FEITIAN

F20 FP Introduction

V1.0

Feitian Technologies Co., Ltd.

www.FTsafe.com

Content

Chapter 1. F20 FP Product Introduction

1.1 Product Introduction

Feitian F20 FP is a smart mobile POS product with PCI PTS5.1 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 10 operating system, software including android system and secure system, the function is simple and easy to use.

Both android system and secure system 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 portable, suitable for mobile use.

- Powerful

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

- Certified

CE, DSM,UN38.3,UL RoHS, Telec&JATE, EMV L1&L2, EMV Contactless L1, PCI 5.1, Paypass, PayWave, Amex, Discover, PURE certified.

- Remote upgrading

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

1.2 Product Appearance

The F20 FP product appearance is shown as follows:

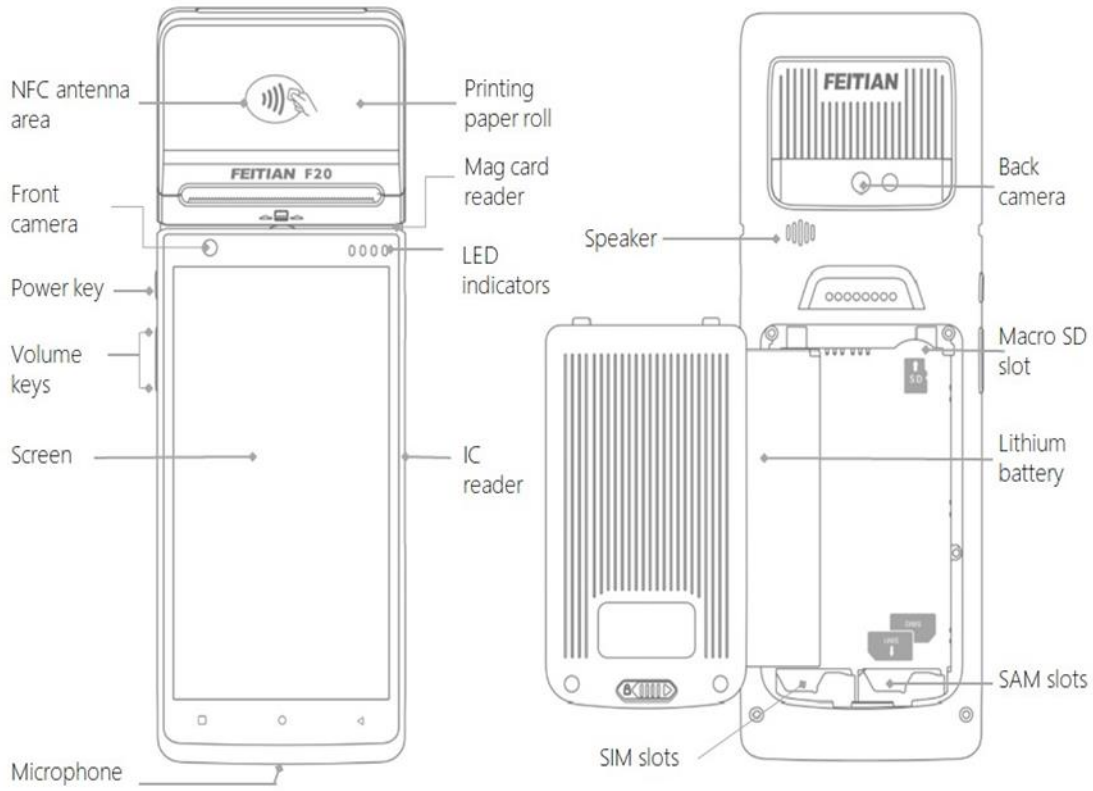


Figure 1 F20 appearance figure

1.3 Specifications

1.3.1 Dimensions

Size:212.39 x 79.18 x 56.57(mm)

1.3.2 Screen

Use a 5.5-inch screen with a resolution of 1280*720 and multi Touch Panel.

1.3.3 Communication Interface

- RF Band

4G: FDD-LTE B2/ B4/ B5/B7/B12/B13/B14/B17/B25/B26/ B66 / B71
TDD-LTE B41;

3G: WCDMA B2 /B5;

- Type-C USB port

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

- WiFi

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

- Bluetooth 4.2

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

- NFC

  NFC is a POS function, which supports 13.56MHz，ISO/IEC 14443，ISO18092， Type A&B、Felica，

Mifare card.

1.3.4 Battery and Power Source

Removable polymer lithium battery, 7.6V/2500mAh, with charge protection and RTC battery.

1.3.5 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.

1.3.6 Camera

- Front Camera

A front camera: 2M，FF

- Rear Camera

8M AF with Flash of the rear camera, and support scanner 1D&2D code.

1.3.7 SIM card

This device can insert into two sim card.

1.3.8 PSAM card

This device can insert into PSAM card.

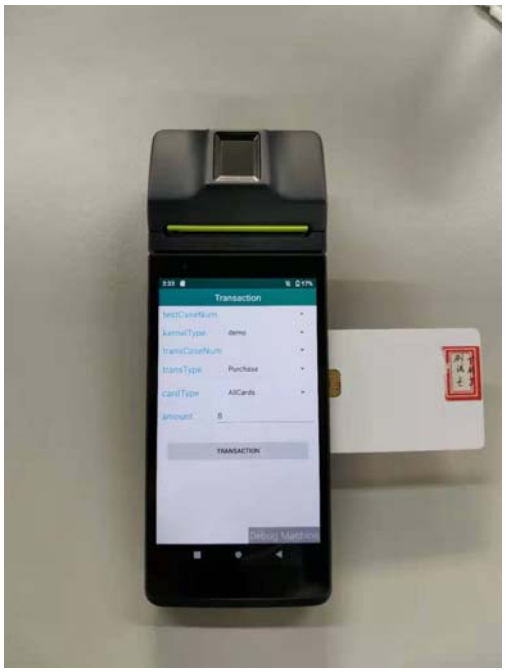
1.3.9 TF-card

Max support 64GB TF-card.

1.3.10 Contact IC card Reader

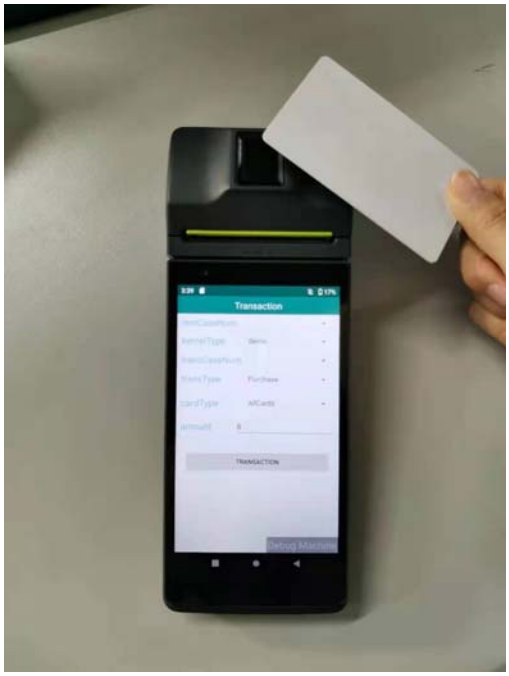
Support contact IC card (ISO/IEC 7816-1/2/3/4 Chip Card), Type A/B/C. When inserting the IC card,

please let the chip side toward the side of the screen.



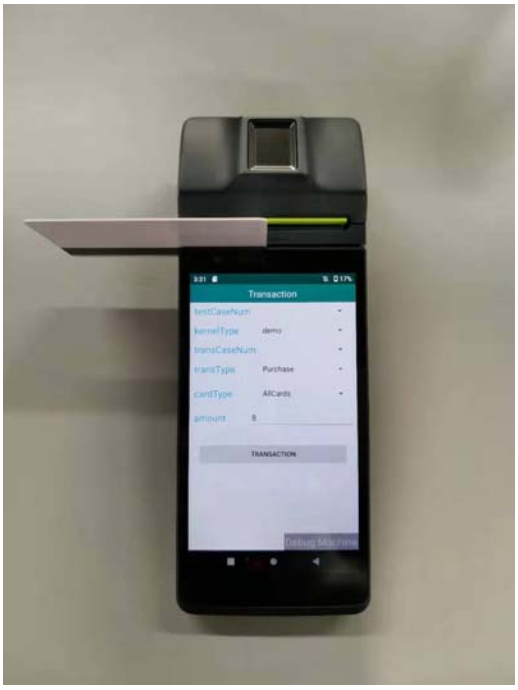
1.3.11 Contactless IC Card Reader

Support contactless IC card (ISO/IEC 14443 Type A, ISO/IEC 14443 Type B, working frequency 13.56MHz)



1.3.12 Magnetic Stripe Card Reader

The magnetic stripe card must be compliant with ISO7812 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 300,000 times. The magnetic stripe must be backward when swiping card.



1.3.13 Features

- Tamper-proof and anti-power-down protection
- Support 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 PTS 5.1 certified
- EMV L1/L2
- EMV Contactless L1
- PBOC3.0 L1/L2
- MasterCard PayPass
- Visa PayWave
- CE
- DSM
- UN38.3

- UL RoHS
- Telec&JATE
- Amex
- Discover
- PURE

1.5 Installation

Step 1. Charging the device

• Insert the USB charging cable into the Type-C port on the upper right side of the device.

• Connect the other end of the USB charging cable into a powered USB socket.

• A charging symbol will appear over the battery symbol in the top right corner of the device during charging.

• Charging of the battery will typically take between 1 and 3 hours, whilst not in use.

• Battery condition is indicated in the display when the device is switched on.

• The terminal is fitted with an internal rechargeable battery which can be removed or replaced. This battery should be charged for at least 1 hours when using the terminal for the first time. It is recommended that the battery is charged to at least 40% of its capacity every 4 months.

Step 2. Turning on the device

• Hold down the power button 2 seconds, the system will start.

• If required, remove the protective film from the display.

Step 3. Mobile payment application

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

Step 4. Performing a chip card sale transaction with PIN

• When prompted, insert the customer's chip card into the slot at the right 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 5. 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 6. Performing a contactless transaction

• Transactions may be completed using a contactless card or enabled product. The contactless symbol is printed on the top of the device.

• 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

• Charge the device with the supplied USB cable.

• Ensure the USB socket being used is powered.

Poor battery life

• Ensure the power is being supplied during charging.

• Check battery charge indicator is at maximum

• Charge for 3 hours to ensure a full charge whilst not in use.

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.

• F20 product will not be held liable for any damage resulting from user operation that does not comply with the above-stated guidance.

• If the device will be stored/unused for extended periods of time, then it is imperative that the battery be recharged every six months or sooner to at least 30–40% of maximum charge while the terminal is in 'OFF' position.

1.6 FCC Statement

Any Changes or modifications not expressly approved by the party responsible 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.

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.
when worn on the body, as described in this user guide, is 1.31 W/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: ZD3FTF20SC200RNA.
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 handset a minimum of 0 cm 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 handset a minimum of 0 cm from your body
is switched on at its highest certified power level in all tested frequency bands.

WCDMA Band II: 1850-1910 MHz MHz(TX), 1930-1990 MHz(RX)

WCDMA Band V: 824-849 MHz(TX), 869-894 MHz(RX)

LTE Band 2: 1850-1910 MHz(TX), 1930-1990MHz(RX)

LTE Band 4: 1710-1755 MHz(TX), 2110-2155MHz(RX)

LTE Band 5: 824-849 MHz(TX), 869-894 MHz(RX)

LTE Band 7: 2500-2570 MHz(TX), 2620-2690 MHz(RX)

LTE Band 12: 699-716 MHz(TX), 729-746 MHz(RX)

LTE Band 13: 777-787MHz(TX), 746-756MHz(RX)

LTE Band 14: 788-798MHz(TX), 758-768MHz(RX)

LTE Band 17: 704-716 MHz(TX), 734-746 MHz(RX)

LTE Band 25: 1850-1915 MHz(TX), 1930-1995 MHz(RX)

LTE Band 26: 814-849 MHz(TX), 859-894 MHz(RX)

LTE Band 41: 2555-2655 MHz(TX), 2555-2655 MHz(RX)

LTE Band 66: 1710-1780 MHz(TX), 2110-2200 MHz(RX)

LTE Band 71: 663-698MHz(TX), 617-652MHz(RX)

BT/BLE :2402-2480 MHz

2.4G Wi-Fi: 2412-2462 MHz(802.11 b/g/n20), 2422-2452MHz(802.11n40)

5G Wi-Fi: B1: 5180-5240 MHz, B4: 5745-5825