



# New Generation EL SMART Biometric ID for Enterprise Solutions

## ELSMART FINGERVEN BIOMETRIC



The EISmart New Generation Finger Vein biometric Reader is a non-intrusive biometric device utilizing industry leading finger vein technology and is built on the EISmart ID Authentication platform. Finger vein technology uses near-infrared light to gather biometric data resulting in extremely consistent and accurate processing, making the solution ideal for many types of applications. Finger-Vein Biometric Authentication is based on unique vascular patterns which are located inside the human finger pattern. These patterns are unique therefore, it's very difficult to replicate or obtain finger vein patterns.

Vein recognition technology is gaining a higher popularity due to the Accuracy, Security (based on unique physical and behavioral traits), High processing speed, Cost effective and physical dimensions. It is used by many sectors including Bank-ATM, Logic Access, Hospitals, Boarder crossing, Law Enforcement, Corporate, Education, HR & Security and many other sectors and applications.

Compared with other biometrics, Finger Vein offers significant advantages such as high accuracy rates, high resistance to criminal tampering, speed of authentication and compactness

Vein recognition biometrics is particularly impressive and promising technology because it requires only a single-chip design, meaning that the units are relatively small and cost effective. The ID verification process is very fast and contact-less. Using a light-transmission technique, the structure of the vein pattern can be detected, captured, secured and subsequently verified.

EISmart Biometric ID solution offers a dual-factor authentication using ID number or Smart card along with Finger Vein biometric sensor for 1:1 verification against the biometric template stored in the central database. This scheme will provide extremely fast verification times (less than 2 sec) and independent of the size of the population. EISmart solution complete SDK support developed to easily integrate the ID solution with customer's ERP, Hospital Management System (HMS), Student Information System (SIS) or other Custom Database applications. Electronia provides customization support of the interfaces to suit specific customer application requirements.

The new generation Finger Vein sensor has excellent Fraud detection capabilities. The stability and environmental resistance of the finger vein provides superior advantages.





## TECHNICAL SPECIFICATIONS

<b>General</b>	
Application	Personnel Identification Management (Patient ID, Staff ID, Student ID), Attendance System, Access Control, E-Gate, Immigration systems, Pension Systems
Mode-of-Operation	Enrollment (Biometric Template capture), Template Storage in Centralized Database Server and Smart card (optional). Verification of stored Finger vein template with live image
Template Storage	Centralized Database Server and Smartcard (optional)
Verification Mode	ID Number + Finger Vein, Smart Card + Finger Vein (optional)
<b>Performance</b>	
Age Group Supported	10 years to 85 years
Enrollment Time (capture time)	Quick capture <2.0 seconds
Verification Time	Fast verification <2.0 seconds
Accuracy of verification	False Acceptance Rate (FAR) 0.0001% False Rejection Rate (FRR) 0.01%
Ease of enrollment (Availability)	Almost all of people can use finger vein authentication The failure to enroll (FTE) rate is 0.03%.
Tolerance	High tolerance of skin surface problems, e.g. roughness, moisture, dirt. The recognition is relatively insensitive to factors such as dirt, sweat or grease on the finger, or surface injury.
Number of Fingers	All 10 fingers can be captured and used for verification
<b>Integration Software Support</b>	
Integration support with Enterprise application	Available using high level SDK interface
Software Interface platform	Microsoft .NET Framework 3.5
Database Support	MSSQL2008, ORACLE 9i+
Web application interface Support	Web interface using WCF/SOAP/XML protocols
Client/Server application interface support	DLL and Function calls (included)
<b>System Capability</b>	
Maximum number of ID records supported	Unlimited
Biometric data security	Uses one directional Hash function to secure data as in the template. Impossible to recreate an image from template
<b>Mechanical</b>	
Dimensions	
Mechanical	Compact Desktop unit
<b>Environmental</b>	
Operating Temperature	0°C to + 35°C
<b>Communications</b>	
Interface	USB 2.0
<b>Power Supply</b>	
Operating Voltage	5V DC +/-5%, Current < 500mA, PC USB port powered

