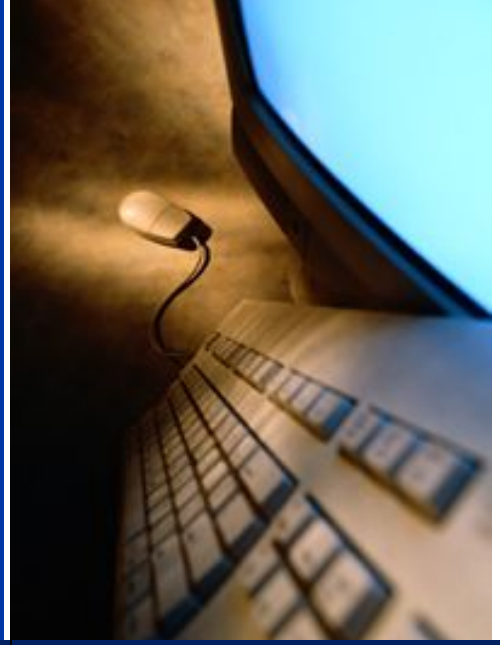
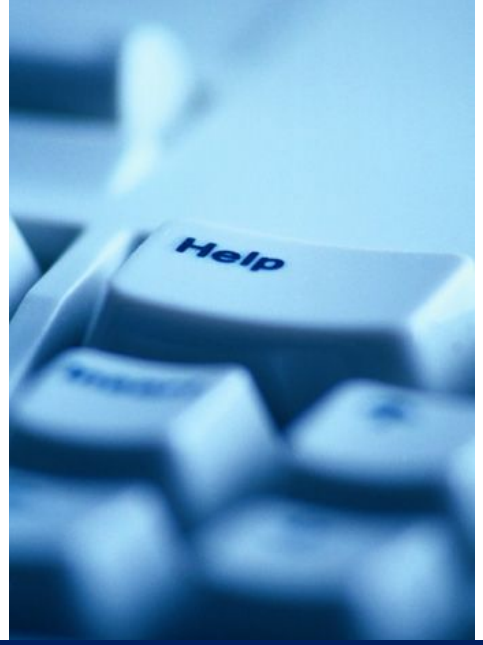
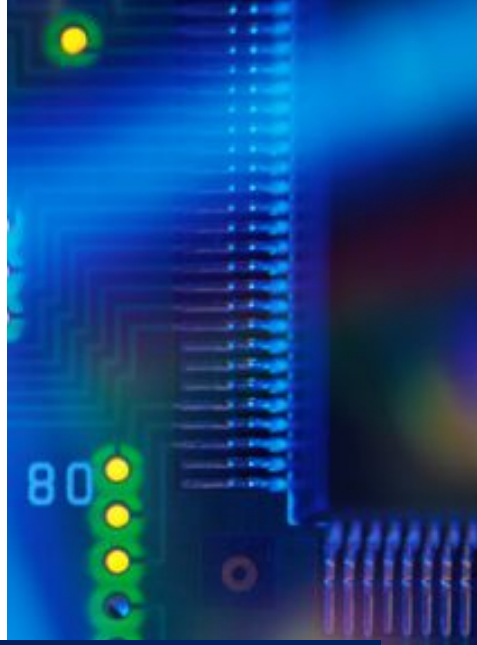





System Configuration

iPECS-MG
Business Enabled Communications

LG-ERICSSON

Contents

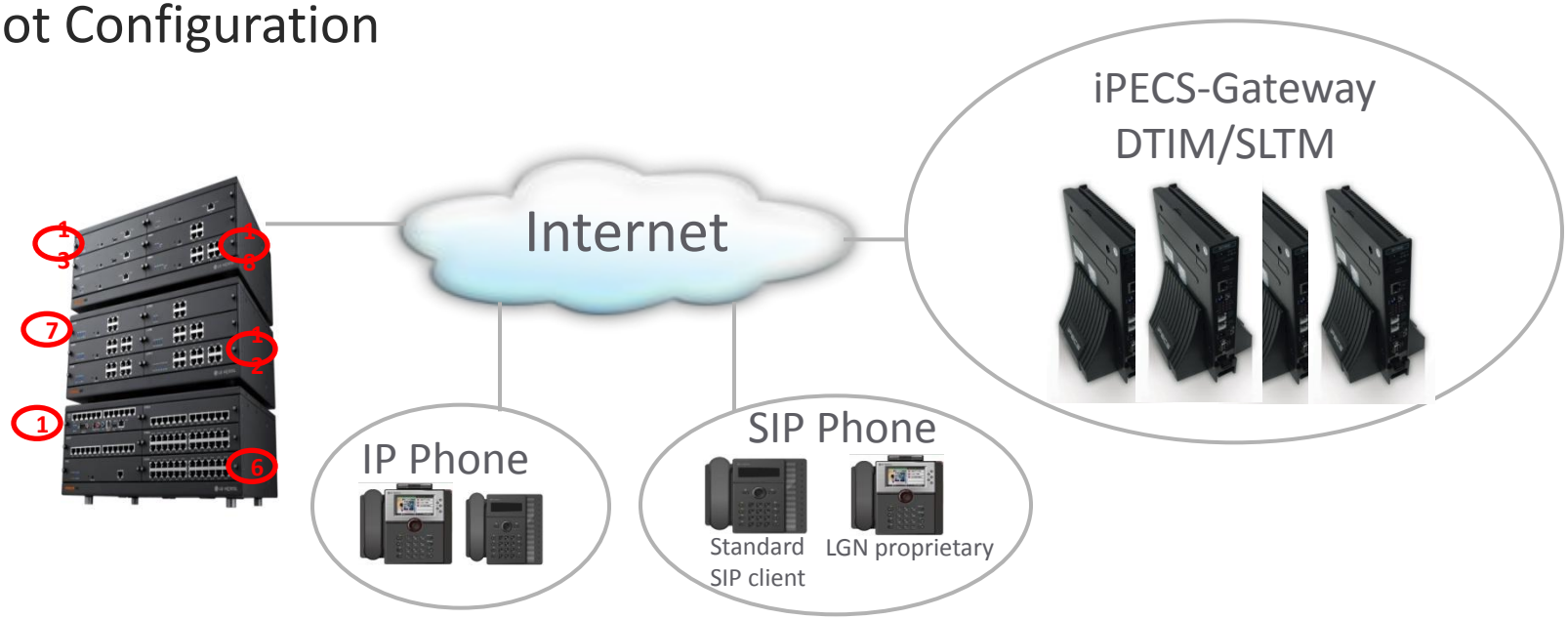
- iPECS-MG System Capacity
- Board Configuration
- Logical Slot Assignment
- IP Phone Registration
- SIP Phone Registration
- MPB Software Upgrade
- Device Software Upgrade
- VM Prompt Upgrade
- VM System Greeting

iPECS-MG System Capacity

Items	iPECS-MG 100	iPECS-MG 300
KSU No.	2	3
Slot No. per KSU	6	6
Total Port (Station + CO line) * Time Slot No : 138 (/KSU)	200	414 (if IP Phone/DECT not included)
		564 (CO 240 + STA 324) (if IP Phone/DECT included)
Number of Station Port	120	324
Number of Station Number	180(STA 120 + DN 60)	648(Ext 324 + DN 324)
Number of CO Line	80	240
CO Group No.	24	72
Numbering Plan	Extension : 8 Digits	Extension : 8 Digits
	Feature Code: 8 Digits	Feature Code: 8 Digits
Number of SMDR Records	5000	5000
Station Group	20 (50 member/Group)	50 (50 member/Group)
Pickup Group	20 (100 member/Group)	50 (100 member/Group)
Digit Restriction (Toll Table)	COS: 16 Allow/Deny Entry per COS: 100	COS: 16 Allow/Deny Entry per COS: 100

Board Configuration

Slot Configuration



iPECS-MG 100 Slot No.	iPECS-MG 300 Slot No.	To be installed Board	Remark
0	0	AAFU or VOIU	4 Channel
1	1	DSIU only	6 DKT + 6 SLT
2 - 6	2 - 6	Universal Slot	
7 - 12	7 - 12	Universal Slot	
	13 - 18	Universal Slot	
13 - 27	19 - 56	Virtual Slot for DTIM or SLTM	
88	88	Virtual Slot for SIP Phone	

Board Configuration

Auto Configuration

If the 1st switch of the DIP on the MPB100/300 is OFF position,
boards on internal slot are configured automatically when system is power up.

Then the 1st switch DIP should be set to ON position to protect database.
In database protecting, the board can be added or removed in Slot Assignment PGM 101.

DIP Switch	Usage	Remark
1	Initialize System with default	Set to OFF Set the system nation in PGM 101 Reset system (Database is initialize and Boards are configured. Set to ON to protect database
2	Lithium Battery Back up ON/OFF for Memory and RTC	Set to ON for Battery Back up

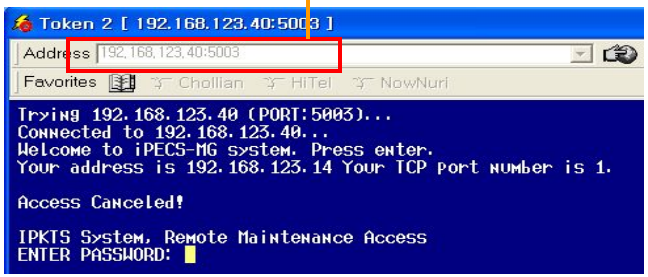
Board Configuration

Board Configuration Check

User can check board configuration through RS232, telnet or Web-Admin.

1) RS232
   - Connect Serial Cable between PC and Com Port on MPB.
   - Set Baud Rate 115200.
   - Enter maintenance Mode
   - bs or bc

2) Telnet
   - Connect with **IP-Addr & 5003 port**
     (Default System IP = 10.10.10.1
     It can be assigned in PGM 108)
   - Enter maintenance password
     (Can be assigned in PGM 226/Btn 3)

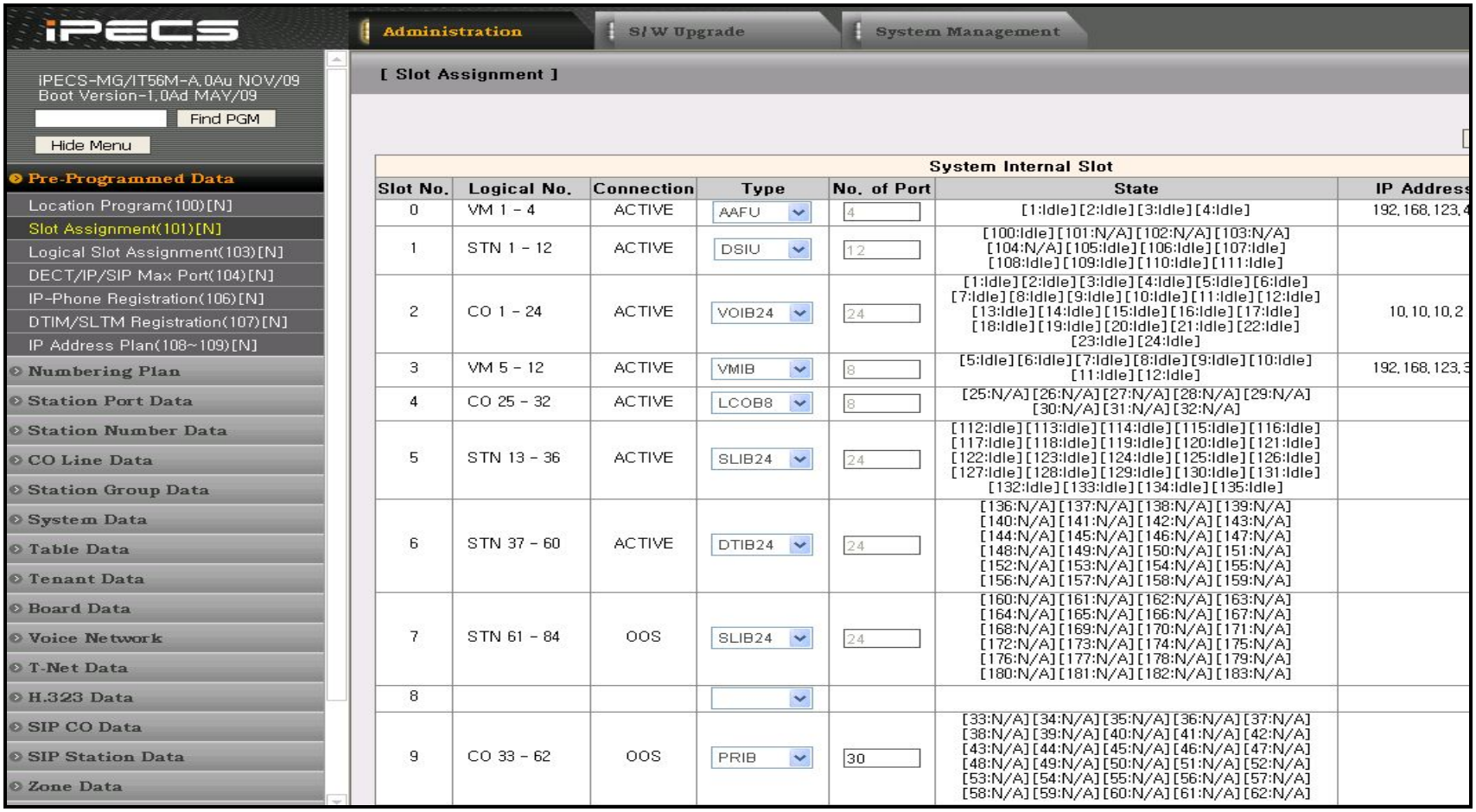



```
maint> bs

### System Configuration Table ###
SLOT  BRD-TYPE   FW-Ver     MAC ADDRESS        IP ADDRESS        FIRST DEV
----  ---------  ---------  -----------------  ---------------   -------------
      MPB        56M-A.0Au  00:1A:7E:A7:9C:58  192.168.123. 40
   0  AAFU       A0Af                          192.168.123. 40   VM 1
   1  DSIU                                                       DN 100
   2  VOIB24     A0Aq                           10. 10. 10.  2   CO 1
   3  VMIB       A0Ap                          192.168.123. 34   VM 5
   4  LCOB8                                                      CO 25
   5  SLIB24     A0Ak                                            DN 112
   6  DTIB24                                                     DN 136
   7  SLIB24                                                     DN 160
   9  PRIB                                                       CO 33
  10  WTIB                                                       DN 184
  11  SLIB12                                                     DN 192
  12  LCOB12                                                     CO 63
  15  DTIB12                                                     DN 204
  16  DTIB24                                                     DN 216
----  ---------  ---------  -----------------  ---------------   -------------
  19  DTIM8                 00:40:5A:15:64:9A  192.168.123. 32   DN 304
  88  SIP                                                        DN 240
  99  IPP                                                        DN 272
----  ---------  ---------  -----------------  ---------------   -------------

maint> bc

### Board Configuration Table ###
SLOT STAS COLS VMIS S-off    T-off    V-off    BrdName  State
---- ---- ---- ---- -------  -------  -------  -------- ---------
   0    0    0    4   0(--)    0(--)    1( 1)  AAFU     ACTIVE
   1   12    0    0   1( 1)    0(--)    0(--)  DSIU     ACTIVE
   2    0   24    0   0(--)    1( 1)    0(--)  VOIB24   ACTIVE
   3    0    0    8   0(--)    0(--)    5( 2)  VMIB     ACTIVE
   4    0    8    0   0(--)   25( 2)    0(--)  LCOB8    ACTIVE
   5   24    0    0  13( 2)    0(--)    0(--)  SLIB24   ACTIVE
   6   24    0    0  37( 3)    0(--)    0(--)  DTIB24   ACTIVE
   7   24    0    0  61( 4)    0(--)    0(--)  SLIB24   OOS
   9    0   30    0   0(--)   33( 3)    0(--)  PRIB     OOS
  10    8    0    0  85( 5)    0(--)    0(--)  WTIB     OOS
  11   12    0    0  93( 6)    0(--)    0(--)  SLIB12   OOS
  12    0   12    0   0(--)   63( 4)    0(--)  LCOB12   OOS
  15   12    0    0 105( 7)    0(--)    0(--)  DTIB12   OOS
  16   24    0    0 117( 8)    0(--)    0(--)  DTIB24   OOS
  19    8    0    0 205(11)    0(--)    0(--)  DTIM8    OOS
  88   32    0    0 141( 9)    0(--)    0(--)  SIP
  99   32    0    0 173(10)    0(--)    0(--)  IPP
```

Board Configuration

Board Configuration Check

3) Web-Admin



Board Configuration

Internal Board Configuration

System Internal Slot

Slot No.	Logical No.	Connection	Type	No. of Port	State	IP Address	Version	CPU
0	VM 1 - 4	ACTIVE	AAFU	4	[1:Idle][2:Idle][3:Idle][4:Idle]	192.168.123.40		
1	STN 1 - 12	ACTIVE	DSIU	12	[100:Use][101:N/A] [102:N/A][103:N/A] [104:N/A][105:Use][106:Idle] [107:Idle][108:Idle][109:Idle] [110:Idle][111:Idle]			
2	CO 1 - 24	ACTIVE	VOIB24	24	[1:Idle][2:Idle][3:Idle][4:Idle] [5:Idle][6:Idle][7:Idle][8:Idle] [9:Idle][10:Idle][11:Idle] [12:Idle][13:Idle][14:Idle] [15:Idle][16:Idle][17:Idle] [18:Idle][19:Idle][20:Idle] [21:Idle][22:Idle][23:Idle] [24:Idle]	10.10.10.2	A0Aq	MS828

Save

System overview

[System Capacity] [System License]

System Capacity Overview

	max port / slot	used port / slot	available port / slot
Total	414	298	116
CO Line	240	74	
Station	324	212	
VMIB (including AAFU)	28 / 4	12 / 2	16 / 2
WTIB	3	1	2

cf) WTIBs should be installed in the same KSU for DECT hand-over.

System Configuration Overview

3rd KSU		DTIB24
	DTIB12	
2nd KSU	SLIB24	WTIB
		SLIB12
	PRIB	LCOB12
1st KSU	MPB (AAFU/DSIU)	LCOB8
	VOIB24	SLIB24
	VMIB	DTIB24

Installed Configuration is displayed.

Board Configuration

IPECS-MG Gateway Configuration

iPECS Gateway Station Slot									
Slot No.	Logical No.	Connection	Type	No. of Port	State	MAC Address	IP Address	Version	CPU
19	STN 205 - 212	OOS	DTIM8	8	[304:N/A] [305:N/A] [306:N/A] [307:N/A] [308:N/A] [309:N/A] [310:N/A] [311:N/A]	00405a15649a	192.168.123.32	D0Fc	MS828
20			DTIM8 SLTM4/8 SLTM32						
21									

Add MAC Address to DTIM/SLTM Registration Table (PGM 107), Then if GW tries to register. It is registered without system reset.

IP Phone/SIP Phone Configuration

SIP / IP Phone Slot				
Slot No.	Logical No.	Type	No. of Port	State
88	STN 141 - 172	SIP	32	[240:N/A] [241:N/A] [242:N/A] [243:N/A] [244:N/A] [245:N/A] [246:N/A] [247:N/A] [248:N/A] [249:N/A] [250:N/A] [251:N/A] [252:N/A] [253:N/A] [254:N/A] [255:N/A] [256:N/A] [257:N/A] [258:N/A] [259:N/A] [260:N/A] [261:N/A] [262:N/A] [263:N/A] [264:N/A] [265:N/A] [266:N/A] [267:N/A] [268:N/A] [269:N/A] [270:N/A] [271:N/A]
99	STN 173 - 204	IPP	32	[272:N/A] [273:N/A] [274:N/A] [275:N/A] [276:N/A] [277:N/A] [278:N/A] [279:N/A] [280:N/A] [281:N/A] [282:N/A] [283:N/A] [284:N/A] [285:N/A] [286:N/A] [287:N/A] [288:N/A] [289:N/A] [290:N/A] [291:N/A] [292:N/A] [293:N/A] [294:N/A] [295:N/A] [296:N/A] [297:N/A] [298:N/A] [299:N/A] [300:N/A] [301:N/A] [302:N/A] [303:N/A]

Logical Assignment – Station/CO Line/VMIB

The Station, CO line and VMIB's logical order can be programmed by PGM 103.
After changing, the system should be reset for re-configuration.

[COL][STA][VMIB]

Station Logical Slot Assignment

Slot No.	Current Order	Type	Logical Number	IP Address	Order
1	1	DSIU	100 - 111		1
5	2	SLIB24	112 - 135		2
6	3	DTIB24	136 - 159		3
7	4	SLIB24	160 - 183		4
10	5	WTIB	184 - 191		5
11	6	SLIB12	192 - 203		6
15	7	DTIB12	204 - 215		7
16	8	DTIB24	216 - 239		8
19	11	DTIM8	304 - 311	192,168,123,32	11
88	9	SIP	240 - 271		9
99	10	IPP	272 - 303		10

Save

Reset System

[COL][STA][VMIB]

CO Logical Slot Assignment

Slot No.	Current Order	Type	Logical Number	IP Address	Order
2	1	VOIB24	1 - 24	10,10,10,2	1
4	2	LCOB8	25 - 32		2
9	3	PRIB	33 - 62		3
12	4	LCOB12	63 - 74		4

Save

Reset System

[COL][STA][VMIB]

VMIB Logical Slot Assignment

Slot No.	Current Order	Type	Logical Number	IP Address	Order
0	1	AAFU	1 - 4	192,168,123,40	1
3	2	VMIB	5 - 12	10,10,10,3	2

Save

Reset System

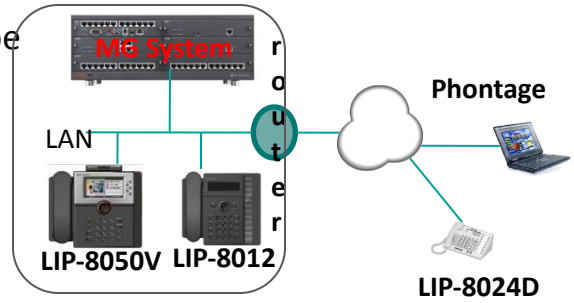
IP Phone Registration

IP Extension – IP Phone (System Programming)

IP phones (LIP-8000/7000 series) can be registered in iPECS-MG, which can be installed in the company LAN or outside. To be registered IP Phone number including Phontage) is programmable and the maximum simultaneous call depends on the VOIB/VOIU channels.

1) IPP should be configured in 'STA Slot' order in advance

2) IP Phone can be registered through MAC authentication or station number authentication



Logical Slot Assignment

Station Logical Slot Assignment

99	10	IPP	272 - 303	2)	10

SIP / IP Phone Slot

Slot No.	Logical No.	Type	No. of Port	
88	STN 141 - 172	SIP	32	[240:N/A][241:N/A] [248:N/A][249:N/A] [256:N/A][257:N/A] [264:N/A][265:N/A]
99	STN 173 - 204	IPP	32	[272:N/A][273:N/A] [280:N/A][281:N/A] [288:N/A][289:N/A] [296:N/A][297:N/A]

IP Phone Registration Table

Index : [1-50][51-100][101- 150][151

Bin No.	Mac Address	ID	Password
1	001a7ea44b0e		
2			

4)

IPP Configuration for IP phone:

1) Assign max. IP Phone no. to be registered in PGM 104

2) Assign station order to IPP (slot 99) in PGM 103

3) Reset the system for configuration

4) Check station range for IP Phone in PGM 101

Registering the MAC address of IP phones (only for MAC auth) :

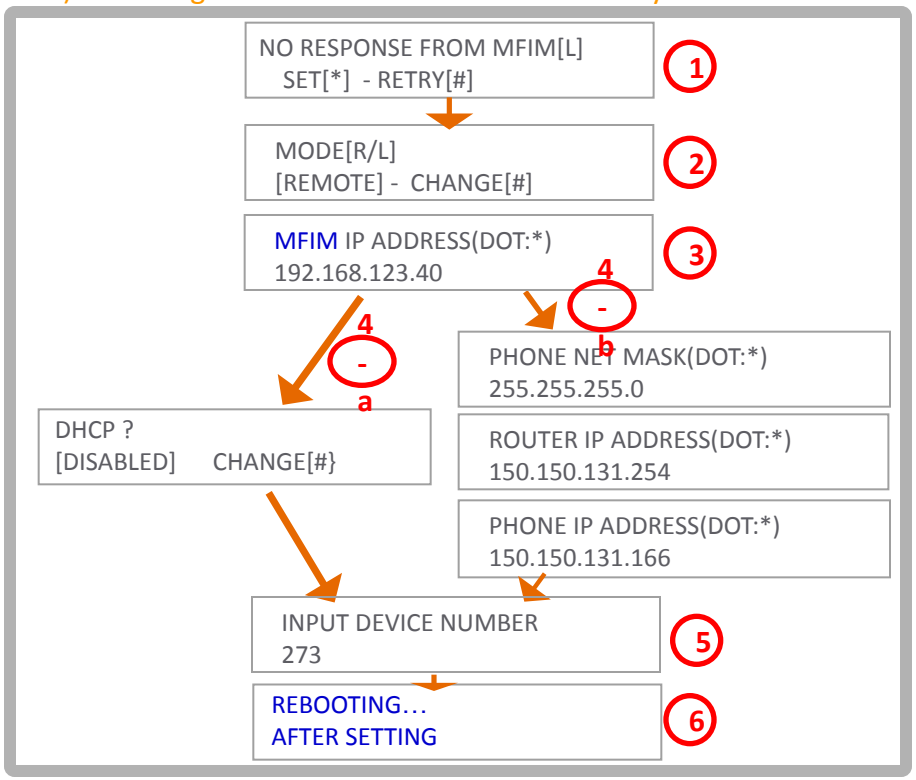
5) Input the MAC address of IP Phones in IP Phone Registration Table (PGM 106)

IP Phone Registration

IP Extension – IP Phone Configuration

IP Phone should be programmed on the phone.

1)Install the IP Phone and Cabling
2)Setting the Mode as Remote (iPECS-MG only supports **remote mode**.)
3)Setting the IP address of system (MPB)
4)Setting the IP address of IP Phone : At home => DHCP mode , at company => Fixed or DHCP
5)Setting the INPUT DEVICE NUMBER(only for STA number auth) : this is the STA number of iPECS-MG system
6)Rebooting. IP Phone tries to connect to the system and connected.



1) Power on the IP Phone. the following message will be displayed on LCD. Press"*" to enter the setup. If password requested, press "1 4 7 *" by default.

2) The following message will be shown. Leave the mode as "Remote" as default set. Move the menu to the next by using Volume up/down button. To change (Toggle) the value press "#".

3) Input the **IP Address of system (MPB).** Press "Hold/Save" button to save. Press "Speaker

4-a/b) Set DHCP enabled or input fixed IP address for the IP phone. In general, DHCP mode at home and Fixed IP mode at office.

5) **Enter station number to be assigned if STA number registration. Station number allocated for IPP should be entered**.

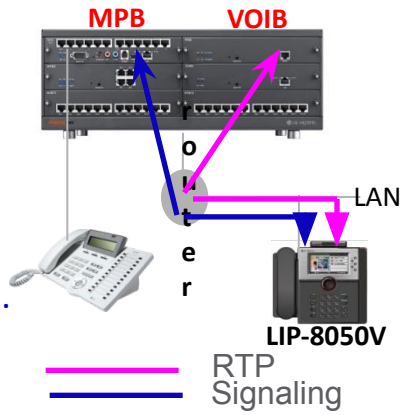
6) Upon completion, press "Hold/Save" then press "Speaker. It will be rebooting to get connected to the system.

IP Phone Registration

IP Phone Voice Connection

When IP phone talks to Digital Phone or accesses CO line,
The voice is connected to the associate device through VOIB.
VOIB Channel is allocated to IP Phone from his Zone's VOIB Resource.

The signaling between system and IP/SIP phone is communicated through MPB IP Address.
But the RTP is communicated through VOIB.
This rule is applied to SIP voice connection.



IP Phone/SIP Phone's Zone

Order	Check All	Attribute	Value
1	☐	Zone No (1-9)	1
2	☐	RTP Relay Group	Not Assign
3	☐	Codec Type	FOLLOW ZONE

Zone Attribute

Check All	Attribute	Value	Range
☐	Nation Code	Italy	
☐	Memo		Max 24 Chars
☐	Codec Type	Tenant Group Codec Type[PGM 281]	
☐	RTP Relay Rule	Automatic	
☐	VOIB Slot for RTP Relay	1: 2 2: 3: 4: 5: 6: 7: 8:	Max 2 Digits
☐	VMIB Slot	1: 3 2: 3: 4:	Max 2 Digits
☐	Peer To Peer	ENABLE	

SIP Phone Registration

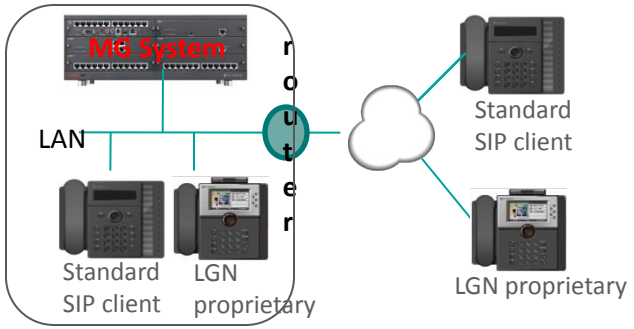
SIP Extension - SIP Phone (System Programming)

MPB VOIB

Standard SIP phones can be registered in iPECS-MG, which can be installed in the company LAN or outside. To be registered SIP Phone is programmable and the maximum simultaneous call depends on the VOIB/VOIU channels.

1) SIP should be configured in 'STA Slot' order in advance

2) SIP Phone can be registered through ID & Authentication ID & Password authentication



Logical Slot Assignment

Station Logical Slot Assignment					
88	9	SIP	240 - 271	2)	9

SIP / IP Phone Slot				
Slot No.	Logical No.	Type	No. of Port	
88	STN 141 - 172	SIP 3)	32	[240:N/A][241:N/A] [248:N/A][249:N/A] [256:N/A][257:N/A] [264:N/A][265:N/A]
99	STN 173 - 204	IPP	32	[272:N/A][273:N/A] [280:N/A][281:N/A] [288:N/A][289:N/A] [296:N/A][297:N/A]

SIP Station Basic Registration Table

Index	Station Number	User ID (Max 32)	Authentication ID (Max 64)	Password (Max 32)
1	240	240	bcs	sw 4)
2	241			

SIP Configuration for IP phone:

1) Assign max. SIP Phone no to be registered in PGM 104.

2) Assign station order to IPP (slot 88) in PGM 103

3) Reset the system for configuration

Check station range for SIP Phone in PGM 101 after system booting

4) Input the ID/Auth/PSWD of SIP phones in SIP Station Basic Registration Table. (Web Admin, SIP STA Base Registration)

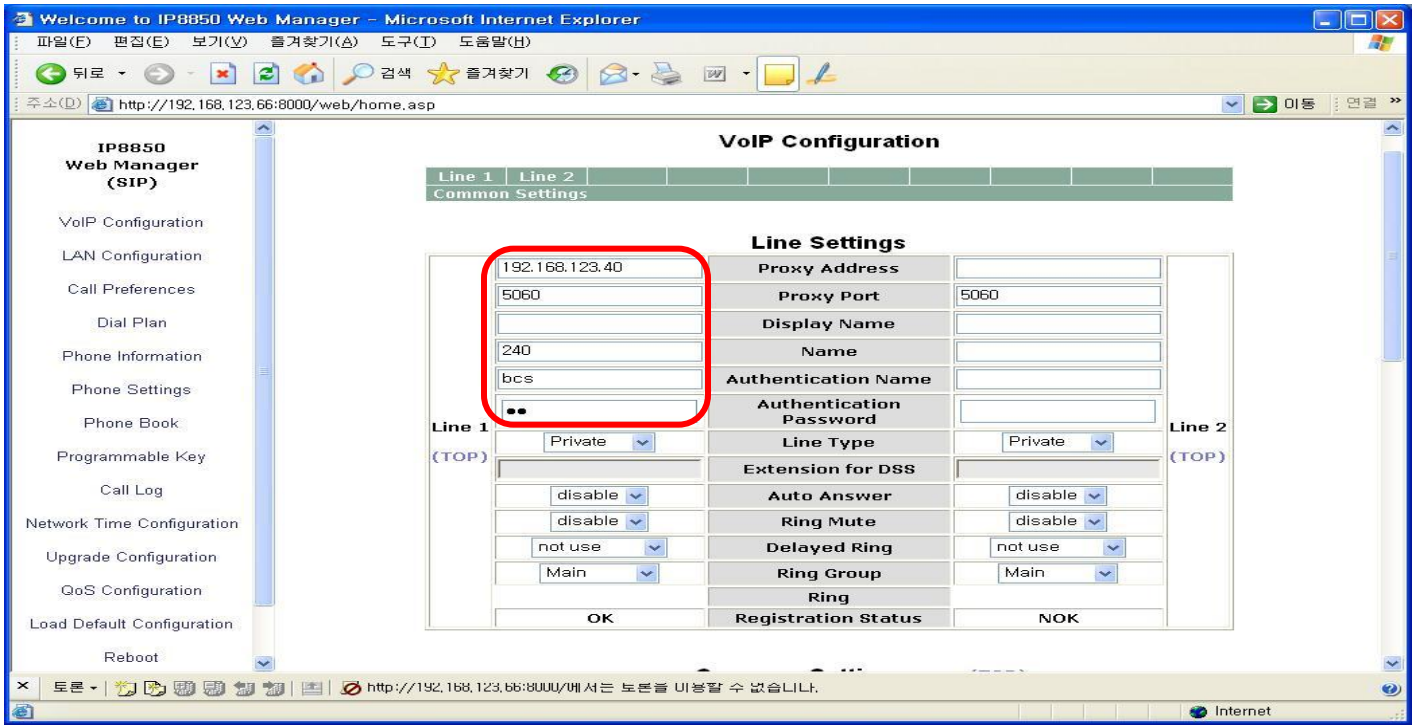
SIP Phone Registration

SIP Extension – SIP Phone Configuration

SIP Phone should be programmed the followings for registration.

1) Proxy Address, Domain : **MPB IP Address**
2) Name (or User ID) : It is mandatory.
3) Authentication Name (or ID)
4) Authentication Password

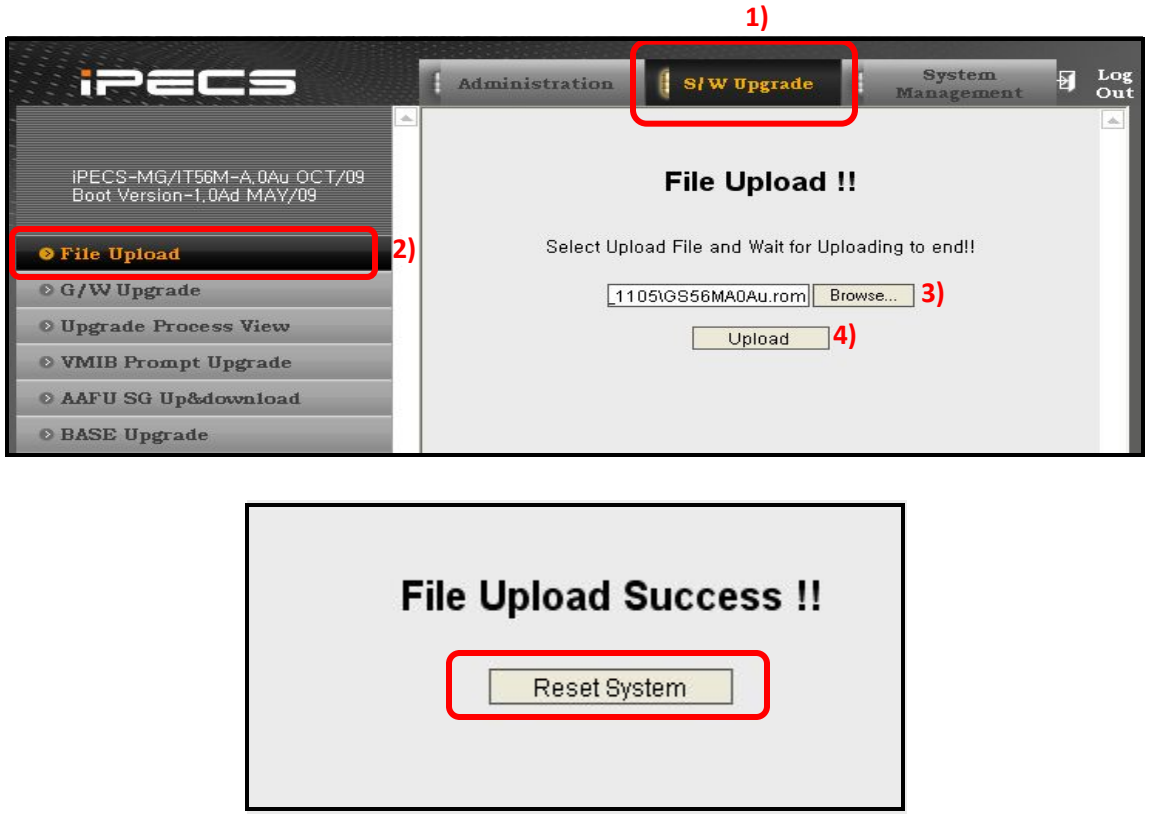
** For configuration, refer to the SIP phone manual



MPB Software Upgrade

S/W Upgrade – Web-Admin

System Software can be upgraded through Web-Admin



1) Select [S/W Upgrade]

2) Click File Upload

3) Select 'S/W File' to upgrade

4) Click [Upload]

If file upload succeeds,
a success page will be displayed.

5) Reset the system
Then uploaded s/w is applied.

MPB Software Upgrade

S/W Upgrade – USB

The Attendant can upgrade system through USB memory.
Before upgrading, a user have to save system Rom file
(GS55(56)MXXXX.rom) in USB memory

To upgrade from Attendant;

1) Save system Rom file (GS55(56)MXXXX.rom) in USB memory
2) Insert the USB memory to the USB port in MPB board.
3) Press the **[PGM]** button and Dial '091', the Attendant Station Program code.

MOUNT USB MEMORY
PLEASE WAIT…

5) Number of system Rom file in USB memory is displayed.

ROM FILE NUM : TOTAL 2
PRESS 0-1 TO VIEW FILE

6) Dial Number of system Rom file to display system Rom file name.

0: GS56MA0Aa.rom
PRESS HOLD TO UPGRADE

7) Press the **[HOLD]** button to upgrade system.
8) After some minutes, result of upgrade is displayed and Keyset goes to IDLE state.

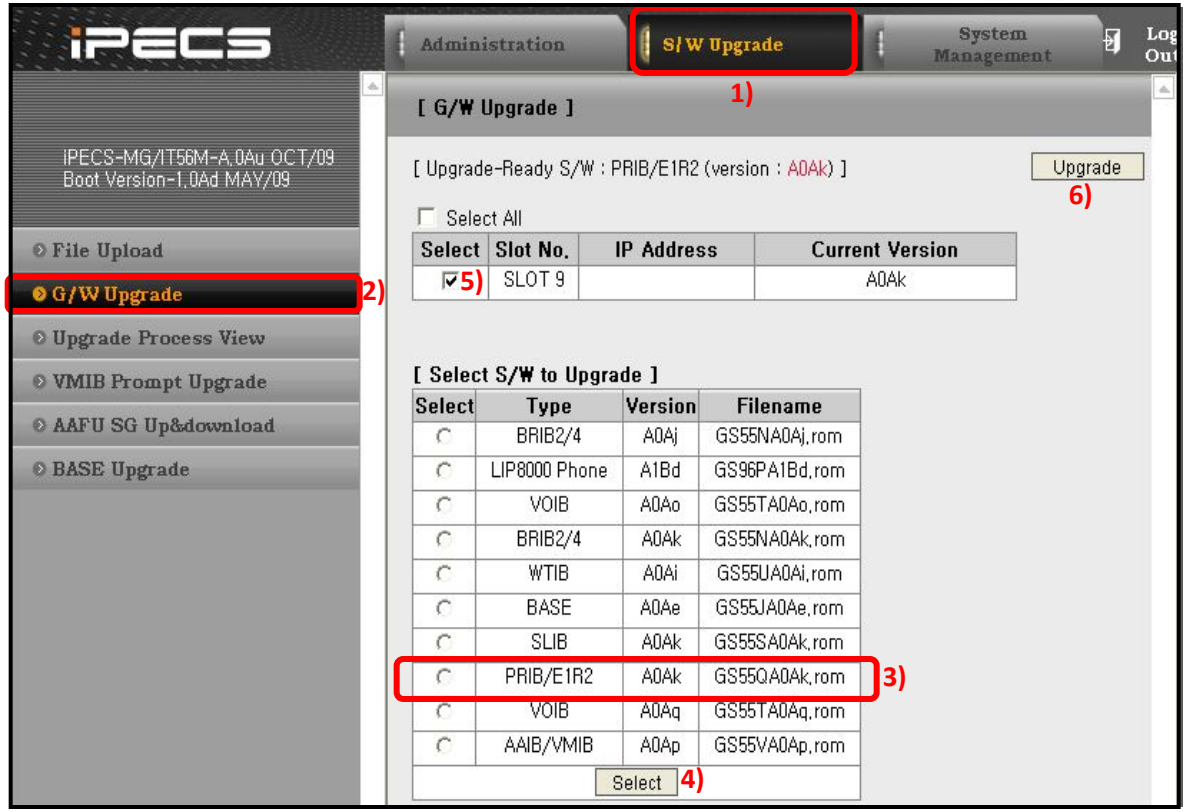
SOFTWARE UPGRADE
USB UPGRADE SUCCESS

9) Restart the System.

Device Software Upgrade

Device Software Upgrade

- Upgrade s/w for all ipp cards
  - . Extension – SLIB
  - . CO - PRIB/BRIB/VOIB
  - . Function cards - VMIB/AAIB
- IP phone software
  - . Lip Phone
- iPECS Gateway software
  - . DTIM/SLTM



1) Select [S/W Upgrade]

2) Click G/W Upgrade

3) Select 'S/W' to upgrade

4) Click [Select]

5) Select 'Board' to upgrade

6) Click [Upgrade]

Upgrade Process is displayed.
If upload succeeds,
a success page will be displayed.

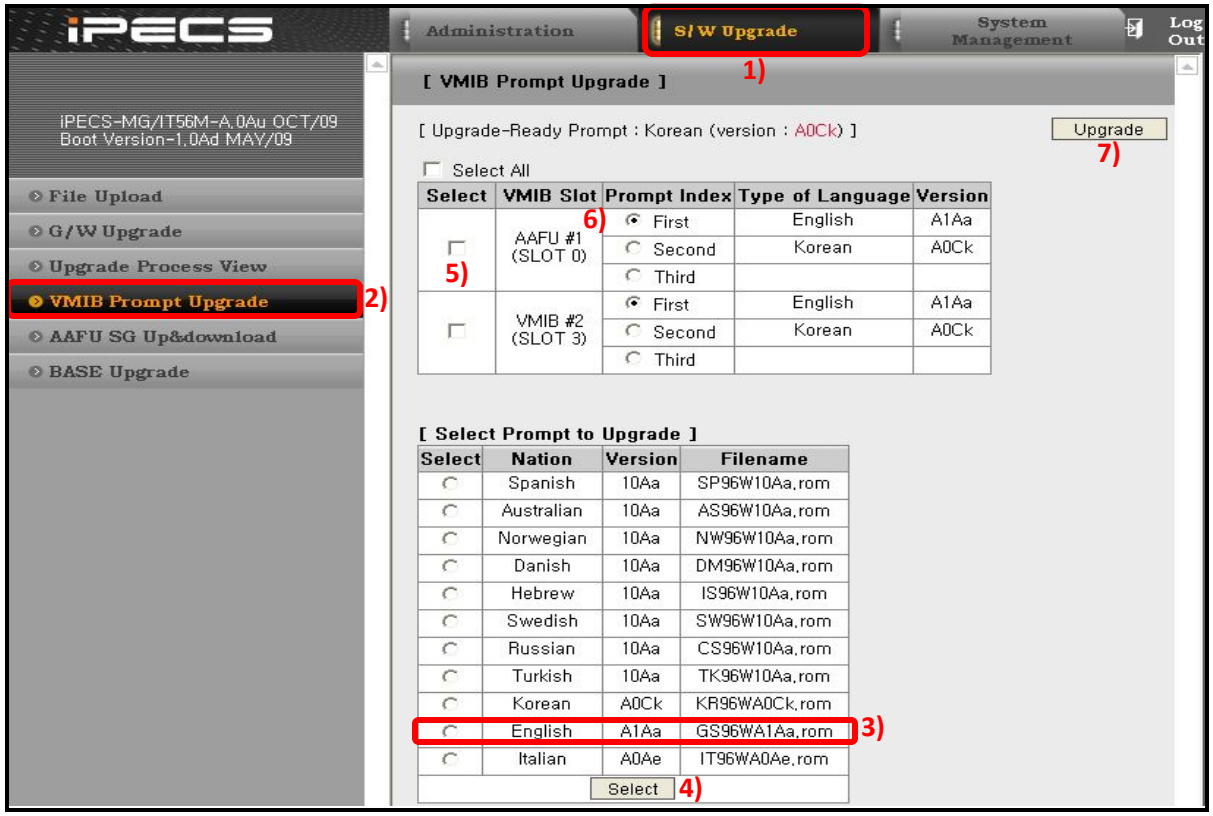
5) The upgraded device is reset automatically.

***Note**: ROM file must be uploaded first by using "File Upload" menu*

VM Prompt Upgrade

Prompt Upgrade – VMIB/AAIB/AAFU

- All Language Prompts are uploaded to MPB when MPB is produced from factory.
- 1 VM board supports 3 Languages.
- Language selection is programmable per station & CO line Base



1) Select [S/W Upgrade]

2) Click VMIB Prompt Upgrade

3) Select 'Prompt' to upload

4) Click [Select]

5) Select 'Board' to upgrade
& Prompt Index

6) Click [Upgrade]

Upgrade Process is displayed.
If upload succeeds,
a success page will be displayed.

System Greeting Upload/Download

System Greeting Upload/Download

- VM System Greeting can be recorded by [Sound Recorder]
- Each S/G can be uploaded or downloaded
- Recorded S/Gs can be downloaded as one merged file
- One merged S/G file can be uploaded to another VMIB/AAIB/AAFU

- AAFU : Up&Download through Web-Admin
- VMIB/AAIB : Up&Download through board Web

VM System Greeting Upload/Download

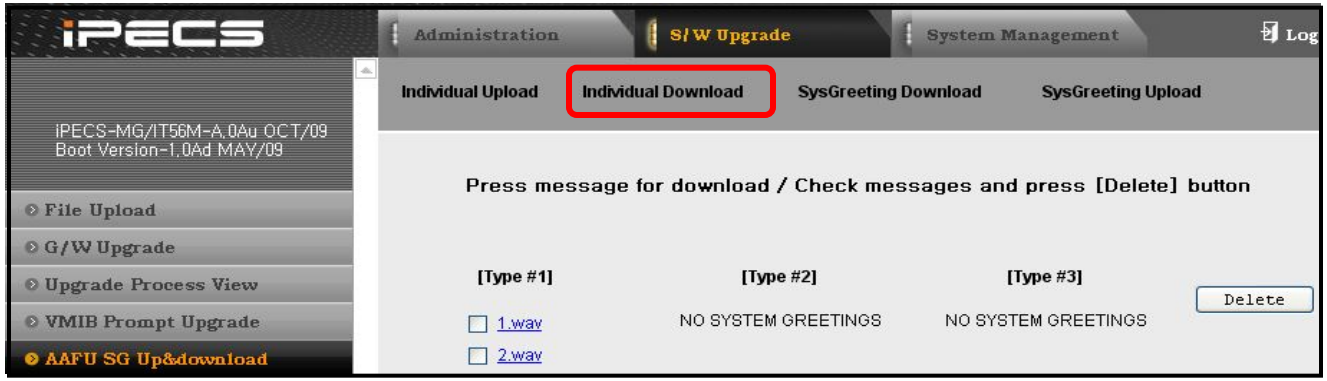
System Greeting (Individual) – AAFU

1) Each S/G can be uploaded with wav file format

If a user want to upload
to type #3 System greeting 25,
1. Select “Third”
2. Upload file name should be
   25.wav or 3_25.wav

- **Wave File Format : CCITT A-Law, 8000KHz, 8 bit, Mono)**

2) Each S/G can be downloaded as wav file format

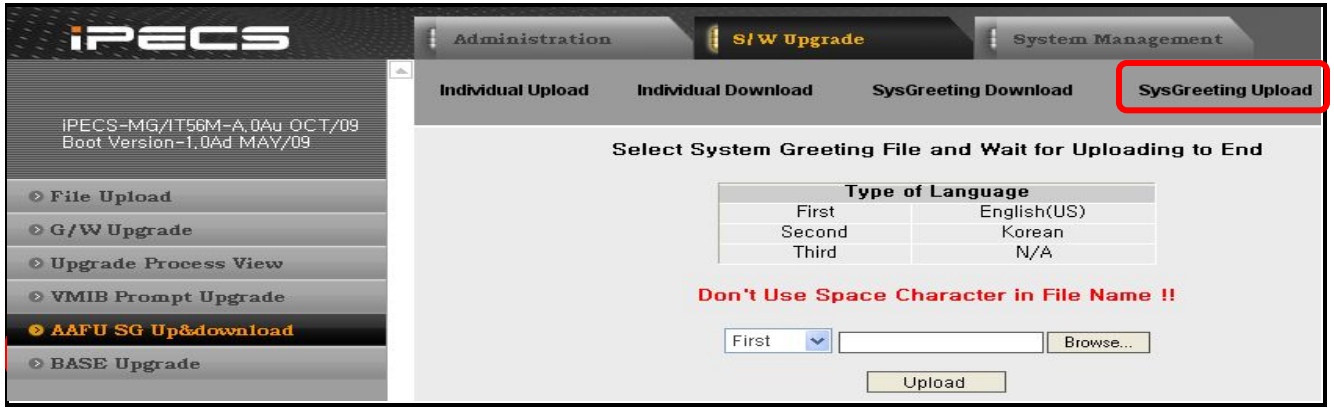


If a user click 1.wav,
file name is 1_1.wav.
(1 means type #1)

VM System Greeting Upload/Download

System Greeting (All) – AAFU

1)) S/Gs can be uploaded as one merged file



If a user want to upload to type #3 whole System greeting,
1. Select “Third”
2. Upload file name should be
   SGTYPE1.rom
   SGTYPE2.rom
   SGTYPE3.rom

2) Recorded S/Gs can be downloaded as one merged file

File name :
SGTYPE1.rom,
SGTYPE2.rom,
SGTYPE3.rom

example)
1.wav, 21.wav, 71.wav
=> SGTYPE1.rom

VM System Greeting Upload/Download

System Greeting – VMIB/AAIB

- System Greeting of VMIB/AAIB is up&download through board Web.
- VMIB/AAIB's IP Address is assigned PGM 305 (Web-Admin)
- System Greeting up&download procedure is same as AAFU