

NS series V4.6

- Summary -

Rev1.0 10 Jul., 2017



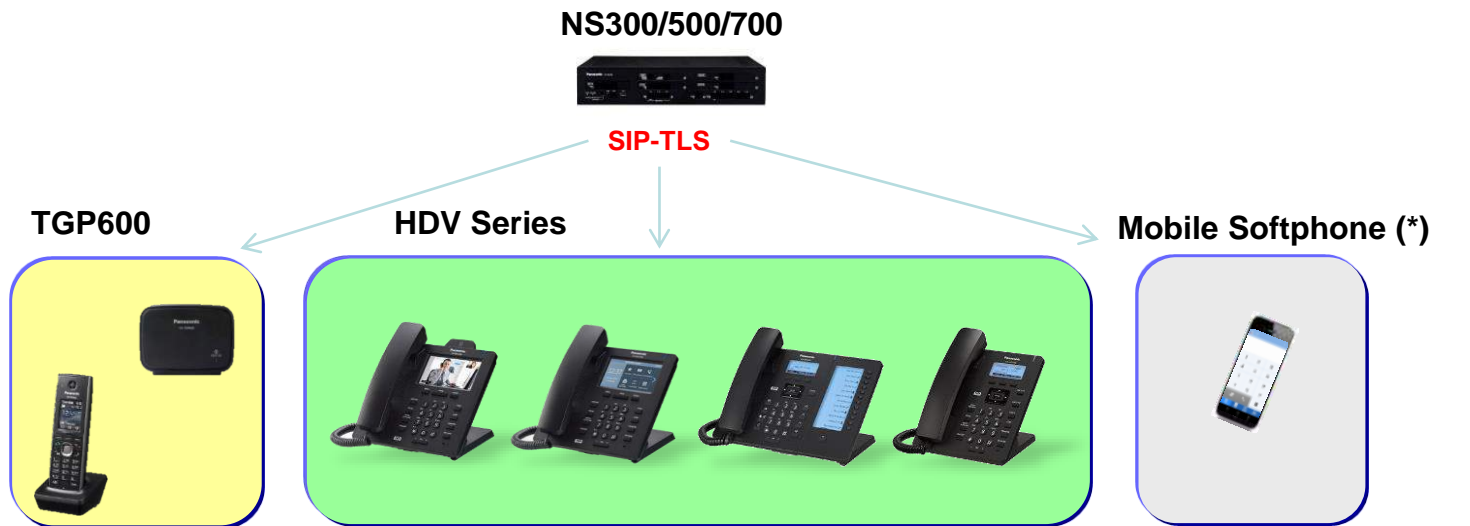
**-Some of features describe in this PPT not apply for NS1000.
However V4.6 available for NS1000 and it is most likely for One-Look
connection with NS3/5/700 only.
While NS3/5/7 connect as Slave unit to V4.6 NS1000 then most of new
features since V4.5 onward is not available at entire One-Look system.**

#	Items	KX-NS300/500/700 V4.6	KX-NS1000 V4.6 (NS300/500/700 as Slave in One-look system)
1. SIP-TLS		Yes	No
2. SIP-MRG		Yes	Yes
3. Others		-	-
3-1	SLT-MW by FSK	Yes	Yes
3-2	NTV Door Access by DTMF	Yes	Yes
3-3	E-mail AK	Yes	Yes
3-4	Built in PMS	Yes	No
3-5	CTI Port Disable	Yes	Yes

1. SIP-TLS

SIP-TLS

Stronger Security for SIP Devices



At NS300/500/700 , SIP-TLS works not only inside office but also using MRG.
TGP600/HDV support TLS since release to market.

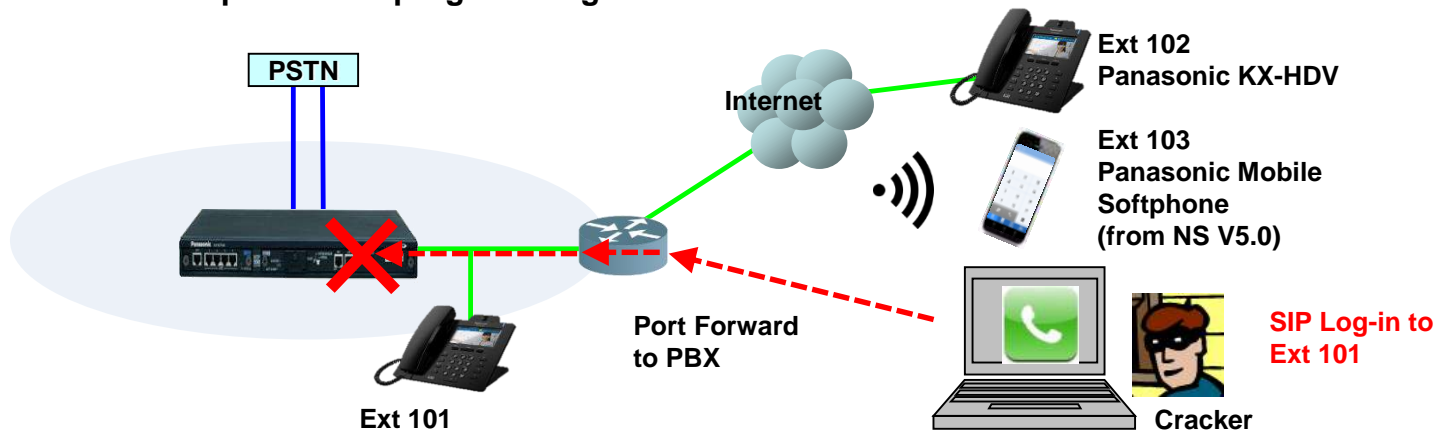
(*) Supported from NS V5.0.

2. SIP-MRG

Stronger Security for “Remote” account

“Remote” is set for SIP extension then you can select “Panasonic SIP Phone only” to reject other SIP terminal remote connection.

Other SIP phone is rejected to connect. Model type is recognized by PBX can be disabled by SIP extension port based programming.



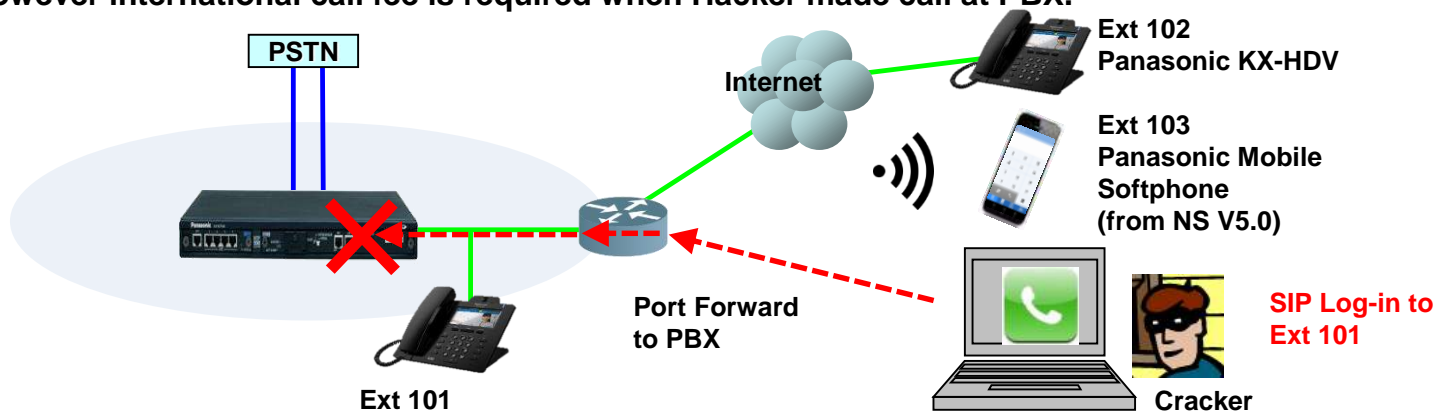
Stronger Security for “Local” account

“Local” has set for SIP extension then **connection from remote is restricted**, even if SIP password is correct.

With old firmware for KX-NS

Connection is not restricted. Voice path does not connect correctly.

However international call fee is required when Hacker made call at PBX.



Stronger Security for “Remote” account

Following IP address is treated as Local regardless of class for IP address of PBX.

10.0.0.0 - 10.255.255.255 (Class A)

172.16.0.0 - 172.31.255.255 (Class B)

192.168.0.0 - 192.168.255.255 (Class C)

PBX define location of phone by IP address.

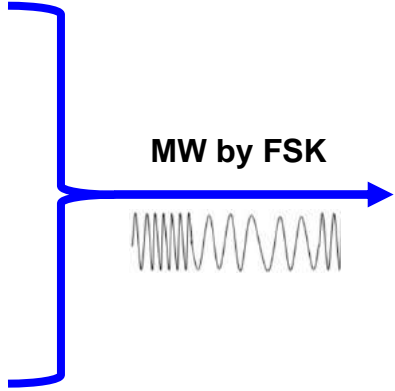
3. Others

Some type of EXT card support SLT can send Message Waiting by FSK signal

NS300/500/700



NS1000



User can recognize there is message at mailbox

Programming is not required. This function valid by default.

When elder guests move to nursing home, they take SLT phone that they were using in their house. Administrator of nursing home wants to leave MSW.

<Supported cards>

- Built in SLT card of KX-NS300/500/700 and KX-NS320/520

- KX-NS5173 / 5174

- KX-TDA1176 / 1178 in KX-TDE(A)100-200 (including KX-TDA100D) connected with KX-NS1000

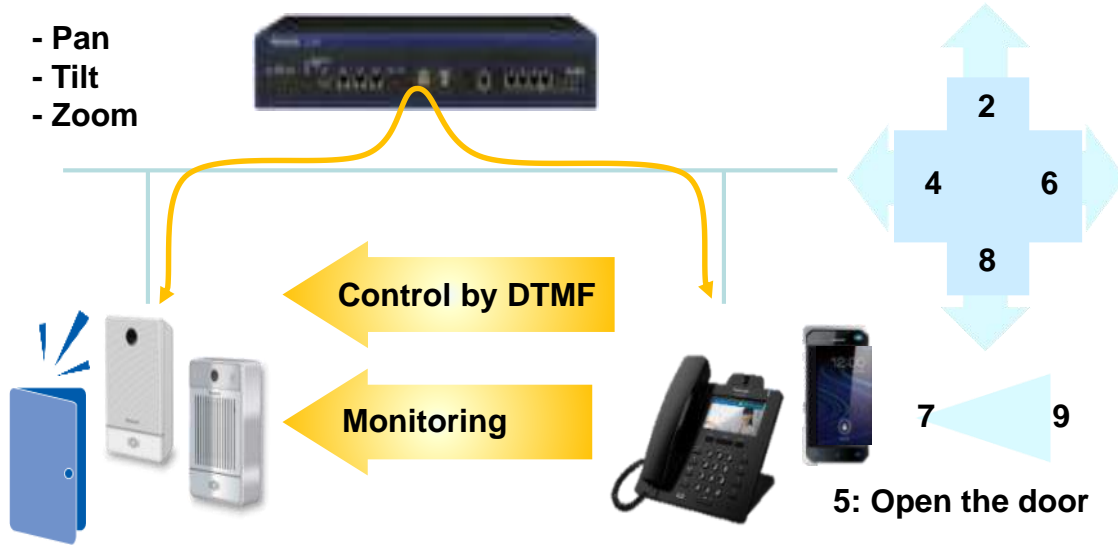
- KX-TDA6179 in KX-TDE(A)600-620 connected with KX-NS1000

FSK-MSW is not supported for other SLT cards such as KX-TDA6178, even if the card supports FSK caller ID.

Some of card need to update LPR firmware to support this.

LPR(EMSLC24/MCSLC24/16)Ver : Version 7.000 or later

Camera/ Door control



Door will be opened when extension user dials “5” during conversation with **KX-NTV**

KX-NTV can receive dials by RFC2833 only.

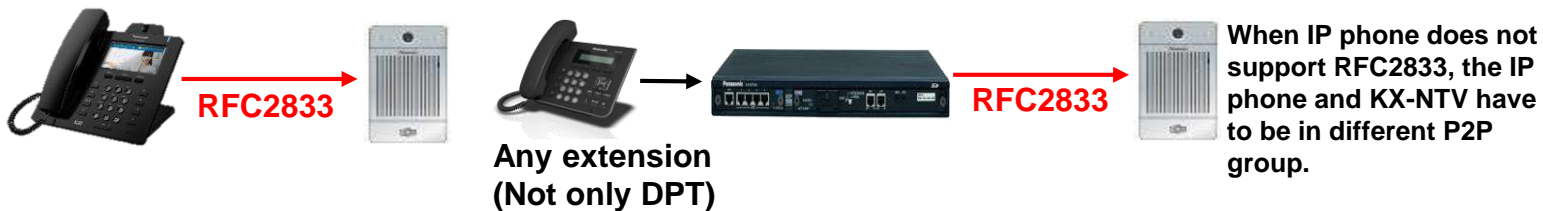
PBX sends any dials by **RFC2833 to SIP** extension (Not only for KX-NTV).

Programming is not required.

<Situation while signal sending as out bound signal>

From IP phone when P2P is used for talking

From PBX when P2P is not used for extension talking



Device can send dial information by RFC2833

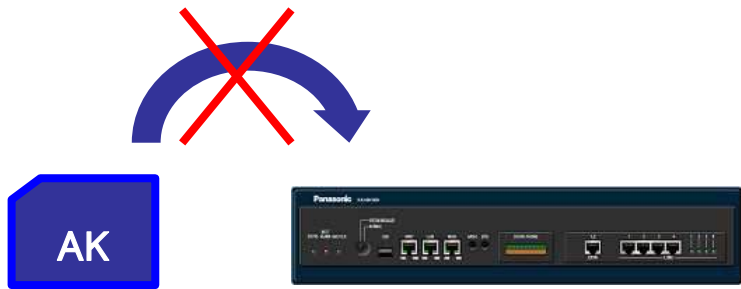
PS, SLT, DPT, NT3XX/5XX, IP Softphone, APT, DSS Console, NT700, 3rd Party SIP, HDV, TGP, UT, UDT

Condition

- **Non P2P call**
- **Target EXT is at Virtual SIP EXT card**
- **Original EXT device is one of above**

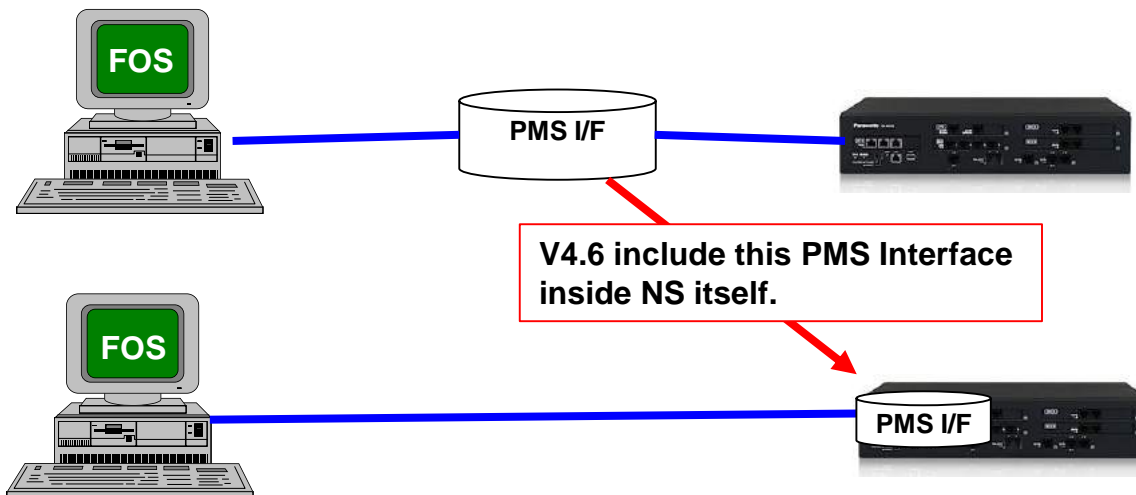
- **It is possible to disable this feature by Sales company Mode. Enable by default**

E-mail AK is not required from this version onward.



Programming is not required.

PMS (Property Management System) Interface is the interface that can convert CSTA interface from PBX to hotel system application interface (FOS: Front Office System).
Currently all of KX PBX need PMS Interface that is on additional computer.



Interface support Server Mode only.

KX-NSF101 or KX-NSA020 is required to connect FOS to NS.

The Built-In PMS interface is adjusted and designed for the specific FOS. So each FOS need to conduct IOT to make sure all command compatibility and functioning. This because we found each FOS has some sort of own dialogue so far.

We will disclose detail interface specification document upon request. Those vender whom wish to use with the I/F then they has to be a PSDN Bronze member at first. This means sales company has to be 1st window to give support for the vender.

We will disclose I/F doc for the vender after sign up as Bronze.

The vender have to disclose evaluation test result about FOS-PMS I/F. Basically we will not modify our interface and we would like to ask FOS vender to adjust for us if there is any necessity.

Related document

- Panasonic NS (except NS1000) BuiltInPMSInterface.ppt
 - PPT describe our interface
describe I/F general, connection sequence, supported command
also describe IOT support, after sales support as tech support
- Application_Form_example for FOS vender.xls
 - Sales company fulfil and send this application to devprg@ml.jp.panasonic.com
We will send PMS I/F interface specification document after we examine application form.
- psdn-c_overview_for_web.pdf
 - We disclose this at PSDN Web site.
This doc describe PSDN partner program.
We add FOS vender as bronze partner for the program on top of application vender for CSTA/TAPI.

Disabling mechanism for CTI connection

It allows to set “0” as “CTI Port Number”. “0” means no application accessible.

How to Program?

PBX Side SIP-TLS

Setup-PBX Configuration-1.Configuration-1.Slot-Site Property - Main - Media Relay

System Property - Site

Main VoIP-DSP Options Port Number LAN Status **Media Relay** SIP Extension Echo Cancellation DSP Conference

Common

NAT - External IP Address :

IP Extension / IP-CS

NAT - MGCP Server Port No. :

NAT - MGCP Server Port No. for IP-CS :

Keep Alive Packet Type :

Keep Alive Packet Type for IP-CS :

Keep Alive Packet Sending Interval Time (s) :

NAT - FTP Server Port No. :

SIP Extension / UT Extension

NAT - SIP Proxy Server Port No. :

NAT - SIP TLS Server Port No. :

PBX Side SIP-TLS

Setup-PBX Configuration-1.Configuration-1.Slot-Site Property - Main - Port Number

System Property - Site

Main VoIP-DSP Options **Port Number** LAN Status Media Relay SIP Extension Echo Cancellation DSP Conference

Voice (RTP) UDP Port No. (Server)	:	<input type="text" value="12000"/>
Voice (RTP) UDP Port No. (IP-PT / SIP-MLT)	:	<input type="text" value="8000"/>
UDP Port No. for SIP Extension Server	:	<input type="text" value="5060"/>
TLS Port No. for SIP Extension Server	:	<input type="text" value="5061"/>

PBX Side SIP-TLS for MRG connection

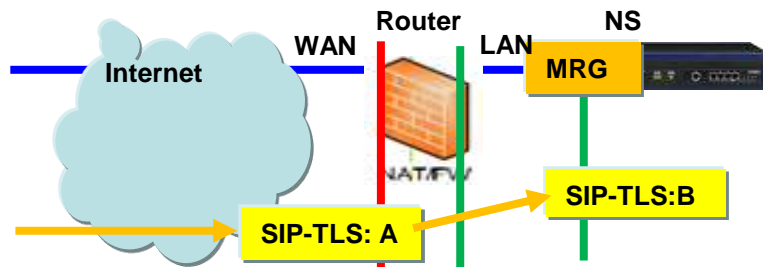
It is necessary to set port forward for SIP-TLS packet at router.

Setup-PBX Configuration-1.Configuration-1.Slot-Site Property - Main – Media Relay

NAT - SIP TLS Proxy Server Port No. : 12345 ← A

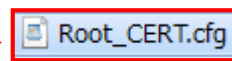
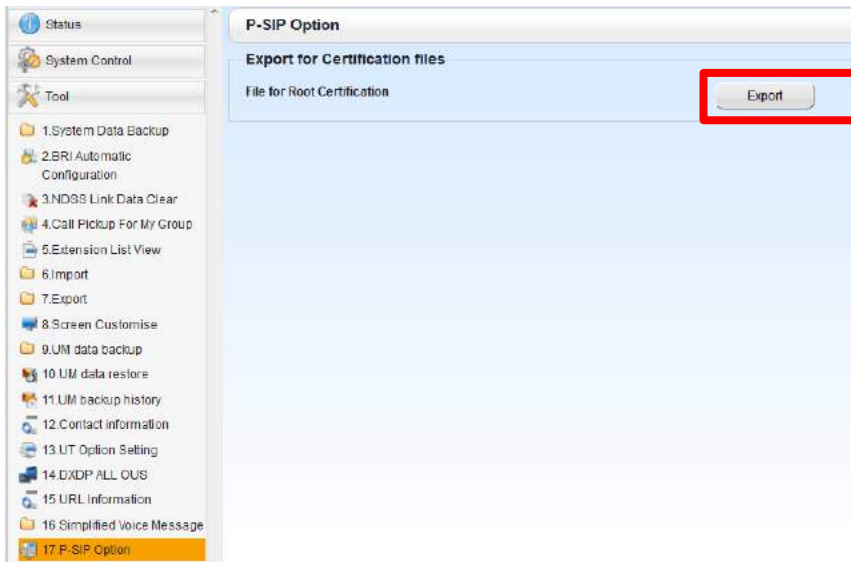
Setup-PBX Configuration-1.Configuration-1.Slot-Site Property - Main - Port Number

TLS Port No. for SIP Extension Server : 5061 ← B



Certification File down load for SIP-TLS connection

Tool – 17.P-SIP Option



It is necessary to download SIP-TLS certification file from PBX and install it to HDV.

PBX Side MRG(Remote)

Port Property - Virtual SIP Extension

Copy to **Forced De-registration**

Main Option Remote Place FAX/T.38

No.	Site	Shelf	Slot	Port	Extension Number (SIP User Name)	Password	Connection	SIP Phone Type	Current IP Address
		ALL					ALL	ALL	
1	1	Virtual	17	1	103	1234	INS	KX-HDV/TGP600	192.168.0.58
2	1	Virtual	17	2	104	1234	INS	KX-NTV	192.168.0.60
3	1	Virtual	17	3	105		Fault		0.0.0
4	1	Virtual	17	4	106		Fault		0.0.0

“SIP Phone Type” column is newly added for easy maintenance.

“Forced de-registration” button is added to clear “SIP password”, “SIP phone type” and “Current IP address” at once.

PBX Side MRG(Remote)

Port Property - Virtual SIP Extension

Copy to Forced De-registration

Main Option **Remote Place** FAX/T.38

No.	Site	Shelf	Slot	Port	Extension Number (SIP User Name)	Password	Connection	Phone Location	Panasonic SIP Phone only
		ALL					ALL	ALL	ALL
1	1	Virtual	17	1	103	1234	INS	Remote (MRG)	Yes (Only)
2	1	Virtual	17	2	104	1234	INS	Local	No
3	1	Virtual	17	3	105		Fault	Local	Yes (Only)
4	1	Virtual	17	4	106		Fault	Local	No
5	1	Virtual	17	5	107		Fault	Local	No

Remote(MRG) phone selection

Yes (only) : Only Panasonic SIP phone can work for "Remote".

No : Any SIP phones including Panasonic SIP can work.

PBX Side MRG(Remote)

"Phone Location" Setting at PBX	Actual SIP Phone Location	Terminal IP address that recognized by PBX	
		KX-NS Older version	KX-NS version 4.6
Local	Local IP	→ Local IP address	Local IP address
	Remote IP	→ Remoter Router's IP address (session may establish but no RTP)	Remoter Router's IP address (Not work at all, PBX reject)
Remote(MRG)	Local (need hairpin NAT at router)	→ Global IP address of local router (Non-P2P Call)	Global IP address of local router(*) (Non-P2P Call)
	Remote	→ Remoter Router's IP address (Non-P2P Call)	Remoter Router's IP address(*) (Non-P2P Call)

(*) SIP phone other than HDV, TGP600 and Mobile Softphone can be restricted.

SLT-MW by FSK

Extension Settings

Copy to CLIP Generate

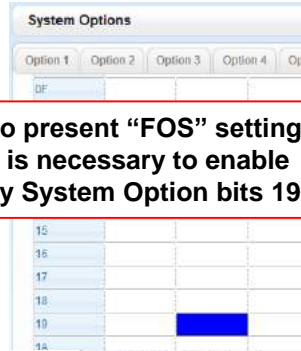
< Option 8 Option 9 FWD / DND >

No.	Extension Number	Extension Name (20 characters)	Group CW w/o Tone (Ring after Call)	Extension Caller ID Sending	Incoming Call Wait Timer for Extension Caller ID (s)	SLT MW Mode	Wrap Timer
1	101		ALL Enable	ALL Enable	ALL 0	ALL Disable	ALL 0

4.Extension	
-1.Wired Extension	MW by FSK
-1.Extension Settings	System reserved bit [19-5]
- Option 8	
-SLT MW Mode	
Enable	Yes(Default)
	No
Disable(Default)	Yes(Default)
	No

-
-
-
-

MW Notification Method
MW drive by Voltage
MW drive by Voltage
MW drive by FSK
No MW



To present "FOS" setting
It is necessary to enable
by System Option bits 19-1

- 6.Feature
 - 1.System Speed Dial
 - 2.Hotel & Charge**
 - 3.Verification Code
 - 4.Second Dial Tone
 - 5.Absent Message
 - 6.Tenant
- 7.TRS
- 8.ARS

6.Feature-2.Hotel & Charge-FOS

Hotel & Charge

Main Bill Charge **FOS**

FOS Interface Setting

Delete Digits for Guest Name : 0

FOS Keepalive Timer (s) : 15

FOS Keepalive Interval Timer (min) : 5

FOS Keepalive Retry Count : 5

Command Response Time (s) : 15

Command Retry Count : 3

Change COS at Check-In

Change COS Enable Disable

COS Number : 1

1.Configuration - 1.Slot-System Property- Site- Port Munber

FOS Interface Port Number : 31000

CTI connection

Site Property - Main

Main VoIP-DSP Options VoIP-DSP Options 2 **Port Number** LAN Status Media Relay SIP Extension Echo C

Voice (RTP) UDP Port No. (Server)	12000
Voice (RTP) UDP Port No. (IP-PT)	8000
UDP Port No. for SIP Extension Server	5060
TLS Port No. for SIP Extension Server	5061
Firmware Update Port No. for IP-PT/IP-CS (Media Relay)	31021
LOGIN Port Number	33321
CTI Port Number	0

END

Appendix

Classification	Item/Feature	Built-in PMSi (NS3/5/700)	External PMSi (as Panasonic old OEM product)	Remark
System Configuration	Diagram	PBX---FOS/PMS	PBX---PC(PMSi)---FOS/PMS	
Connection with PBX	PC environment	- (Not needed)	Windows PC	
	Interface protocol	- (Not needed)	CSTAT/TAPI	
	Required Activation Key for PBX	CTI or MUX	CTI or MUX	
	Required license for PC	- (Not needed)	PMSi license (dongle)	
Connection with FOS/PMS	COM (RS-232C)	No	Yes	
	LAN (TCP-IP)	Yes	Yes	
	Server mode	Yes	Yes	
	Client Mode	No	Yes	

Classification	Item/Feature	Built-in PMSi (NS3/5/700)	External PMSi (as Panasonic old OEM product)	Remark
System Option	Support for 3rdParty Voice mail unit	No	No	It may be possible by PBX made by other company and PMSi made by other vender.
Interface protocol with FOS	FIAS Type (FIAS: Opera-Fidelio)	Yes	Yes	
	Original	No	Yes	<p>The "Original" supports all functions of FIAS type IF, Furthermore, it supports extra support for the following functions.</p> <p>1) Message (from FOS)</p> <ul style="list-style-type: none"> • CallForward • FWD Type (Both/Internal/External) for DND or CallForward • Credit Limit Exceeded • Set/Get System Date and Time <p>2) Command (to FOS)</p> <p>※The purpose of these functions is to inform the FOS of the result of control from the hotel operator extension of the PBX.</p> <ul style="list-style-type: none"> • Change COS • Wakeup time set/Clear • CallForward • FWD Type (Both/Internal/External) for DND or CallForward • Guest Name Set / Clear • System Date and Time Report • Error Message

Classification	Item/Feature	Built-in PMSi (NS3/5/700)	External PMSi (as Panasonic old OEM product)	Remark
Interface fitting with FOS	Interface adjustment on site	No	Yes	External PMSi can change the interface configuration on site for the followings. <ul style="list-style-type: none"> • The order and length of each parameter, in each command and each message • Sequence of each command to FOS and each response from FOS • Wait time and retry count for response from FOS • Code for ACK/NAK • BCC (Binary Character Checksum)
Alive-Check for other party	Keep-Alive for FOS	Yes	Yes	
	Keep-Alive for PBX	- (Not needed)	Yes	

Classification	Item/Feature	Built-in PMSi (NS3/5/700)	External PMSi (as Panasonic old OEM product)	Remark
Message (FIAS type) (PBX/PMSi <- FOS)	Check In / Out	Yes	Yes	
	Message Waiting Lamp On / Off	Yes	Yes	
	Do Not Disturb Set / Clear	Yes	Yes	
	Wakeup Time Set / Clear	Yes	Yes	
	Change CoS	Yes	Yes	
	Guest Change (at Room Sharing)	Yes	Yes	
	Room Move	No	No	It may be possible by PBX made by other company and PMSi made by other vender

Classification	Item/Feature	Built-in PMSi (NS3/5/700)	External PMSi (as Panasonic old OEM product)	Remark
Command (FIAS Type) (PBX/PMSi -> FOS)	SMDR (Charge Type)	Yes	Yes	
	SMDR (MeterPulseType)	Yes	Yes	
	Room Status (Gather Digits)	Yes	Yes	
	Minibar Charge Posting (Gather Digits)	Yes	Yes	
	Wakeup Confirmation OK/NG	Yes	Yes	
	Message Waiting Lamp On/Off	Yes	Yes	
	Do Not Disturb Set / Clear	Yes	Yes	

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- 1st release