NEXGO

G3   POS Terminal

User Guide

Version Information

Shenzhen Xinguodu Technology Co., Ltd.

Version number：V 1.00

Notice

1. Install software well in this terminal;

2. Set up related number and password well in this terminal:

System manager number：99

Password of system manager：82112711

Merchant manager number：0

Password of merchant manager number：123456

operator：01, 02, 03, 04, 05

password of operator：0000

security password：12345678

Contents

Specification of pos terminal

Item	Specifications
Processor	Dual CPU, Samsung 32 Bit CPU & 8 Bit CPU
Memory	Standard 32MB FLASH, 32MB SDRAM. Option to be extended to 128MB、128MB FLASH/SDRAM, support at least 500 transaction records.
OS	Linux
Power Supply	External switch power Input: 100V～240V AC，50/60Hz Output: 8.5VDC, 2.5A
Working electric current	power on current:50mA～150mA，printing average current:1A
Connectivity	1 power port，1 telephone line port,1 LAN port, 1 RS232/PINPAD port, option to additional 2 RS232 and 1 USB port
Magnetic Stripe Reader	Track 1/2/3, bi-directional swipe, speed is 10mm/s-100 mm/s，GB/T 14916、GB/T 15120、GB/T 15694-1、ISO7812-2、GB/T 17552 compliant , High Coercively , Life cycle: above 500,000
IC Card Reader	Can read ISO7816 IC with card voltage range of 1.8V, 3V, 5V, can read standard EMV card and memory card, with EMV 2000, PBOC 2.0 certifications approved
PSAM Slots	1 PSAM slot, Option to be extended to 3 slots, compliant to ISO7816
Printer	High-speed thermal printer, 20lines/second, resolution 8 dots/mm & paper end detection；average print without malfunction over 10 kilometers（over 50,000 POS sheet），Life cycle：the length of paper is over 50 kilometers（over 250,000　POS sheet）
LCD	128*64 LCD with adjustable backlit
Keypad	20 keys with waterproof and dustproof, 10 alphanumeric keys，9 function keys，1 on/off switch, supports to input figure and letter，the life cycle of key is over 300.000 times
Pin pad	Embedded pin pad, supports alphanumeric input and display, 3DES、ANSIX9.9、ANS9.8，above 100 secret keys
Modem	Sync (SDLC, 1200/2400/9600bps), handshake time is about 5 seconds; asynchronous（33.6Kbps) (55.6Kbps optional), handshake time is about 7-8 seconds;
Communication mode	● GPRS, CDMA ,WCDMA or LTE FDD(optional, one of them) ● Wi-Fi
SDK Software for all needed Application	Standard C, support Second Development and at least 20 apps for multi-application

Item	Specifications
	Complete Set Development Tools For Application Development Through Library And Software simulation on PC
TMS	Remote Downloading (App. & Configuration) -Scheduling -Full feature license -Independ to the special router - Unlimited connection POS to the TMS - running many operation in according program in a connection for some POS to the TMS (scenario) -Key Management system -keeping security methods for DATA between POS and TMS Ability implement Hotlist or Black list
Language	Multi-language, such as English, Chinese, Farsi, Cyrillic, Russia etc.
Update	RS232 from PC, terminal to terminal, remote download, USB Drive
Size & Weight	165(L) X 80(W）X 65(H)mm 0.44KG
Certifications	China Union Pay POS test, 3C,EMV LEVEL1/LEVEL2,PBOC2.0 LEVEL1/LEVEL2,China telecom Access Net license, China Union Pay Magnetic Stripe/IC card POS Access Net license, Visa ADVT , Master Tip, PCI PED 2.0

Basic setting

Power on/off

power on：

Please connection G3 with power by power adapter, press "on/off" for 3 seconds to boot up

  G3;

Power off：

Under status of power on, please press "on/off" for 3 seconds, then it will prompt " press OK

to power off, other keys to return", then press "OK", then it will prompt " in powering off,

waiting…", after 2 seconds, it will finally power off.

Self-checking

1. Press "on/off", "F" and "3" at the same time to power on, then it will prompt "please input password";

2. Input password "556677" and press "OK" to enter self-checking menu; please "OK"

```
         Test app
G3 V1.01     20070622

Pls press "OK" to continue──→
2007-6-25        15:10:00
Jun 22 2007    10:27:50
```

```
         Test app
1.keypad      5.comm
2.LCD        6.IC card
3.Mag-card    7.accessories
4.print      8.clock
```

(1) Keypad: to check if every button works well, here you can press arrow keys to adjust frequency of buzzer;

(2) LCD: to check if LCD works well, as below:

```
      1. Test LCD
      2. Test LCD backlit
      3. Test LCD contrast
      4. Test charging battery
```

① Test LCD: to play WAV file;

② Test LCD backlit: adjust the light of backlit;

③ Test LCD contrast: adjust the current contrast of LCD;

④ Test charging battery: not support;

(3) Mag-card: to check if read/write mag-card working well;

(4) print: to check if printer works well, as below picture:

```
      Test Print
   1. Test print
   2. Test aging print
   3. Test LAN
```

① Test print: printing according to the types of printers: thermal or matrix dot;

② Test aging print: POS will print a time at every hour and the LCD will prompt the current

batch receipt number;

③ Test LAN; input IP address to check if the LAN works well or not;

（5）Comm: to test MODEM, GPRS,CDMA;

（6）IC card: to test IC cards slot 1,2 3 and initialization key card;

（7）Accessories: to test fingerprint, barcode scanner, voice(not support in G3)
 and USB and serial port;

（8） Clock: to set the current time.

Apps download

I Kernel download:

Note: please prepare both USB and serial port cable before kernel download.

1. please install driver apps according to your PC OS：Secbulk_2000.msi(OS 2000)/Secbulk_2003(OS 2003).msi/Secbulk_XP.msi(OS XP)

2. connect G3 with K3209 (please take care, the side with ACH of backbox should be upwards, the other side with arrow sign should be downward)

3. connect PC and K3209 by serial port cable, and please take care of connecting with K3209 by "POS/PINPAD", and USB cable to plug into "USB D";

4. Open "G3DL_3.6.7.exe" download tool on your PC, and click "start download", it will prompt "BIOS is booting…";

5. Press "2, 5,0" and "on/off" to boot POS, then it will prompt input password "888888", when download tool prompt " waiting for BIOS booting.." again, it will means finishing to download kernel.

II Apps download

Note: G3 POS can support USB, serial port and remote download to download apps.

a.USB download: using USB to upgrade apps;

Note: please install USB simulated serial port communication driver well in your PC before connection USB and K3209, otherwise, POS will prompt "please check USB cable connect well or not, please plug USB again, and retry by pressing "OK", or cancel to exit";

1. Open "G3DL_3.6.7.exe" by your PC；

2. Click "read configuration file" to select "apps.INI" file, and click "add" to tick "√" at the option of "USB simulated serial port";

3. Operation method: press "F" + "1" and press "CNL" at the same time to boot up POS until you see "apps download (USB), please input your password";

4. Input password "556677" and press "OK", then it will prompt "apps download (USB), downloading, baud rate=115200"

5. Click "start" to download apps, after finishing, it will prompt " download success";

6. Press "CNL" to exit apps to enter "sign in" interface.

b. Serial port apps download: using PC serial port to upgrade apps.

Note: directly connect PC with K3209 by"POS/PINPAN", don't need to install USB driver

1. Operation method: press "F" and "6", and press "CNL" to start pos until it prompt "apps download(COM), please input password";

2. Input password "556677" and press "OK", then it will prompt "apps download (COM), downloading, baud rate=115200"

3. Open "G3DL_3.6.7.exe" by PC；

4. Click "read configuration file" to select "app.INI", then click "add" and select "single port download", and tick " √ " the "don't need USB simulated serial port";

5. Click "start" to download apps, after finishing, it will prompt " download success";

6. Press "CNL" to exit apps to enter "sign in" interface.

G3 setting of China UnionPay

System setting

System management	
1. POS parameter setting	↑
2. Comm. Parameter setting	
3. Transaction function setting	
4. Pos key management	↓

China UnionPay will set system parameter of G3 like bellows:

(1) input operator 99 to enter sign in interface and input system manager password；

(2) Input system manager password（82112711）, and press "OK" to enter system setting page；

(3) After setting, press "OK", then it means finishing system parameter setting, system will prompt if write card, only if cards is written, the parameter is valid.

System management	
5. Modify management password	↑
6. Other functions	
7. PC parameter download	
8. MODEM parameter setting	↓

1. POS parameter setting:

Please input 15 bits merchant number by order, 8 bits POS number, Merchants' name (maximum more than 20 Chinese characters), merchants' English name (maximum more than 30 English characters), after finishing please enter next setting items.

POS parameter setting
Please input merchant No. (15bits)
ʗʗʗʗʗʗʗʗʗʗʗʗʗ

Merchants' number: must ensure to input 15 bits

terminal number： must ensure to input 8 bits

merchants' name： the Chinese and English name of merchants, press "OK" to input Chinese or English, for Chinese, it allows to input 20 characters, for English, it allows to input 30 characters. Under Chinese input method to input section code, press "alphabet" to input pinyin; under English input method, press "alphabet" to switch number and alphabet.

Current year： set current year

Serial number： set current serial number

Batch number： set current batch number

Verify version： if set verify version，（1-YES，0-NO）

Refund amount： set refund amount

Set settlement print： set if print details（1-YES，0-NO）

Commercial banks' code： set bank code

Local area code:: set local area code

If print English receipt： Set if print English receipt

Select receipt： Set if print new receipt or old one

Default transaction : set default transaction (1-sales , 0-pre-authorization), under the main menu of this function, you could directly enter transaction by brushing card;

Key length： set key length（1-single , 0-double）

Sales void： set if need brushing card when sales void

Pre-authorization completion void: set if need brushing card when pre-authorization completion void

Sales void password： set if need input password when sales void

Pre-authorization void password: set if need input password when pre-authorization void

pre-authorization completion void password： set if need input password when pre-authorization completion void

pre-authorization completion (online) password: set if need input password when pre-authorization completion (online)

2. comm. setting

1. comm. method select：0-cable 1-CDMA 2-GPRS

2.dial-up setting

Outside call number：set the phone number of outside call, maximum 4 bits;

call 1： Directly call China unionpay, maximum 20 bits. At the same time, you can set 3 different phone numbers, if dial-up the first number is overtime, then POS will automatically select the second one, if second one is overtime too, then automatically select the third one;

Transaction call 2： same as above；

Transaction 3： same as above；

Manage callings： set manage callings, online download apps, maximum 20 bits;

Pre-dailup setting: set if need pre-dailup；

Dial-up time：set time of dial-up

overtime: set time of overtime

Redial-up times：set times of redial-up

Comm. setting
1. comm. method
2. dial-up setting
3. Wireless setting
43.TPDU setting

2. Wireless setting (please parse GPRS/CDMA SIM card)

Input APN1：set APN1

Input APN2：set APN2

If needing users：0-No　1-Yes

User name 1：input user name 1

User password 1：input user password 1

User name 2：input user name 2

User password 2：input user password 2

Host IP1：input Host IP1

Host port1：input host port1

Host IP2：input Host IP2

Host port2：input Host port2

Select APN：select using APN（0 or 1）

Dynamic IP：set if select dynamic IP

Automatic switch：set if automatically switch to dial-up or Ethernet

Link method：select link method　0-long link　1-short link

Calling times：set calling times

4. TPDU setting：banking cards TPDU, total 10 bits, the first 2 bits are TPDU ID, generally they are 60, and the middle 4 bits are the target address of TPDU, the last 4 bits are source address of ；

3. Transaction functions setting:

shield transaction：set function of shield transaction to stop transaction

Chargeback setting：set if automatic chargeback after settlement

Tip setting： set if support tip, if support, then you should set the proportion of tip

Resend times: set if fail to do transaction, it will resend automatically, and press "CLR" to delete previous data and input the required number.

Print pages: set pages number of printing receipts

Maximum transaction：set if storing maximum transaction times at this batch, when transaction times of this batch ≥ the setting number, system will remind settlement, if transaction number is 1~500, then the default is 300 transactions.

Other parameter：input card No. by hand: set if support transaction by inputting card No. by hand

Offline upload: set offline transaction if uploads before next online transaction or settlement

Password keypad: if having password keypad

Completion methods of Magnetic card pre-authorization： set completion methods of magnetic card

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Transaction functions setting
1. shield transaction 5.print page number
2.chargeback setting 6.maximum transaction
3.tip setting　　7. Other parameter
4.resend times　　8.IC card parameter

<div align="center">pre-authorization</div>

　　　　printer：select the printer types

　　　　No center: select if no center area

　　　　Online points：set if support online points

　　　　Points TPDU：set online points of TPDU

IC card parameter：set if support IC cards

4、Terminal key management

Key load-in：currently not available。

Key input by hand：set key by hand。

Transaction key index：**set transaction key index。**

TMS key index：**remote download index。**

5、change password

1、change administration password

2、change security password

3、reset dominating password

6、other functions

Erase transaction batch： Delete all transaction record

TMS download： Remote download

Parameter printing： Print key parameter

POS introduction： POS brief introduction

7、PC parameter download

Use computer and POS terminal for communication and parameter setting.

8、MODEM parameter setting

Set MODEM parameter, set whether online checking、test dialing tone, and testing time etc.

Setting on G3 by Appointed merchants' manager

Upon getting G3 from China union pay, the appointed merchants' manager will set G3 parameter and accredit operation rights accordingly. (At the very first, get merchant administration password of G3 from CUP)

Main setting：

1、under main interface, choose "7, management" option；

2、choose "4, counter staff" option；

3、all settings are valid on confirmation. Setting complete, system will prompt whether read-in card. Parameter is valid after read-in.

1、director revise password： revise director password。

2、add operator：Add operators, to 30 at most.

3、inquiry operator：inquiry current operator ID。

4、delete operator： delete operator account。

5、operator revise password： operator revise their access password。

6、director setting：after inputting director password, can change time display。

7、energy-saving setting：(Workable when no external power connected)

1. enter energy-saving model（15-180s）

   Set energy-saving time, default 15S.

2. Wehther keyboard locked

   Set whether keyboard lockable

3. Wehther auto shut-off allowed

   Set whether auto shut-off allowed.

4. auto shut-off time（3-999m）

   Under this menu, set auto shut-off in regulated time。

General function operation

Operator sign-in

Function：Sign-in means the operator start to use POS terminal, and to make sure it's valid.

Operation steps： 1、when start, system will prompt sign-in, and input operation ID number；

2、input operator ID number（0~30）and press enter；

3、input operator password and enter；

4、G3 will upload data to central host and ask for response, it shows "sign-in success" when

succeed; or else shows "sign-in failure";；

5、enter main interface。

Sales

Function：cardholders make online transaction by credit cards at merchants' place。

Operation steps： 1、in main menu, choose "1, sales" to enter payment interface；

2、swipe card by instruction on device screen；

3、when default is consumption, the above two steps can be replaced as a shortcut to make

payments；

  4、follow instruction, enter value amount and press enter；

  5、Input password in Pin pad, no password, press enter directly；

  6、Use G3 to make payment, screen shows payment success at last, and print receipt.

Void

Function：Transaction withdraws including transaction withdraw, pre-authorization void and pre-authorization complete void, which are operated by administrations sometimes are needed because of operation error and other reasons.

Operation steps： 1、in main menu, choose "2, void" and enter withdraw interface；

  2、merchants administration input password and press enter；

  3、follow instructions, input authorized number, press enter ；

  4、swipe card by instruction, check whether card number is correct；

  5、input password in pin pad, no password, press enter directly；

  6、use G3 to withdraw transaction, it shows success at the end, meanwhile print receipt。

Refund

Function：Transaction refund is used to withdraw transaction made in previous days or batches. Operator need to verify the transaction receipt from cardholder, and make sure transaction is in valid period (like, within 3 months). Follow instructions, operator need to input data regarding original transaction, then send to POS center and applying for refund.

Operation steps： 1、in main menu choose "3, refund"；

  2、input administration password, and press enter；

  3、swipe card by instruction, make sure card number is correct；

  4、input system reference number and press enter；

  5、input original transaction date （m-d）；

  7、input refund amount and press enter；

  8、Use G3 to refund, it shows success at the end, meanwhile to print receipt.

Pre-authorization

I pre-authorization：

Function：It refers to the transaction made by cardholders to deposit by swiping cards at appointed merchants' place. Then the bank hosts that issuing the cards will freeze authorized amount, and name the transaction a authorization code.

Operation steps： 1、Under main menu choose "4, pre-authorization" then "1, pre-authorization";

2、swipe card by instruction and make sure card number is correct；

3、input pre-authorized amount and press enter；

3、input password in pin pad, no password, press enter directly;

4、Use G3to make pre-authorization transaction, it shows success at the end, meanwhile print authorization receipt。

II Superadd pre-authorization ：

Function： after pre-authorization transaction succeed, super addition is available。

Operation steps：

1. under main menu choose "4, pre-authorization" then "2, superadd pre-authorization";

2. swipe card by instruction, and make sure card number is correct；

3. input pre-authorization code(the code corresponding to receipt) and press enter；

4. input amount, press enter；

5. input password in pin pad, no password, press enter；

6. Use G3 to make pre-authorization transaction, it shows success at the end, meanwhile print pre-authorization receipt

III pre-authorization completion online：

Function： Merchants frozen cards of cardholder and credit fee, but this transaction is revocable.

Operation steps: 1、under main menu to press"4、pre-authorization",and select"3、pre-authorization completion online"

2、brushing card according to screen prompt or input card No. by hand；

3、input original transaction date；

4、input original authorization code and press "OK".

5、input amount and press OK；

6、input password, if no password please directly press "OK"；

7、pre-authorization success and print receipt..

IV pre-authorization completion offline：

Function： Merchants frozen cards of cardholder and credit fee, but this transaction is not revocable

Operation steps: 1、under main menu to press"4、pre-authorization",and select"4、pre-authorization completion offline"；

2、brushing card according to screen prompt or input card No. by hand；

3、input original transaction date；

4、input original authorization code and press "OK".

5、input amount and press OK；

6、input password, if no password please directly press "OK"；

7、pre-authorization completion success and print receipt..

V pre-authorization void：

Function： Pre-authorization void when cardholder likes to claim back their deposit.

Operation steps:： 1、under main menu to press "4、pre-authorization", and select "5、pre-authorization void"；

2、merchants manager input his password and press "OK";

2、brushing card according to screen prompt or input card No. by hand；

3、input original transaction date；

4、input original authorization code and press "OK".

5、input amount and press OK;

6、input password, if no password please directly press "OK";

7、pre-authorization void success and print receipt.

VI pre-authorization completion void:

Function：Void the actual sales amount which cardholder buys something from merchants.

Operation steps:1、under main menu to press"4、pre-authorization",and select"6、pre-authorization completion void"；

2. Merchants manager input his password and press "OK";

2、brushing card according to screen prompt or input card No. by hand；

3、input original transaction date；

4、input original authorization code and press "OK".

5、input amount and press OK;

6、input password, if no password please directly press "OK";

7、pre-authorization completion void success and print receipt.

Note: pre-authorization completion offline is not revocable.

Offline

I offline settlement：

Function： Do offline settlement by POS, currently it's only allowed for visa and mastercard cards.

Operation steps:1、under main menu to select "5. Settlement"；

2、select "1 offline settlement"；

3、input card No. and press "OK";

4、input validity of card and press "OK"；

5、input original authorization method, there are 3 methods：1. POS，2. pre-authorization by phone，3. cash stand-in authorization.

POS：

Input authorization code and press "OK"

Input international organization code and press "OK";

Print purchasing receipt and upload when next POS online or before next batch settlement online;

Pre-authorization by phone：

Input authorization code and press "OK"

Input international organization code and press "OK";

Input actual settlement amount and press "OK";

Print purchasing receipt and upload when next POS online or before next batch settlement online;。

II settlement adjustment：

Function： Adjust the current batch settlement amount, or supperadd tip of current batch sales, which is only available for visa, mastercard ect. Banking cards.

Operation steps:1、 under main menu to select "5. Settlement"；

2、 select "2. Settlement adjustment" and press "OK"；

3、 input original transaction receipt No. and press "OK'；

4、 after figuring out original transaction, handle them again again:

Original is sales, then input sales amount and press "OK"；

If original is not sales, then input adjusted amount and press "OK"；

5、 print receipt;

Query

Function： **Cardholder inquiry his balance by POS. this transaction don't attend settlement.**

Operation steps:1、 under main menu to select "8. Other operation" and select "1. Balance inquiry"；

2、 swiping card；

3、 input password, if no password, please press "OK"；

4、 pos will return the balance of banking card.

Response Test

Under main menu to select "8. Other operation", then select "2. Response test, then you can test the Ethernet between POS and banking switch, if connecting success, POS will prompt "comm. Line works well".

Settlement

Function： When pos go on batch settlement, POS will upload debit amount, load amount in batch to banking switch center to handle response message of batch settlement. When POS in batch settlement, it will do settlement according to different RMB account and foreign currency account separately. After finishing, it will implement reconciliation between POS and banking switch center. Then POS will print settlement receipt automatically and clear cache at the same time.

Operation steps:1、 under main menu to select "7. Management", and then select "6. Settlement"；

2、 G3 will show debit and load times and amount according to different banking cards；

3、 please press upward key and downward key to switch showing RMB or other foreign

currency;

4、press "OK", then G3 will upload settlement command, then G3 will start uploading settlement, until screen prompts "settlement success" and print receipt automatically;

Note： If settlement is not correct, G3 will upload report. If uploading report stops, G3 will continue to upload report after next online until finish uploading.

General management operation

Reprint

Under main menu to press "6. reprint" to enter reprint interface.

I reprint the last sales receipt： Reprint the last successful sales receipt, if last sales receipt is not completed then need reprint the last one.

II Reprint any sales receipt: input receipt No. to reprint any receipt you want

III reprint sales details: reprint all unsettlement sales record by time of sales happen

IV reprint sales summary: reprint china unionpay card and visa marstercad debit or load data separately.

Chargeback

Under main menu to select "7. Management" and then to select "chargeback".

If no any settlement available on this POS, please select this option to close the current working status of POS.

Operation query

Under main menu to select "7. Management", then to select "3. Operation query" to enter query interface.

I inquiry sales details:

G3 will display the last sales details. please press upward key and downward key to inquiry the last sales details and the previous sales details.

II inquiry sales summary：

Inquiry sales amount, times and total void sales amount and times.

III   Inquiry by receipt No.

Input existing receipt No. to inquiry sales records before settelement.

Outline

Under main menu to select "7. Management", then to select "5. Outline"

When merchants need to change phone line and having outline, merchants can set outline number by themselves, after setting please save by pressing "OK", print important parameter list, you can check if setting is ok by important parameter list.

System standby

Under main menu to select "7. Management", then "7. Lock POS", then it will enter system closing interface temporary.

If operator need to leave POS temporary, he can use this function to lock G3 POS temporary, and the screen will prompt "system close temporary", that means the whole system will be closed temporary, if need withdraw close, then press "return" to input current operator password or merchant management password.

System information

Under main menu to select "7. Management, then select "8. Version

It will provide related version information of G3 and communication success rate

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device 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.

Certification information (SAR)

This device is also designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA).

The SAR limit adopted by the USA is 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported to the FCC for this device type complies with this limit.

The highest SAR value reported to the FCC for this device type when properly worn on the body is 0.757 W/kg