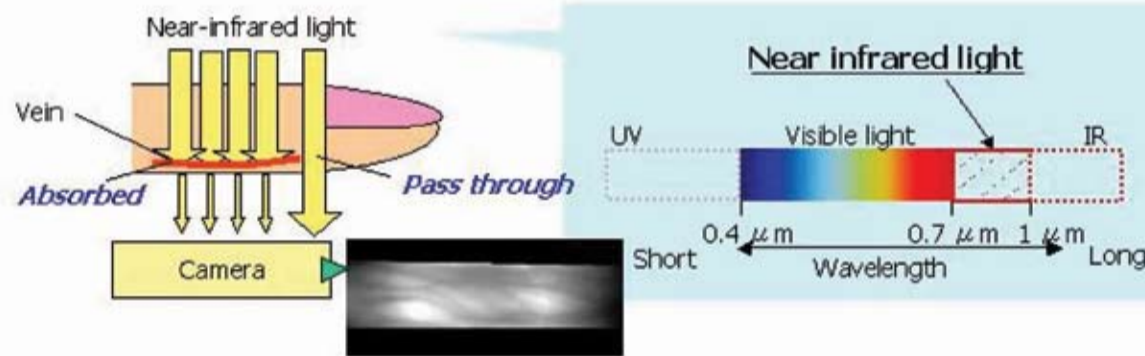
## FINGER VEIN IMAGING TECHNOLOGY

- Near-infrared light is projected through a finger
- This light is absorbed by haemoglobin in the blood.
- The vein pattern is captured as shadow
- Near-infrared light is not harmful to human body

	Security		Practicality				
	Anti-forgery	Accuracy	Speed	Enrollment	Convenience	Cost	Size
Fingerprint	✗	●	●	✗	●	✓	✓
Iris	●	✓	●	●	✗	✗	✗
Face	●		●	●	✓	✗	✗
Voice	●	✗	●	●	✓	●	●
Finger Vein	✓	✓	✓	●	●	●	●

Key: ✗ Poor, ● Average, ✓ Good

Table 1 Qualitative Comparison of Major Biometric Methods



#### Technical Specifications:

Biometric sensor	Vascular finger sensor (Finger Vein).
Identification / Biometric verification	1:N; 1:1.
Maximum users number (1 pattern per user)	1.000.
Maximum Loggings	15.000
Maximum number of customizable messages	As much as users
Number of relays	4 relays (optional up to 6)
Digital inputs	4 digital inputs
RS-232	9600, 19200, 38400 bps integrated on board
UDP, TCP/IP	Integrated on board
Wi-Fi	Optional module
Offline / Online programming	OCX / ASCII lays
Timetable balance	Via software
Remote module control	Available for relays, readers, display and keyboard
Firmware	Upgradeable via RS-232 or TCP/IP
Operative temperature / Humidity	5°C to 45°C / 15% to 85% relative
Max. environmental luminosity	2300 lux
Environmental dust	0.15 mg/m <sup>2</sup>
Stainless steel box	Estimated 14,8h x 20,7 x 5,9 (8,2) cm / 1,8kg.
Office box	16,5h x 22,1 x 6,1 cm. / 700 gr.



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