

Deptrum® Veinshine 01

Product Specification

V2.3 - 2026/09/30

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1 Revision History

Revision	Description	Date	Revised by
V2.3	Official release	2026/09/30	Yan Qizhan



Figure: Product appearance

2 Product Overview

Product Introduction The Deptrum® Veinshine 01 high-definition RGB palm-print + IR palm-vein camera adopts high-precision optical technology, combined with a high-performance ISP and AI module. Based on a unique software AE algorithm, it achieves efficient palm detection and closed-loop auto exposure of palm images under various environmental conditions (including low-light environments), delivering high-quality palm-vein images. System Requirements Palm-vein image processing and algorithms are executed within the camera module; the host PC must run the palm-vein recognition algorithms, including liveness detection and feature extraction. A host compute capability of no less than Arm 4×A53@1.8GHz is recommended.	Product Features • High-definition IR palm-vein image capture • Polarized fill-light system • Built-in PalmAE auto-exposure algorithm • Customizable interactive lighting effects system • Wide field of view (FOV), 5 ~ 12 cm palm-scan working distance Applications • PalmID identity recognition and access control • Palm-vein payment
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3 Core Specifications

Veinshine 01 Product Specifications		
Module Parameters	Overall dimensions	53.33 × 53.33 × 14.43 mm
	Material & weight	Aluminosilicate glass, aluminum alloy; 62 g
	Camera	IR + barcode-scanning camera

	Interface	USB Type-C (USB 2.0 protocol)
	Palm-scan working distance	5 ~ 12 cm
	Barcode-scanning working distance	3 ~ 20 cm, supports basic QR code scanning
	Operating voltage	5 V ~ 12 V
	Supply current	> 1.5 A @ 5 V
	Module power consumption	2.5 W average
Palm-vein recognition performance	Palm recognition pass rate	> 98%
Algorithm performance	Palm-scan angle	Pitch $\leq 30^\circ$, roll $\leq 30^\circ$, yaw $\leq 360^\circ$
	Host compute requirement	$\geq 4 \times \text{A17 @ 1.8 GHz}$
	Algorithm deployment	Supports local and cloud deployment
Firmware & SDK capabilities	Image processing	Built-in high-performance ISP / built-in PalmAE
	Security	Palm feature data encryption
	OTA support	Supports USB upgrade
	System compatibility	Supports Android 7 / 8 / 9 / 10 / 13; supports Windows 10 / 11

4 Module Dimensions & Structure

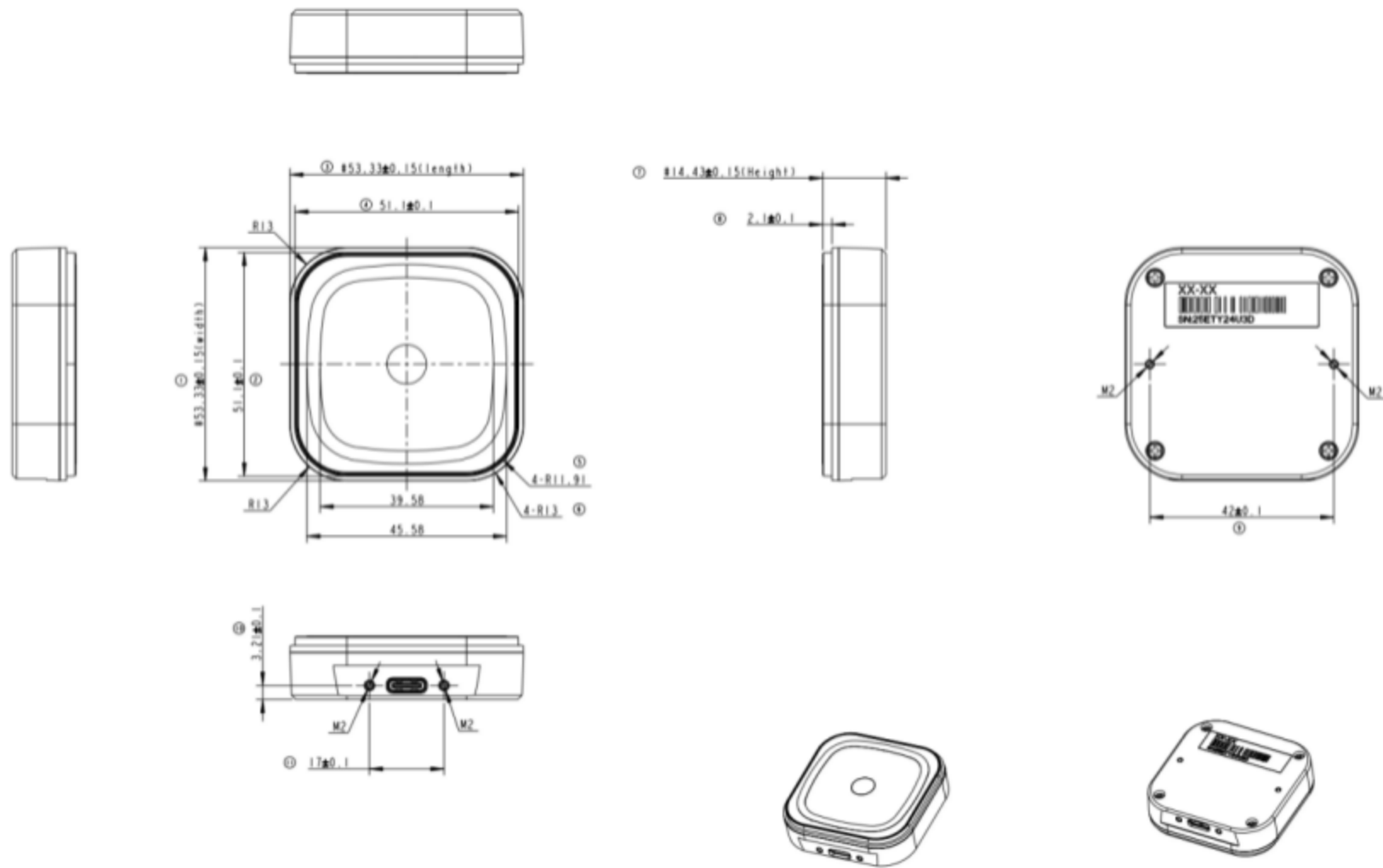


Figure: Dimension drawing

4.1 Product Description

The Veinshine 01 module consists of a Type-C connector, IR fill light, RGB camera, IR camera, indicator light ring, and enclosure. Its compact structure facilitates integration into host devices such as door access systems and turnstiles. The overall dimensions are $53.33 \times 53.33 \times 14.43$ mm, with an aluminosilicate glass and aluminum alloy housing.

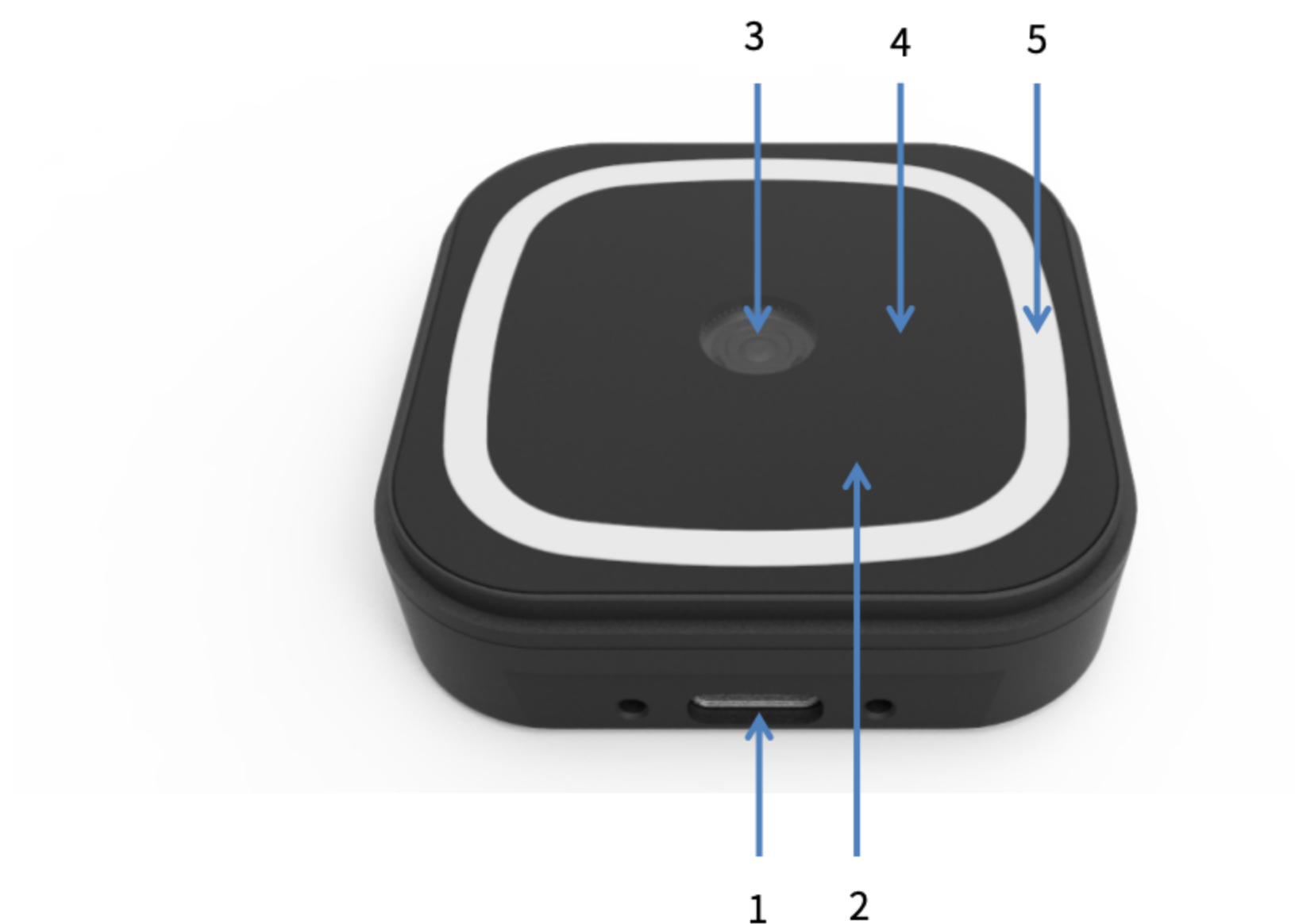


Figure: Veinshine 01 component numbering diagram (numbers correspond to the component table)

Product Components	No.
Type-C connector	1
IR fill light	2
Barcode-scanning camera	3
IR camera	4
Indicator light ring	5

5 Environment & Reliability

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

6 EMC

Item	Specification
ESD rating	Contact discharge ± 4 kV, air discharge ± 8 kV
RE radiation	Compliant with GB 9254 Class B

7 Software Development

Customers can use the Deptrum Palm SDK for secondary development. The SDK supports Windows/Linux/Android platforms and x86_64, ARMv7 and ARMv8 architectures, with targeted performance optimizations for embedded architectures. For detailed usage, please refer to the documentation included with the SDK.

8 Disclaimer

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

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9 Technical Support

Support is available 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 subject this product to impact, to prevent damage to internal components and degradation of accuracy; improper handling may damage internal components.
- Do not attempt to modify or disassemble this device in any way, as this may cause product damage and degrade accuracy.
- The product will heat up after a period of use; this is normal. Heat dissipation measures may be applied to the back of the product.
- Do not store the product in high-temperature, high-humidity environments, to prevent degradation of accuracy or functional failure.