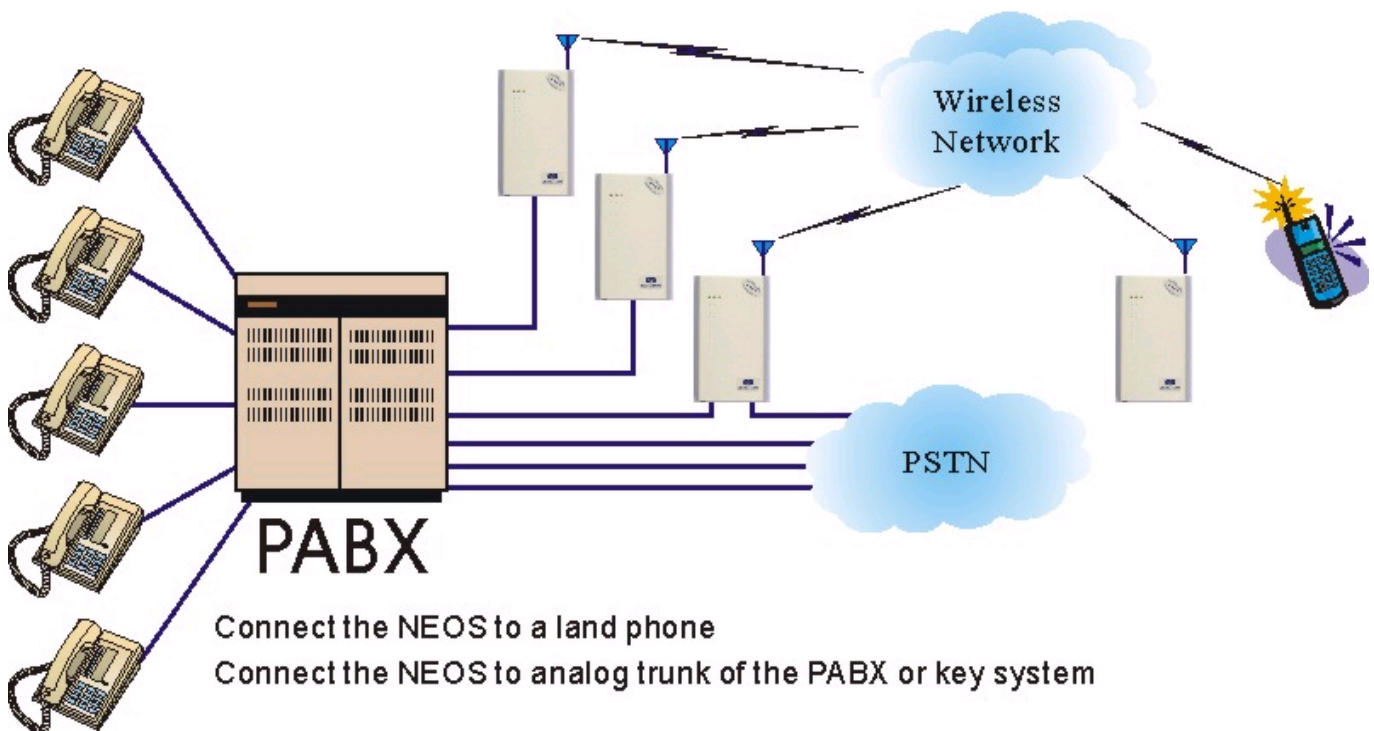# MANUAL
NEOS3000

A. INTRODUCTION

Thank you for choosing the **NEOS3000AB2** series product from Gainwise. This innovative product make you connect to standard telephone equipment with GSM engine into a cellular network for total communications flexibility. You can connect the **NEOS3000AB2** to the land phone or the analog trunk of the PABX or key system.

B. CHECKING YOUR PARTS

Item	Description	Qty	Included	Optional
1	NEOS3000AB2	1		
2	DC12V/1A Switching Adapter	1		
3	Phone Cord	1		
4	Telephone Box	1		
5	Male SMA Antenna	1		
6	Operation Manual	1		
7	Display	1		
8	Data Cable	1		
9	SCM50	1		

C. SYSTEM ARCHITECTURE

Trunk Side Application

Wireless Network

PSTN

PABX

Connect the NEOS to a land phone
Connect the NEOS to analog trunk of the PABX or key system

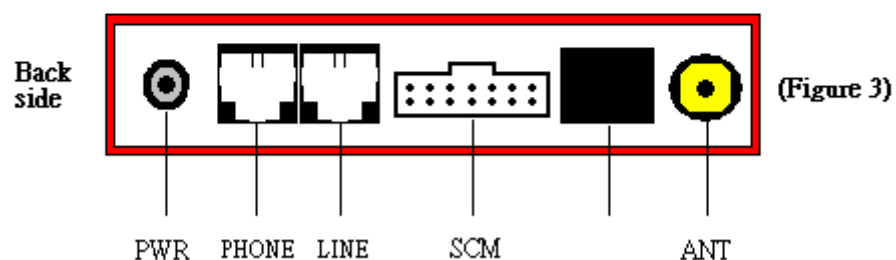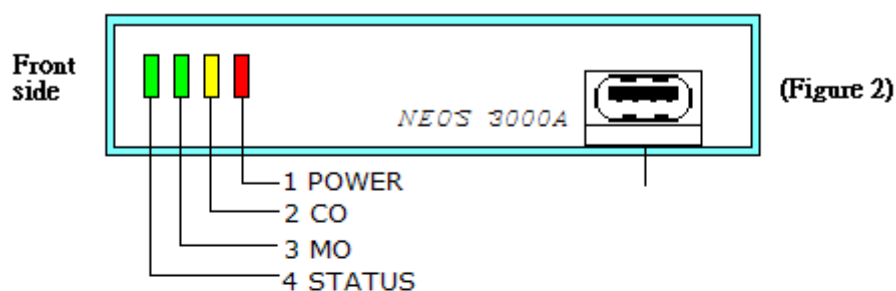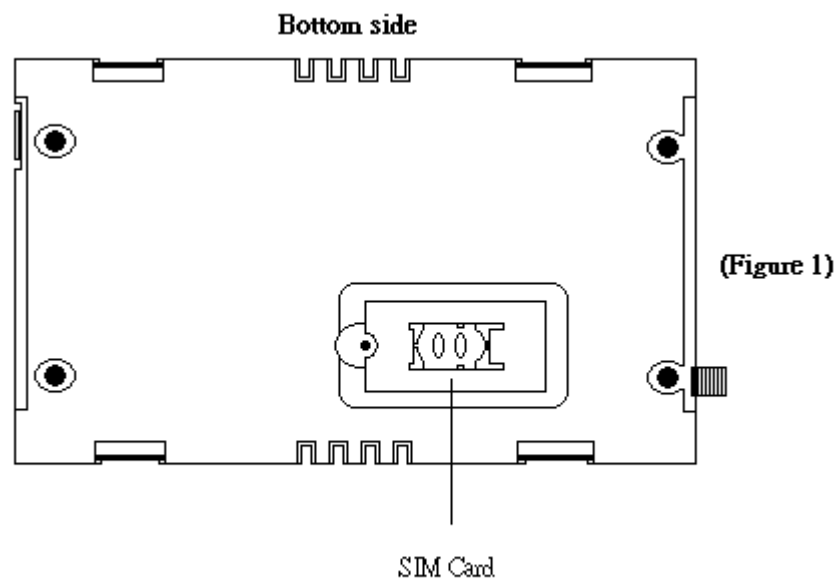D. INSTALLATION (see diagram below)

1. SIM Card Installation(figure 1)

    1-1. Remove the 12VDC switching adapter

    1-2. Gently insert the mini-SIM card in the slot of bottom of NEOS3000AB2

    1-3. Make sure the SIM card is put exactly

    1-4. Attach the 12VDC switching adapter

2. Connect the antenna to the SMA antenna connector on the back of NEOS3000AB2.
3. Connect The Power and Plug In Your Telephone Equipment(figure 2 and 3)
   3-1. Connect the LINE port of NEOS3000AB2 with wall jack of PSTN. (If you don't have PSTN or need LCR, you don't do it.)
   3-2. Connect one end of phone cord to the PHONE port of NEOS3000AB2 and the other end to the analog port of the PABX. (or key system or the land phone)
   3-3. Connect the switching adapter to the DC jack of NEOS and AC power.
   3-4. All steps are finished, the red led and green led turn on.

Bottom side

(Figure 1)

SIM Card

Front side

(Figure 2)

NEOS 3000A

1 POWER
2 CO
3 MO
4 STATUS

Back side

(Figure 3)

PWR   PHONE LINE   SCM   ANT

4. LED Status Indicators

Position	LED Color	LED Activity	Description
1	RED	Continuous ON or OFF	The DC power is ON or OFF
2	YELLOW	Continuous ON	The PSTN line is idle.
2	YELLOW	Flashing(0.05sec ON / 0.05sec OFF)	The PSTN line is talking.
3	GREEN	Continuous ON	The GSM phone is idle.
3	GREEN	Flashing(0.05sec ON / 0.05sec OFF)	The GSM line is talking.
3	GREEN	Flashing(0.25sec ON / 0.25sec OFF)	The redial tone of NEOS.
3	GREEN	Flashing(0.5sec ON / 0.5sec OFF)	The busy tone of NEOS.
4	GREEN	Continuous OFF	The engine is OFF, in SLEEP, ALARM
4	GREEN	Flashing(0.6sec ON / 0.6sec OFF)	No SIM card, no PIN entered, network searching
4	GREEN	Flashing(0.075sec ON / 3sec OFF)	Logged on a network but no call in progress
4	GREEN	Continuous ON	Connected to remote party
2&3	GREEN and YELLOW	Flashing three time in one second	Enter the Setup Mode
2&3	GREEN and YELLOW	Flashing(0.25sec ON / 1.75sec OFF)	Enter the Programming Mode

E. HOW TO USE
1. Pick up your telephone handset.
2. Listen for dial tone. (If there is no tone, you have to check the GSM engine signal)
3. Dial the phone number.

F. PROGRAMMING MODE
1. Pick up the telephone handset and listen for the dial tone. Press the   then enter the setup mode. You can hear the Du Du Du tone (three times per second).
2. Press the password to enter programming mode, the default value is 1234
   2-1. When the password is correct, the green LED and yellow LED of NEOS will flash and you hear short Du tone (one time per second). We call it setup tone.
   2-2. When the password is wrong, the green LED and yellow LED of NEOS will flash and you hear three Du tones then back to the setup mode.
3. In programming mode you can press the function code to program the feature you want. (check the table of function code)
   3-1. If the programming is successful, the green LED and yellow LED of NEOS will flash one time and you can hear one Du tone. You can program the other function.
   3-2. If the programming is fail, the green LED and yellow LED of NEOS will flash three times and you can hear three Du tones. If you hear setup tone, you can reprogram the function
   3-3. You can hang up the handset to cancel this programming when you press wrong code.
   3-4. Press   or hang up the handset over two second if you want to quit the programming mode.

G. FUNCTION DESCRIPTION (Reference FUNCTION CODE TABLE)

1. Outgoing Time Control

   1-1. NEOS will emit three Du Du Du tones at 25 seconds before the end of the outgoing time that you program. It reminds you that this call will be finished.

   1-2. Press 90X to set the outgoing time from 1 to 9 minutes. X is 1 to 9.

   1-3. Press 911 to disable NEOS to finish the call when outgoing time is up. But NEOS will emit the reminding tone per minute.

   1-4. Press 912 to enable NEOS to finish the call when outgoing time is up.

   1-5. Press 900 to set that NEOS don't restrict the outgoing time.

2. Call Restriction (It is useful when you remove phone cord from line port of NEOS)

   2-1. Press 916 to enable the call restriction. You can call when the prefix of phone number match permissible dialing number or else you can not call and hear Du Du Du tone.

   2-2. Press 915 to disable the call restriction. You can call all number when you don't connect wall jack to line of NEOS.

   Note If you press 916 to enable the call restriction and the permissible dialing number is empty, you can not call at all.

3. Permissible Dialing Number

   3-1. Press 80XXXXXXXX to add the prefix number. X represents digit of number. One prefix is up to 9 numbers and total is up to 50 sets.

   3-2. Press 70XXXXXXXX to delete the prefix number.

   3-3. Press 998 to clear all permissible dialing number.

   3-4. If you connect wall jack to NEOS, the permissible dialing number will become router between PSTN and GSM network.

4. Outgoing Tone

   4-1. Press 927 to disable the beeping tone when you call via GSM network.

   4-2. Press 928 to enable the beeping tone when you call via GSM network.

5. Polarity Reversal

   5-1. Polarity reversal of outgoing call description
   When the outgoing call is connecting NEOS will reverse the polarity. If anyone hangs up the phone, then NEOS reverse the polarity back.

   5-2. Polarity reversal of incoming call description
   When you pick up your handset NEOS reverse the polarity. If anyone hangs up the phone, then NEOS reverse the polarity back.

   5-3. Polarity reversal Option
   Press 963 to disable polarity reversal of outgoing.
   Press 964 to enable polarity reversal of outgoing.
   Press 967 to disable polarity reversal of incoming.
   Press 968 to enable polarity reversal of incoming

6. Factory Default Setting
   Press 999 to enable the default setting.

H. INSTALLITION TIPS

1. Make sure that GSM engine logged to a network. Check the receive signal strength and move the antenna until you achieve the best signal possibly.

2. RF energy from GSM engine may affect the other standard telephone equipment. Don't place the NEOS beside equipment too close.

3. When you connect NEOS with PABX, please notice the polarity of PSTN line.

4. Please disable the PIN entered of SIM card. Disable the feature of call waiting, call forwarding and voice mail.

I. FUNCTION CODE TABLE

Feature	Function Code	Description
Setup Mode		Enter the setup mode
		Escape the setup mode and enter normal mode
Password	0XXXX	Set the password. It is up to 8 digits. The default is set 1234 .
	913	Disable to press password
	914	Enable to press password. It is default.
Outgoing Time Control	900	Disable outgoing time control
	90X	Set the outgoing time. X is 1 to 9 minutes.
	911	Disable NEOS to cut the call when outgoing time is up. But NEOS will emit the reminding tone per minute
	912	Enable NEOS to cut the call when outgoing time is up.
Call Restriction	915	Disable limiting dial. It is default.
	916	Enable limiting dial.
Permissible Dialing Number	80XXXXXXXX	Add the prefix number.
	70XXXXXXXX	Delete the prefix number.
	998	Clear all permissible dialing number.
Outgoing Tone	927	Disable
	928	Enable
Polarity Reversal	963	Disable polarity reversal of outgoing. It is default.
	964	Enable polarity reversal of outgoing
	967	Disable polarity reversal of incoming. It is default.
	968	Enable polarity reversal of incoming.
Receive Volume	53X	X is 0 to 4. Adjust the receive volume of engine.
Reset Default	999	Enable the default setting
Factory Default setting		Password is 1234 .
		Outgoing time is not limited.
		Disable limiting dial

J.WARNING!!

a. 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.

b. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

c. 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.

d. FCC RF Radiation Exposure Statement:

    1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

    2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

e. The product was tested according with the TIA –968-A regulations, using the procedure of our latest submitted application. And this product complies with 47CFR PART 68.

Frequently Asked Questions (FAQ):

Q: The light "PWR" does not light on after power on?

A: Check the power adapter or no electricity in the socket

Q: Where to check the LED status?

A: Please see Page 4 LED Status indicator List

Q: When the telephone is hook off, I can't hear any dial tone?

A: 1. Check the phone machine situation

2. Check the phone cable line is Normal or loosen

3. Check the LED light is correct

Q: When the telephone is hook off and heard "DOMISO" music?

A: 1. The mobile network is off service or registering to the telecom system unsuccessful.

2. Take the sim card insert into mobile phone to check this situation and disable this "ENTER PIN CODE" functions.

3. If it is not successful, please contact local dealer.

Q: I can't hear the answer party sound

A: 1. Please redial this number more than once and if it is successful that this problem was caused by Telecom Network are not catching the signal properly temporary.

2. If it is still problems exist, please contact local dealer.

Q: When incoming call go through GSM network, and dialer still hear the answer party is ringing but nobody answer?

A: 1. Check and dial tone and try to dial again from another telephone machine

2. If the answer party is ringing and nobody answer, please contact local dealer.

3. If it will happen temporary , the GSM network are on RESET situation.

Q: This machine can't hear any dial tone?

A: 1. Disconnect this power

2. Check the outgoing call is still can go through by PSTN line, if outgoing call can't go through PSTN, This telephone machine or PBX system is damaged.

3. Change another Telephone machine and check again follow above procedure.

GAINWISE TECHNOLOGY CO.,LTD.