

VOIB48/MEMU/MODU/MISU

(iPECS eMG100HW-TRA-01-004)

30 Aug, 2019

REVISION HISTORY

ISSUE	DATE	DESCRIPTION OF CHANGES
0.1	23-Aug-19	Preliminary release
0.2	30-Aug-19	Error correction VM Channel, Board installation added

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VOIB48

Overview

- **VOIB48 Capacity**

Function	Default (without License)	Expansion (with License)	Max
VoIP Channels	8 ch.	40 ch.	48 ch.

- **VOIB48 (48 VoIP Interface Board)**

- Common Resource Unit for VoIP Channel
- Empty VoIP channel
- Need license for each required function (VOIBCL8)
- All functions can be used at the same time
- Mounted on basic KSU

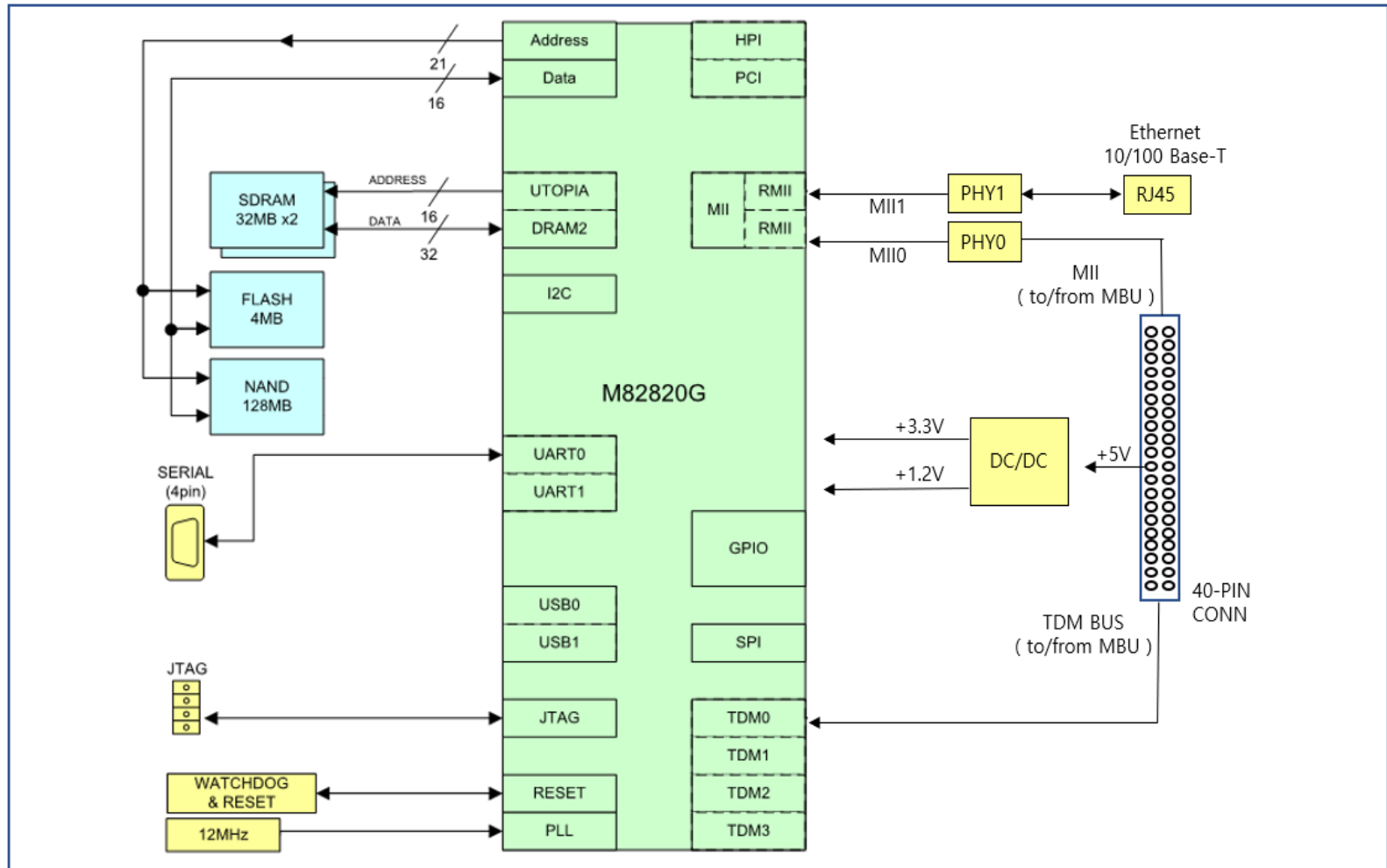
General Description

Voice Over internet protocol Interface Board

- Channel capacity : maximum Voip 48 channels
- Protocol stack version : H.323 and SIP (RFC3261)
- Voice compression : G.711(A-law/ u-law), G.729a/b, G.723.1a
- Voice/ Fax switching : T.38 (H.323/ SIP/ NAT/ GK)
- Echo cancellation : G.165/G.168-2004 (up to 128ms)
- SRTP (Encryption and Authentication)

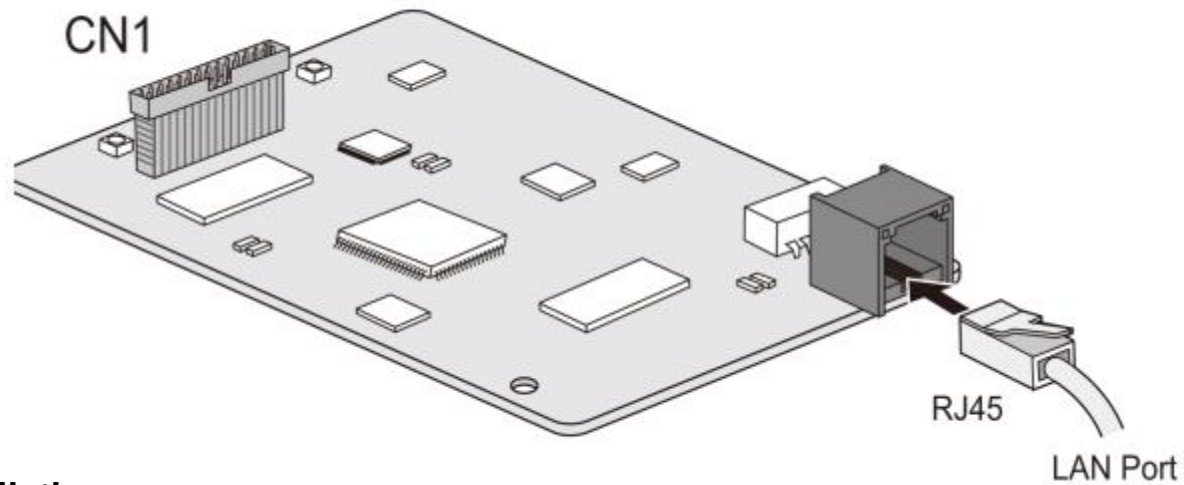
VOIB48

Block Diagram

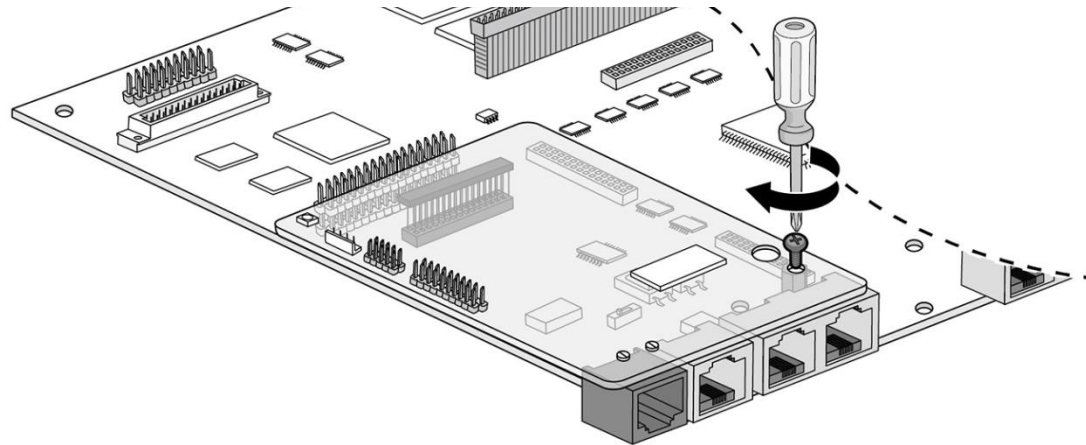


VOIB48

PCB Assembly & Installation



- VOIB48 Installation



VOIB48

Switches & LEDs

VOIB48 Push Button Reset, SW2

Switch	Functions
SW2	Reset push button

VOIB48 LED Indication

LED	Color	Description
LD1	Blue	Flash 100ms ON and OFF, normal operation
LD2	Blue	Channel in use status ON – a VoIP channel in use OFF – all VoIP channels idle

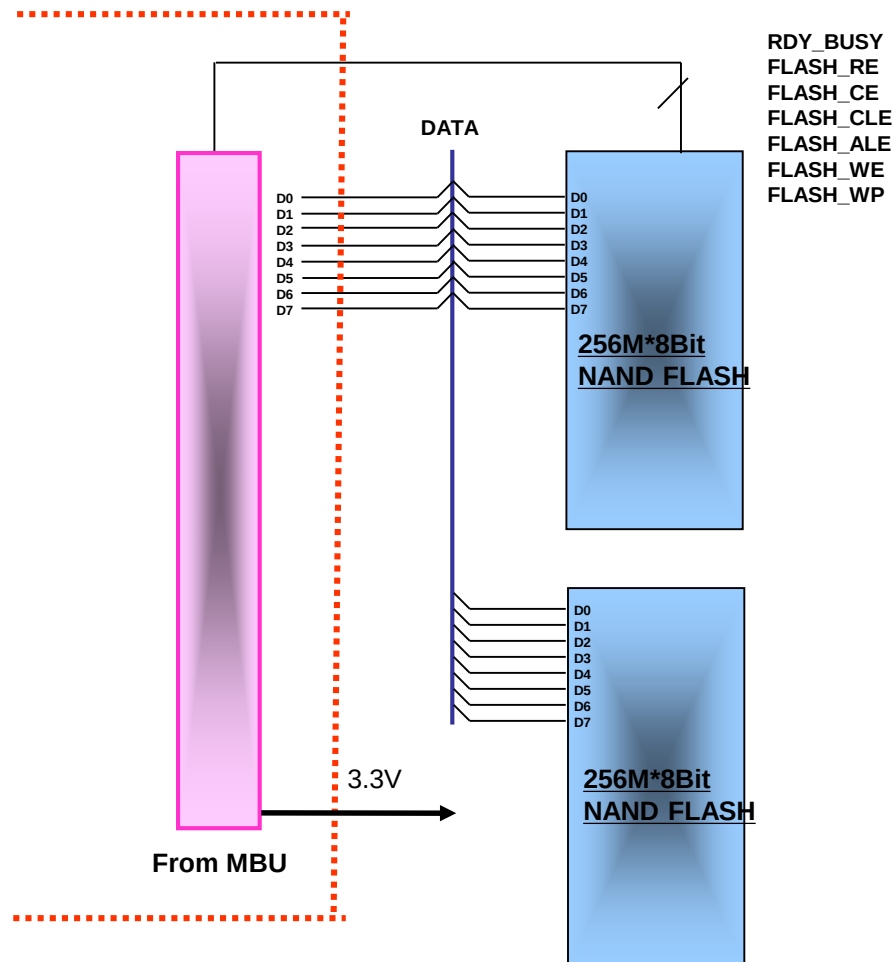
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MEMU & MEMU2

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MEMU & MEMU2

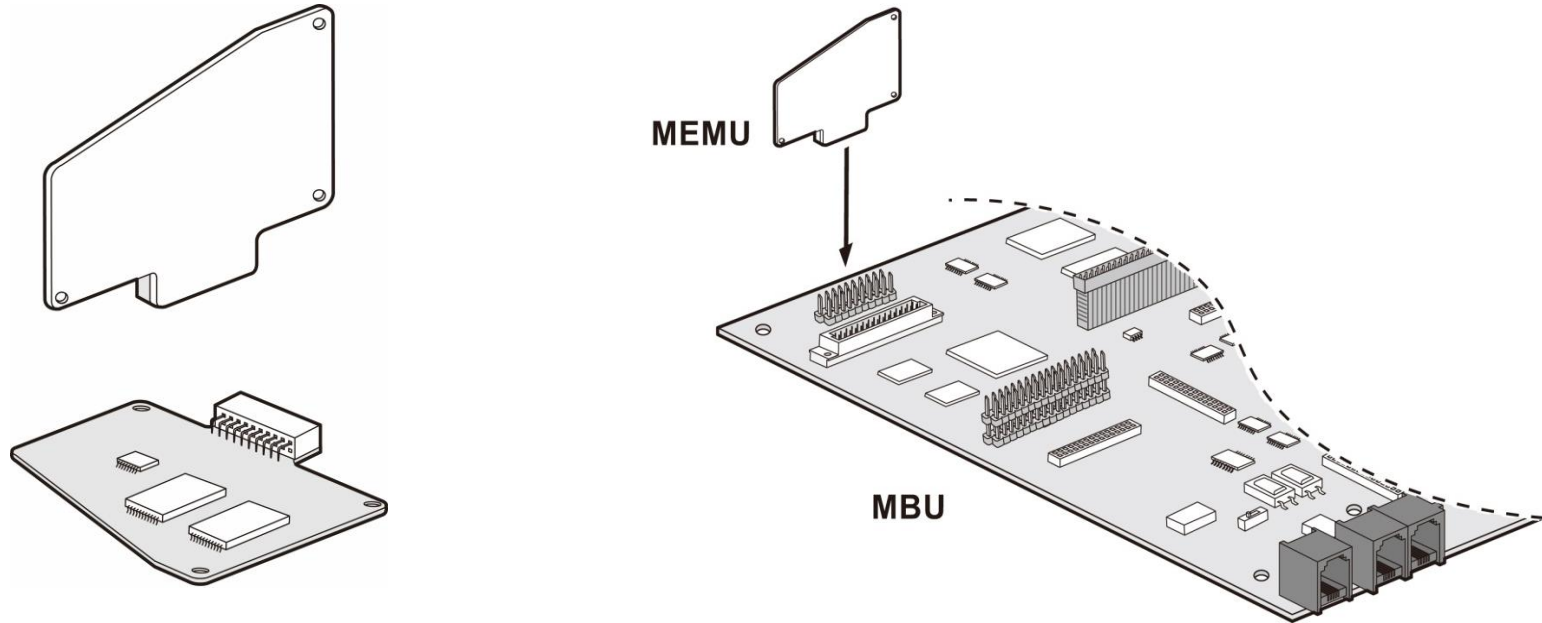
Block Diagram



MEMU & MEMU2

PCB Assembly & Installation

- MEMU/MEMU2 Installation



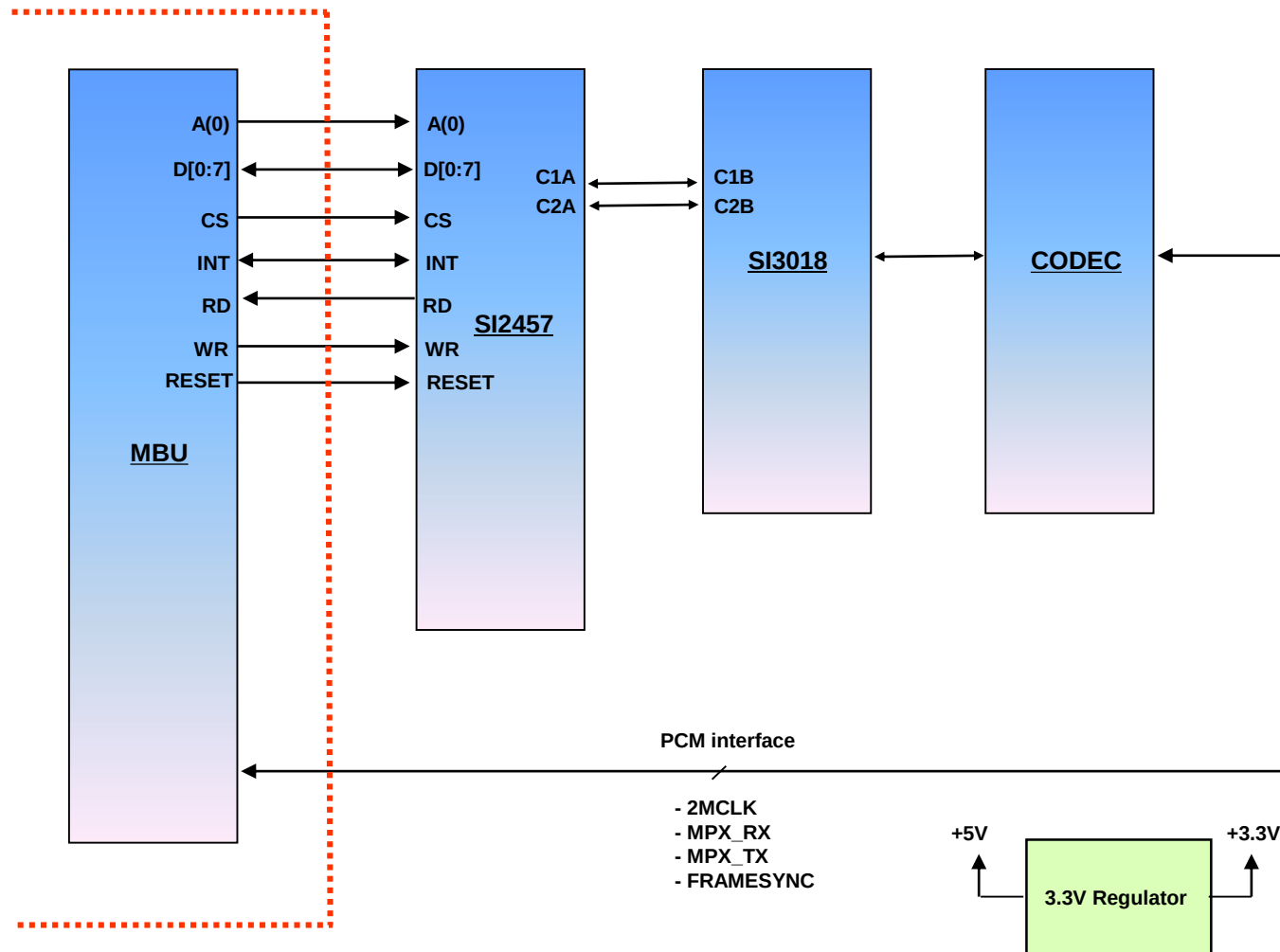
- MEMU/MEMU2 (Memory Expansion Module Unit)
 - ; **No license required**
 - Memory Expansion Unit for Voice Mail, Mounted on basic KSU
 - MEMU : 15hrs (Expandable VM Recording time)
 - MEMU2 : 60hrs (Expandable VM Recording time)

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MODU

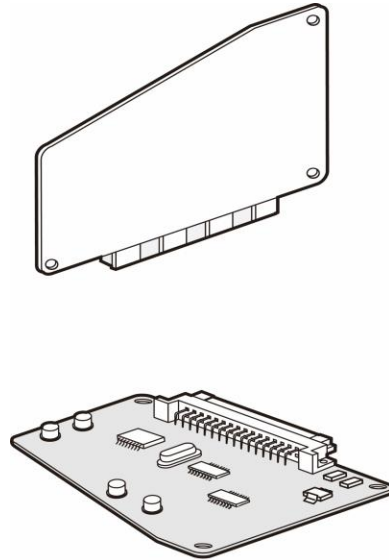
- Block Diagram
- PCB Assembly & Installation

Block Diagram

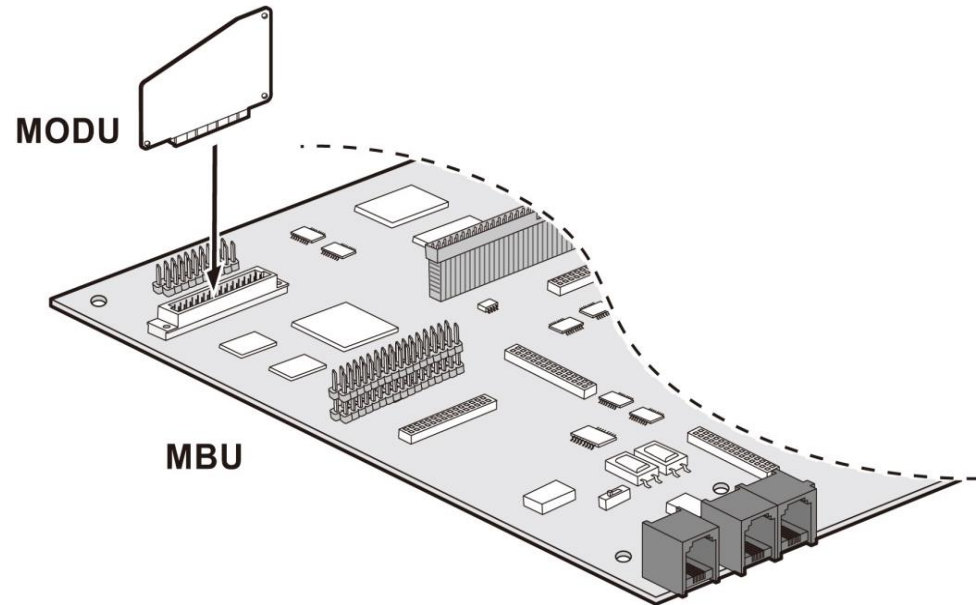


MODU

PCB Assembly & Installation



• MODU Installation



• MODU (Modem Unit)

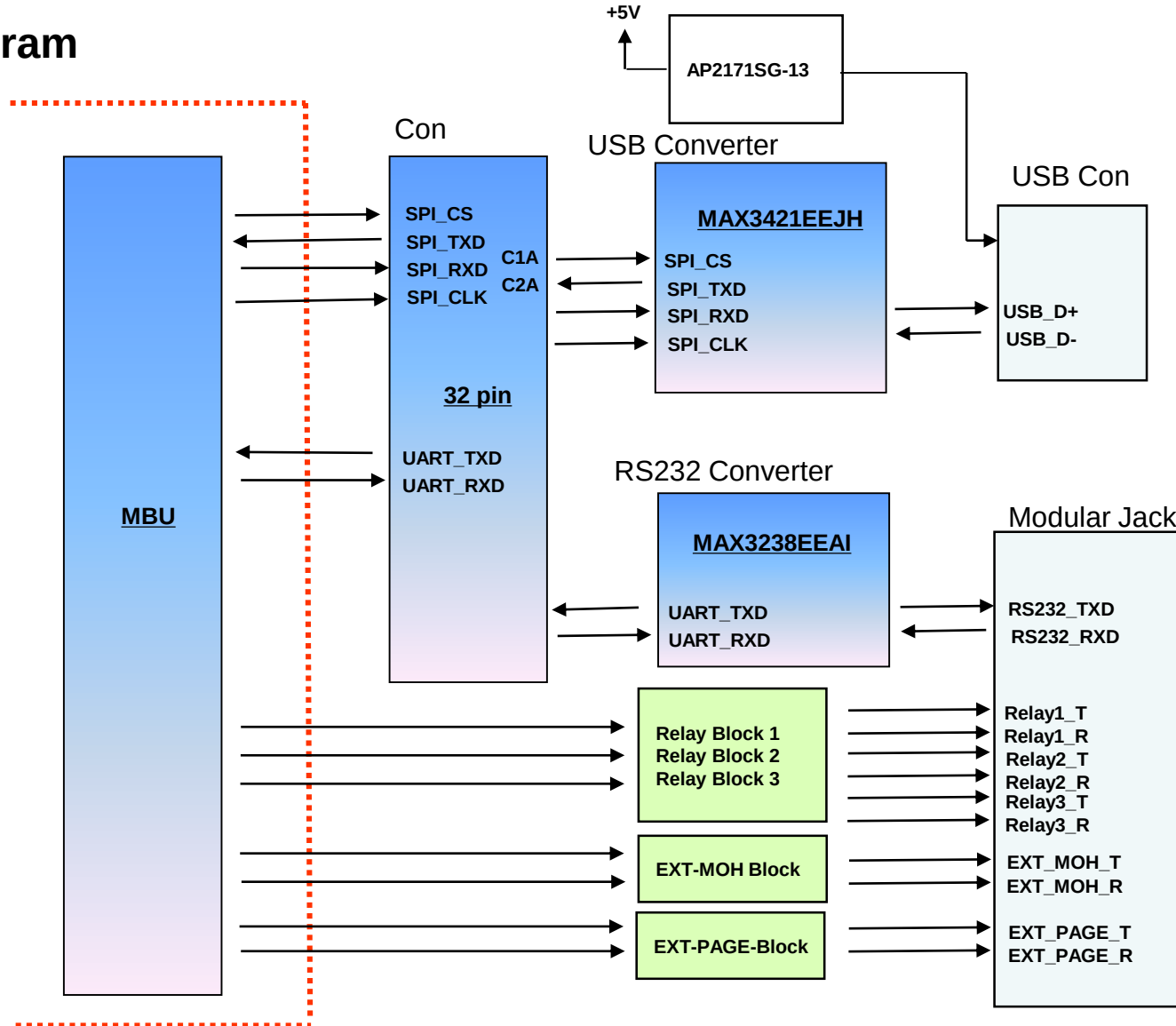
- Support Bell, ITU-T, V.34, V.32BIS and V.90 protocols
- Baud rates : 300bps up to 33Kbps with automatic rate negotiation

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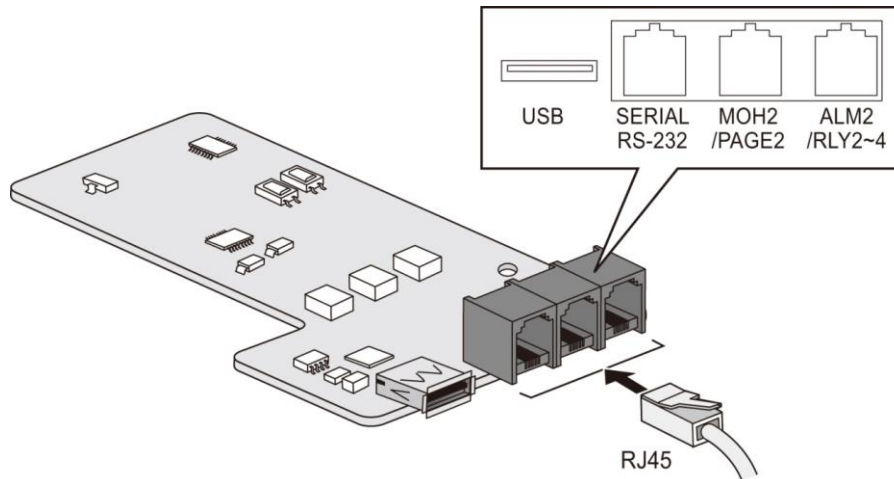
MISU

- Block Diagram
- PCB Assembly & Installation
- Modular jack wiring

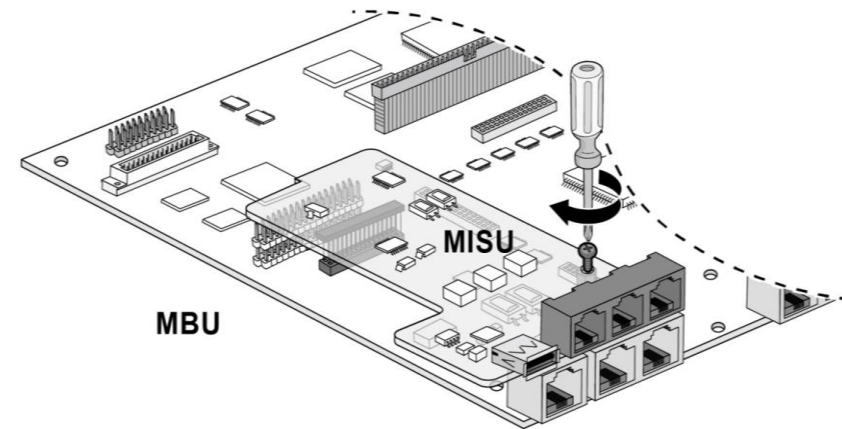
Block Diagram



PCB Assembly & Installation



• MISU Installation



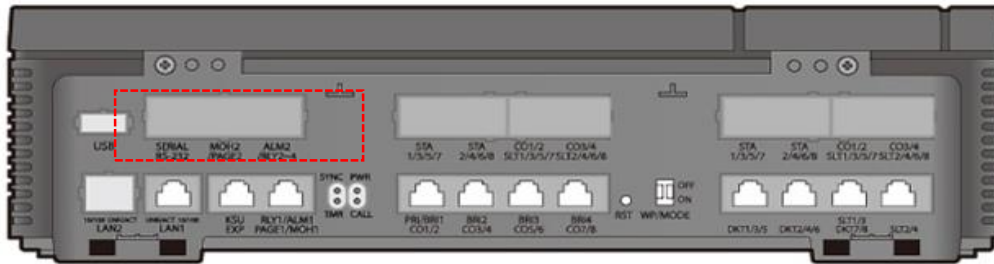
• MISU (Miscellaneous function Unit)

- One USB port.
- One RS-232C port
- Provides one external MOH, one external PAGE,
- One ALARM port, three General purpose RELAY ports,
- The USB function is up/downloading the Database and upgrading MP SW.

Caution

For using USB function, please enter the maintenance mode and use the function when the system is in idle condition.

Modular jack wiring



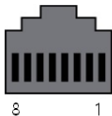
MISC Board	Modular Jack	Pin assignment
MISU		CN2 : VBUS(+5V), D-, D+, GND MJ1-1: RXD(6), TXD(3), GND(5,4) MJ1-2: MOH2(8,7), PAGE2(5,4) MJ1-3: RLY2(8,7), RLY3(6,5), RLY4(4,3), ALM2(2,1)

- USB Termination

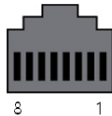
Connector	Pin-out	Pin Number	Signal Name	Function
USB		1	VBUS (+5V)	Power
		2	D+	Data signal
		3	D-	Data signal
		4	GND	Ground

Modular jack wiring

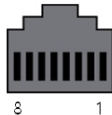
MJ1-1 Wiring : RS-232C port

Connector	Pin-out	Pin Number	Signal Name	Function
RJ45		8,7,	N.C	
		6	RXD	RX data
		5,4	GND	Ground
		3	TXD	TX data
		2,1	N.C	

MJ1-2 Wiring : Ext MOH / Ext PAGE

Connector	Pin-out	Pin Number	Signal Name	Function
RJ45		8	EXTMOH_T	External MOH Tip
		7	EXTMOH_R	External MOH Ring
		6	N.C	
		5	EXTPAGE_T	External Page Tip
		4	EXTPAGE_R	External Page Ring
		3,2,1	N.C	

MJ1-3 Wiring : Relays & Alarm

Connector	Pin-out	Pin Number	Signal Name	Function
RJ45		8	RELAY2_T	Relay Contact Tip
		7	RELAY2_R	Relay Contact Ring
		6	RELAY3_T	Relay Contact Tip
		5	RELAY3_R	Relay Contact Ring
		4	RELAY4_T	Relay Contact Tip
		3	RELAY4_R	Relay Contact Ring
		2	ALARM_T	Alarm Detection Tip
		1	ALARM_R	Alarm Detection Ring

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