Dual-Modal Palmprint Recognition Identity VP530D

Leading a new era of digital identity verification

Palm Veins | Camera RGB/IR | Recognition Time <450ms | Custom Lighting System | Polarization Lighting System | FOV (7-15cm)

VP530D

With the increasing pace of digital transformation and the move towards a cashless society, secure and convenient identity verification has become a necessity. Our palm vein technology utilizes the unique, deeply embedded vein patterns of each individual, offering the perfect combination of ultimate security and a seamless user experience.

HF-VP530D   employs a dual-mode RGB and infrared palm print/palm vein camera, integrating high-precision optical technology, a high-performance image signal processor, and an artificial intelligence module. Utilising a unique software-based automatic exposure algorithm, it achieves efficient palm detection and closed-loop automatic exposure of palm images across diverse lighting conditions, including low-light environments, thereby producing high-quality palm print and palm vein images.
Palm ID identity verification and access control for subway turnstiles.

Why palm vein recognition -Why HFSecurity -Why NOW

☒Pain point: Cumbersome and insecure access control management for businesses and buildings.

☑Solution: Palm vein access control system enables truly seamless access and precise auditing.

☑Customized Development: Tailored solutions based on your business processes.

☑Localized Services: Local language support (Vietnamese, Indonesian, French, etc.), technical support, on-site installation and training, and rapid response maintenance.

☑Marketing: Collaboratively explore markets, educate users, and establish industry benchmarks.

☑Free: SDK, API

Features

System Requirements

★Image processing performed within the camera module

★The host computer must run palm print/palm vein recognition algorithms, including liveness detection and feature extraction. A system with computing power equivalent to at least an Arm 4A17@1.8GHzis recommended.

Palm Vein Access & Attendance Terminal

Applications:
Office buildings, data centers, factories, laboratories, high-end apartments.

Functions:
Provides the highest level of security with palm vein access control and automatically generates accurate attendance records.

Palm Vein Identity Verification Kiosk

Scenarios:
Bank account opening, telecommunications service centers, government service halls, hospital registration.

Function:
Used for high-security identity verification processes, ensuring that the person matches the identification document, and preventing financial fraud and identity theft.

★Palm vein dual mode.

★Polarization lighting system

★RGB/IR image alignment

★Built-in Palm AE

★Custom interactive lighting system

★Large field of view (FOV), 7-5 cm brush-pal working distance

Embedded Palm Vein Module

Scenario:
For partners to integrate into their own devices such as ATMs, smart door locks, safes, and self-service machines.

Features:
Compact size, low power consumption, and universal interface, quickly empowering your products with top-tier biometric capabilities.

Module Parameters

Model	HF-VP530D
Dimensions	Length 53.33mm *Width 53.33mm*Height 14.43mm
Camera	RGB/IR
Interface	USB Type -C port (USB 2.0 protocol)
Palm Scanning Working Distance	7-15cm
Operating Voltage	5V
Supply Current	0.5A @5V
Module Power Consumption	Average 2.5W
ESD Rating	Contact discharge±4KV, air discharge ±8KV

Algorithm Performance

Palm-Scanning Angle	Pitch angle ≤ 30°, Roll angle ≤ 30°, Yaw angle ≤ 360°
Comparison Mode	1v1, 1vN
Accuracy	FAR ≤ 0.0001% FRR ≤ 0.01%
Host Computer Processing Requirements	Recommended ≥ 4*A17 @1.8GHz
Algorithm Deployment Options	Supports local deployment

Firmware and SDK Capabilities

Recognition Time	≥450ms
Image Processing	Built-in high-performance ISP / Built-in Palm AE
Security	Palm feature information encryption
OTA Support	Supports USB upgrades

Operating Environment

System Compatibility	Supports Android 7+; Supports Windows 10+
Testing Environment	Indoor / Semi-outdoor
Operating Temperature	-10°C to 50°C
Relative Humidity	10-90%

Storage Environment

Illuminance	0 to 50,000 Lux (Module not exposed to direct sunlight)
Storage Temperature	- 40°C to 85°C
Relative Humidity	10% to 95%

VP530D Component Introduction

Type C Interface	Number 1
RGB Camera	Number 2
IR Camera	Number 3
Light Diffuser Ring	Number 4

★Software Secondary Development

Customers may utilise the HF Palm SDK for secondary development.
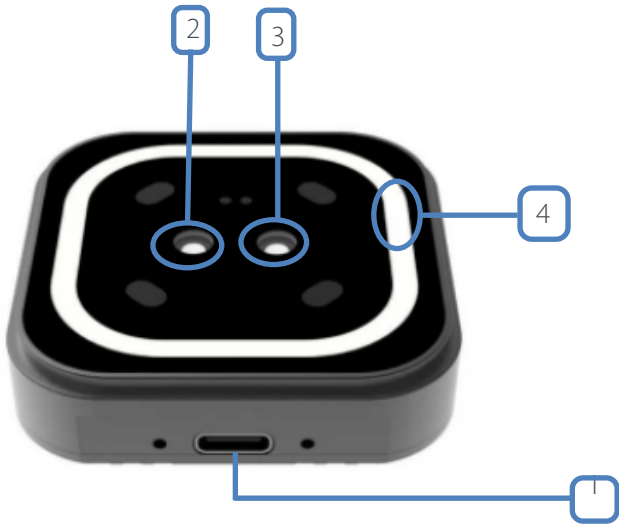
· VP530D Component Overview ·