DEPTRUM
光鉴科技

Deptrum® Veinshine 05

Product Specification

V1.1 - 2026/09/30

1 Revision History

Version	Description	Date	Revised by
V1.1	Official release	2026/09/30	Yan Qizhan



Product appearance

2 Product Overview

Introduction

The Deptrum® Veinshine 05 IR palm-vein camera combines high-precision optics with a high-performance ISP and AI module. Its proprietary software AE algorithm enables efficient palm detection and closed-loop palm image AE under a wide range of ambient conditions (including low light), delivering high-quality palm-vein images.

System Requirements

Palm-vein image processing and algorithms run inside the camera module; the host device runs the palm-print and palm-vein recognition algorithms including liveness detection and feature extraction, while the upper computer only performs feature matching.

Product Features

- IR palm-vein imaging
- Infrared fill-light system
- Built-in PalmAE
- On-module palm-scan algorithm
- 5 ~ 12 cm palm-scan working distance

Applications

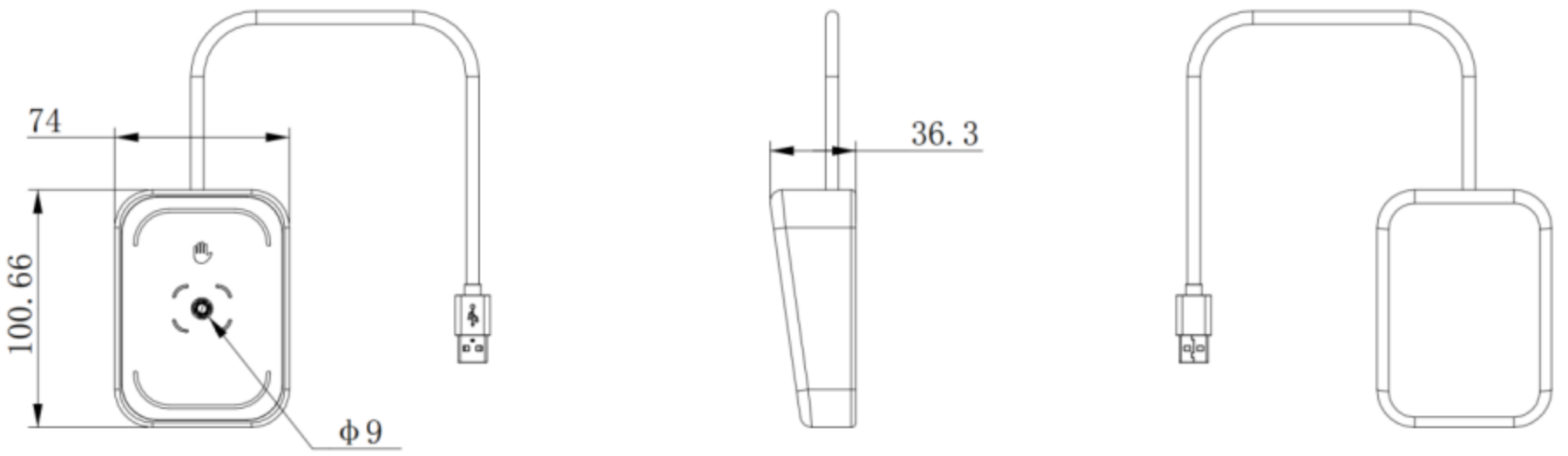
- PalmID identification and access control
- Smart door access
- Turnstile control

3 Core Specifications

Veinshine 05 Product Specifications		
Module Parameters	Overall Dimensions	100.66 × 74 × 36.3 / 23.01 mm (incl. USB cable)
	Camera	IR camera
	Interface	USB 2.0, 1.2 m cable
	Palm-Scan Working Distance	5 ~ 12 cm

	Operating Voltage	5 V
	Supply Current	> 0.5 A @ 5 V
	Module Power Consumption	1.2 W average
	ESD Level	Contact discharge ±4 kV, air discharge ±8 kV
	RE Level	Complies with GB 9254 Class B
Palm-Vein Recognition Performance	Palm Recognition Pass Rate	98% @ 5,000 ID
Algorithm Performance	Palm-Scan Angles	Pitch ⩽ 30°, Roll ⩽ 30°, Yaw ⩽ 360°
	Host Computing Requirement	⩾ 4 × A7 @ 1.2 GHz
	Deployment Options	On-module front-end algorithm, local deployment, or cloud deployment
Firmware & SDK Capabilities	Image Processing	High-performance ISP / built-in PalmAE / IR feature extraction algorithm
	Security	Palm feature encryption
	OTA Support	USB firmware upgrade
	OS Compatibility	Android 7 / 8 / 9 / 10 / 13; Windows 10 / 11

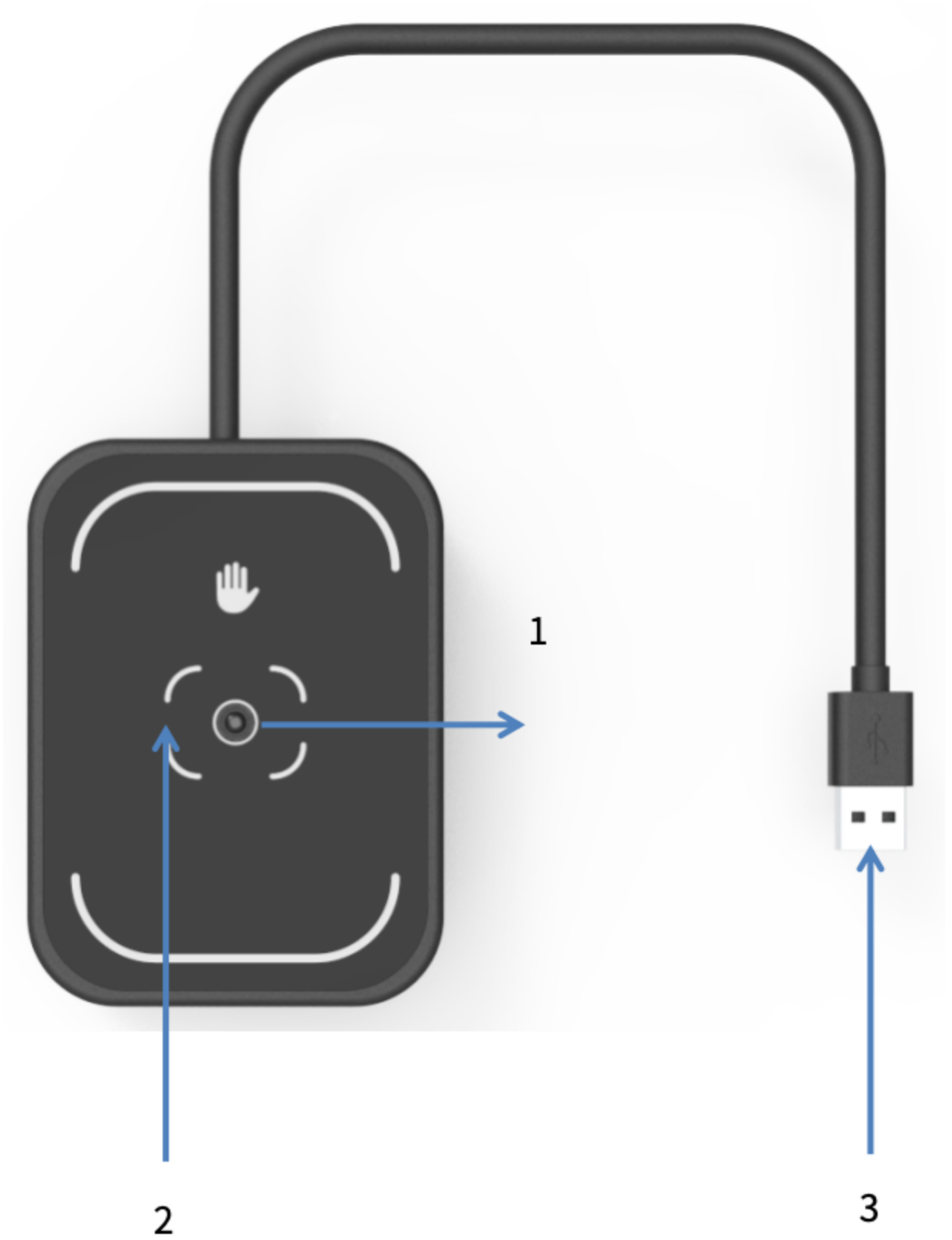
4 Product Dimensions & Structure



Dimension drawing

4.1 Product Description

The Veinshine 05 module consists of an IR camera, IR fill-in illuminators, a USB interface, and the enclosure. Overall dimensions are 100.66 × 74 × 36.3 / 23.01 mm with an integrated 1.2 m USB cable, suitable for desktop or embedded integration.



Veinshine 05 component numbering diagram (numbered components correspond to the product components table)

Product Components	No.
IR camera	1
IR fill-in illuminator	2
USB interface	3

5 Environment & Reliability

Item	Parameter	Specification
Operating Environment	Temperature	-10°C ~ +50°C
	Relative Humidity	10% ~ 95%, non-condensing
	Illuminance	0 ~ 10,000 lux (module not exposed to direct sunlight)
Storage Environment	Temperature	-40°C ~ +85°C
	Relative Humidity	10% ~ 95%, non-condensing

6 EMC

Item	Specification
ESD Level	Contact discharge ±4 kV, air discharge ±8 kV
Radiated Emission (RE)	Complies with GB 9254 Class B

7 Software Development

Customers can develop with the Deptrum Palm SDK, which supports Windows / Linux / Android platforms and x86_64 as well as ARMv7 / ARMv8 architectures, with specific optimizations for embedded platforms. Refer to the documentation bundled with the SDK for details.

8 Disclaimer

The device application information and similar content described in this publication are provided for your convenience only and may be superseded by updated information. It is your own responsibility to ensure that your application complies with the technical

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9 Technical Support

You can obtain support through the following channels:

- Email support: please send your questions to support@deptrum.com
- FAE support: please contact our sales team for FAE support arrangements

10 Precautions

- Do not heat this product with any other heat source.
- Do not drop or impact this product, to prevent damage to internal components and accuracy degradation; improper handling may damage internal components.
- Do not attempt to modify or disassemble this device in any way, to avoid product damage and accuracy degradation.
- The product may heat up after extended use; this is normal. Thermal dissipation can be applied on the back of the product.
- Do not store the product in high-temperature, high-humidity environments, to prevent accuracy degradation or functional failure.