

Ошибка! Используйте вкладку "Главная" для применения [제목 7](#) к тексту, который должен здесь отображаться.

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# IPX-G5X0 Series

## Installation Guide

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# 1. IPX-G5X0 Series Introduction

## 1.1 IPX-G5X0 Series Specification

### 1.1.1 Structure

IPX-G5X0 Series Structure

Item		Specification		
Size		Size(WxDxH): 441.5 × 352 × 44mm		
Power		AC 110/220V ICMU, DC +12 V/5.5 A Output		
IPX-G500B	BASE	Universal Slot 4 개, Power Redundancy (Optional)		
		Gigabit Ethernet 2 port		
		USB 1 port, Console 1 port		
Option Card	Card	4 universal slot installation		
		FXS 4 port, FXO 4 port, PRI 2 port, PRI 1 port, BRI 2 port		
IPX-G520S/G540S		Max 6 cabinet connection (240 ports)	FXS 20 port, Power Redundancy (Optional) RJ-45 connector	
		FXS 40 port		

### 1.1.2 Capacity

#### 1. 1. 2. 1 Station/Trunk Capacity

IPX-G5X0 Series Capacity

Item		Specification	
Max stations	FXS port	256	136 ports in case of power redundancy
	SIP Phone Survivability	512	UDP/TLS are same
	Sum of stations (at the	768	Survival mode

Item	Specification		
	same time)		
Max trunks	FXO port	16	-
	BRI channel	16	8 ports(Europe only)
	PRI channel	240 (E1 PRI)	8 ports
	SIP channel	256	-
	Sum of trunks (at the same time)	256	-

-

## 2. IPX-G5X0 Series Installation

To install IPX-G5X0 Series, you have to set gateway information in SCM. Then you also have to set basic information in IPX-G5X0 systems.

IPX-GX0 Series is compatible with SCME 5.4 or higher. If your SCME version is low, you have to upgrade SCME first. To upgrade SCME, please refer to the SCME documents.

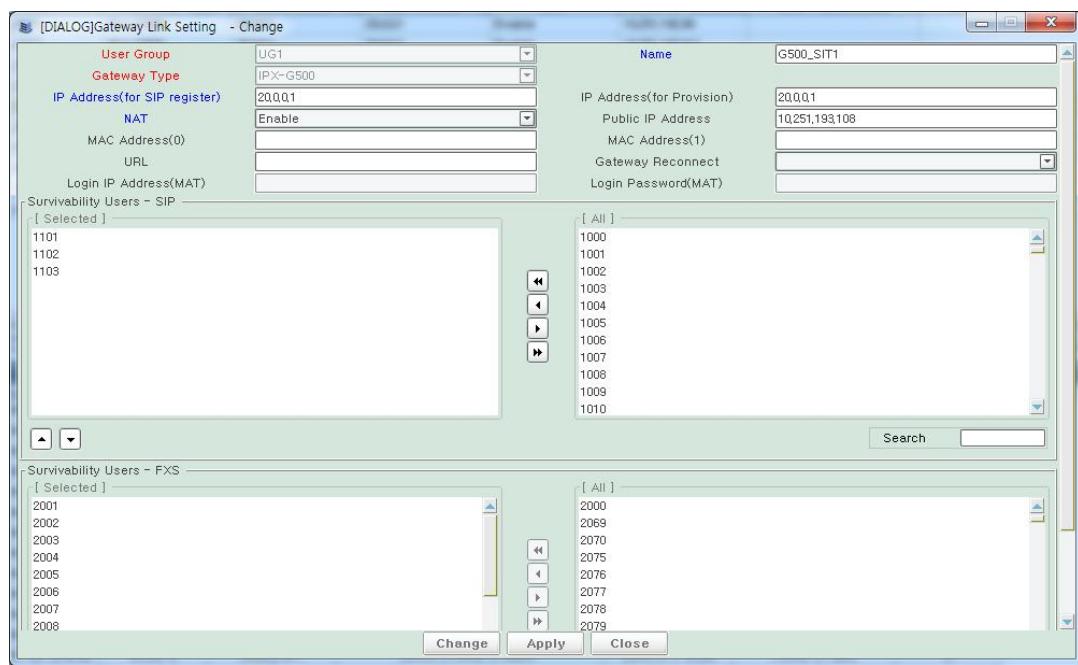
### 2.1 SCM Configuration

#### 2.1.1 Gateway Link Setting

Create a new gateway link in [Configuration – Gateway – Gateway Link Setting].

Enter a gateway name, local IP address, public IP address and select NAT or not.

If NAT is enabled, public IP address should be entered.

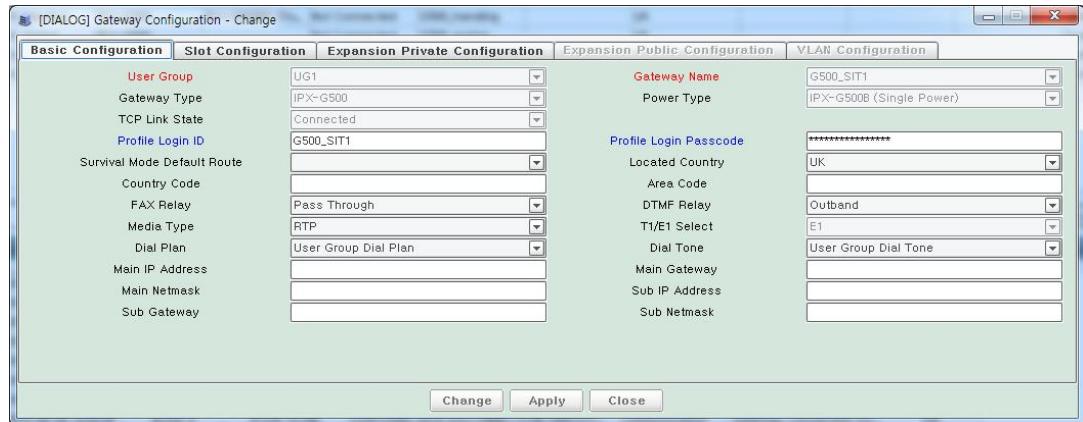


#### 2.1.2 Gateway Configuration

Configure a new gateway in [Configuration – Gateway – IPX Setting – Gateway Configuration]

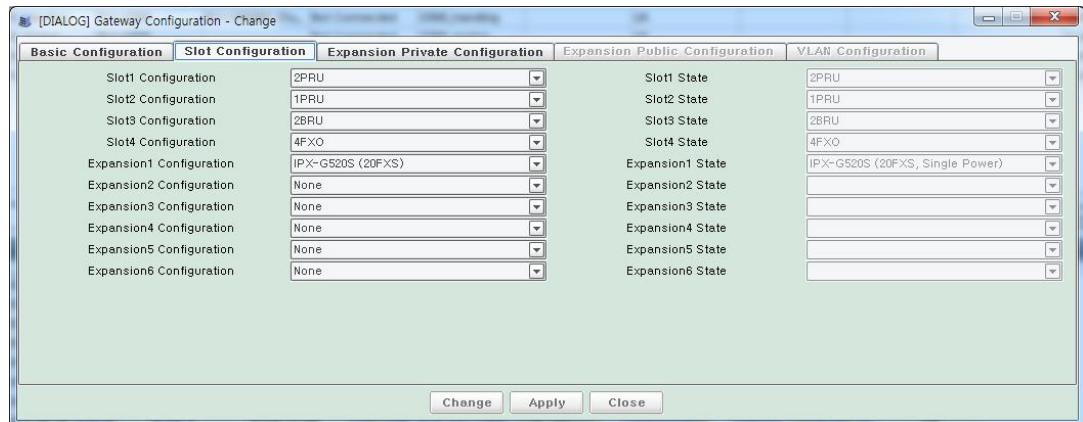
## 2. 1. 2. 1 Basic configuration

Enter profile login ID(same with gateway name), profile login passcode. You don't need to enter IP addresses. It is not used and will be removed.



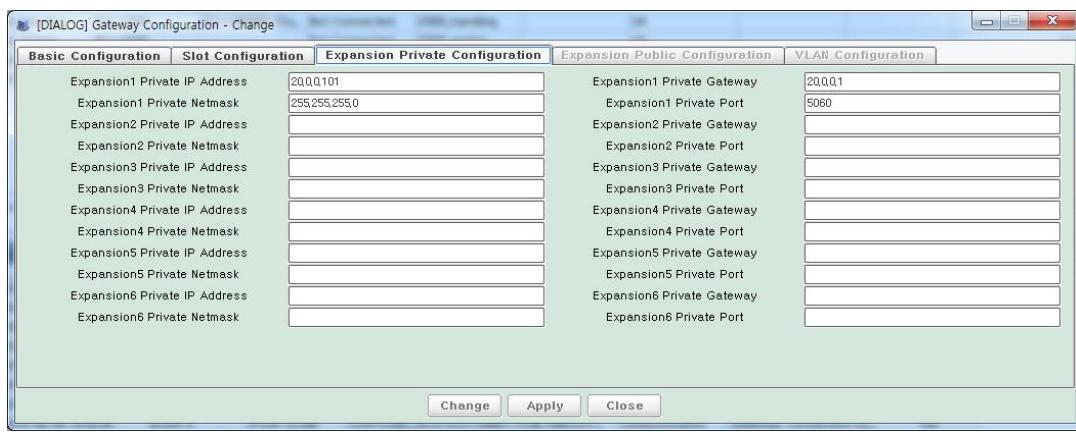
## 2. 1. 2. 2 Slot configuration

Enter a slot configuration and expansion configuration of the gateway. Select the option card and expansion cabinet which is installed. After the installation is completed, actual state of slot and expansion will be updated on the right side.



## 2. 1. 2. 3 Expansion private configuration

Enter a IP address and ports of installed expansion cabinets.



### 2.1.3 Network Configuration

Enter a network information in [Configuration – Gateway – IPX Setting – Gateway Network Configuration].

If you plan to use WAN interface, select Yes to [Use WAN], or No.

Then enter default gateway IP, LAN IP, LAN subnet mask, GWU IP.

IPX-G500B has 2 internal hardware unit. CMU and GWU.

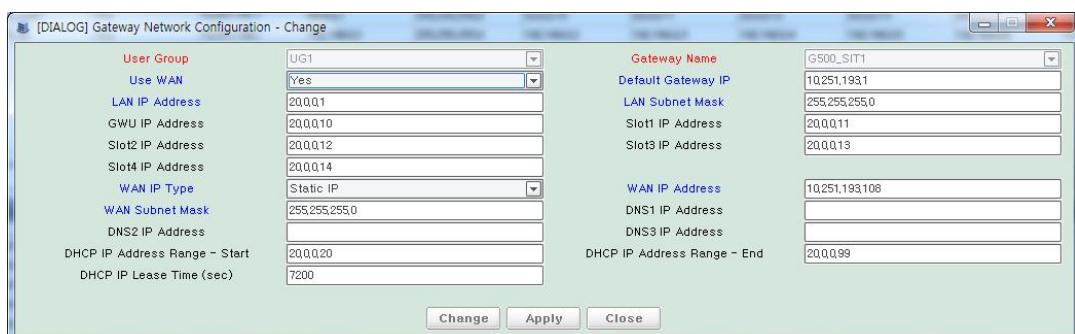
LAN IP will be assigned to CMU and GWU IP will be assigned to GWU board.

Then enter slot IP addresses for optional cards.(PRI cards needs IP addresses)

If you select to use WAN, enter WAN IP address and subnet mask.

IPX-G5X0 has DHCP server. If you want to connect another devices for example IP phones to LAN and want to receive IP addresses automatically, set DHCP IP address range.

Ref) IPX-G500B has 2 GbE ports. If you want to use WAN/LAN, you have to connect WAN to GbE port 1 and LAN to GbE port 2. If you want to use LAN only, you can connect any GbE ports.



### 2.1.4 Create a analog FXS phone user

Create a analog FXS phone user of the gateway in [Configuration – User – Single phone user]. If you already have a unused FXS phone user, you can use it.

Enter extension number, name, application user id, application password, authentication user id, authentication password, profile login id, profile login passcode and PIN number. The phone type should be Analog FXS Phone.

[DIALOG] Single Phone User - Change

Basic Configuration		Protocol	Number Translation	Service	Interworking	Phone
User Group	UG1					Service Group
Location	UG1-LOC1					Language
Extension Number	2501					Extension Name
Mobile Phone Number						Use Mobile Phone Number
Application User ID	2501@ug1.scm.com					Application Password
Authentication User ID	2501					Authentication Password
Profile Login ID	UG12501					Profile Login Passcode
PIN Number						Make Mailbox
Phone Type	Analog-FXS-Phone					License Phone Type
Phone Verification	None					MAC Address
IP Address						Private IP Address
Use mVoIP	No					VMS Extension Number
A-A Primary Node	NODE 0					A-A Dual Registration
Change to Multi Type						Call Appearance
User Type						

Change Apply Close

## 2.1.5 Assign analog phone

Assign the created analog FXS phone to the slots and expansions of gateway in [Configuration – Gateway – IPX Setting – Gateway Analog Phone].

User Group	UG1	Gateway Name	G500_SIT1	Slot	Exp1	
Port	Extension Number	CID Send Support	CID Type	MWI Send Support	Loop Open Release	PRS Send Support
1	2001	Enable	Bellcore	Disable	Disable	Disable
2	2002	Enable	Bellcore	Disable	Disable	Disable
3	2003	Enable	Bellcore	Disable	Disable	Disable
4	2004	Enable	Bellcore	Disable	Disable	Disable
5	2005	Enable	Bellcore	Disable	Disable	Disable
6	2006	Enable	Bellcore	Disable	Disable	Disable
7	2007	Enable	Bellcore	Disable	Disable	Disable
8	2008	Enable	Bellcore	Disable	Disable	Disable
9	2009	Enable	Bellcore	Disable	Disable	Disable
10	2010	Enable	Bellcore	Disable	Disable	Disable
11	2011	Enable	Bellcore	Disable	Disable	Disable
12	2012	Enable	Bellcore	Disable	Disable	Disable
13	2013	Enable	Bellcore	Disable	Disable	Disable
14	2014	Enable	Bellcore	Disable	Disable	Disable
15	2015	Enable	Bellcore	Disable	Disable	Disable
16	2016	Enable	Bellcore	Disable	Disable	Disable
17	2017	Enable	Bellcore	Disable	Disable	Disable
18	2018	Enable	Bellcore	Disable	Disable	Disable
19	2019	Enable	Bellcore	Disable	Disable	Disable
20	2020	Enable	Bellcore	Disable	Disable	Disable

## 2.1.6 Create a gateway route

Create a route information of new gateway in [Configuration – Trunk Routing – Route]

### 2.1.6.1 Basic configuration

Select [Register Type] to Receive REGISTER and enter port 5060.

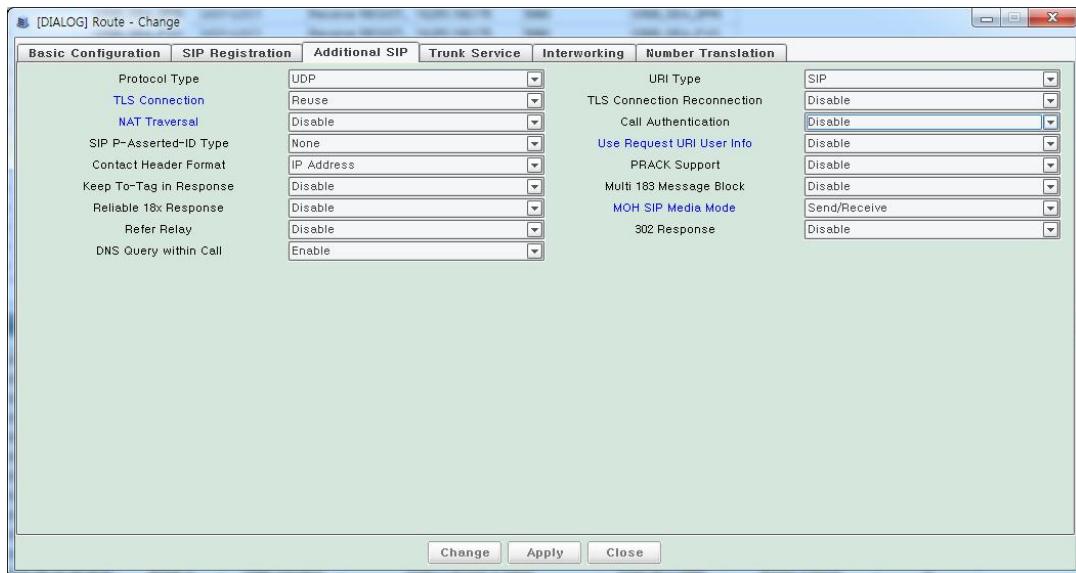
User name is same with gateway name.

Enter the gateway IP address for proxy server, authentication user name and password.

Basic Configuration	SIP Registration	Additional SIP	Trunk Service	Interworking	Number Translation
Route Type Route Name Register Type User Name Multiple Registration Proxy Server Authentication User Name DNS A-A Primary Node TIE Trunk	User Group G500_SIT1 Receive REGISTER G500_SIT1 Disable 10.251.193.108 G500_SIT1 NODE 0 Normal	User Group UG1 Location UG1-LOC1 Port 5060 Domain Name ug1.scm.com User Number Range  Secondary Proxy Server  Authentication Password ***** DNS2  A-A Dual Registration Enable			

## 2.1.6.2 Additional SIP

Set [Call authentication] to disable in [Additional SIP] tab.



## 2.1.7 FXO/SIP/BRI/PRI trunk routing

Create a route information of FXO/SIP/BRI/PRI trunks which is located in the gateway in [Configuration – Trunk Routing - Route].

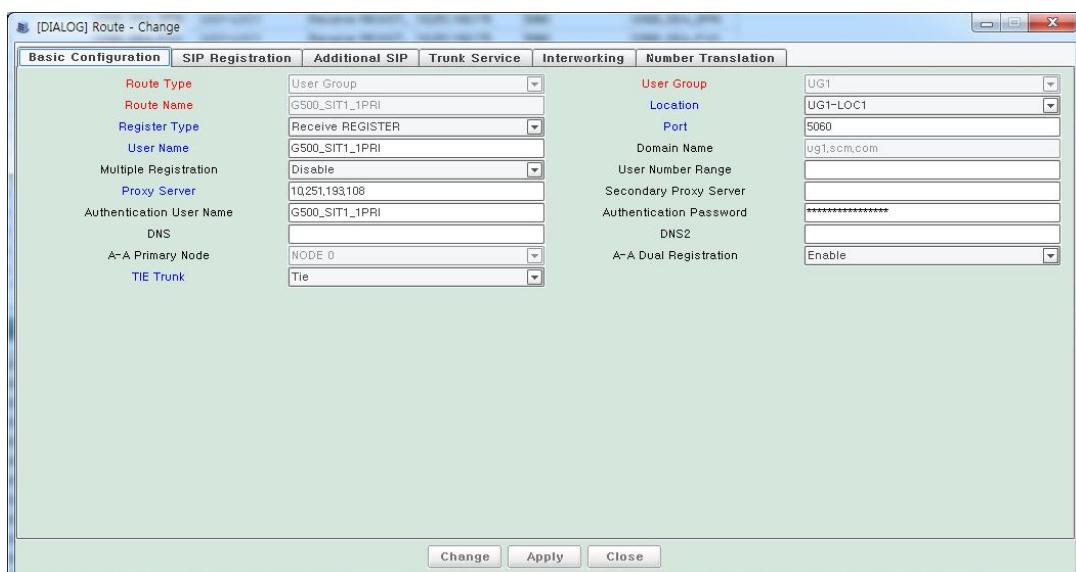
### 2.1.7.1 Basic configuration

Set [Register Type] to Receive REGISTER and enter port 5060.

Enter user name which is unique for this trunk.

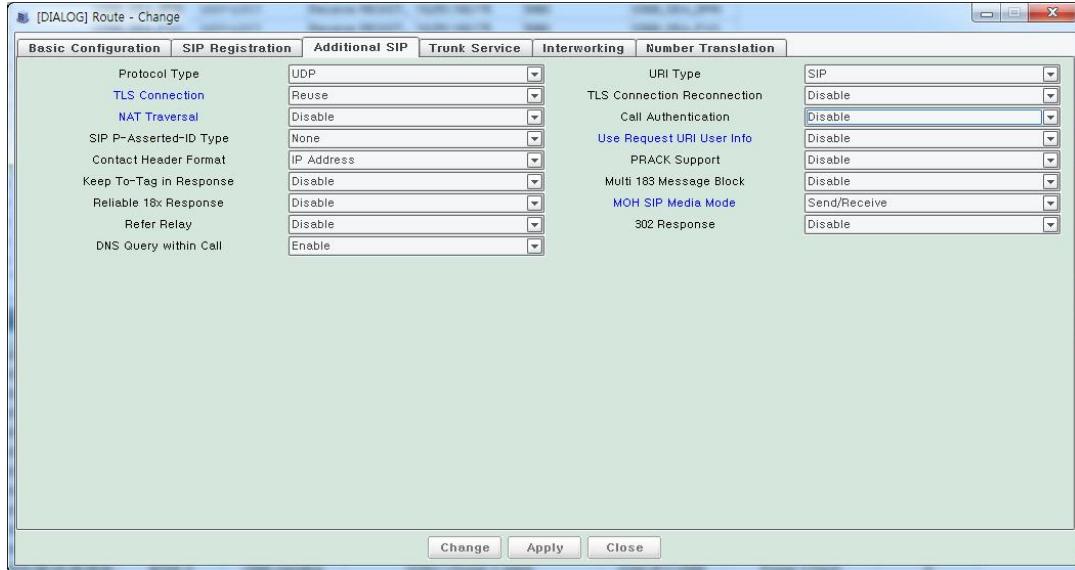
Then enter the gateway IP address for proxy server, authentication user name and password.

You can also set access code for this trunk route.



## 2. 1. 7. 2 Additional SIP

Set [Call authentication] to disable in [Additional SIP] tab.



### 2.1.8 Analog Trunk

If you have FXO card, you have to set it in [Configuration – Gateway – IPX Setting – Gateway Analog Trunk]

Select the gateway and press [Change] button.

Then select the slot you want to set which is 4FXO card is installed

Assign the created FXO trunk route to the route name and the other information, For example, CID receive support and Ring destination number.

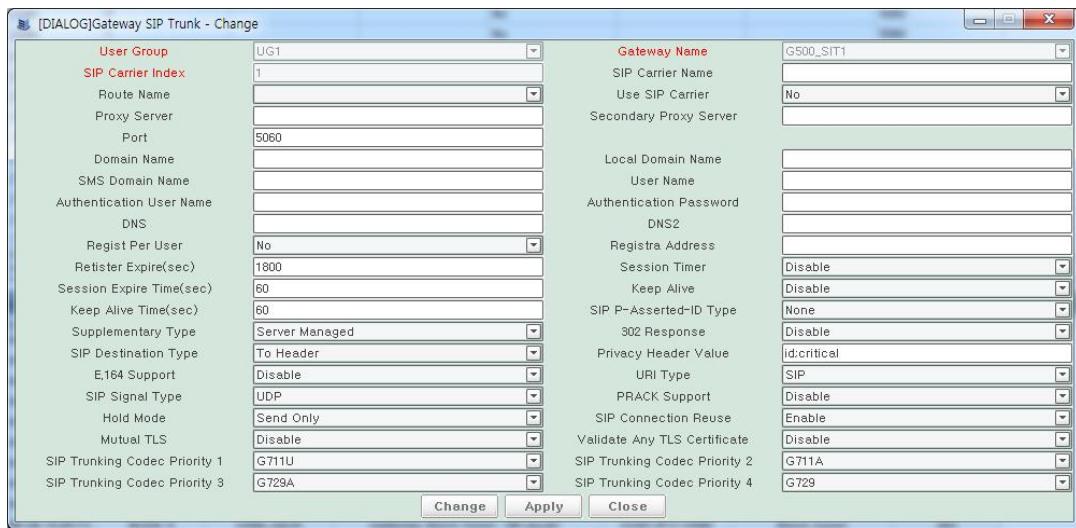


### 2.1.9 SIP Trunk

If you want to set SIP trunks, you have to set it in [Configuration – Gateway – IPX Setting – Gateway SIP Trunk]

IPX-G5X0 Series supports 4 sip carriers.

Ref) SIP server should be entered as IP addresses not domain name. Supporting domain name is now under developing and will be available soon.



## 2.1.10 PRI Trunk

To use 1PRI/2PRI card, you have to set it in [Configuration – Gateway – IPX Setting – Gateway PRI Trunk]

Select the gateway to edit and press [Change] button.

Then select the slot which is PRI card is installed.

Assign the created PRI trunk route to the route name and select the network mode(TE : terminal mode or NT : network mode)



## 2.1.11 BRI Trunk/Station

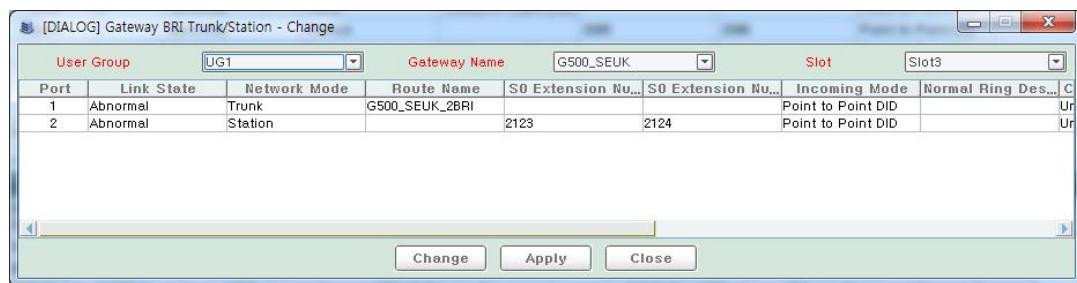
If you want to set 2BRI card, you have set it in [Configuration – Gateway – IPX Setting – Gateway BRI Trunk/Station]

Select the gateway to edit and press [Change] button.

Then select the slot which is 2BRI card is installed.

For BRI trunk, assign the created BRI trunk route to the route name and select the network mode to Trunk.

For station, select the network mode to Station and enter S0 Extension number.



## 2.2 IPX-G5X0 Series Configuration

After SCME configuration is completed, you have to configure IPX-G5X0 series.

For IPX-G500B(Base cabinet) you have to set IP address of base cabinet, IP address of SCME which is connected and gateway name.

For IPX-G520S/G540S you have to set IP address of expansion cabinet, and sequence number

### 2.2.1 Connecting Serial console

To connect serial console, please do the followings

- Connect serial cable to the console port of the system.
- Run serial terminal program(for example, hyperterminal or etc) on you PC and set baud rate to 38,400bps
- Enter ID: admin, Password: samsung to log on.
- Enter to ' cli' to set basic configuration.

```
Welcome to Samsung IPX-G500
IPT-NPU login: admin
Password:

#####
#          #
#          #
#          Samsung IPTGW-CMU          #
#          #
#          Enter 'cli' to set basic configuration      #
#          #
#          #
#####
S A M S U N G   - I P T G W
-----
admin@IPT-NPU:~#
```

## 2.2.2 IPX-G500B basic configuration

- Connect the serial cable to the console port of IPX-G500B.(baud rate:38,400 bps)
- Enter ID and password to log on.
- Enter “ cli”
- Select ‘ 1. Setup basic configuration’ .
- According to the prompt, select the network mode. LAN or NAT
- If you select NAT
  - Enter WAN IP address, gateway and subnet mask of IPX-G500B.
  - Enter the LAN IP address, gateway and subnet mask of IPX-G500B
- If you select LAN
  - Enter the LAN IP address, gateway and subnet mask of IPX-G500B.
- Enter SCM Express IP address which is connected.
- Enter the gateway name. This should be same with the SCME configuration.
- After all informations are entered, it will ask to reset the system to apply the changes. To reboot the system enter ‘ yes’ , otherwise enter ‘ no’

[NAT]

```
##### Please enter network mode of this GW #####
1. Enter Networkmode [0:LAN / 1:NAT] (Enter Key : NAT) :
```

```
##### Please enter [WAN IP/Gateway/Subnet Mask] of this GW #####
1. Enter WAN IP Address (Enter Key : 10.251.0.10) :
2. Enter Gateway Address (Enter Key : 10.251.0.1 ) :
3. Enter WAN IP Subnet Mask (Enter Key : 255.255.255.0 ) :
```

```
##### Please enter [LAN IP/Subnet Mask] of this GW #####
1. Enter LAN IP Address (Enter Key : 192.168.0.1 ) :
2. Enter LAN IP Subnet Mask (Enter Key : 255.255.255.0 ) :
```

```
##### Please enter the IP Address of SCME #####
1. Enter SCME IP Address (Enter Key : 10.251.0.100) :
```

```
##### Please enter the name of this GW (Max 30char) #####
1. Enter Name of this GW (Enter Key : G500_default ) :
```

End of Configuration. To apply it, please restart the system.  
Do you want to restart? (yes/no) :

[LAN]

```
##### Please enter network mode of this GW #####
1. Enter Networkmode [0:LAN / 1:NAT] (Enter Key : NAT) : 0
```

```

##### Please enter [LAN IP/Gateway/Subnet Mask] of this GW #####
1. Enter LAN IP Address (Enter Key : 192.168.0.10 ) :
2. Enter Gateway Address (Enter Key : 192.168.0.1 ) :
3. Enter Subnet Mask (Enter Key : 255.255.255.0 ) :

##### Please enter the IP Address of SCME #####
1. Enter SCME IP Address (Enter Key : 192.168.0.100 ) :

##### Please enter the name of this GW (Max 30char) #####
1. Enter Name of this GW (Enter Key : G500_default ) :

End of Configuration. To apply it, please restart the system.
Do you want to restart? (yes/no) :

```

### 2.2.3 IPX-G520S/540S(ECU) basic configuration

- Connect the serial cable to the console port of IPX-G520S/540S.(baud rate:38,400bps)
- Enter ID and password to log on.
- Enter “ cli” .
- Select ‘ 1. Setup basic configuration’ .
- According the prompt, enter IP address of ECU, gateway, subnet mask.
- Enter the LAN IP address of IPX-G500B which this expansion cabinet will be connected.  
Ref) IPX-G520S/G540 LAN port should be connected with the same network of IPX0-G500B LAN.
- Enter the sequence number from 1 to 6 of this expansion cabinet. It should be unique in one gateway.
- After all informations are entered, it will ask to reset the system to apply the changes. To reboot the system enter ‘ yes’ , otherwise enter ‘ no’

```

##### Please enter [IP/Gateway/Subnet Mask] of this ECU #####
1. Enter ECU IP Address (Enter Key : 10.251.0.11 ) :
2. Enter Gateway Address (Enter Key : 10.251.0.1 ) :
3. Enter Subnet Mask (Enter Key : 255.255.255.0 ) :

##### Please enter the IP Address of CMU #####
1. Enter CMU IP Address (Enter Key : 10.251.0.10 ) :
1. Enter this ECU number (Enter Key : 1) :

End of Configuration. To apply it, please restart the system.
Do you want to restart? (yes/no) :

```

## 2.3 Update Software

### 2.3.1 Update with SCM Administrator

You can update the IPX-G5X0 series software with SCM Administrator

#### 2. 3. 1. 1 File Upload

Before updating the gateway software, you have to upload the software to SCME.

You can upload it in [Configuration – Gateway – IPX Setting – Gateway File Upload]

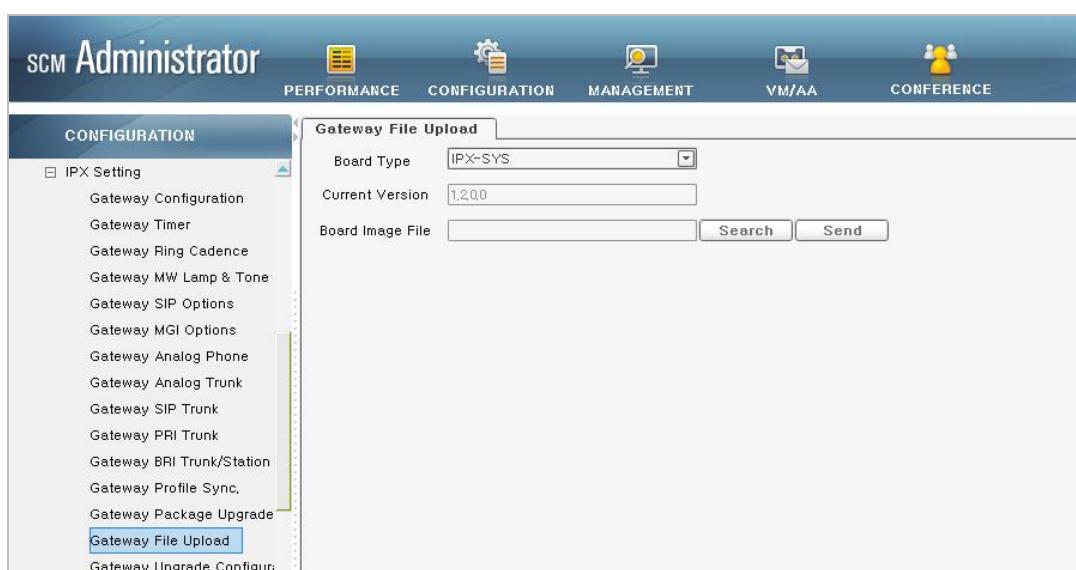
Select the board type and press [Search] button to assign software, then press [Send] button to upload it.

Board type is like the followings.

IPX-SYS : IPX-G500B software

IPX-ECU : IPX-G520S/G540S software

IPX-PRI : 1PRI/2PRI card software



## 2. 3. 1. 2 Upgrade Configuration

Set upgrade configuration in [Configuration – Gateway – IPX Setting – Gateway Upgrade Configuration]. Enter software version to update, the protocol to transfer(tftp or ftp), port, ID, password.

The screenshot shows the SCM Administrator web interface. The top navigation bar includes links for PERFORMANCE, CONFIGURATION, MANAGEMENT, VM/AA, and CONFERENCE. The left sidebar under the CONFIGURATION heading has several options, with 'Gateway Upgrade Configuration' currently selected. The main content area is titled 'Gateway Upgrade Configuration' and contains a table with the following data:

Name	Value
Gateway Version (IPX-G500)	1.200
Gateway Upgrade Protocol	tftp
Gateway Upgrade Public Zone Protocol	tftp
Gateway Upgrade Port	
Gateway Upgrade Public Zone Port	
Gateway Upgrade FTP Login ID	
Gateway Upgrade FTP Login Password	*****

## 2. 3. 1. 3 Package Upgrade

- You can see the software/hardware version in [Configuration – Gateway – IPX Setting – Gateway Package Upgrade]

The screenshot shows the SCM Administrator interface. The left sidebar has a tree view under 'CONFIGURATION' with 'IPX Setting' expanded, showing various gateway configuration options like 'Gateway Configuration', 'Gateway Timer', etc. The 'Gateway Package Upgrade' option is highlighted with a blue border. The main area is titled 'Gateway Package Upgrade' and contains a table with columns: User Group, Gateway Name, Type, Card/HW Type, and Version. The table lists 15 entries for UG1, mostly for G500\_SIT1, with various types like SYS, Slot1, Expansion1, etc., and card types like CPLD, PCB, and None.

User Group	Gateway Name	Type	Card/HW Type	Version
UG1	G500_SIT1	SYS		1.200/1.200
UG1	G500_SIT1	Slot1	2PRU	1.200
UG1	G500_SIT1	Slot2	1PRU	1.200
UG1	G500_SIT1	Slot3	2BRU	
UG1	G500_SIT1	Slot4	4FXO	
UG1	G500_SIT1	Expansion1	IPX-G520S (20FXS, Sin...	1.200
UG1	G500_SIT1	Expansion2	None	
UG1	G500_SIT1	Expansion3	None	
UG1	G500_SIT1	Expansion4	None	
UG1	G500_SIT1	Expansion5	None	
UG1	G500_SIT1	Expansion6	None	
UG1	G500_SIT1	SYS Hardware	CPLD	0/4
UG1	G500_SIT1	SYS Hardware	PCB	0/4
UG1	G500_SIT1	Slot1 Hardware	CPLD	1
UG1	G500_SIT1	Slot1 Hardware	PCB	3

- Select the target to update software and press [Change] button. Then check the target to update software and press [Upgrade] or [Apply] button.
- Then the gateway will be updated and reboot automatically

This is a dialog box titled '[DIALOG] Gateway Package Upgrade - Upgrade'. It has dropdown menus for 'User Group' (set to UG1) and 'Gateway Name' (set to G500\_SIT1). The main area is a table with columns: User Group, Type, Card Type, Current Version, and New Version. The table lists 15 items corresponding to the ones in the previous screenshot. At the bottom are three buttons: 'Upgrade', 'Apply', and 'Close'.

User Group	Type	Card Type	Current Version	New Version
UG1	SYS		1,200/1,200	1,200
UG1	Slot1	2PRU	1,200	1,200
UG1	Slot2	1PRU	1,200	1,200
UG1	Slot3	2BRU		
UG1	Slot4	4FXO		
UG1	Expansion1	IPX-G520S (20FXS, Single ...	1,200	1,200
UG1	Expansion2	None		1,200
UG1	Expansion3	None		1,200
UG1	Expansion4	None		1,200
UG1	Expansion5	None		1,200
UG1	Expansion6	None		1,200

## 2.3.2 Manual Update

If it is impossible to update software with SCM Administrator, you can update gateway software manually.

### 2.3.2.1 Preparing manual update

First, you need to extract gateway software.

IPX-SYS package has CMU package(ipx-sysn-XXXX.img) and GWU package(ipx-sysg-XXXX.tar).

IPX-PRI package has 1PRI package(ipx-pri1-XXXX.tar) and 2PRI package(ipx-pri2-XXXX.img).  
IPX-ECU package only has ECU package(ipx-ecu-XXXX.tar)

Then you have to prepare ftp server and put the software to it that the gateway can download it.

Ref) For manual update, you have to access GWU board.

To access it, you need Y type connector to divide the console port of IPX-500B. Console port 1 is CMU and 2 is GWU.

### 2.3.2.2 IPX-G500B(CMU) software update

- Connect the serial cable to the console port 1 of IPX-G500B.(baud rate: 38,400 bps)
- Enter id and password to log on.
- Change directory that the software can be downloaded.(For example: “ cd /tmp” )
- Enter the followings to download and upgrade the software.

```
admin@IPT-NPU:/tmp#wget ftp://ID:PASSWORD@FTP Server IP/CMU Package Name
admin@IPT-NPU:/tmp#upgrade [CMU Package Name]
admin@IPT-NPU:/tmp#reboot
```

### 2.3.2.3 IPX-G500B(GWU) software update

- Connect the serial cable to the console port 2 of IPX-G500B.(baud rate: 38,400 bps)
- Enter id and password to log on.
- Change directory that the software can be downloaded.(For example: “ cd /tmp” )
- Enter the followings to download and upgrade the software.

```
admin@IPT-GWU:/tmp#wget ftp://ID:PASSWORD@FTP Server IP/GWU Package Name
admin@IPT-GWU:/tmp#upgrade [GWU Package Name]
admin@IPT-GWU:/tmp#reboot
```

### 2.3.2.4 IPX-G520S/540S(ECU) software update

- Connect the serial cable to the console port of IPX-G520S/540S.(baud rate: 38,400 bps)

- Enter id and password to log on.
- Change directory that the software can be downloaded.(For example: “ cd /tmp” )
- Enter the followings to download and upgrade the software.

```
admin@IPT-ECU:/tmp#wget ftp://ID::PASSWORD@FTP Server IP/ECU Package Name
admin@IPT-ECU:/tmp#upgrade [ECU Package Name]
admin@IPT-ECU:/tmp#reboot
```

## 2. 3. 2. 5 1PRI/2PRI software update

- Connect the serial cable to the console port of 1PRI/2PRI card.(baud rate: 38,400 bps)
- Enter id and password to log on.
- Change directory that the software can be downloaded.(For example: “ cd /tmp” )
- Enter the followings to download and upgrade the software.

```
admin@IPT-PRU:/tmp#wget ftp://ID::PASSWORD@FTP Server IP/PRI Package Name
admin@IPT-PRU:/tmp#upgrade [PRI Package Name]
admin@IPT-PRU:/tmp#reboot
```

## 2.4 Factory Reset

You can initialize the gateway and restore it to factory configuration

- Connect the serial cable to the console port of the gateway to initialize.(baud rate: 38,400 bps)
- Enter id and password to log on.
- Enter “ cli” .
- Select ‘ 4. Factory Reset’ .
- It will ask again to confirm the selection. Enter ‘ yes’ .

```
#####
#                               #
#       GW Setup Manager      #
#                               #
#####
1. Setup basic configuration
2. Show current configuration
3. Show version
4. Factory Reset
5. Exit
Please select the number : 4

This will clear all configurations. Do you want to continue? (yes/no) :
```