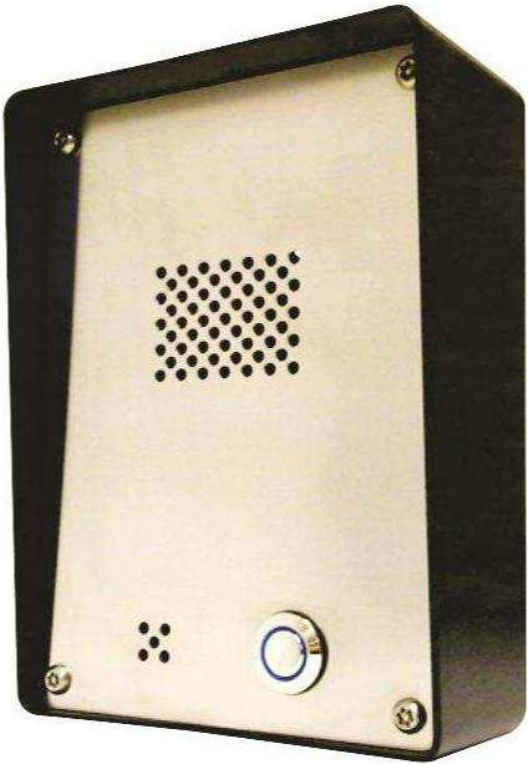

S-NX

GSM door-entry Program Manual

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ING. GIANNI SABATO
Via S. Stefano 74, I-40125 Bologna
GSM +39 335 238046
Ph. +39 051 6211553
Fax +39 051 3370960
E-mail: info@doingsecurity.it
Web: www.doingsecurity.it

Technical assistance Tel.: +39 329 2288344 / +39 051 6211553

Tel.: +39 335 238046 ✉ : info@doingsecurity.it

Content

1 For your safety

Read these simple guidelines. Not following them may be dangerous or illegal. Read the complete user guide for further information.

SWITCH ON SAFELY

Do not switch the unit on when use of wireless phone is prohibited or when it may cause interference or danger.

INTERFERENCE

All wireless phones and units may be susceptible to interference, which could affect performance.

SWITCH OFF IN HOSPITALS

Follow any restrictions. Switch the unit off near medical equipment.

SWITCH OFF IN AIRCRAFT

Follow any restrictions. Wireless devices can cause interference in aircraft.

SWITCH OFF WHEN REFUELING

Do not use the unit at a refueling point. Do not use near fuel or chemicals.

SWITCH OFF NEAR BLASTING

Follow any restrictions. Do not use the unit where blasting is in progress.

USE SENSIBLY

Use only in the normal position as explained in the product documentation. Do not touch the antenna unnecessarily.

2 Introduction

S-NX is a simple GSM intercom communication system that is designed to ensure low-cost, reliable and single box solution for intercom application. It is designed for unlimited range, wire free GSM intercom and CLIP support.

In addition S-NX supports alarm detection, stay-alive messages, credit detection etc.

3 Features and Applications

Main features are:

a. Built-in quad-band GSM module
b. Up-to 8 buttons call support (Note: S-NX has only one button; S-KC door-phone module can manage up to 8 call-buttons)
c. 2 alarm inputs, 2 additional on extension connector
d. 2 outputs (relay supported)
e. Up to 100 telephone numbers for CLIP support
f. Programming by USB SIM Key editor (optional)
g. Download programming by SMS command
h. Anti-tampering input

Main applications are:

i. Single box, wire free intercom solution
j. Remote gate opener (CLIP)
k. Simple alarm support

4 Start-up

Follow these steps for the system start-up (see also Quick Start Guide):

- Insert SIM card to be used for S-NX in your personal mobile phone and **ERASE THE PIN CODE**!
- Insert SIM card in S-NX device. The unit must be switched OFF when you insert the SIM card.
- Connect inputs and outputs to S-NX.
- Connect the antenna to antenna connector.
- Connect power cable to S-NX device.
- Connect device to source power supply voltage.
- Wait until LED3 display is turned ON (yellow) and LED1 (blue) starts flashing. This is set in around 1 minute.
- S-NX unit is now ready to operate

WARNING: Before sending any SMS commands to S-NX device, it must be in normal operation. S-NX device will "beep" in 15s interval until the device is not in normal operation.

5 LED display

5.1 Blue LED (1)

Indicates the level of the GSM signal from 1 to 5 LED flashes (1 is weak signal, 5 is excellent signal).

5.2 Red LED (2)

When LED 2 is ON the unit has a problem with a GSM network connection or the GSM part of the unit is out of order. In this case immediately call the Customer Assistance!

5.3 Yellow LED (3)

Short flashing indicates that the GSM module is ON, but it is not yet connected on the GSM network. After connection, yellow led is flashing with short pulse ON and a long pulse OFF.

6 Clear all data from SIM

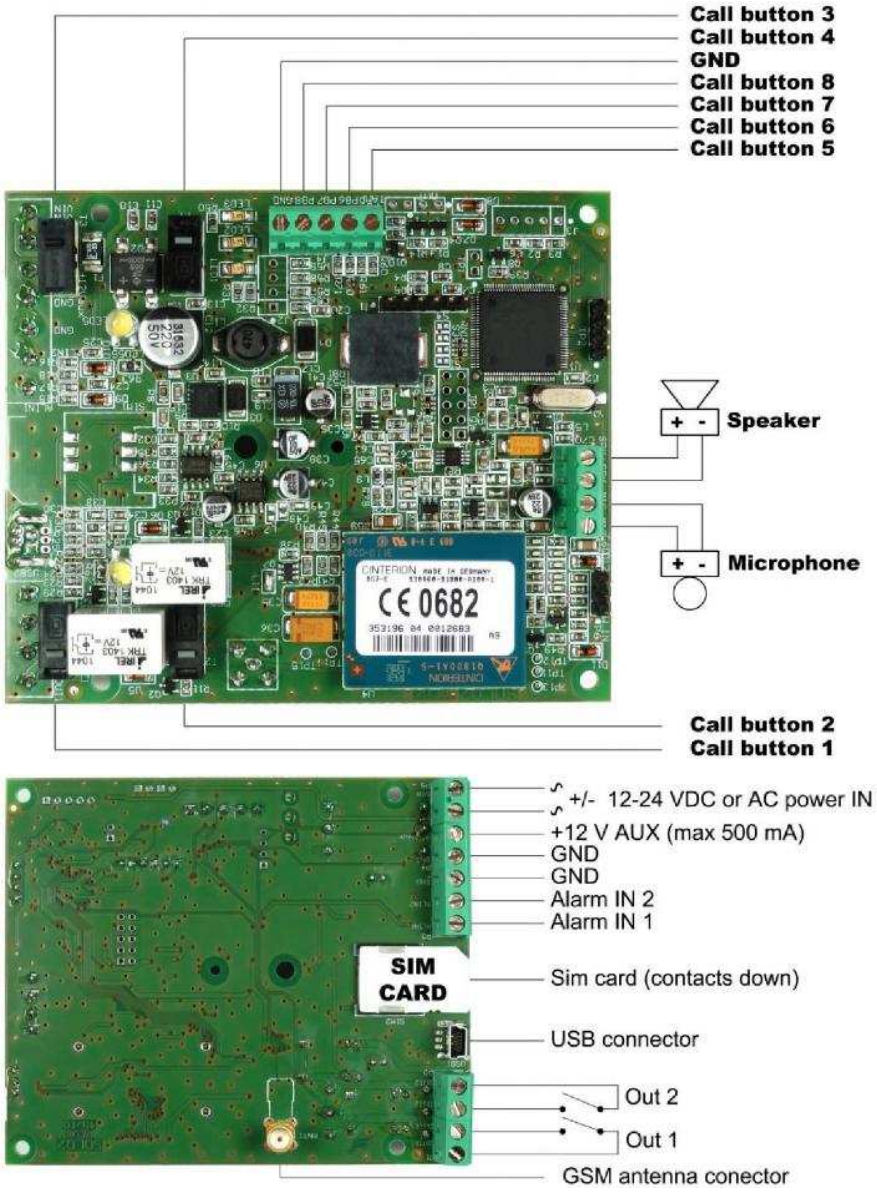
This is highly recommended when a SIM card you are going to use for the S-NX is not new and it already has some data stored in the phone book memory.

By sending the folowing SMS to S-NX, all programmed parameters and numbers are cleared:
;SDCLR;

After sending SMS you should wait at least 60 second for the command to be executed!

NOTE: By sending this command to the S-NX, all programmed data are erased from the SIM card, including SMS messages! After the device will start it will be configured with factory defaults.

7 Connection Diagram



8 Programming S-NX

S-NX can be programmed in many ways.

- To program S-NX parameters put the SIM card into your personal GSM phone. Add programming parameters in SIM Card “Phone Book”.
- You can program S-NX remotely by SMS command.
- You can program S-NX with USB key and SIM manager (USB dongle and software are optional items).
- You can program S-NX with direct USB connection, with the use of configuration software running on PC (programming software is optional).

9 S-NX parameters

The S-NX parameters are divided in logical sections and are described in the following paragraphs.

9.1 Alarm Support

Alarm reporting is supported by group of different parameters. First section is used to define the relations needed for alarm to be trigged. The second section is used to report alarm.

9.1.1 Alarm Triggering

Parameters are used to control (filter) the triggering of the alarm inputs.

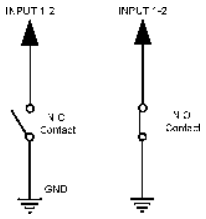
9.1.1.1 IN parameter

Alarm and reset input can be triggered in 2different ways. The status of the input can either be normal closed (N.C.) or normal open (N.O.) trigged with GND.

When you need the input feedback information it is possible to receive SMS when input returns from alarm to normal position. To receive return SMS use IN setting 4 and 5.

- IN = 0 – Normal Open – triggered with negative voltage (GND)
- IN = 1 – Normal Close – breaking negative or positive voltage loop
- IN = 2 – Not in use
- IN = 3 – Not in use
- IN = 4 – IN = 0 + input reset SMS
- IN = 5 – IN = 1 + input reset SMS
- IN = 6 – Not in use

Herein below, the input connection diagram



9.1.1.2 ID parameter

ID parameter determines time period of the pulse length to trigger the alarm.

The pulse time can be from 0,5 seconds to 9999 seconds. The default time is 0,5 seconds when the parameter value is 0.

9.1.1.3 DD parameter

This parameter is used to define the delay between the time that alarm input is trigged and the time that alarm is reported.

9.1.1.4 Table of parameters

Name	Comment
IN1	Mode of operation for input 1
IN2	Mode of operation for input 2
IN3	Mode of operation for input 3
IN4	Mode of operation for input 4
ID1	Input time integration delay on input 1
ID2	Input time integration delay on input 2
ID3	Input time integration delay on input 3
ID4	Input time integration delay on input 4
DD1	Time delay for alarm reporting on input 1
DD2	Time delay for alarm reporting on input 2
DD3	Time delay for alarm reporting on input 3
DD4	Time delay for alarm reporting on input 4

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
IN1	0	Alarm activated by connecting to GND
IN2	4	Alarm activated by connecting to GND + RST SMS
ID1	10	Input 1 has to be valid for 10 second to trigger the alarm
ID2	0	Input 2 has to be valid for 0,5 second to trigger the
DD1	0	Reporting of the alarm on input 1 is delayed by 0s
DD2	15	Reporting of the alarm on input 2 is delayed by 15s

Example of remote programming by SMS:

;IN1=0;IN2=4;ID1=10;ID2=0;DD1=0;DD2=15;

9.1.2 Remote Report of Alarm Events

Parameters used to define the way to report the alarm events. Note that S-NX send SMSs to report alarm events.

9.1.2.1 TN parameter

Telephone numbers for remote alarm reporting are listed as TN parameters. Remote alarm reporting on S-NX is done via SMS messages.

9.1.2.2 LN parameter

This parameter is used to link alarm event from inputs or any other source to the telephone numbers from TN list.

9.1.2.3 LOT parameter

LOT parameter is used to define the time control for voice calls. The start of voice connection starts the LOT timer. If the voice connection is still ON when the LOT timer expires S-NX disconnects voice connection.

9.1.2.4 Table of parameters

Name	Comment
TN1	1st telephone number
TN2	2nd telephone number
TN3	3rd telephone number
TN4	4th telephone number
TN5	5th telephone number
LN1	Input & telephone No. linking for 1st alarm input (TN1 – TN5)
LN2	Input & telephone No. linking for 2nd alarm input (TN1 – TN5)
LN3	Input & telephone No. linking for 3nd alarm input (TN1 – TN5)
LN4	Input & telephone No. linking for 3nd alarm input (TN1 – TN5)
LN5	Periodic test SMS. No. linking (TN1 – TN5)
LN6	SIM card refill. No. linking (TN1 – TN5)
LN7	NAC list. No. linking (TN1 – TN5) (see note)
LN8	Log status. No. linking (TN1 – TN5)
LOT	Time out for GSM connection.

Remark: When telephone number (calling or messaging S-NX) is not on the CLIP list, not acknowledge event occurs (NAC). The telephone number responsible for this event can be send to TN user for notification.

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
TN1	042376678	1st telephone number
LN1	13	Input 1 reports alarm to TN1 & TN3
LN2	1234	Input 2 reports alarm to TN1 & TN2 & TN3 & TN4
LN7	1	NAC event sent to TN1
LOT	60	Voice connection stay valid for max of 60s, after this time Voice connection breaks

Example of remote programming by SMS:

;TN1=042376678;LN1=13;LN2=1234;LN7=1;LOT=60;

9.1.3 Controlling Outputs with DTMF

S-NX can control the outputs with the use of DTMF. This is very useful function in the intercom application.

To control the outputs the user must press the combination of 2 digits. First digit is used to select the output (1 to 2), the second digit is used to activate (1) or deactivate (0) the output. There is a special case when the user can select for first digit (output selection) number 0. In this case all outputs control by the same time.

Combination must be pressed in 2s interval, and must be 3s apart to be valid.

Remark: S-NX must be in voice connection to support DTMF output control!

Example:

DTMF combination	Description
00	Deactivate ALL outputs
01	Activate ALL outputs
11	Activate output 1
20	Deactivate output 2

9.2 Output Management

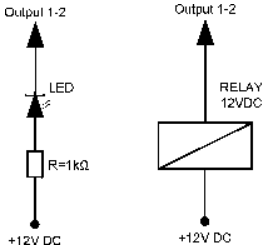
S-NX supports the possibility to report alarms from inputs and any other events locally via 2 outputs. The behavior is defined using next parameters.

9.2.1 OS parameter

S-NX device has 2 dedicated relay supported outputs. Outputs can be configured to different behavior:

- OS = 0 Disabled
- OS = 1 Bi-stable toggle (latch) mode
- OS = xxx Mono-stable pulse mode (duration in seconds)

Typical connection for the output is as shown herin below:



9.2.2 OD parameter

OD parameter is used to link the alarm event directly to output.

9.2.3 OP1, OP2 parameters

Parameters are used to invert the polarity of the outputs.

- 0 – normal
- 1 – inverted

9.2.4 Table of parameters

Name	Comment
OS1	Mode of operation for output 1
OS2	Mode of operation for output 2
OD1	Input 1 direct link to outputs
OD2	Input 2 direct link to outputs
OD3	Input 3 direct link to outputs
OD4	Input 4 direct link to outputs
OD5	NAC direct link to outputs
OP1	Invert control for output 1
OP2	Invert control for output 2

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
OS1	1	Bistable toggle mode
OS2	14	Monostable pulse mode (14s pusle)
OD1	1	Input 1 activates output 1
OD4	2	Input 2 activates output 2
OP1	1	Output 1 inverted

Example of remote programming by SMS:

;OS1=1;OS2=14;OD1=1;OD4=2;OP1=1;

9.3 Security Level SL

SL parameter from 0 to 5 defines which telephone number stored in the phone book from TN1 – TN5 can enter into programming and remote control of the S-NX (dialing the S-NX phone number or sending the SMS).

Note that when the SL level is 0, an access to the S-NX is possible from any phone!

Warining: Before any SL number is programmed the S-NX can accept ALL CALLS. Remote SMS programming and remote controlling is possible from any phone!

Name / value	Comment
SL = 0	All calls and SMS are accepted
SL = 1	Only number stored under parameter TN1 has access to unit
SL = 2	Numbers stored under parameters TN1 to TN2 have access to
SL = 3	Numbers stored under parameters TN1 to TN3 have access to
SL = 4	Numbers stored under parameters TN1 to TN4 have access to
SL = 5	Numbers stored under parameters TN1 to TN5 have access to

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PITONE BOOK		
Name	**Number**	**Description**
SL	3	Numbers stored under parameters TN1 to TN3 have access to unit

Example of remote programming by SMS:

;SL=3;

9.4 Prepaid SIM credit and Validity Info

S-NX can be used with prepaid SIM cards and its limitations. To be able to overcome this limitation of the prepaid SIM cards, S-NX offers the possibility of automatic checking mechanism for credit and time expiration.

Note that S-NX automatically sends warning SMS when the credit reaches low level defined by LCV parameter or SIM card validity is near to expiration. Note also that the validity of a prepaid SIM card depends from a provider to another.

9.4.1 Programming prepaid SIM credit and validity string

To be able to support credit and time validity checking different parameters are used.

9.4.1.1 LCV and SCV parameters

LCV is used to set the limit for low credit event. If the credit on prepaid SIM cards falls below this limit SMS is sent.

SCV is the period of valid operating time and depends from GSM network providers. The value can be programmed from 1 to 360 days. The default value does not presume any kind of expiry warning.

For example in Italy SCV is 360 days.

9.4.1.2 CC1, CC2 and CC3 parameters

Number used to check low credit value. They are provided from the GSM provider.

=' CC1	This method can be used by any GSM provider that supports UnstructuredSupplementary Service Data
=' CC2	This method is dedicated to Italian TIM mobile provider
=' CC3	This method is dedicated to Italian Vodafone mobile provider

9.4.1.3 CREF, CTIM, CVODA parameters

Parameters are used to find the credit value of the prepaid SIM card. Strings under these parameters are used to parse the replay message from the GSM provider.

=' CREF	Parse string for the replays received from CC1 number
=' CTIM	Parse string for the replays received from CC2 number
=' CVODA	Parse string for the replays received from CC3 number

9.4.1.4 Table of parameters

Name	Comment
LCV	Low credit value, bottom limit for low credit event.
SCV	Sim card validity time (in days)
CC1	Credit number for credit check universally used
CC2	Credit number for credit check dedicated for Italian TIM mobile provider
CC3	Credit number for credit check dedicated for Italian Vodafone mobile provider
CREF	String for parsing replay message from CC1 number
CTIM	String for parsing replay message from CC2 number
CVODA	String for parsing replay message from CC3 number

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
CC1	*448#	Simobil
CC2	4916	TIM Italy
CC3	404	Vodafone Italy
LCV	4	Low credit message will be send below 4

Example of remote programming by SMS:

;CC1=*448#;CC2=4916;CC3=404;LCV=4;

9.5 Set-up parameters

Different parameters are used to support versatile functionality of S-NX.

9.5.1 HTN parameter

Hidden telephone number is a parameter used in order to conceal the telephone number of the S-NX device. The default value is set to “1” which means that the number is displayed.

9.5.2 ESC parameter

Parameter is used to define the input used to cancel the outgoing call from the S-NX device.

9.5.3 UDC parameter

Parameter is used to synchronise S-NX clock to GSM network clock. User must enter here the number of the S-NX SIM card (Telephone number of S-NX device).

9.5.4 RAN parameter

Parameter is used to provide support for auto-answer options for S-NX device. The number defines the numbers of rings needed for S-NX device to answer the incoming call. The incoming number must be on the TN list for S-NX device to answer.

9.5.5 TST parameter

A test SMS is sent periodically. S-NX can send the test message in the interval ranging from 1 hour to 240 hours.

Example:

to send test SMS, TST value is set to 12, the numbers linked to “LN5” receive a test message every 12 hours

9.5.6 TSTT parameter

TSTT parameter is used to define reference point for sending test message. If this parameter is set than after restart of the S-NX first test SMS will be send out at time defined with TSTT parameter. Parameter value is defined in hours.

Example:

to receive first test SMS at 20.00h TSTT value must be set to 20

Note that this function can be disabled by setting TSTT to 0.

9.5.7 MNF parameter

When it is necessary to fix the GSM network to one provider the user can use the MNF parameter. The MNF parameter switches "automatic network searching" to manual.

Warining: This parameter is dependant from the GSM provider!

Example:

MCC/MNC code for TIM is 22201 and Vodafone Italy is 22210

9.5.8 MIC parameter

MIC parameter enables you to change the sound level on microphone.

9.5.9 SPK parameter

SPK parameter enables you to change the speaker sound level.

9.5.10 MUT parameter

MUT parameter enables you mutate the speaker sound while initiating voice connection.

9.5.11 ARST parameter

ARST parameter defines periodic of auto restart time (in hours) of the S-NX device.

9.5.12 ADF parameter

Parameter is used to define voice refresh function, to prevent blocking of SIM in some networks.

9.5.13 LNG parameter

LNG parameter switches between the preprogrammed languages:

- 0 - English
- 1 - Italian
- 2 - Slovenian
- 3 - Croatian
- 4 - Dutch
- 5 - German
- 6 - Spanish

9.5.14 BUZ parameter

Parameter is used to control buzzer functionality on S-NX. Buzzer is used to audio support some events on S-NX device.

9.5.15 Table of parameter

Name	Comment
UDC	Tel. number of S-NX device
ESC	Input used as cancel button
RAN	Auto answer ring number
HTN	Hidden telephone number
TST	SMS test time out
TSTT	Periodic test SMS start time
MNF	Manual GSM provider selection
MIC	Microphone volume control
SPK	Speaker volume control
ARST	Time out control for automatic system restart
ADF	Auto dial functionality (Call TN1)
LNG	Language selection
BUZ	Buzzer control

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
HTN	0	Hidden telephone number of the S-NX device
MNF	29340	Manual fixing of the GSM provider (Simobil)
LNG	1	Switch on Italian language
MIC	2	Output sound level
SPK	20	Input sound level
TST	24	24 hours periodic test SMS
BUZ	0	Mute buzzer
ESC	2	Input 2 is used as cancel button

Example of remote programming by SMS:

;HTN=0;MFN=29340;LNG=1;MIC=2;SPK=20;TST=24; BUZ=0;ESC=2;

9.6 SMS editor

You can write and send a short SMS message for each alarm input. The default message is English, but it is possible to change language with LNG parameter. Each message is built from 3 parts and user can write the first (User Location) and the second (alarm event) part of the message. Unit adds the third part (alarm event description) automatically. Language of the 3rd part may be changed by LNG parameter. The message is stored in the SIM phone book so you should add any number for correct operation.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
#	0	U	S	E	R		L	O	C	A	T	I	O	N	
#	1	I	N	P	U	T		1							
#	2	I	N	P	U	T		2							
#	3	I	N	P	U	T		3							
#	4	I	N	P	U	T		4							

Warining: Message should be no longer than 14 characters! Spaces are also counted as characters!

9.6.1 Table of parameter

Name	Comment
#0	User location, same for all alarm messages
#1	Input 1, second part of message
#2	Input 2, second part of message
#3	Input 3, second part of message
#4	Input 4, second part of message

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
#0House	1	Location definition
#1Kitche	1	Alarm input is from the kitchen

Example of remote programming by SMS:

;#0HOUSE=1;#1KITCHEN=1;

9.7 Intercom

Intercom functionality is supported by a set of parameters, used to tweak the functionality to each user needs.

For each button S-NX incorporates a group of parameters. There are up to 8 groups of parameters.

Remark: S-NX is capable of supporting up-to 8 call buttons. The current version equipped with only 1 call button so only A GROUP is used and described in this manual!

9.7.1 xTN1 - xTN5 parameters

Parameters are the call numbers for intercom application.

9.7.2 RTNx parameter

Parameter defines the ring time time-out. RTNx timer is started when the call button is pressed. If the RTNx timer expires before the GSM voice connection is established then S-NX device calls the next number in XTN1-XTN5 call list.

9.7.3 DTMF auto-dial functionality

This function is used to provide a support for S-NX device to be able select extended numbers via DTMF command.

9.7.3.1 SDNx parameter

Parameter is used to set the DTMF number in auto self-select function.

9.7.3.2 SDDx parameter

Parameter is used to set the delay (in sec.) for sending DTMF number in auto self-select function.

9.7.4 Time zone

Time zone support. When both time limits are sets (TZSx and TZEx) time zone functionality is ON. When the current time is in the limits of the time zone parameters the button event calls the number from xTN1 to xTN4, else button event calls xTN5.

9.7.4.1 TZSx parameter

Parameter is used to configure the start time for the time zone functionality - 24h time format.

9.7.4.2 TZEx parameter

Parameter is used to configure the end time for the time zone functionality - 24h time format.

9.7.5 Table of parameter

Name	Comment
ATN1	Button 1, Telephone number 1.
ATN2	Button 1, Telephone number 2.
ATN3	Button 1, Telephone number 3.
ATN4	Button 1, Telephone number 4.
ATN5	Button 1, Telephone number 5.
RTNA	Button 1, time out control for voice connection.
SDNA	Button 1, DTMF number to send.
SDDA	Button 1, delay for DTMF number to send.
TZSA	Button 1, time zone start period.
TZEA	Button 1, time zone end period.

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
ATN1	040713470	Button 1, Telephone number 1.
ATN2	+390643360	Button 1, Telephone number 2.
RTNA	30	Button 1, time out control for voice connection.

Example of remote programming by SMS:

;ATN1=040713470;ATN2=+390643360;RTNA=30;

9.8 Clip

CLIP is used to provide the “free of charge” options to control the outputs.

9.8.1 CLPEN parameter

Parameter used to enable CLIP functionality.

9.8.2 CLPOU parameter

Parameter used to choose which output will be controlled by the CLIP functionality.

9.8.3 CLPI parameter

This parameter, if set, is a precondition for CLIP function to control the output.

9.8.4 CLP1 ... CLP100 parameter

Set of telephone number, which can control the output. The number not on CLP list is not able to control the output using clip functionality.

9.8.5 Table of parameter

Name	Comment
CLPEN	Enable CLIP functionality
CLPOU	Control output pin when CLIP event
CLPI	CLIP input activation condition
CLP1	CLIP number 1
.	.
.	.
.	.
CLP100	CLIP number 100

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
CLPEN	1	Enable CLIP functionality
CLPOU	2	CLIP control output 2
CLPI	0	No input activation condition
CLP1	040414414	CLIP number 1
CLP2	042340880	CLIP number 2

Example of remote programming by SMS:

;CLPEN=1;CLPOU=2;CLPI=0;CLP1=040414414;CLP2=042340880;

9.9 Event Logging

S-NX device support logging of specific events. S-NX logs CLIP event and alarm input events. Log event consist of event type, time and telephone number or input number.

9.9.1 LOGN parameter

Parameter is used for defining the number of events printed out on PLOG requests.

9.9.2 LOGI parameter

Parameter is used to define the media used for logging of events on S-NX. User can select between nonvolatile memory on S-NX or select USB to transfer events directly via USB to PC.

- LOGI=0 Logging is OFF
- LOGI=1 Logging in internal memory
- LOGI=2 Logging to USB interface

9.9.3 ALC parameter

Parameter is used to control behavior when log on S-NX is full. User can select between auto log clear or manual clear of logs.

- ALC=0 Automatically delete buffer when memory is FULL
- ALC=1 Memory buffer must be deleted manually when it is FULL

9.9.4 Table of parameter

Name	Comment
LOGN	Number of log events for printing out
LOGI	Log interface
ALC	Automatic log clear

Example of direct programming on SIM card:

S-NX PROGRAMMING TABLE		
SIM CARD PHONE BOOK		
Name	**Number**	**Description**
LOGN	5	5 log events will be printed out on PLOG command
LOGI	0	Nonvolatile memory on S-NX
ALC	1	Log is auto cleared when full

Example of remote programming by SMS:

;LOGN=5;LOGI=0;ALC=1;

9.10 Special SMS commands

These commands can only be issued only over SMS message, and are used to control some special functions of S-NX device.

9.10.1 ORC command

Command is used to control outputs directly via SMS message.

9.10.2 SDCLR command

To clear all data on SIM card SDCLR command is used.

9.10.3 LCLR command

This command clears log on S-NX device.

9.10.4 CLPCLR command

This command is used to delete all CLP numbers.

9.10.5 MRES command

This command is used to manually restart GSM module on S-NX device.

9.10.6 SSRES command

This command is used to manually restart S-NX device.

9.10.7 Table of parameter

Name	Comment
ORC1	Control of output 1
ORC2	Control of output 2
SDCLR	Delete all SIM content
LCRL	Delete log on S-NX device
MRES	Manual reset of GSM module
SSRES	Manual reset of S-NX device

Example of SMS programming:

SMS commad	Description
;ORC1=1;	Activate output 1
;ORC2=0;	Deactivate output 2
;SDCLR;	Clear all data on SIM
;LCLR;	Delete log on S-NX device
;MRES;	Manual reset of GSM module
;SSRES;	Manual reset of S-NX device

10 Print-out of parameters

The user can check the settings of ALL parameters on the S-NX.

10.1 Receive all parameters (PALL)

By sending this command to S-NX you receive SMS messages with all parameters that are currently programmed in the unit:

;PALL;

10.2 Check SW revision (PSW)

By sending this command to S-NX you receive SMS messages with current SW version running on S-NX device:

;PSW;

10.3 Check signal quality (PSQ)

By sending this command to S-NX you receive SMS messages with signal quality S-NX device is connected to network:

;PSQ;

10.4 Receive telephone numbers (PTN)

By sending this command to S-NX you receive SMS messages with all currently programmed telephone numbers (TN1 – TN5):

;PTN;

10.5 Receive links (PLN)

By sending this command to S-NX you receive SMS messages with all currently programmed links (LN1 –LN8):

;PLN;

10.6 Receive input parameters (PIN)

By sending this command to S-NX you receive SMS messages with all currently programmed input parameters (IN1 – IN4):

;PIN;

10.7 Receive input filter value (PID)

By sending this command to S-NX you receive SMS messages with all currently programmed input filters (ID1 – ID4):

;PID;

10.8 Receive output filter value (POD)

By sending this command to S-NX you receive SMS messages with all currently programmed direct output links (OD1 – OD5):

;POD;

10.9 Receive delay before dial value (PDD)

By sending this command to S-NX you receive SMS messages with all currently programmed dial delays (DD1 – DD5):

;PDD;

10.10 Receive access telephone numbers (PSL)

By sending this command to S-NX you receive SMS messages with currently programmed SL level:

;PSL;

10.11 Receive output parameters (POS)

By sending this command to S-NX you receive SMS messages with currently programmed output parameters (OS1 - OS2):

;POS;

10.12 Receive programmed SMS (P#)

By sending this command to S-NX you receive SMS messages with currently programmed alarm SMS messages (#0 - #4):

;P#;

10.13 Receive set-up parameters value (PPA)

By sending this command to S-NX you receive SMS messages with currently programmed setup parameters (TST, MNF, ...):

;PPA;

10.14 Receive credit parameters (PCREF)

By sending this command to S-NX you receive SMS messages with currently programmed credit parse parameters (CREF, CVODA, ...):

;PCREF;

10.15 Receive all Clip parameters (PCLP)

By sending this command to S-NX you receive SMS messages with currently programmed CLIP parameters (CLPEN, CLPOU, CLPI, CLPx, ...):

;PCLP=x,y;

where x = start number and y = end number. Example: **;PCLP=1,30;** prints first 30 CLIP numbers.

10.16 Receive intercom button parameters (PDEA)

By sending this command to S-NX you receive SMS messages with currently programmed button 5 group parameters (ATN1, ATN2, ATN3, ATN4, ATN5, RTNA, SDNA, SDDA, TZSA, TZEA):

;PDEA;

10.17 Credit level for prepaid SIM (PCCx)

By sending this command to S-NX you receive SMS messages with Credit Amount on your prepaid SIM card:

;PCCx;

where x is the number of programmed SIM card provider.

10.18 State of the outputs (PORC)

By sending this command to S-NX you receive SMS messages with current output state:

;PORC;

10.19 GSM module manual reboot (MRES)

By sending this command to S-NX, it shuts down GSM module and after a few second it switches the power of the GSM module ON again. The unit reboots all parameters from the SIM card:

;MRES;

10.20 State of the inputs (INS)

By sending this command to S-NX you receive SMS messages with current input state:

;INS;

10.21 Receive S-NX logs (PLOG)

By sending this command to S-NX you receive SMS messages with logs on the device log buffer:

;PLOG=x,y;

where x = start event and y = end event. Example: **;PLOG=1,30;** prints first 30 log events.

11 Change parameters using SMS

All programming parameters for S-NX can also be sent by SMS command. Each SMS command should start and stop with semicolon. If the confirmation SMS is needed, put “+” at the beginning of the command SMS.

The first command is SMS with telephone numbers (TN1 – TN4). If you would like to check which telephone numbers are programmed in S-NX please use the following command:

;PTN;

Return SMS is (example):

;TN1=0;TN2=0;

If you would like to enter telephone numbers in to S-NX you can use the following example:

;TN1=040713470;TN2=+393922288344;

If you would like to receive confirmation SMS write “+” before SMS command:

;+TN1=040713470;TN2=+393922288344;

Return SMS from S-NX is the following:

;TN1=040713470;TN2=+393922288344;

Remark: the same programming procedure can be used for all parameters!

It is also possible to change different parameters with a sinlge SMS. Consider that the SMS message should not be longer than 160 characters (included space characters).

If you would like to change the following parameters TN1, IN1, IN2, OS1, OS2; ID1, LN1 and CRE and would like to receive confirmation SMS, try next example:

;+TN1=+39040713470;IN1=1;IN2=1;OS1=15;OS2=1;ID1=120;LN1=1;

Send SMS message to S-NX telephone number and in a few seconds you receive SMS message from S-NX. The sentence of the SMS must be the same as the one you have sent to S-NX before.

12 Default settings

S-NX PROGRAMMING TABLE		
Name	**Default Value**	**Short Description**
TN1	Empty	Telephone number 1
TN2	Empty	Telephone number 2
TN3	Empty	Telephone number 3
TN4	Empty	Telephone number 4
TN5	Empty	Telephone number 5
IN1	0	Input 1 control
IN2	0	Input 2 control
IN3	0	Input 3 control
IN4	0	Input 4 control
O S1	5	Output 1 mode
OS2	5	Output 2 mode
OD1	1	Input 1 direct output link
OD2	0	Input 2 direct output link
OD3	0	Input 3 direct output link
OD4	0	Input 4 direct output link
OD5	0	NAC direct output link
LN1	Empty	Input 1, link to tel. numbers
LN2	1	
LN3	Empty	Input 3, link to tel. numbers
LN4	1	Input 4, link to tel. numbers
LN5	Empty	Periodic SMS text, link to tel. numbers
LN6	Empty	SIM card refill, link to tel. numbers
LN7	Empty	NAC, link to tel. numbers
LN8	Empty	LOG full, link to tel. numbers
ID1	1	Input 1 delay filter on input
ID2	120	Input 2 delay filter on input
ID3	1	Input 3 delay filter on input
ID4	1	Input 4 delay filter on input
DD1	0	Input 1 delay before dialing
DD2	0	Input 2 delay before dialing
DD3	0	Input 3 delay before dialing
DD4	0	Input 4 delay before dialing
SL	0	Security level

#0	“User Location”	SMS main head text
#1	“Input1”	SMS input 1 text
#2	“Input2”	SMS input 2 text
#3		SMS input 3 text
#4	“Input4”	SMS input 4 text
CC1	Empty	Check credit Num 1
CC2	Empty	Check credit, TIM Italy
CC3	Empty	Check credit, Vodafone Italy
ESC	0	Input used as cancel button
UDC	Empty	Tel. number of S-NX device
HTN	1	Hidden telephone number
RAN	0	Auto answer ring number
SCV	0	SIM card time validity
TST	24	Periodic test SMS timeout
TSTT	0	Periodic test SMS start time
MNF	0	Network connection type
MIC	15	Microphone volume setting (0 - 40)
MUT	0	Mute functionality
SPK	10	Speaker volume setting (0 - 20)
LCV	4	Low credit value
LNG	0	Language selection
LOT	90	Connection time out value
LOGN	5	Number of log events for printing out
LOGI	0	Log interface
ALC	1	Automatic log clear
ADF	90	Auto dial functionality (Call TN1)
ARST	0	Automatic reset timeout
CREF	“EUR”	Parse text (contact support)
CTIM	“EURO”	Parse text (contact support)
CVODA	“DISPON. E.”	Parse text (contact support)
OP1	1	Output invert 1
OP2	1	Output invert 2
BUZ	1	Buzzer control
SPO	1	SIM card starting position
CLPEN	1	Enable CLIP functionality
CLPOU	1	Control output pin when CLIP event
CLPI	0	CLIP input activation condition
CLP1	Empty	CLIP number 1
.	.	
.	.	
.	.	
CLP100	Empty	CLIP number 100

ATN1	Empty	Button 1, Telephone number 1
ATN2	Empty	Button 1, Telephone number 2
ATN3	Empty	Button 1, Telephone number 3
ATN4	Empty	Button 1, Telephone number 4
ATN5	Empty	Button 1, Telephone number 5
RTNA	25	Ring time, Button 5
SDNA	0	DTMF number to send
SDDA	0	Delay for DTMF to send
TZSA	0	Time zone start interval
TZEA	0	Time zone end interval

13 Print-out commands

S-NX PROGRAMMING TABLE	
Name	**Short Description**
PALL	Prints all parameters available on S-NX.
PSW	Prints SW version of S-NX.
PSQ	Prints GSM network signal quality of S-NX.
PTN	Prints TNx numbers.
PLN	Prints LNx links.
PIN	Prints INx parameters.
PID	Prints IDx parameters.
POD	Prints ODx parameters.
PDD	Prints DDx parameters
PSL	Prints SL parameter.
POS	Prints OSx parameters.
P#	Prints #x parameters.
PPA	Prints various setup parameters.
PCLP	Prints CLIP parameters.
PLOG	Prints log of the S-NX.
PCREF	Prints credit pars parameters.
PCN	Prints credit request numbers.
PCC1	Prints credit for S-NX (universal request).
PCC2	Prints credit for S-NX. (TIM Italy).
PCC3	Prints credit for S-NX. (VODAFONE Italy).
PWG	Prints Wiegand parameters.
INS	Prints status of the inputs.
PORC	Prints (controls) the status of outputs.
PDEA	Prints intercom button 1 parameters.

14 Technical specifications

Description	Value
Power Supply	12 - 24V AC/DC
Current consumption - peak	2A
Current consumption - transmitting mode	250mA
Current consumption - idle mode	40mA
Quad-Band	850/900/1800/1900 MHz
PCB dimensions	106 x 89 mm
Unit dimensions (1 button)	156 x 116 x 61 (51) mm
Call buttons	Up to 8 (S-KC larger enclosure)
External Antenna SMA	1
Weight	945 gr.
Alarm inputs	2
Alarm outputs (relay)	2
12V DC Power Supply input	Y
12-24V AC/DC Power Supply input	Y
Anti-tamper protection	optional