



HF-VP530D integrates a dual-mode RGB and infrared palm print/palm vein camera, high-precision optical technology, a high-performance image signal processor, an AI-powered recognition module, and QR code scanning capability. Powered by a unique software-based automatic exposure algorithm, it enables efficient palm detection and closed-loop exposure control under various lighting conditions, including low-light environments, delivering high-quality palm print and palm vein images with reliable recognition performance. Supporting palm ID and QR code identity verification, HF-VP530D provides a secure and flexible access control solution for subway turnstiles and other high-security scenarios.

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@1.8GHz is recommended.

Features

- ★Finger print / Palm vein dual mode.
- ★QR Code Recognition
- ★Polarization lighting system
- ★RGB/IR image alignment
- ★Palm AE inside
- ★Custom interactive lighting system
- ★Large field of view (FOV), 7-15 cm brush-pal working

distance

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 ± 4 KV, air discharge ± 8 KV

Algorithm Performance

RE Rating	Complies with GB 9254 CLASS B Specification
Palm-Scanning Angle	Pitch angle $\leq 30^\circ$, Roll angle $\leq 30^\circ$, Yaw angle $\leq 360^\circ$
Comparison Mode	1v1, 1vN
Accuracy	FAR $\leq 0.0001\%$ FRR $\leq 0.01\%$
QR Code Recognition	Supports
Host Computer Processing Requirements	Recommended ≥ 4 *A17 @1.8GHz
Algorithm Deployment Options	Supports local deployment

Firmware and SDK Capabilities

Recognition Time	≤ 450 ms
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

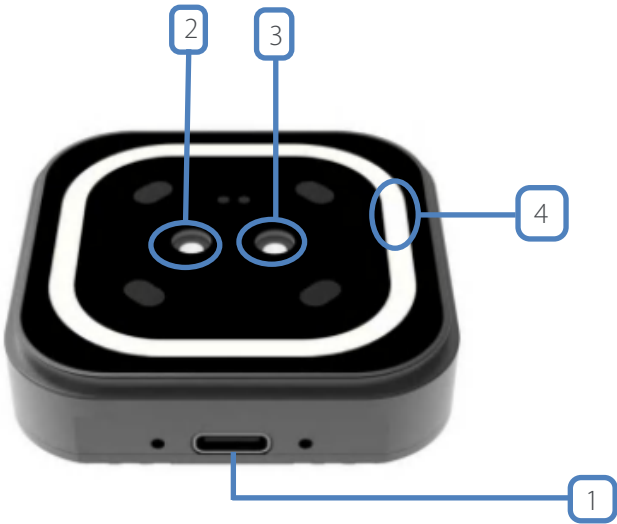
Illuminance	0 to 50,000 Lux (Module not exposed to direct sunlight)
Storage Temperature	- 40°C to 85°C
Relative Humidity	10% to 95%

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 ·

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