FEITIAN

F310 P Technical Manual

V1.0

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Content

Chapter 1. F310 P ProductTechnical Manual.....3

1.1 ProductTechnical Manual.....3
1.2 Product Appearance.....3
1.3 Specifications.....4
1.3.1 Dimensions.....4
1.3.2 Screen.....4
1.3.3 Communication Interface.....4
1.3.4 Audio.....5
1.3.5 Camera.....5
1.3.6 SIM card.....5
1.3.7 PSAM card.....5
1.3.8 TF-card.....5
1.3.9 Contact IC card Reader.....5
1.3.10 Magnetic Stripe Card Reader.....6
1.3.11 Contactless IC Card Reader.....6
1.3.12 Features.....7
1.4 Certifications.....7
1.5 Installation.....8
1.6 FCC Statement.....10

Chapter 1. F310 P ProductTechnical Manual

1.1 ProductTechnical Manual

Feitian F310 P is a smart mobile POS product with PCI PTS6.2 certification. It has a stylish and smart design.

Connect with smart phone or tablet via Bluetooth interface, you can easily and quickly complete the payment process. It can achieve payment progress anytime anywhere which provides end users with a new experience of payment.

This product is developed based on Android operating system, software including Android system and secure system, the function is simple and easy to use.

Both internal software system(AP) and secure system(SP) can be upgraded remotely or upgraded by TF card/OTG+U disk, lower the following cost of development and maintenance.

The features of this product:

- Portable

The appearance is suitable for use.

- Powerful

Support magnetic stripe card, contact card and contactless card. Support WiFi and Bluetooth.

- Certified

PCI、Paywave(VISA)、Paypass(Mastercard)、Pure、Amex、EMV L1/L2、EMV Contactless L1、D-PA(DISCOVER)、qUICS、RoHS、TQM、CE、FCC、GMS.

- Remote upgrading

Firmware can be upgraded remotely, reducing the cost of late development and maintenance.

1.2 Product Appearance

The F310 P product appearance is shown as follows:

Figure 1 F310 P appearance figure

1.3 Specifications

1.3.1 Dimensions

Size: 173mm (L) × 82.5mm (W) × 17.2mm (H).

1.3.2 Screen

Use a 6.5-inch screen with a resolution of 720*1600 and multi Touch Panel.

1.3.3 Communication Interface

- RF Band LTE-FDD B2/B4/B5/B7,LTE-TDD B38
- WCDMA B2/B4/B5
- GPRS/EGPRS 850/1900 MHz
- Type-C USB port

  When the device is connected to the host (for example, PC) through this interface, this interface provides functions such as transmit data.
- WiFi

  This device can be connected to 2.4G/5G network, support 802.11 a/b/g/n/ac.
- Bluetooth 5.0

This device can be connected to smart phone or bluetooth headset through this interface.

- GPS

  This device supports GPS.

- NFC

  supports TYPE A/B and complies with EMV Contactless L1 and qPBOC L1 standards.

1.3.4 Audio

- Speaker

This device can play audio through this interface.

- Mic

This device can record through this interface.

- Buzzer

Notify the user by beeping when needed.

1.3.5 Camera

- Front Camera

A front camera: 2M FF, support Scanner 1D&2D code

- Rear Camera

A Rear camera :8M AF, with Flash LED, Support Scanner 1D&2D code

1.3.6 SIM card

This device can insert into sim card.

1.3.7 PSAM card

This device can insert into PSAM card.

1.3.8 TF-card

This device can insert into TF card.

1.3.9 Contact IC card Reader

Support contact IC card , conform to EMV L1/L2 and complies with ISO/IEC 7816 standard. When inserting the IC card, please let the chip side toward the side of the screen.

1.3.10 Magnetic Stripe Card Reader

The magnetic stripe card must be compliant with ISO/IEC 7811, 7813 standard. The magnetic strip card reader can read data from magnetic track 1, 2, 3 at the same time, support bi-directional swipe, swipe speed ranges from 10mm/s to 100mm/s. The life cycle is over 400,000 times. The magnetic stripe must be backward when swiping card.

1.3.11 Contactless IC Card Reader

Support contactless IC card (Type A, Type B, Meet the EMV Contactless L1 standard, can pass the international 6 major card organizations non-connection certification (paypass, Paywave, etc.)), working frequency 13.56MHz

1.3.12 Features

- Tamper-proof and anti-power-down protection
- Support MK/SK and DUKPT key systems
- RSA、AES、3DES、SHA-1、SHA-256；Support RSA, AES, 3DES, SHA-1, SHA-256
- Support SM2, SM3, SM4
- Physical tamper-proof has self-destruction function
- Support redevelopment

1.4 Certifications

PCI
Paywave(VISA)
Paypass(Mastercard)
Pure
Amex
EMV L1/L2
EMV Contactless L1
D-PA（DISCOVER）
qUICS
RoHS
TQM
CE
FCC
GMS

1.5 Installation

Step 1. Turning on the device

•Place the battery, Press the power button.
•If required, remove the protective film from the display.

Step 2. Mobile payment application

Please follow the instructions provided by your bank or service provider to download the mobile application onto this device.

Step3. Performing a chip card sale transaction with PIN

•When prompted, insert the customer's chip card into the slot at the down hand side of the device with the chip facing upwards.

•Follow the instructions provided by your bank or service provider to complete the transaction.

Step 4. Performing a magnetic stripe transaction

•During device operation you may be prompted to read a presented card by means of the magnetic stripe.

•The magnetic stripe reader is a slot positioned on the top of the device. Swipe the card in a single smooth motion from left to right.

•Follow the instructions provided by your bank or service provider to complete the transaction.

Step 5. Performing a contactless transaction

•Transactions may be completed using a contactless card or enabled product.

•To read a contactless card it must be positioned in close proximity to the device over the contactless symbol.

•Follow the instructions provided by your bank or service provider to complete the transaction.

Troubleshooting

In the unlikely event you experience issues with this product, please follow the guidelines below. If this does not resolve the issue, please contact your solution provider for further assistance.

No display

•Ensure the power adapter being used is powered.

Cannot read Cards

•Ensure the magnetic stripe card has been swiped in the correct orientation.

•Ensure the chip card has been inserted in the correct orientation.

•Ensure the contactless card has been placed at a distance of 0 to 4 cm from the device.

•Test with another card of the same type.

Caution and Safety Instructions

•Do not attempt to disassemble, modify, service or repair any part.

•Do not use if damaged or with signs of tampering.

•Only use the device with supplied or manufacturer-certified accessories.

•To avoid the potential hazard of electrical shock do not use in wet environments or during an electrical storm.

•Do not use in proximity of potentially flammable gases or substances.

•Ensure cables used do not cause a trip hazard or risk the device being dropped on to a hard surface.

•Do not expose to excessive heat or cold. Only operate between -10 °C and 50 °C.

•Before cleaning, disconnect from the electrical outlet. Use only a dry or dampened soft cloth.

•Do not immerse, use liquids, sprays or aerosol cleaners. Clean all spillages quickly.

•This device is intended for handheld use only or in an approved cradle/stand.

•Dispose any part in an environmentally sound manner and in accordance with local laws.

•F310 P product will not be held liable for any damage resulting from user operation that does not comply with the above-stated guidance.

Frequency bands and power

•Maximum radio frequency power transmitted in the frequency bands in which this equipment operates is below the limit values specified in the corresponding Harmonized Standards.

•The frequency bands and power limits applicable to this equipment are: Bluetooth:BT5.0 ; NFC: 13.56 MHz, Type A&B、ISO/IEC 14443, ISO18092.

1.6 FCC Statement

Any Changes or modifications not expressly approved by the party responsibl e for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates,uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

RF Exposure Information (SAR) :

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. *Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands.

Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the poser required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

The highest SAR value for the device as reported to the FCC when worn on the body, as described in this user guide, is 0.464W/kg (Body-worn measurements differ among devices, depending upon available enhancements and FCC requirements.)

While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on FCC ID: ZD3FTF310P

For body worn operation, this device has been tested and meets the FCC RF exposure guidelines for use with an accessory that contains no metal and the positions the device minimum of 10 mm from the body . Use of other enhancements may not ensure compliance with FCC RF exposure guidelines. If you do not use a body-worn accessory position the device a minimum of 10 mm from your body when the device is switched on at its highest certified power level in all tested frequency bands.