DEPTRUM
光鉴科技

Deptrum® P50 Smart Tablet Product Specification

V1.0 · 2026/10/22

Revision History

Version	Description	Date	Revised by
V1.0	Official release	2026.10.22	Yan Qizhan

1 Usage Guidelines

To keep the device in optimal condition and extend its service life, read this specification carefully before use and observe the following precautions:

- Observe all warnings marked on the device;
- Keep the device away from environments prone to electromagnetic interference or static electricity;
- Use the power adapter supplied with the device;
- Do not share the same AC outlet with high-power appliances or devices that may cause voltage fluctuations;
- Avoid using the device in direct sunlight or near heat sources, cooking fumes, dust or corrosive gases;
- If liquid spills onto the device, disconnect the power immediately and wipe it dry with a dry cloth;
- Do not push any object into the enclosure through its openings; electric shock or short circuit may otherwise occur;
- Clean the device surface regularly. Before cleaning, turn off the power switch, unplug the power cord and wipe with a slightly damp soft cloth;

- Place the power adapter and power cord properly so that the cord is not stepped on or pulled, which could cause the device to fall and be damaged;
- Check the clock accuracy after each power-on. If there is a large deviation (e.g. more than 5 minutes), correct the time before use; otherwise data may be corrupted;
- If the device will not be used for a long time, clean it, keep it tidy and dry, put the device, accessories and user manual back into the original package and store it in a ventilated, dry place;
- Do not disassemble the product by yourself; otherwise the device may be damaged, data may be lost, or electric shock and other hazards may occur. Contact your service provider for repair;
- During installation, installers are advised to wear gloves to avoid scratching the screen;
- If any other abnormality occurs during use, record the device status in detail and contact your service provider.

2 Product Overview

The P50 is a desktop, embedded or wall-mounted checkout and identity verification device for open environments, suitable for campus / enterprise / commercial canteens, supermarkets / convenience stores, door access / metro turnstiles and similar scenarios.

The product features a high-precision WeChat palm-print + palm-vein module and the RK3568 quad-core Cortex-A55 high-performance chip for stable performance; it supports palm-scan, card and QR-code verification and payment, and offers Wi-Fi and Ethernet connectivity.

2.1 Applications

- Campus / enterprise / commercial canteens
- Supermarkets / convenience stores
- Door access / metro turnstiles
- Desktop checkout

3 Product Features

3.1 Payment Security

Equipped with a palm module that supports palm-vein recognition, ensuring uniqueness and resistance to attacks. No card needs to be carried, reducing the risk of card loss and fraud.

3.2 High Performance

Powered by the RK3568 quad-core Cortex-A55 high-performance chip, delivering fast and smooth recognition and transaction processing.

3.3 Privacy Protection

Unlike face recognition, palm-print raises no privacy concerns, making it easier for users and the market to accept.

3.4 Hygienic

Fewer contacts with the device during payment, eliminating concerns about transmitting germs.

3.5 OTA Upgrade

In addition to local upgrades via OTG and USB flash drive, the device also supports batch upgrades over the network, which simplifies the upgrade and maintenance of a large number of devices.

3.6 Automatic Clock Calibration

The device periodically synchronizes its clock with the backend server, keeping the clock error within the allowed range and effectively preventing data corruption caused by clock desynchronization.

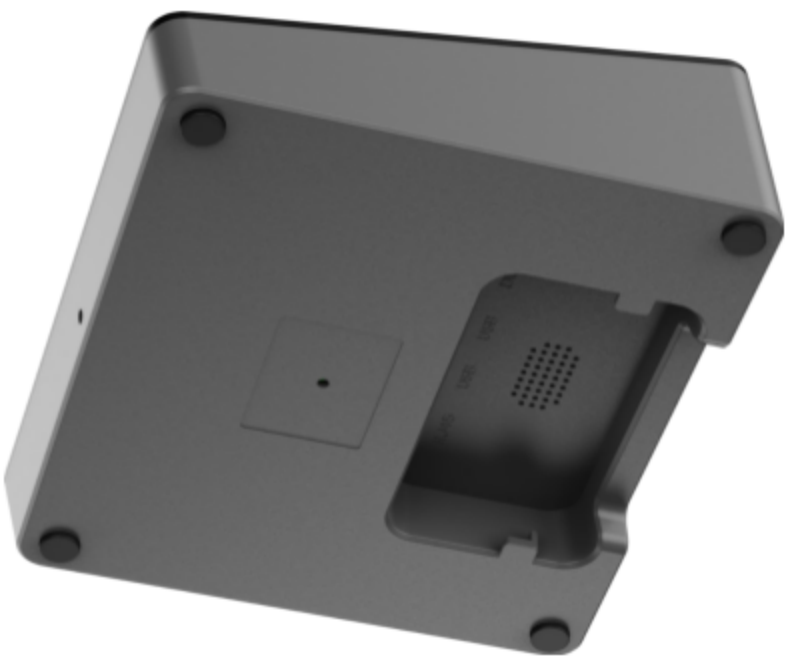
4 Core Specifications

P50 Smart Tablet Core Specifications		
General Specifications	Device Dimensions	172 × 149 × 50 mm
	Net Weight	Approx. 0.7 kg
	Housing Material	PC + ABS
	Power Adapter	12 V 3 A, 5521 DC plug
	Rated Power	15 W
Display & Touch	Display	5.5-inch IPS LCD, 720 × 1280, capacitive touch, multi-point G+G
System & Storage	CPU	Quad-core 2.0 GHz Cortex-A55, RK3568 platform
	Storage	2 GB LPDDR4X RAM + 32 GB eMMC
	Operating System	Android 13
	RTC Battery	Supported; battery life > 2 years
	Audio Output	1 speaker; rated power 1.5 W @ 8 Ω / 1 kHz
Network & Wireless	Wi-Fi	Dual-band 2.4 G / 5 G; 802.11 a/b/g/n/ac
	Bluetooth	BT 4.2（BR/EDR + BLE）
	Wired Network	RJ45, 10/100 Mbps Base-T auto-negotiation
Recognition & Card Reading	Palm-scan Distance	6 ~ 15 cm
	QR-code Distance	3 ~ 12 cm (supports payment and refund QR codes)
	Palm-scan Angle	Pitch ⩽ 30°, roll ⩽ 30°, yaw ⩽ 180°
	Recognition Rate	> 98%
	Palm-scan Illuminance	Indoor and semi-outdoor, 0 ~ 50,000 lux

P50 Smart Tablet Core Specifications		
	Contactless Card Reading	Reading distance > 2 cm; 13.56 MHz; ISO/IEC 14443A/B and ISO 15693; supports Mifare S50/70, UltraLight, PlusCPU, CPU cards, etc.
External Interfaces	USB	1 × USB 2.0 HOST Type-A; 1 × USB Slave (flashing, HID)
	USB Output	4.8 V ~ 5.2 V / 500 ~ 600 mA
	Power Interface	DC5521 jack, 12 V 3 A
Operating Environment	Operating Temperature	Max. range -10 °C ~ +50 °C; recommended -10 °C ~ +40 ℃
	Operating Humidity	Max. range 10% ~ 90% RH; recommended 10% ~ 80% RH

5 Product Appearance

5.1 Device Front View



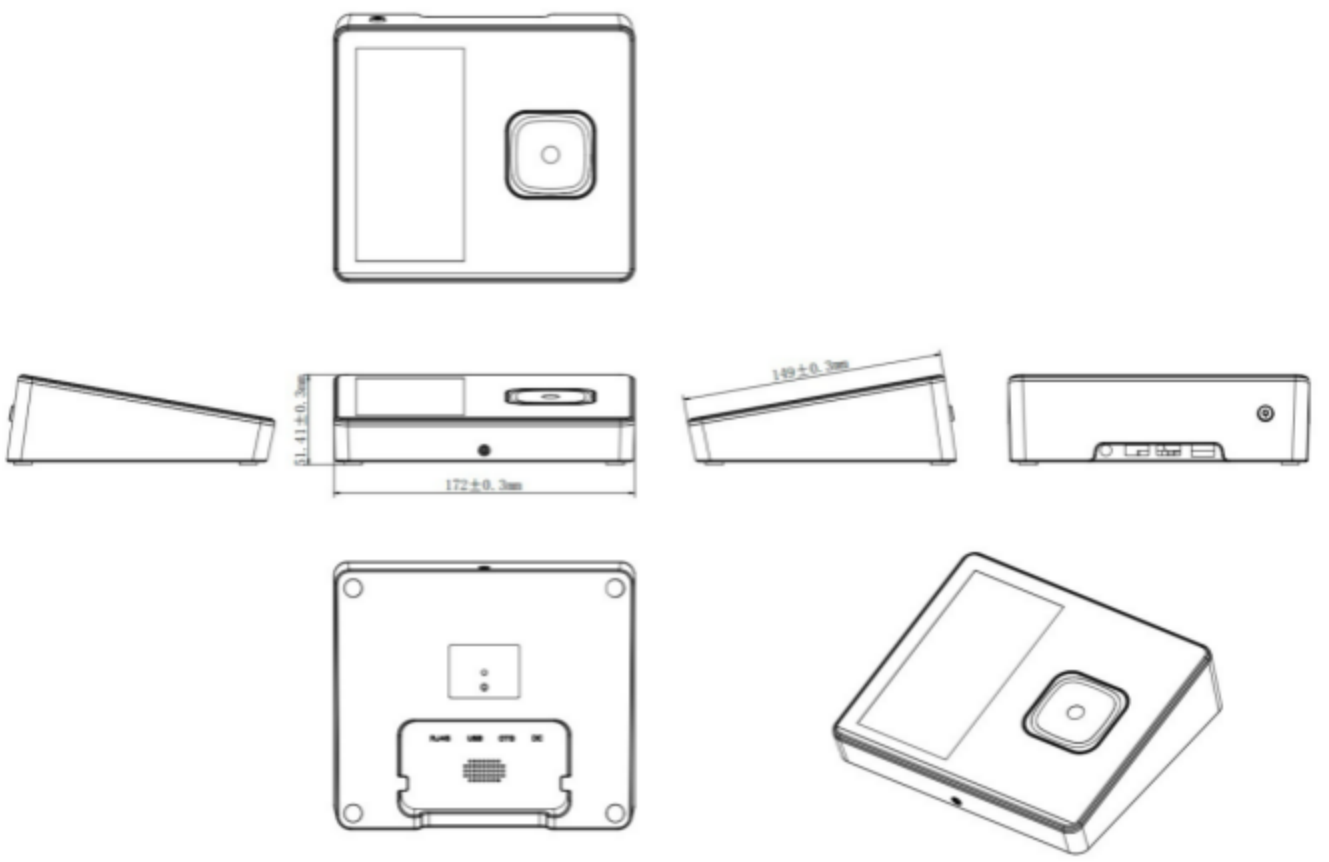
Device front view

5.2 Device Oblique View



Device oblique view

6 Product Dimensions



Product dimensions (unit: mm)

7 External Interface Description

7.1 Interface Layout



Interface locations

7.2 Interface Description

Interface	Qty	Description
DC 12 V power jack	1	DC5521，12 V 3 A
Standard Ethernet port	1	10/100 Mbps auto-negotiation
USB 2.0 HOST	2	Type-A, for external USB devices

7.3 Terminal Electrical Definition

Terminal	Electrical Definition
Center positive (center pin)	12 V
Outer negative (outer ring)	GND

8 Product Packaging

Each color box contains one device with accessories; one outer carton holds 6 color boxes, i.e. 6 devices per carton. Each standard carton (6 devices) weighs approx. 9.01 kg.

8.1 Accessories per Unit

Item	Qty	Remark

Item	Qty	Remark
12 V 3 A adapter (PSE certified)	1	Standard
12 V 3 A Japan-standard power cord (PSE certified)	1	Standard
Wall-mount bracket	1	Standard
M2.5 × 6 machine screw with assembled washer	2	Standard
M4 × 30 expansion screw (incl. expansion sleeve and self-tapping screw)	6	Standard

8.2 Packaging and Nameplate



Single-unit color box packaging



Product nameplate

9 Storage Conditions

- Temperature: 10 ~ 30 °C
- Humidity: 30 ~ 70% RH
- Shelf life: 1 year

Note: if stored for more than one year, the product must be re-tested before shipment.

10 Certification

Complies with RoHS 2.0 and is certified to VCCI and TELEC.

11 Troubleshooting

The following table lists common symptoms together with the corresponding checks and solutions for reference. It does not cover every possible fault, but provides a starting point for preliminary diagnosis.

Symptom	Solution
Device does not power on	1. Check that the power outlet is properly connected; 2. Check that the power switch is turned on
No network access or intermittent connection	1. Check that the network cable is properly connected; 2. Check the quality of the network cable and of the cabling;
Card reading failure	Run the built-in device test tool to identify the fault
Palm not recognized	1. Check that the palm module is working properly; 2. Check whether the screen protective film has been removed
Unresponsive key	Run the built-in device test tool to identify the fault

12 Warranty

During the warranty period, the supplier shall provide free repair service for any non-human-caused failure of the product.

The following cases are not covered by the free warranty:

(1) Failure or damage caused by incorrect or improper use, maintenance or storage, such as cracking, corrosion or damage of the product or its parts resulting from improper handling, dropping, excessive external force, contact with or exposure to unsuitable temperatures, water immersion or damp environments;

(2) Failure or damage caused by repair, modification or disassembly by an organization or person not authorized by the supplier;

(3) Failure to install the device in accordance with the supplier's product manual or installation video (including but not limited to any non-standard operation such as drilling that may affect the quality or performance of the device);

(4) Failure or damage caused by force majeure or accidents;

(5) Other failure or damage not caused by the quality of the product itself.

Apart from the cases excluded above, the supplier shall repair the product free of charge within 15 working days after receiving the product mailed by the customer, and mail the repaired product back to the customer immediately; each party shall bear its own shipping costs.

For cases not covered by the free warranty, the corresponding repair and shipping costs shall be borne by the customer.

13 Disclaimer

The device application information and other similar content in this specification are provided for your convenience only and may be superseded by updated information. It is your responsibility to ensure that applications comply with the technical specifications. Shenzhen Deptrum Technology Co., Ltd. makes no representation or warranty of any kind, express or implied, written or oral, statutory or otherwise, with respect to such information,

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14 Technical Support

You can obtain support through the following channels:

- Email support: send your questions to support@deptrum.com
- FAE support: contact our sales representatives for the FAE contact details