

iPECS eMG80 System Overview

(iPECS-eMG80_SW-TRA-01-001)

11 July, 2013

REVISION HISTORY

ISSUE	DATE	DESCRIPTION OF CHANGES
0.1	17-June-13	Preliminary release
0.2	11-July-13	Domestic training

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Capacity

Port Capacity

		1 st KSU	2 nd KSU	Max	
Total	Max Port	222	44	222	Extension + Trunk + VM
Trunk	Max Port	74(54)	12	74 (66)	() : Ports except remote G/W
	Analog	12	12	24	
	PRI / T1 / E1	30	-	30	
	IP (SIP/H.323)	16	-	16	
	Remote G/W	*Max	-	*Max	Max Relay Channel: 16 Ch
Extension	Max Prot	140 (36)	32	140 (68)	() : Port except IP, DECT
	SLT	31	32	63	
	Digital	24	24	48	
	Hybrid	*23	24	47	Port 1 : DKT only
	IP	*32	-	*32	Max Relay Channel: 16 Ch
	DECT	48	-	48	Max base channel : 24 Ch
VMIB	Max Port	8	-	8	

*Max : Remote IP Phone/Gateway can be registered within max system port.
But, there is a limitation related to relay channel.

Capacity

System Capacity

List		Detail	iPECS-eMG80	Remark
Fixed Slot			16	
Extension			140	TDM Port : 68
ICM Group			15	
CO line			74	TDM Port : 66
CO Group			20	
SMDR Record			5000	
Station Group			40	
Pick up Group			20	
Digit conversion			15	
Call Park			19	
Exec / Sec			36	
Conference	Manual		-	Max 13 party
	Room		9	Max 13 party
	Group (Station)		20	Max 13 party
	Group (System)		40	Max 13 party
Page	Internal		35	
	External		1	
Speed Dial	Station		100	Max. : 4000
	System		3000	
	Zone		10	

Compatibility

Rich features and applications



2 copy of free Phontage and Communicator each (Seat Base)

Compatibility Applications

	ipLDK-20	ipLDK-60	iPECS eMG80	License for eMG80
ez Phone	Yes	Yes	No	n/a
Web Phone	-	-	No	n/a
Phontage Basic	Yes	Yes	Yes	LIP-SP
Phontage Deluxe	-	-	Yes	LIP-SPD
iPECS Communicator – Android	-	-	Yes	eMG80-COMA
iPECS Communicator – iOS	-	-	Yes	eMG80-COMI
iPECS Attendant – Office	-	-	Yes	eMG80-ATD
iPECS Attendant – Hotel	-	-	Yes	eMG80-ATDH
iPECS UCS 3.0	-	-	Yes	eMG80-UCS, eMG80-UCSMA eMG80-UCSMI(P2)
IPCR	-	-	Yes	eMG80-IPCRS, eMG80-IPCRC
CCS			P2	P2
iPECS NMS 2.0	-	-	P2	P2
IP Networking / Qsig Networking	Yes	Yes	Yes	eMG80-IPN
T-Net	-	-	P2	eMG80-TLNSS (P2)
TAPI (1 st Party)	Yes	Yes	Yes	Embedded
TAPI (3 rd Party)	Yes	Yes	Yes	eMG80-TAPI
Fidelio I/F	-	-	Yes	eMG80-Fidelio
SIPE	-	-	Yes	eMG80-SIPE
AIM	-	-	Yes	eMG80-AIMS

Compatibility

Terminal

		ipLDK-20	ipLDK-60	iPECS eMG80	Remark
Digital	LDP-6000	Yes	Yes	Yes*	MDed, For backward compatibility
	LDP-6200	Yes	Yes	Yes*	MDed, For backward compatibility Limited countries only
	LDP-7000 (4N, 4D, 8D, 16D, 24D, 24LD, 48 DSS)	Yes	Yes	Yes*	Only FU support No BTU, MFU, MU, CTU, USB supported
	LDP-7200 (8D, 24D, 48DSS)	-	Yes*	Yes*	Limited countries only
	LDP-9000 (8D, 30D, 48DSS)	Yes	Yes	Yes*	No BTU supported
IP	LIP-7000/8000	Yes	Yes	Yes*	MDed, For backward compatibility
	LIP-8000E (2E, 2AE, 8E, 12E, 24E, 40E, 50E)	-	-	Yes	
	LIP-9070	-	-	Yes	
	LIP-9000	-	-	P2	
	IP-8800E (15E, 20E, 30E, 40E, 50E)	-	-	Yes	
	ACT-50	-	-	Yes	
WiFi	WIT-400H	-	-	Yes	To be MDed in Q1/2014
	WIT-400HE	-	-	Yes	
DECT	GDC-400H	Yes	Yes	Yes	To be MDed in Q1/2014
	GDC-450H	Yes	Yes	Yes	
	GDC-500H	-	-	Yes	

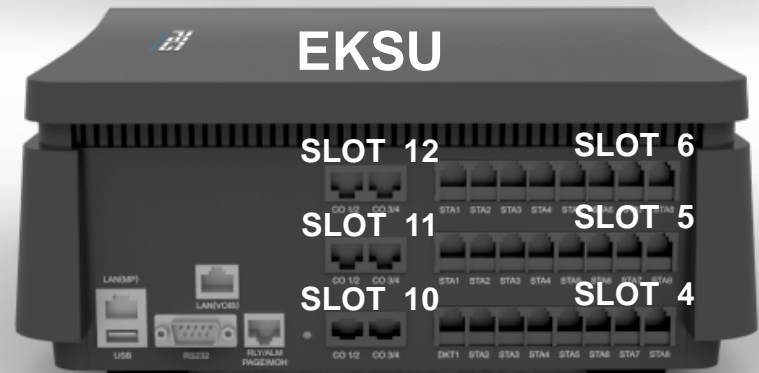
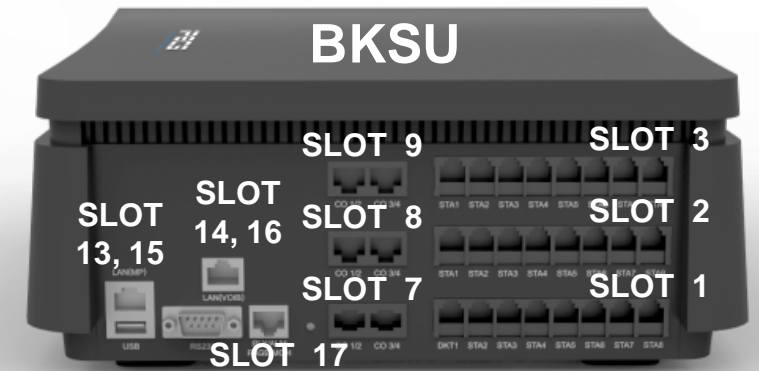
Board Configuration

Logical slot assignment

BKSU	
Slot 1	HYIB8(1D+7H) / DSIB12(8D+4S)
Slot 2	HYIB8 / HYIB4 / WTIB4 (SLIB16)
Slot 3	HYIB8 / HYIB4 / SLIB16 / WTIB4
Slot 7	LCOB2 / LCOB4 / BRIU/ PRIU
Slot 8	LCOB2 / LCOB4 / BRIB1 / BRIB2
Slot 9	LCOB2 / LCOB4 / BRIB1 / BRIB2

EKSU	
Slot 4	HYIB8
Slot 5	HYIB8 / HYIB4 / (SLIB16)
Slot 6	HYIB8 / HYIB4 / SLIB16
Slot 10	LCOB2 / LCOB4
Slot 11	LCOB2 / LCOB4
Slot 12	LCOB2 / LCOB4

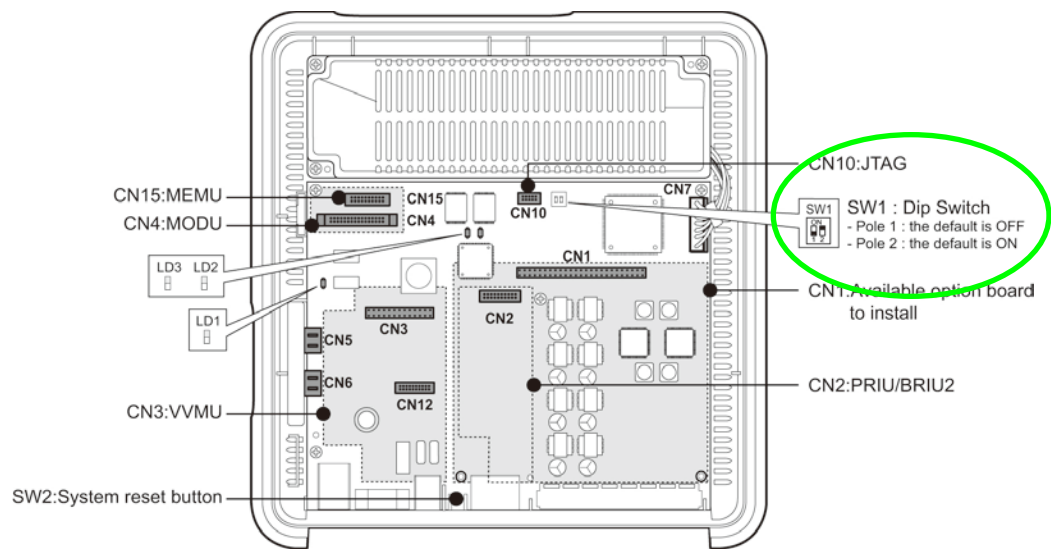
OPTION	
Slot 13	VOIU (MBU)
Slot 14	VOIB (VVMU)
Slot 15	VMIU (MBU)
Slot 16	VMIB (VVMU)
Slot 17	MISU (Relay, External Page port)



Board Configuration

Auto Configuration

- If the 2'nd pole of DIP SW1 on the KSU is OFF position, boards on internal slot are configured automatically when system is powered up.
- The 2'nd pole of DIP SW1 should be set to ON position to protect database.
- In database protecting, the board can be added or removed in Slot Assignment PGM 101.



Pole	Function	Switch State		Remarks
		ON	OFF	
1	Database protection	Protect database, no admin allowed	Unprotect	Default = OFF
2	Initialization for Database	Initialize Database on reset	Use stored Database	Default = ON

Option Board

VVMU, MEMU

- Enhanced VoIP & VM

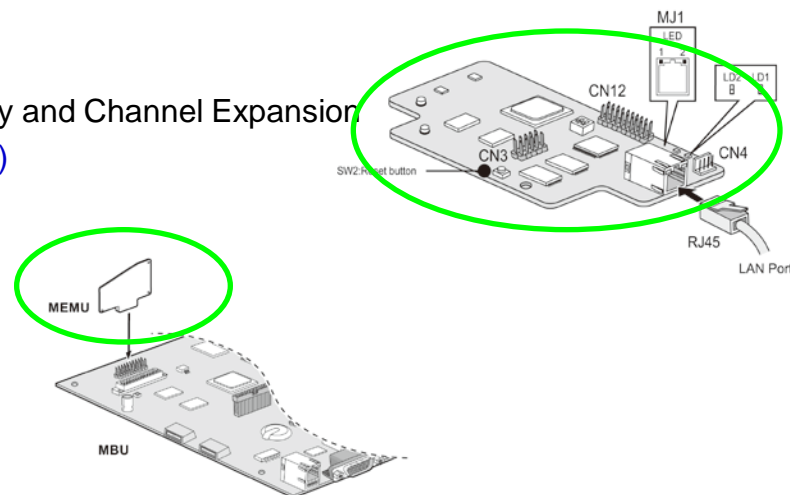
	Built-in	Expandable Option	Max	License
VoIP	Max 8chs	1.VVMU : 8chs	• With VVMU : 16chs	• eMG80-IPCL(2chs)
VM	Max 4chs/1hr	1.MEMU : 15hrs 2.VVMU : 4chs/15hrs	• With MEMU : 4chs/16hrs • With VVMU : 8chs/16hrs • With MEMU+VVMU : 8chs/31hrs	• eMG80-VMCL(2chs) • eMG80-VMML(15hrs)

- VVMU (VoIP and VM Unit)

- Common Resource Unit for VoIP Channel ,Voice Mail Memory and Channel Expansion
- Need license for each required function (IPCL, VMCL, VMML)
- All functions can be used at the same time
- Mounted on basic KSU

- MEMU (MEMory Unit) – No license required

- Memory Expansion Unit for Voice Mail
- Mounted on basic KSU

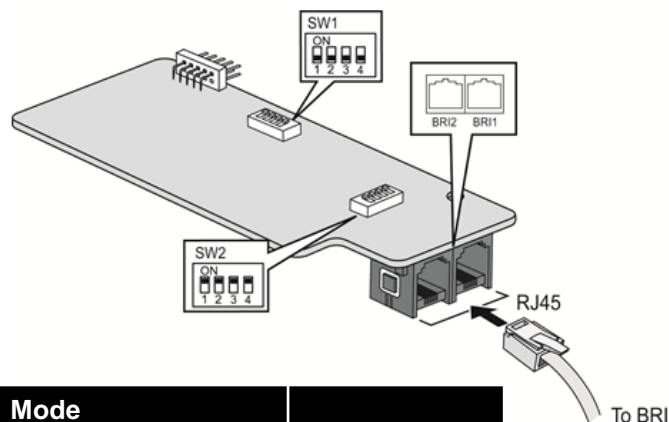


Option Board

BRIU2

- **1 BRIU2 can be installed on BKSU**

- 2 ports S/T interface
- Automatic clock control



BRIU2 BRI Mode SW1

Pole	Function	Mode		Remarks
		ON	OFF	
1	S or T mode	S mode	T mode	Default=OFF
2 & 3	Reserved	-	-	
4	BRI line loopback	Test		

BRIU2 LED Indication

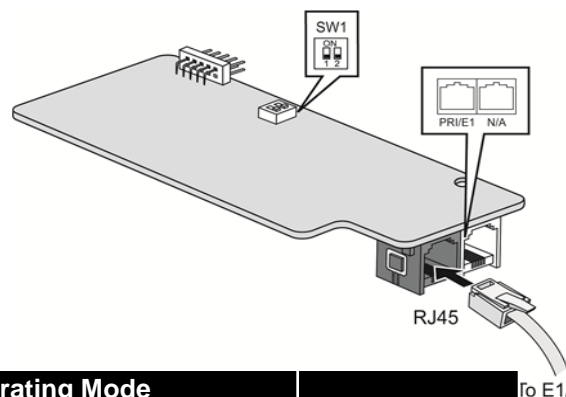
LED	Color	Description
LD1	Blue	ON: Programming CPLD OFF: No programming CPLD
LD2	Blue	ON: a BRI channel is in use OFF: all BRI lines idle
LD3	Red	ON: BRI line Error OFF: both BRI Lines normal
LD4	Blue	ON: BRI reference clock external OFF: BRI reference clock internal

Option Board

PRIU

• 1 PRIU can be installed on BKSU

- NT / TE mode
- Automatic clock control



PRIU PRI/E1 Function SW1

Pole	Function	Operating Mode		Remarks
		ON	OFF	
1	E1R2 or PRI mode	E1R2	PRI mode	Default = OFF
2	Reserved	-		

PRIU LED Indications

LED	Color	Description
LD1	Blue	ON : FPGA programmed OFF : FPGA not programmed
LD2	Blue	Flash (500ms): normal
LD3	Blue	ON: PRI channel in use OFF: All PRI channels idle
LD4	Red	ON: Line error OFF: normal

System Resource

VOIP/VM, IP Relay

- **Built in VOIP/VM**

- VOIP : 8 channels
- VM : 4 channels / 1 hour

- **IP Relay**

- Conversation for a IP phone : 1 relay channel
- IP phone \leftrightarrow IP phone : No channel
- Page / MOH : 1 relay channel for multicast

System Resource

ACT2 DSP resource

- Number of ACT2 DSP channels : 32 channels
 - eMG80 System provides 32 DSP channels for CO line functions such as DTMF receiver, Caller ID detection and etc.
- DSP functions
 - Caller ID detection for Analogue CO : FSK/DTMF/Russia CID
 - DTMF Receiver for DISA/CCR : Analogue and Digital CO
 - Call Progress Tone Detection for Analogue CO : dial tone, ring back tone, busy/error tone detection for line drop or ACNR

System Resource

Conference

- Conference module on ACT2
 - ACT2 on KSU has 148 available channels for Conference
 - eMG 80 provides max. 13 parties conference.
- Channel for Conference
 - No Limitation for 3rd parties conference

Parties	Channels for CONF
4	4
5	10
6	11
7	11
8	14

Parties	Channels for CONF
9	23
10	27
11	31
12	35
13	44

Feature different with LIK P6.0

All LIK P6.0 features are supported in eMG80 except below features

Feature name	Comment
Redundancy	Not applicable
Hot Desk	It is only supported for LIP phone
IP Bridge Mode	It is only supported for LIP phone
Linked Station Pairs	MAC link pair is not supported for TDM device Station link pair is not supported
SIP Virtual Mobile Extension (VMEX)	Not supported
SIP Virtual CO Line (VCOL)	Not supported
Cabinet Alarm	Not applicable
Zone Call Limit	Not applicable
Web User Manual	Not supported
Centralized Control TNET	It will be supported in version 2
Network Management System	It will be supported in version 2
E&M, RD, LD	Not supported

IP gateways

Supported gateways	Not supported gateways
SLTM 4, 8, 32	MCIM
LGCM 4, 8	VOIM 8, 24
BRIM 2, 4	WTIM 4, 8
PRIM	RSGM
E1IM	MATM
T1IM	
DTIM 8, 24	

Features

Digit Conversion - DID

- Digit conversion table can be assigned about each CO line.
- 15 tables – 200 entries
- Type : Unconditional / DNT / LCR
- Dialed Digit : digits to compare. 0~9, *, #, X(mask digit), F(ignore digit)
- Changed Digit : digits to change. 0~9, *, #, X(mask digit)

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Administration
Maintenance

Change Language
Log Out

Tables Data

- LCR Control Attribute(220)
- LCR LDT(221)
- LCR DMT(222)
- LCR Table Initialization(223)
- Toll Exception Table(224)
- Emergency Code Table(226)
- COS Table
- Station Authorization Code Table(227)
- System Authorization Code Table(227)
- CCR Table(228)
- Executive/Secretary(229)
- Flexible DID Conversion(231)
- System Speed Zone(232)
- Auto Ring Mode Table(233)
- Voice Mail Dialing Table(234)
- Registration Table(235)
- Mobile Extension Table(236)
- > **Digit Conversion Table(270)**
- Dummy Dial-Tone Digit Table

Favorite PGM
Digit Conversion Table(270)

Enter Table No (1 - 15) :
Enter Index (1 - 200) :
Load
Save

Table No 1
Index Range 1-10

Index	Apply Time	Auto Ring Mode Table	Dialed Digit (Max 24 Digits)	Changed Digit (Max 24 Digits)	Apply Option
1	Unconditional		1000	#201	All
2	Follow Day/Night/Timed		10XX	Day : 1XX Night : 620 Timed : #202	All
3	Follow LCR Time		2100	Day1-Time1 : 100 Day1-Time2 : 620 Day1-Time3 : #202 Day2-Time1 : #202 Day2-Time2 : #202 Day2-Time3 : #202 Day3-Time1 : #202 Day3-Time2 : #202 Day3-Time3 : #202	All

Features

Tone Table (Maintenance > Gain & Cadence Control)

- Each station/CO line has a tone table index
- 5 Tone tables / 31 tones can be changed
- Normal tone/Annc/INT MOH/EXT MOH/VSF MOH/SLT MOH

The screenshot displays the IPECS eMG80 Web Admin interface. The browser address bar shows the URL http://192.168.123.187/a_index.html. The interface includes a navigation menu on the left with options like Multi Language, SMDR, File System, License Install, DECT Statistics Feature, VSF Prompt Upload, VSF SG Up&download, User Management, Trace, TDM Gain Control, IP Gain Control, and Tone/Ring Gain&Cadence Control. The main content area shows the 'Tone Table' configuration page. At the top, there are tabs for System Information, User Management, TDM Gain(P408~418), TDM DSP Gain(P419), IPKT Handset Gain(P400), Tone Generation Gain(P422), and Tone Table. Below the tabs, there is a form to 'Enter Tone Table Range (1 - 5)' with a 'Load' button. The main table lists 19 tones with columns for Index, Tone Name, Tone Type, and Annc No (1~70). The table is titled 'Tone Table Range - 1'.

Check All	Index	Tone Name	Tone Type	Annc No (1~70)
<input type="checkbox"/>	1	Station Busy Tone	Normal	
<input type="checkbox"/>	2	Station Error Tone	Normal	
<input type="checkbox"/>	3	Station DND Tone	Normal	
<input type="checkbox"/>	4	Station Reminder Tone	Normal	
<input type="checkbox"/>	5	Station Ring Back Tone	Normal	
<input type="checkbox"/>	6	All Call Page Tone	Normal	
<input type="checkbox"/>	7	Internal Page Tone	Normal	
<input type="checkbox"/>	8	HFTB Warning Tone	Normal	
<input type="checkbox"/>	9	Confirmation Tone	Normal	
<input type="checkbox"/>	10	Single Error Tone	Normal	
<input type="checkbox"/>	11	Station Dial Tone	Normal	
<input type="checkbox"/>	12	Dial Warning Tone	Normal	
<input type="checkbox"/>	13	Conference Timeout Tone	Normal	
<input type="checkbox"/>	14	Station OHVA Tone	Normal	
<input type="checkbox"/>	15	CO Hold Tone	Normal	
<input type="checkbox"/>	16	Dissuasion Tone	Normal	
<input type="checkbox"/>	17	CO Ring Back Tone	Normal	
<input type="checkbox"/>	18	Admin Error Tone	Normal	
<input type="checkbox"/>	19	LCR Dial Tone	Normal	

Features

Gain Table (Maintenance > Gain & Cadence Control)

- Each station/CO line has a TDM gain table index
- 3 Gain Tables in a system

IPeCS eMG80 Web Admin

192.168.123.187/a_index.html

이 페이지는 영어로 되어 있습니다. 번역하시겠습니까? [번역](#) [번역 안함](#) [영어 번역 안함](#)

IPeCS eMG80 Administration Maintenance Change Language Log Out

S/W Upgrade Database Multi Language SMDR File System License Install DECT Statistics Feature VSF Prompt Upload VSF SG Up&download User Management Trace

TDM Gain Control

> TDM Gain(P408~418) TDM DSP Gain(P419)

IP Gain Control Tone/Ring Gain&Cadence Control Appliances Control

System Information User Management TDM Gain(P408~418) TDM DSP Gain(P419)

Enter Index (1 - 3) : Load

TDM Gain Control Table Index 1

Device	Rx Gain From												
	DKT-HS (0-63)	DKT-HF (0-63)	SLT (0-63)	DECT (0-63)	IP Relay-LIP (0-63)	IP Relay-WIT (0-63)	IP Relay-SIP (0-63)	ACO (0-63)	DCO (0-63)	VSF (0-63)	DTMF (0-63)	Tone (0-63)	MUSIC (0-63)
DKT-HS	26 -3.0dB	26 -3.0dB	22 -5.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	24 -4.0dB	25 -3.5dB	29 -1.5dB	8 -14.0dB	25 -3.5dB	29 -1.5dB
DKT-HF	26 -3.0dB	26 -3.0dB	22 -5.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	24 -4.0dB	25 -3.5dB	29 -1.5dB	8 -14.0dB	25 -3.5dB	29 -1.5dB
SLT	32 0.0dB	32 0.0dB	32 0.0dB	32 0.0dB	33 0.5dB	33 0.5dB	33 0.5dB	32 0.0dB	26 -3.0dB	40 4.0dB	28 -2.0dB	38 3.0dB	40 4.0dB
DECT	26 -3.0dB	26 -3.0dB	22 -5.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	29 -1.5dB	33 0.5dB	29 -1.5dB	8 -14.0dB	37 2.5dB	29 -1.5dB
IP Relay-LIP	26 -3.0dB	26 -3.0dB	33 0.5dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	22 -5.0dB	33 0.5dB	29 -1.5dB	8 -14.0dB	32 0.0dB	29 -1.5dB
IP Relay-WIT	26 -3.0dB	26 -3.0dB	33 0.5dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	14 -9.0dB	33 0.5dB	29 -1.5dB	8 -14.0dB	32 0.0dB	29 -1.5dB
IP Relay-SIP	26 -3.0dB	26 -3.0dB	33 0.5dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	26 -3.0dB	28 -2.0dB	33 0.5dB	29 -1.5dB	8 -14.0dB	32 0.0dB	29 -1.5dB
ACO	32 0.0dB	30 -1.0dB	32 0.0dB	31 -0.5dB	44 6.0dB	44 6.0dB	42 5.0dB	32 0.0dB	38 3.0dB	37 2.5dB	37 2.5dB	22 -5.0dB	37 2.5dB
DCO	26 -3.0dB	26 -3.0dB	32 0.0dB	26 -3.0dB	33 0.5dB	33 0.5dB	33 0.5dB	24 -4.0dB	32 0.0dB	32 0.0dB	32 0.0dB	32 0.0dB	32 0.0dB
VSF	21 -5.5dB	21 -5.5dB	21 -5.5dB	26 -3.0dB	29 -1.5dB	29 -1.5dB	29 -1.5dB	23 -4.5dB	32 0.0dB	32 0.0dB	32 0.0dB	32 0.0dB	32 0.0dB
	26	26	26	26	32	32	32	28	37	37	32	32	32

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Features

Green Mode

Features & Operation

1. eMG80 System can disable the power of a Digital Phone installed in the system.
2. The power On/Off can be controlled by Web Admin manually or automatically according to preprogrammed power On/Off time.
3. Green mode is applied only to keyset terminals
4. The first two keysets in BKSU(STA100/STA101) is not controlled by this feature. That is, they are always provided with power.

Features

Green Mode

Admin Program-1

Favorite PGM: [Green Mode Activation\(500\)](#)

Power Save Usage:

Slot No.	Board Type	Station Range	Power Save Mode	Current State
1	HYIB	100 - 107	<input type="button" value="Disable"/>	ON
2	HYIB	108 - 115	<input type="button" value="Disable"/>	ON

Manual Power On/Off Button

Administrator can assign each board individually

Features

Green Mode

Admin Program-2

The screenshot shows the IPECS eMG80 Web Admin interface. The browser address bar displays the URL http://192.168.122.86/a_index.html. The interface has a sidebar menu on the left with categories like Station Data, Board Based Data, CO Line Data, System Data, Station Group Data, ISDN Line Data, SIP Data, Tables Data, Networking Data, Zone Data, Device Login, DECT Data, Green Mode, and Initialization. The Green Mode section is expanded, showing 'Green Mode Activation(500)' and 'Green Mode Time Setting(501)'. The top navigation bar includes 'Administration' and 'Maintenance' tabs, along with 'Change Language' and 'Log Out' buttons. The main content area has tabs for 'Favorite PGM', 'Green Mode Activation(500)', and 'Green Mode Time Setting(501)'. A 'Save' button is located on the right. A table is displayed with columns 'Attribute', 'Value', and 'Range'. The table lists power on/off times for each day of the week. A red bracket highlights the table, and text annotations explain its functionality.

Attribute	Value	Range
Monday	Power On Time	HH:MM 00:00 ~ 23:59
	Power OFF Time	
Tuesday	Power On Time	
	Power OFF Time	
Wednesday	Power On Time	
	Power OFF Time	
Thursday	Power On Time	
	Power OFF Time	
Friday	Power On Time	
	Power OFF Time	
Saturday	Power On Time	
	Power OFF Time	
Sunday	Power On Time	
	Power OFF Time	

Administrator can assign Power Off Start Time and Power On Start Time.

These time rule can be defined by day of the week.

Features

Line Monitoring

Features & Operation

1. eMG80 System can detect the physical connection of CO line and manage the CO state based on the line status.
2. If a CO line is pulled out, the CO state is changed to Out Of Service automatically so that it is not allowed to access that CO line.

Admin Program

The screenshot shows the iPECS eMG80 Administration interface. The left sidebar lists various configuration categories, with 'CO Additional Attr(148)' selected. The main content area displays a table of configuration parameters for this category. The 'Analogue Line Monitor' parameter is checked and highlighted with a red box.

Favorite PGM	CO Additional Attr(148)
<input type="checkbox"/>	RCID Request Count
<input type="checkbox"/>	RCID Request Retry Delay Timer
<input type="checkbox"/>	Collect Call Blocking
<input type="checkbox"/>	Collect Call Answer Timer
<input type="checkbox"/>	Collect Call Idle Timer
<input checked="" type="checkbox"/>	Analogue Line Monitor

Web admin Overview



- Html5 base web admin- IE10, Firefox, Chrome
- Install wizard
- Favorite PGM
- Multi tap
- Multi language (Support both English and Local language)

PGM Name	Count
System&Device IP(102~103)	6
Common Attributes(140)	3
System Attributes(160~161)	3
Station User Login(443)	3
DECT Registration(0#)	2
Flexible Numbering Plan(106~109)	2
Common Attributes(111)	2
System Overview	2
Station Group Assignment(190)	2
Station Group Attributes(191)	2

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Trace

Type 'jennie' to enter monitor mode

- Target
 - 't b (slot no)' : to set board trace
 - 't c|e|h|' s|c(station no, co no): to set device trace
 - c : command
 - e : event
 - h : timeslot
- Function
 - . 't s call' : call trace
 - . 't s tdm' : TDM switching information for all device

```
16:13:41(28) [RX STN:1200] <----- [TX Tone05 (22)] - Tone Start
16:13:45(31) [RX COL:001(240)] <----- [TX STN:1200(248)] + [TX NULL(ff/ffff)(1152)] - Connect CH
16:13:45(31) [RX STN:1200] <----- [TX Null-Cahnnel] - Connect Null CH
16:13:45(31) [RX STN:1200] <----- [TX Null-T/R] - ToneRing End
16:13:45(31) [RX STN:1200(248)] <----- [TX COL:001(240)] + [TX NULL(ff/ffff)(1152)] - Connect CH
```

Maintenance

Type 'brandy' to enter maint mode

- Timeslot – 'tslot'
 - 'tslot show' : to check timeslot assignment in system
 - 'tslot slot xx' : to check timeslot assignment in slot

```
maint> tslot slot 1
Highway Time-Slot configuration for Slot(1)

Board Type : DSIB
=====
Slot(01)  001 002 003 004 005 006 007 008 009 010 011 012
          .....
          248 249 250 251 252 253 254 255 256 257 258 259
          .....
          248 249 250 251 252 253 254 255 256 257 258 259
          =====
```

- 'tslot check (slot no)' : to check the current connection

```
maint> tslot check
=====
Current TDM switching status
=====
- Slot:1, Type:DSIB      , Devs:12
  PORT : DEST
    1 : STN:1200(248) < Channel(1152) + COL:001(240)

- Slot:13, Type:VOIU     , Devs:8
  PORT : DEST
    1 : COL:001(240) < Channel(1152) + STN:1200(248)
=====
```

System Recovery

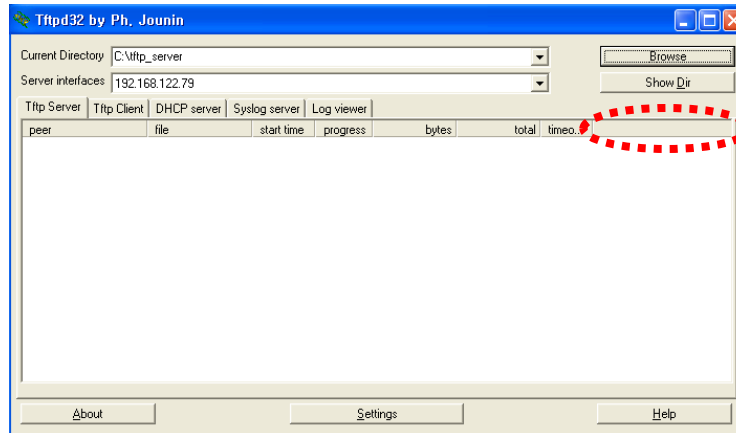
Overview

- System Recovery can be performed when the boot image is operating normally.
- If the boot image is broken by any chance, System Recovery is not available. In that case, ROM writer equipment is needed.
- Recovery files for eMG80 system
 - Boot image : u-boot-mbu.bin
 - MSP image : msp.axf
 - Kernel image : ulmage-mbu
 - Root File System : fs-emg80-mbu.yaffs2

System Recovery

TFTP Server Program

1. Install TFTP Server program on your PC and run tftpd32 program (TFTP server program can be downloaded from <http://tftpd32.jounin.net/>)
2. Set TFTP Server Directory using the browse button (ex: C:\tftp_server)



3. Copy 4 files(u-boot-mbu.bin/msp.axf/ulmage-mbu/fs-emg80-mbu.yaffs2) to the directory

System Recovery

System Recovery Procedure

1. Connect your PC to eMG80 through Serial Port
2. Turn eMG80 system on and press [Ctrl+C] as quick as to log in boot mode. eMG80-MBU>

```
DDR Training(1).....Done
U-Boot 2013.01 (Apr 17 2013 - 18:40:47) Mindspeed $Name: uboot_7_00_5 $

I2C: ready
Flash: 4 MiB
0 ONFI flash detected
ONFI param page 0 valid
NAND device: Manufacturer ID: 0x01, Chip ID: 0xda (AMD S34ML02G1)
1 No NAND device found.
2 ONFI flash detected
NAND device: Manufacturer ID: 0x01, Chip ID: 0xda (AMD NAND 256MiB 3,3V 8-bit)
3 ONFI flash detected
NAND device: Manufacturer ID: 0x01, Chip ID: 0xda (AMD NAND 256MiB 3,3V 8-bit)
NAND: 768 MiB
In: serial
Out: serial
Err: serial
Reserve MSP memory
DDR Training :
DLL_ADJ(0,1,2,3): 0x20,0x22,0x1e,0x1e
MR_DQS:delay0 0x7b, delay1 0x79, delay2 0x7b, delay3 0x7a
boot location @20380000
mount boot partition...
Scanning device for bad blocks
Bad eraseblock 1100 at 0x000008980000
Bad eraseblock 2047 at 0x00000ffe0000
Copy boot/u-boot.bin to 0x81000100... File not found(-1)
Copy boot/boot_env to 0x80a223e8... [DONE 8176(0x1ff0) bytes]
Net: concerto_genac0
eMG80-MBU>
```

System Recovery

System Recovery Procedure

3. To check the current system's boot environment.

```
eNG80-MBU> printenv
addeth=setenv bootargs ${bootargs} hwaddress=${netdev},${ethaddr}
addip=setenv bootargs ${bootargs} ip=${ipaddr}:${serverip}:${gatewayip}:${netmask}:${hostname}:${netdev}:off
addntd=setenv bootargs ${bootargs} ${ntdparts}
addtty=setenv bootargs ${bootargs} console=ttyS0,$(baudrate)
baudrate=115200
board_maketime=18:41:07, Apr 17 2013
board_version=1.0Ae
boot_knand=ydm boot/uImage ${loadaddr}; run flashargs addeth addip addtty addntd; bootn
boot_nfs=ydm boot/uImage ${loadaddr}; run nfsargs addeth addip addtty addntd; bootn
bootcmd=run boot_knand
bootdelay=0
bootname=u-boot-nbu.bin
eth1addr=00:40:5a:00:00:01
ethact=concerto_gwac0
ethaddr=00:40:5a:00:00:00
flashargs=setenv bootargs init=${init_process} root=/dev/ntdblock2 rootfstype=${rootfstype} rw
fsfile=fs-eng80-nbu.yaffs2
gatewayip=10.10.10.1
hostname=ipecs-nbu
hwaddress=${netdev},${ethaddr}
init_process=etc/preinit
ipaddr=10.10.10.2
ipaddr1=1.2.3.4
kernelname=uImage-nbu
loadaddr=81000000
loadenv2=run setroot addip addeth addtty addntd
loadenvnfs=run nfsargs addip addeth addtty
nspname=nsp.axf
ntddename=rootfs
ntddenum=2
ntdids=nand0=concertonand,nand2=concertonand2,nand3=concertonand3
ntdparts=ntdparts=concertonand:10M(boot),64M(ppt),96M(rootfs),54M(db),-(vn0);concertonand2:-(vn1);concertonand3:-(vn2)
netdev=eth0
netmask=255.255.255.0
nfsargs=setenv bootargs init=${init_process} root=/dev/nfs rw nfsroot=${nfsserver}:${rootpath}
nfsserver=192.168.123.215
partition=nand0,2
rootfstype=yaffs2
rootpath=/devel/fs-small
serverip=192.168.123.215
stderr=serial
stdin=serial
stdout=serial
updateboot=tftpboot ${loadaddr} ${bootname}; board update boot ${loadaddr} ${filesize}
updatefs=tftpboot ${loadaddr} ${fsfile}; board update rootfs ${loadaddr} ${filesize}
updatekernel=tftpboot ${loadaddr} ${kernelname}; board update kernel ${loadaddr} ${filesize}
updatenp=tftpboot ${loadaddr} ${nspname}; board update nsp ${loadaddr} ${filesize}

Environment size: 2006/8172 bytes
eNG80-MBU>
```


System Recovery

System Recovery Procedure

4. Set IP of TFTP server by 'setenv serverip' and 'saveenv' command. (We assume that eMG80 has 10.10.10.2 and PC has 10.10.10.100)

```
eMG80-MBU> printenv serverip
serverip=192.168.123.215
eMG80-MBU> setenv serverip 10.10.10.100
eMG80-MBU> saveenv
Saving Environment to Flash...
> update boot env...
> update kernel env...
eMG80-MBU>
```

5. Verify Recovery files' name by 'printenv' command

```
eMG80-MBU> printenv bootname
bootname=u-boot-mbu.bin
eMG80-MBU> printenv mspname
mspname=msp.axf
eMG80-MBU> printenv kernelname
kernelname=uImage-mbu
eMG80-MBU> printenv fsfile
fsfile=fs-emg80-mbu.yaffs2
eMG80-MBU> █
```

System Recovery

System Recovery Procedure

6. Update Boot Image using 'run updateboot' command

```
eMG80-MBU> run updateboot
PHY 100Mbit FD
Using concerto_gemac0 device
TFTP from server 10.10.10.100; our IP address is 10.10.10.2
Filename 'u-boot-mbu.bin'.
Load address: 0x81000000
Loading: #####
          2 MiB/s
done
Bytes transferred = 392956 (5fefc hex)
: update boot: verifying...
Update boot...
Flash: sector erase
..... done
Flash: write
9....8....7....6....5....4....3....2....1....
eMG80-MBU> █
```

Note) This is not necessary if Boot image is not changed.

And you should reset your system after updating Boot image.

System Recovery

System Recovery Procedure

7. Update MSP Image using 'run updatemsp' command

```
eMG80-MBU> run updatemsp
PHY 100Mbit FD
Using concerto_gemac0 device
TFTP from server 10.10.10.100; our IP address is 10.10.10.2
Filename 'msp.axf'.
Load address: 0x81000000
Loading: #####
      ####
      2.2 MiB/s
done
Bytes transferred = 1006144 (f5a40 hex)
: update msp: verifying...
Update msp...
eMG80-MBU>
```

System Recovery

System Recovery Procedure

8. Update Kernel Image using 'run updatekernel' command

```
eMG80-MBU> run updatekernel
PHY 100Mbit FD
Using concerto_gemac0 device
TFTP from server 10.10.10.100; our IP address is 10.10.10.2
Filename 'uImage-mbu'.
Load address: 0x81000000
Loading: #####
          #####
          2.6 MiB/s
done
Bytes transferred = 1904340 (1d0ed4 hex)
: update kernel: verifying...
Update kernel...
eMG80-MBU> █
```

System Recovery

System Recovery Procedure

9. Update Root File System Image using 'run updatefs' command

```
eMG80-MBU> run updatefs
PHY 100Mbit FD
Using concerto_genac0 device
TFTP from server 10.10.10.100; our IP address is 10.10.10.2
Filename 'fs-eng80-nbu.yaffs2'.
Load address: 0x81000000
Loading: #####
#####
#####
#####
#####
#####
#####
```

```
#####
#####
#####
#####
#####
#####
#####
2.7 MiB/s
done
Bytes transferred = 55013376 (3477000 hex)
: update RFS: verifying...
Write RFS to NAND...

NAND erase.part: device 0 offset 0x4a00000, size 0x6000000
Skipping bad block at 0x08980000
Erasing at 0xa9e0000 -- 100% complete.
OK

NAND write: device 0 offset 0x4a00000, size 0x3477000

Writing data at 0x7cdf800 -- 100% complete.
55013376 bytes written: OK
eMG80-MBU>
```

10. Restart the system when Root File System file is programmed completely

License

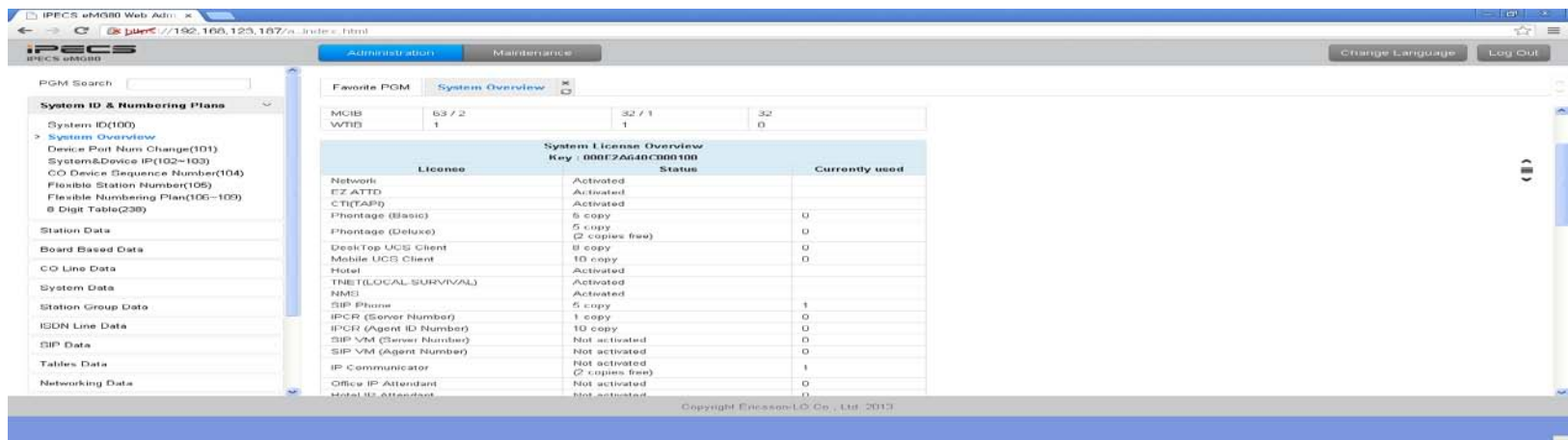
New license in eMG80

- Hotel license : Enable/Disable Hotel features
- VOIU channel license
 - 2 channel free, It can be increased by license up to 8 (2 channel base)
- VOIB channel license
 - It can be increased by license up to 8 (2 channel base)
- VMIU license
 - Memory: 1 hour free, 15 hour can be expanded by MEMU
 - 2 channel free, 2 channel can be increased by license
- VMIB license
 - Memory: 1 hour free, 15 hour can be expanded by license
 - Channel : It can be increased by license up to 4 (2 channel base)
- Application package
 - 2 IP communicator, 2 Phontage deluxe, 1 IP office attendant
- MS LYNC (EV, RCC server and client)
 - It will be supported by the end of 2013

License

Overview and install

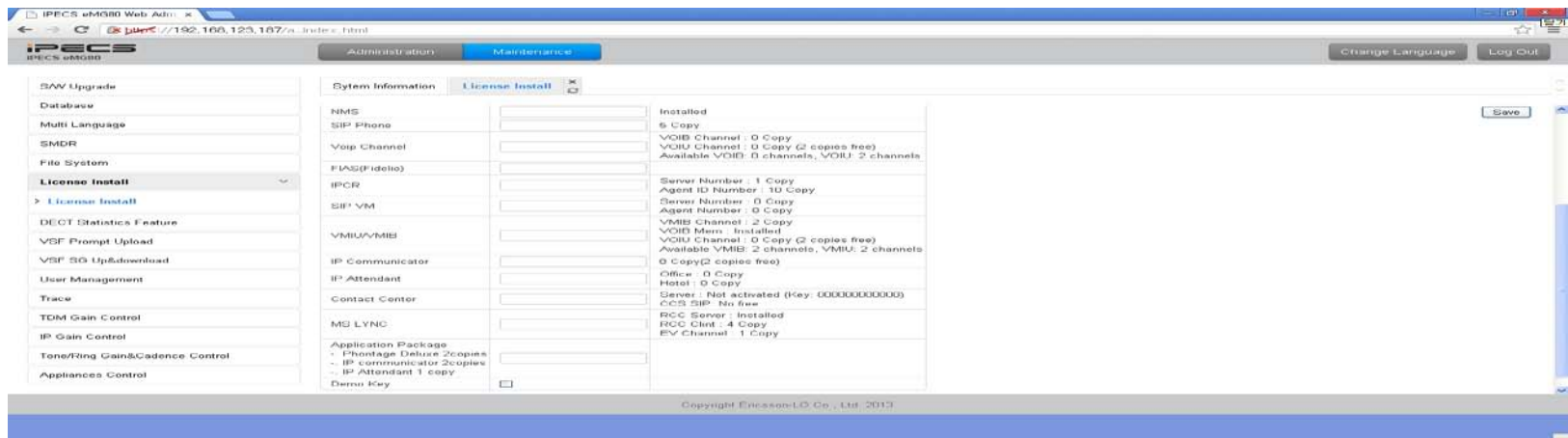
- Overview



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License	Status	Currently used
Network	Activated	
EZ ATTD	Activated	
CT(TAP)	Activated	
Phontage (Basic)	5 copy	0
Phontage (Deluxe)	5 copy (2 copies free)	0
DeskTop UCS Client	8 copy	0
Mobile UCS Client	10 copy	0
Hotel	Activated	
THET(LOCAL SURVIVAL)	Activated	
NMS	Activated	
SIP Phone	5 copy	1
IPCR (Server Number)	1 copy	0
IPCR (Agent ID Number)	10 copy	0
SIP VM (Server Number)	Not activated	0
SIP VM (Agent Number)	Not activated	0
IP Communicator	Not activated (2 copies free)	1
Office IP Attendant	Not activated	0
Hotel IP Attendant	Not activated	0

- Install



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System Information	License Install
NMS	Installed
SIP Phone	5 Copy
Voip Channel	VOIB Channel : 0 Copy VOIU Channel : 0 Copy (2 copies free) Available VOIB : 0 channels, VOIU : 2 channels
FAS(Fidelio)	
IPCR	Server Number : 1 Copy Agent ID Number : 10 Copy Server Number : 0 Copy Agent Number : 0 Copy
SIP VM	VMB Channel : 2 Copy VOIB Menu : Installed VOIU Channel : 0 Copy (2 copies free) Available VMB : 2 channels, VOIU : 2 channels 0 Copy(2 copies free)
IP Communicator	Office : 0 Copy Hotel : 0 Copy
IP Attendant	Server : Not activated (Key: 0000000000000000) CCS SIP : No free
Contact Center	RCC Server : Installed RCC Chid : 4 Copy EV Channel : 1 Copy
MS LYNC	
Application Package	
- Phontage Deluxe 2copies	
- IP Communicator 2copies	
- IP Attendant 1 copy	
Demo Key	<input type="checkbox"/>

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