Panasonic

Administrator Guide

SIP Phone

<KX-UTG300>

Model No. KX-UTG200
KX-UTG300

Thank you for purchasing this Panasonic product.
Please read this manual carefully before using this product and save this manual for future use.

KX-UTG200/KX-UTG300: Software File Version 1.131 or later

Document Version 2014-04

Introduction

Outline

This Administrator Guide provides detailed information on the configuration and management of this unit.

Audience

This Administrator Guide contains explanations about the installation, maintenance, and management of the unit and is aimed at network administrators and phone system dealers.
Technical descriptions are included in this guide. Prior knowledge of networking and VoIP (Voice over Internet Protocol) is required.

Related Documentation

Getting Started
Briefly describes basic information about the installation of the unit.

Operating Instructions
Describes information about the installation and operation of the unit.

Manuals and supporting information are provided on the Panasonic Web site at:
http://www.panasonic.com/sip

Conventions Used in This Manual

- In descriptions of settings performed on the unit, "select" refers to either touching the screen (KX-UTG300 only) or pressing **[▲]** or **[▼]** (KX-UTG300 and KX-UTG200) to select items displayed on the screen.
- The KX-UTA336 Add-on Key Module is also referred to as "KEM" in this manual.

Technical Support

When technical support is required, contact your phone system dealer.

Open Source Software Notice

Parts of this product use open source software. For details about the open source software, see the Operating Instructions.

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Notes

- The screen shots shown in this guide are provided for reference only, and may differ from the screens displayed on your PC.

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Section 1

Initial Setup

This section provides an overview of the setup procedures for the unit.

1.1 Setup

1.1.1 Factory Defaults

Many of the settings for this unit have been configured before the unit ships.
Where possible, these settings are configured with the optimum or most common values for the setting. For example, the port number of the SIP (Session Initiation Protocol) server is set to "5060".
However, many of the settings, such as the address of the SIP server or the phone number, have not been pre-configured, and they must be modified depending on the usage environment. If the port number of the SIP server is not "5060", the value of this setting must be changed.
This unit thus will not function properly using only the factory default settings. The settings for each feature must be configured according to the environment in which the unit is used.

1.1.2 Basic Network Setup

This section describes the basic network settings that you must configure before you can use the unit on your network.
You must configure the following network settings:

- TCP/IP settings (DHCP [Dynamic Host Configuration Protocol] or static IP address assignment)
- DNS server settings

The unit supports both IPv4 and IPv6.

TCP/IP Settings (DHCP or Static IP Address Assignment)

A unique IP address must be assigned to the unit so that it can communicate on the network. How you assign an IP address depends on your network environment. This unit supports the following 2 methods for assigning an IP address:

Obtaining an IP Address Automatically from a DHCP Server

You can configure the unit to automatically obtain its IP address when it starts up from a DHCP server running on your network. With this method, the system can efficiently manage a limited number of IP addresses. Note that the IP address assigned to the unit may vary every time the unit is started up.
For details about the DHCP server, consult your network administrator.

Using a Static IP Address Specified by Your Network Administrator

If IP addresses for network devices are specified individually by your network administrator, you will need to manually configure settings such as the IP address, subnet mask, default gateway, and DNS servers.
For details about the required network settings, consult your network administrator.

DNS Server Settings

You can configure the unit to use 2 DNS servers: a primary DNS server and a secondary DNS server. If you set both DNS servers, the primary DNS server receives priority over the secondary DNS server. If the primary DNS server returns no reply, the secondary DNS server will be used.
For details about configuring the DNS server settings using the unit, or using the Web user interface, see **Configuring the Network Settings of the Unit** in this section.

Configuring the Network Settings of the Unit

The following procedures explain how to change the network settings via the unit.
For details about the individual network settings that can be configured via the unit, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).
For details about configuring network settings via the Web user interface, see **4.3.1 Basic Network Settings**.

Settings for IPv4

To configure network settings automatically

1. On the Home screen, select .
2. Select "Network Settings", and then press **[ENTER]**.
3. Select "Network", and then press **[ENTER]**.
4. Select "IPv4", and then press **[ENTER]**.
5. Select "DHCP", and then select Yes.
6. Select "Auto DNS", and then select Yes.
   - Select No to enter the addresses for DNS1 (primary DNS server) and, if necessary, DNS2 (secondary DNS server) manually.

To configure network settings manually

1. On the Home screen, select .
2. Select "Network Settings", and then press **[ENTER]**.
3. Select "Network", and then press **[ENTER]**.
4. Select "IPv4", and then press **[ENTER]**.
5. Select "DHCP", and then select No.
6. Select "Auto DNS", and then select No.
7. Enter the IP address, subnet mask, default gateway, DNS1 (primary DNS server), and, if necessary, DNS2 (secondary DNS server).

Settings for IPv6

To configure network settings automatically

1. On the Home screen, select .
2. Select "Network Settings", and then press **[ENTER]**.
3. Select "Network", and then press **[ENTER]**.
4. Select "IPv6", and then press **[ENTER]**.
5. Select "Enable IPv6 DHCP", and then select Yes.
6. Select "IPv6 Auto DNS", and then select Yes.
   - Select No to enter the addresses and other settings as necessary.

To configure network settings manually

1. On the Home screen, select .
2. Select "Network Settings", and then press **[ENTER]**.
3. Select "Network", and then press **[ENTER]**.
4. Select "IPv6", and then press **[ENTER]**.
5. Select "Enable IPv6 DHCP", and then select No.
6. Select "IPv6 Auto DNS", and then select No.
7. Enter the IP addresses and other settings as necessary.

Note

- If your phone system dealer does not allow you these settings, you cannot change them even though the unit shows the setting menu. Contact your phone system dealer for further information.
- If you select "DHCP"/"Enable IPv6 DHCP" for the connection mode, all the settings concerning static connection will be ignored, even if they have been specified.
- If you enable "DHCP"/"Enable IPv6 DHCP" for the connection mode and "Auto DNS"/"IPv6 Auto DNS" for DNS, the DNS server settings (DNS1 and DNS2) will be ignored, even if they have been specified.

1.1.3 Overview of Programming

There are 3 types of programming, as shown in the table below:

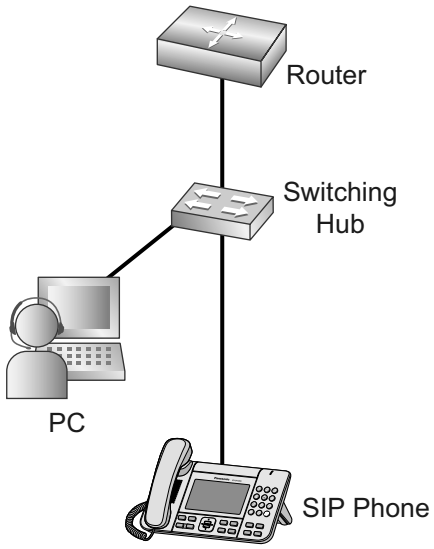
Programming Type	Description	References
Phone user interface programming	Configuring the unit's settings directly from the unit.	→ 1.1.4 Phone User Interface Programming → Section 3 Phone User Interface Programming
Web user interface programming	Configuring the unit's settings by accessing the Web user interface from a PC connected to the same network.	→ 1.1.5 Web User Interface Programming → Section 4 Web User Interface Programming
Configuration file programming	Configuring the unit's settings by creating configuration files and having the unit download the files from a server on the Internet.	→ Section 2 Provisioning → Section 5 Configuration File Programming

1.1.4 Phone User Interface Programming

You can change the settings directly from the unit.
For details about the operations, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).
For details about additional features available with direct commands, see **Section 3 Phone User Interface Programming**.

1.1.5 Web User Interface Programming

After connecting the unit to your network, you can configure the unit's settings by accessing the Web user interface from a PC connected to the same network. For details, see **Section 4 Web User Interface Programming**.



1.1.5.1 Password for Web User Interface Programming

To program the unit via the Web user interface, a login account is required. There are 2 types of accounts, and each has different access privileges.

- **User:** User accounts are for use by end users. Users can change the settings that are specific to the unit.
- **Administrator:** Administrator accounts are for use by administrators to manage the system configuration. Administrators can change all the settings, including the network settings, in addition to the settings that can be changed from a User account.

A separate password is assigned to each account.
For details, see **Access Levels (IDs and Passwords)** in **1.1.5.2 Before Accessing the Web User Interface**.

Notice

- You should manage the passwords carefully, and change them regularly.
- The settings that can be accessed may be limited by the configuration file programming.

1.1.5.2 Before Accessing the Web User Interface

Recommended Environment

This unit supports the following specifications:

HTTP Version	HTTP/1.0 (RFC 1945), HTTP/1.1 (RFC 2616)
Authentication Method	Digest (or Basic)

The Web user interface will operate correctly in the following environments:

Operating System	Microsoft® Windows® XP or Windows 7
Web Browser	Windows Internet Explorer® 7, Windows Internet Explorer 8, or Windows Internet Explorer 9
Language (recommended)	English

Opening/Closing the Web Port

To access the Web user interface, you must open the unit's Web port beforehand. For details, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).
For details about additional features available with direct commands, see **Section 3 Phone User Interface Programming**.

Configuring Settings from the Unit

To open the unit's Web port

1. On the Home screen, select .
2. Press **[#][5][3][4]**.
3. Select **Yes**.

To close the unit's Web port

1. On the Home screen, select .
2. Press **[#][5][3][4]**.
3. Select **No**.

Configuring Settings from the Web User Interface

To close the unit's Web port

1. In the Web user interface, click **[Web Port Close]**.
2. Click **OK**.

Note

- The Web port of the unit will be closed automatically in the following conditions:
  - The port close timer configured through the Web user interface expires (→ see **[Port Close Timer]** in **4.4.4.1 Web Server Settings**).
  - 3 consecutive unsuccessful login attempts occur.
- The Web port can be set to stay open continuously, through Configuration file programming (→ see "**HTTPD_PORTOPEN_AUTO**" in **5.4.5 HTTP Settings**). However, please recognize the possibility of unauthorized access to the unit by doing so.

Access Levels (IDs and Passwords)

2 accounts with different access privileges are provided for accessing the Web user interface: User and Administrator. Each account has its own ID and password, which are required to log in to the Web user interface.

Account	Target User	ID (default)	Password (default)	Password Restrictions
User	End users	user	userpass	• When logged in as User, you can change the password for the User account (→ see **4.4.3 User Password**). • The password can consist of 6 to 16 ASCII characters (case-sensitive) (→ see **Entering Characters** in **1.1.5.3 Accessing the Web User Interface**).
Administrator	Network administrators, etc.	admin	adminpass	• When logged in as Administrator, you can change the password for both the User and Administrator accounts (→ see **4.4.2 Administrator Password**). • The password can consist of 6 to 16 ASCII characters (case-sensitive) (→ see **Entering Characters** in **1.1.5.3 Accessing the Web User Interface**).

Notice

- Only one account can be logged in to the Web user interface at a time. If you try to access the Web user interface while someone is logged in, you will be denied access.
- The IDs can be changed through configuration file programming (→ see "**ADMIN_ID**" and "**USER_ID**" in **5.3.1 Login Account Settings**).

1.1.5.3 Accessing the Web User Interface

The unit can be configured from the Web user interface.

To access the Web user interface

1. Open your Web browser, and then enter "http://" followed by the unit's IPv4 address into the address field of your browser. If IPv6 address are used on the unit, enter "http://[IPv6 IP address]".

   Note

   - To determine the unit's IP address, perform the following operations on the unit:
     1. On the Home screen, select .
     2. Select "Information Display", and then press **[ENTER]**.
     3. Select "IP Address" or "IPv6 Address".

2. For authentication, enter your ID (user name) and password, and then click **OK**.

   Notice

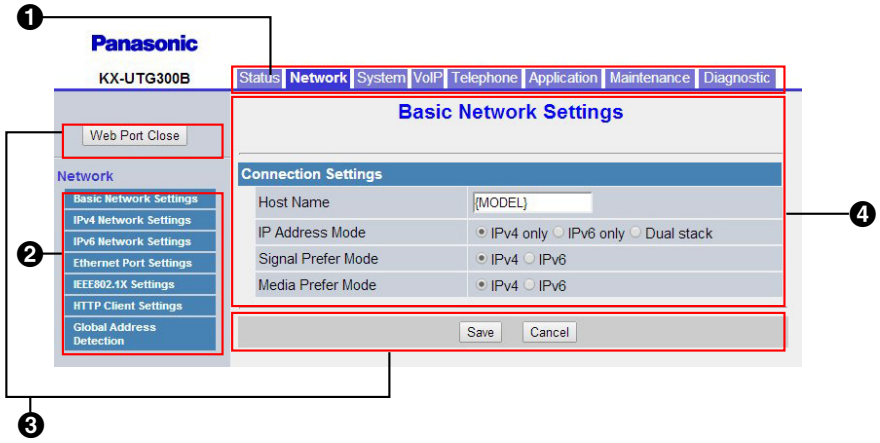
   - The default ID for the User account is "user", and the default password is "userpass".
   - The default ID for the Administrator account is "admin", and the default password is "adminpass".

3. The Web user interface window is displayed. Configure the settings for the unit as desired.

4. You can close from the Web user interface at any time by clicking **[Web Port Close]**.

Controls on the Window

The Web user interface window contains various controls for navigating and configuring settings. The following figure shows the controls that are displayed on the **[Basic Network Settings]** screen as an example:



Note

- The screen shots shown are taken from the Web user interface of the KX-UTG300 (or, in some cases, KX-UTG200), so the model name may differ from that shown on your PC.
- Actual default values may vary depending on your phone system dealer.

❶ **Tabs**

Tabs are the top categories for classifying settings. When you click a tab, the corresponding menu items and the configuration screen of the first menu item appear. There are 8 tabs for the Administrator account and 7 tabs for the User account. For details about the account types, see **Access Levels (IDs and Passwords)** in this section.

❷ **Menu**

The menu displays the sub-categories of the selected tab.

❸ **Buttons**

The following standard buttons are displayed in the Web user interface:

Button	Function
Web Port Close	Closes the Web port of the unit after a confirmation message is displayed.
Save	Applies changes and displays a result message (→ see **Result Messages** in this section).
Cancel	Discards changes. The settings on the current screen will return to the values they had before being changed.
Refresh	Updates the status information displayed on the screen. This button is displayed in the upper-right area of the **[Network Status]** and **[VoIP Status]** screens.

❹ **Configuration Screen**

Clicking a menu displays the corresponding configuration screen, which contains the actual settings, grouped into sections. For details, see **4.2 Status** to **4.8.7.5 Restart**.

Entering Characters

In the Web user interface, when specifying a name, message, password, or other text item, you can enter any of the ASCII characters displayed in the following table.

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
20	SP	!	"	#	$	%	&	'	(	)	*	+	,	-	.	/
30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
40	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
50	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
60	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
70	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	

However, there are additional limitations for certain types of fields as follows:

- IPv4 Address field
  - You can enter the IP address using dotted-decimal notation (i.e., "n.n.n.n" where n=0–255).
  - You cannot enter invalid IP addresses, for example, "0.0.0.0", "255.255.255.255", or "127.0.0.1".
- IPv6 Address field
  - You can enter the IPv6 address using eight groups of four hexadecimal digits separated by colons (i.e., "2001:b021:70:2685:1000:8a2e:0370:7335").
  - Some examples of invalid addresses include "::", "0::0", "0::1", and "FF01::101".
- Authentication ID/Password field
  - The field cannot contain ", &, ', :, <, >, or space.
  - The length of user password and administrator password must be from 6 to 16 characters.

Result Messages

When you click **[Save]** after changing the settings on the current configuration screen, one of the following messages will appear in the current configuration screen:

Result Message	Description
Save Complete!	The operation has successfully completed.
Failed (Parameter Error)	The operation failed because some specified values are out of range or invalid.

Result Message	Description
Get Fail! Hide Number: HTTP Connection failed	The operation failed because a network error occurred during the data transmission.
Get Fail! Simultaneous Ring: HTTP Connection failed	
Get Fail! Anywhere: HTTP Connection failed	
Get Fail! Remote Office: Server Busy	The operation failed because the server is busy.
Get Fail! Hide Number: Server Busy	
Get Fail! Simultaneous Ring: Server Busy	
Get Fail! Anywhere: Server Busy	

1.1.6 Other Network Settings

1.1.6.1 Global Address Detection

If the unit is connected to a network that uses a NAT router and a private IP address is assigned to each terminal on the network, you must configure the STUN (Simple Traversal of UDP through NATs) function for the unit so that the units can find the public IP and the new address will be registered to the SIP server. However, if your phone system supports the SBC (Session Border Controller) function, it is not necessary to configure these settings.
For details about the SBC function, consult your phone system dealer.
For details about specifying this setting through the Web user interface, see **4.3.7 Global Address Detection**.

Note

- For details about server information, consult your network administrator.

1.1.6.2 802.1x

802.1X provides port-based authentication, which involves communications between a Supplicant, Authenticator, and Authentication server. The supplicant is often software on a client device, such as a laptop or a VOIP phone, the authenticator is a wired Ethernet switch or wireless access point, and an authentication server is generally a RADIUS database. The unit supports various EAP-methods including EAP-MD5-Challenge, EAP-TLS, EAP-PEAP/GTC, EAP-PEAP/MSCHAPv2, EAP-TTLS/EAP-GTC, and EAP-TTLS/EAP-MSCHAPv2.

1.1.6.3 LLDP

The LLDP (Link Layer Discovery Protocol) is a vendor-neutral link layer protocol used by network devices for advertising their identity, capabilities, and neighbors in a LAN. It also used for getting the VLAN information from the switch in the network environment the unit is connected to.

1.2 Reset

1.2.1 Reset

1.2.1.1 Resetting to Factory Default (Factory Setting)

Performing Factory Setting from the phone user interface resets all settings in the unit to their factory defaults. This type of initialization also deletes all other data on the unit, such as the call logs and the phonebook.
To perform this initialization, follow the procedure below:

1. On the Home screen, select .
2. Press **[#][1][3][6]**.
3. Enter the Admin Password, and then press **[ENTER]**.
4. Select Yes.

Notice

- After performing Factory Setting, the unit will restart automatically. To avoid problems, it is recommended that you save your settings before performing Factory Setting.

1.2.1.2 Resetting Settings Except Private Settings

Executing "Exclude Private Settings" resets all settings except for private settings. Private settings include ringtone volume, brightness, phonebook, and call history.
To perform this initialization, follow the procedure below:

1. On the Home screen, select .
2. Select "Reset", and then press **[ENTER]**.
3. Select "Reset Excluding Private Settings", and then press **[ENTER]**.
4. Select Yes.

1.2.1.3 Resetting Settings Except Network Settings

Executing "Reset Excluding Network Settings" resets all settings except for network settings. Private settings and Bluetooth settings (KX-UTG300 only) are reset in this case. Network settings include IPv4, IPv6, LLDP Settings, CDP Settings, VLAN Settings, Speed/Duplex, and Port Mirroring phone user interface settings, and RTP Packet QoS (DSCP) and RTCP Packet QoS (DSCP) web user interface settings.
To perform this initialization, follow the procedure below:

1. On the Home screen, select .
2. Select "Reset", and then press **[ENTER]**.
3. Select "Reset Excluding Network Settings", and then press **[ENTER]**.
4. Select Yes.

1.3 Phonebook

Three types of phonebooks can be used with the unit: Local phonebook, LDAP phonebook, and Enterprise phonebook.

1.3.1 Local phonebook

The phonebook stored on the unit is referred to as Local Phonebook. Up to 1,000 entries can be saved to the local phonebook.

1.3.2 LDAP phonebook (optional)

LDAP phonebook is a phonebook linked with an LDAP server. If the unit is configured to use LDAP, it can access phonebook entries on the LDAP server. LDAP phonebook can be configured through the web user interface programming (see → 4.6.9 LDAP (Page 148)) and the configuration file programming (see → 5.4.8 LDAP Settings (Page 226)).

1.3.3 Enterprise phonebook (optional)

Enterprise phonebook is a server based phonebook that can be accessed through the Application Settings. An application server must be configured to use enterprise phonebook. Enterprise phonebook can be configured through the web user interface programming (see → 4.7.1 Application Settings (Page 149)) and the configuration file programming (see → 5.5.9 XML Application Settings (Page 248)).

Section 2
Provisioning

This section explains how to use provisioning to configure phones.

2.1 What is Provisioning?

Provisioning is a mechanism that allows the phone to configure itself by retrieving the required settings from a central provisioning server. This enables mass deployment to be done easily and quickly.
There are two steps required to perform provisioning of the device.
Step 1: Obtaining Provisioning URL setting
This step involves obtaining the URL of the provisioning server either manually or automatically, and downloading the initial configuration file.
Step 2: Provisioning device information
This step involves downloading the actual device configuration files needed for the operation of the device.

2.2 Provisioning URL Settings

The provisioning URL can be obtained using the following methods.
– Automatic discovery via SIP PnP, DHCP option 160/159/66, or via a redirection server
– Manual configuration via web user interface or phone user interface

Priority of the different methods

The device can use IPv4 addresses, IPv6 addresses, or operate in dual-stack mode. By default, IPv4 addresses are preferred over IPv6 addresses. During provisioning, the device checks the status of its interface and determines whether it is configured with an IPv4 address, an IPv6 address, or both.
The order of priority is as follows.

Device has IPv4 address only	Device has IPv6 address only	Device has IPv4 and IPv6 addresses
1. Manual configuration **2.** SIP PnP **3.** DHCP option 160 **4.** DHCP option 159 **5.** DHCP option 66 **6.** Redirection server	**1.** Manual configuration **2.** DHCPv6 sub-option 1	**1.** Manual configuration **2.** SIP PnP **3.** DHCP option 160 **4.** DHCP option 159 **5.** DHCP option 66 **6.** DHCPv6 sub-option 1 **7.** Redirection server

Information included when specifying the provision URL

– Provisioning protocol
  Supported protocols: TFTP, FTP, HTTP and HTTPS
– Provisioning server address
  Supported format: IP, FQDN
– Full path to the subdirectory of the initial configuration file
  The initial configuration file contains the device configuration URL and the certification URL.

Valid URL formats

– `<protocol>://<username>:<password>@<IP address>` or `<domain>:<port>`
– IP address

– FQDN

Examples

When the filename is not specified, the phone adds {MODEL}.cfg to the end of the URL.

Specified URL	Result
– **http://10.0.0.2**	– **http://10.0.0.2/**{MODEL}**.cfg**
– **http://10.0.0.2/**	– **http://10.0.0.2/**{MODEL}**.cfg**
– **http://provisioning.com**	– **http://provisioning.com/**{MODEL}**.cfg**
– **http://provisioning.com/**	– **http://provisioning.com/**{MODEL}**.cfg**
– **http://10.0.0.2/pana**	– **http://10.0.0.2/pana/**{MODEL}**.cfg**
– **http://provisioning.com/pana**	– **http://provisioning.com/pana/**{MODEL}**.cfg**

When the protocol is not specified, the phone adds {MODEL}.cfg to the end of the URL, and also attempts to contact using all supported protocols.

Specified URL	Result
– **10.0.0.2**	– **tftp://10.0.0.2/**{MODEL}**.cfg** – **http://10.0.0.2/**{MODEL}**.cfg** – **https://10.0.0.2/**{MODEL}**.cfg** – **ftp://10.0.0.2/{MODEL}.cfg**

Note

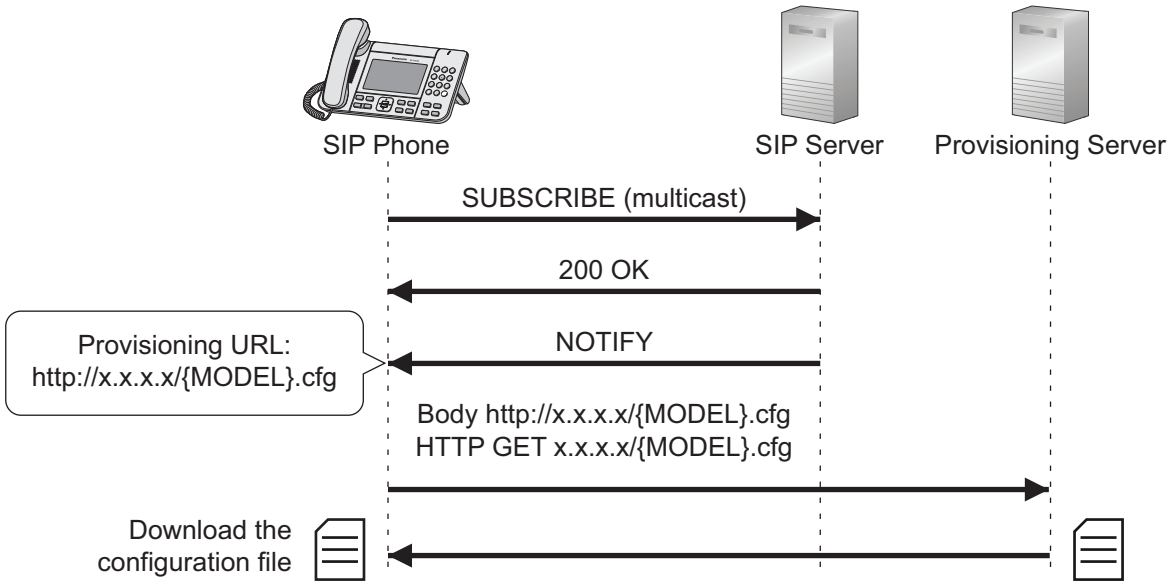
- If the filename is not defined in the URL, the phone automatically adds the default configuration file name "{MODEL}.cfg".

2.2.1 Automatic Discovery of the Provisioning URL

2.2.1.1 SIP PnP

The device sends a SIP SUBSCRIBE message to a multicast IP address (e.g., 224.0.1.75:5060).
Any SIP server in the LAN that listens to that multicast IP address may respond with a valid SIP NOTIFY message that contains the provisioning URL setting in its body.

Examples



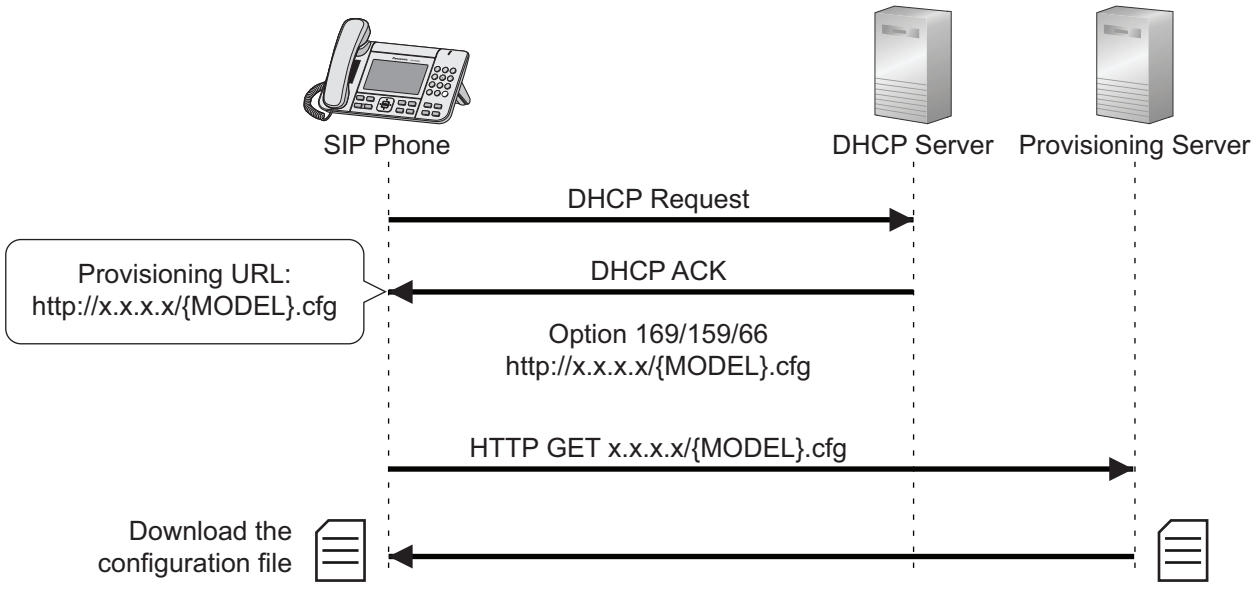
Conditions

- If SIP PnP is enabled, the device sends a multicast SIP SUBSCRIBE message each time it starts up and waits a maximum of 5 seconds for a response.
- If there is no reply, the device gives up on SIP PnP.

2.2.1.2 DHCP Option 160/159/66

The device sends a DHCP REQUEST message with option 66,159, and 160 added to the parameter request list (option 55).
The DHCP server on the LAN responds with the requested values for the specified configuration parameters in a DHCP ACK message.

Example

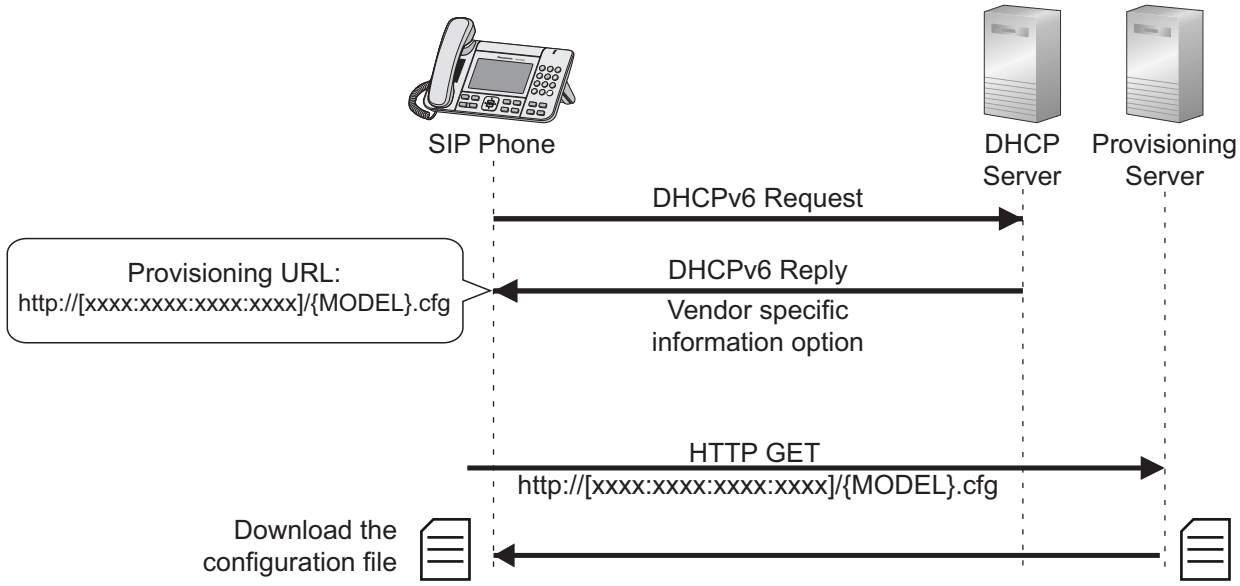


Conditions

- By default, all DHCP options are enabled, thus the device must use option 160 first. If it is not populated, the device will use 159. If it is not populated, the device will use option 66 as a last resort.
- When DHCP options are unavailable, the device gives up on DHCP options.
- If DHCP option 160/159/66 is enabled, each time the device starts up it checks for the provisioning URL setting from the DHCP options if SIP PnP fails.

2.2.1.3 DHCPv6 Sub-option

The device sends a DHCPv6 request message with vender-specific information (17) added to the option request. The DHCPv6 server on the LAN responds with a DHCPv6 reply message that contains the requested value for the specified configuration parameter.



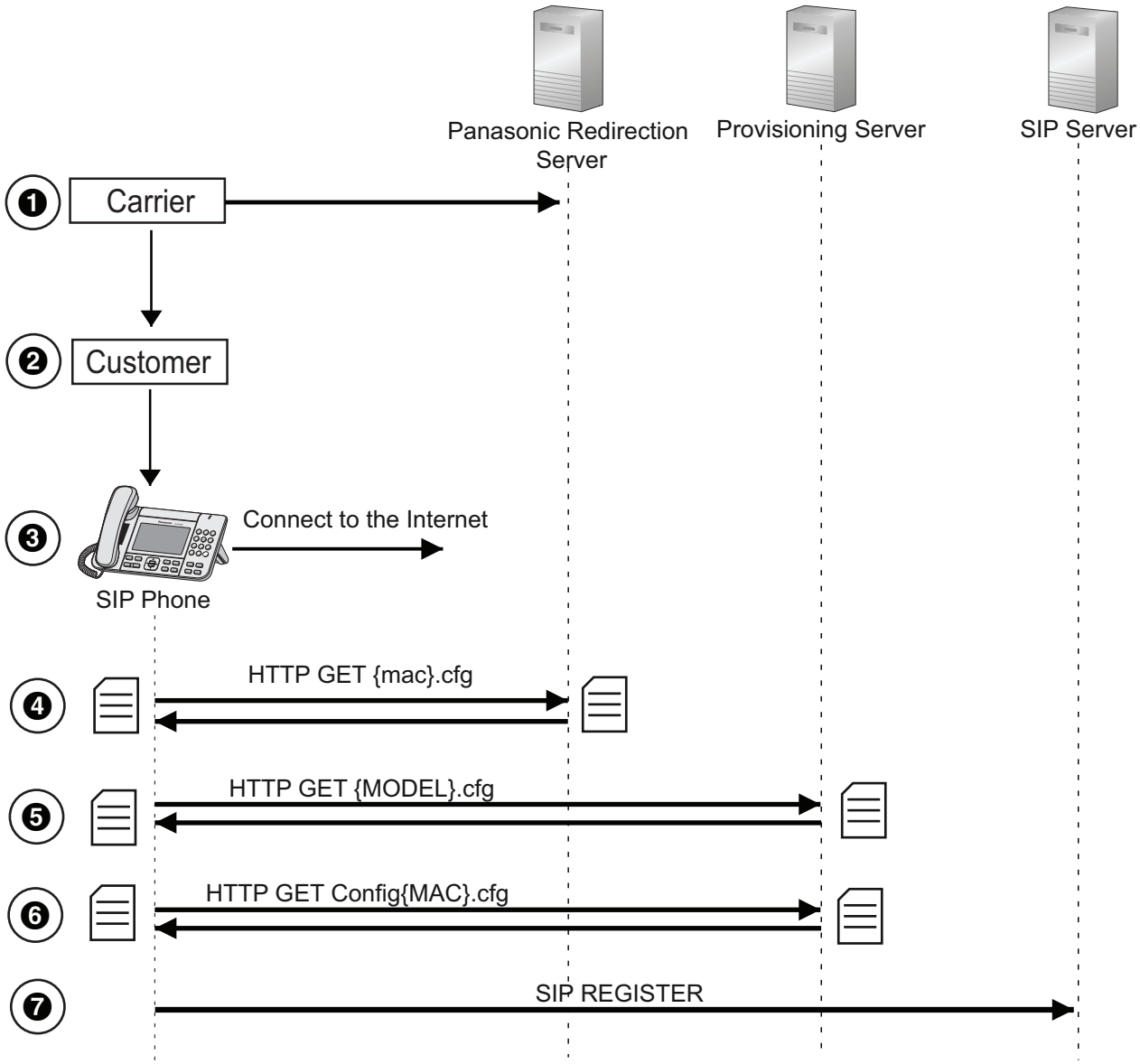
Note

- If the DHCPv6 option is unavailable, the device gives up on DHCPv6.

2.2.1.4 Redirection Server

If the provisioning URL cannot be obtained via SIP PnP or DHCP, it can be obtained via a redirection server. Redirection server is a service provided by Panasonic that allows retrieval of the provisioning URL from Panasonic's redirection servers in order to start provisioning.
In order to use a redirection server, the MAC address of the unit and the provisioning URL to be used must be registered to the redirection server.
For more information about redirection server, consult your phone system dealer.

The following illustration depicts an overview of how redirection server is used.



1. Register the provisioning URL and the MAC address
   - The carrier registers its provisioning URL and the MAC address of the unit to the redirection server.
2. Deliver the unit to the customer
3. Connect the phone to Internet
   - Assuming that unit can't obtain Provisioning URL via SIP PnP or DHCP options.
4. Get the {mac}.cfg configuration file
   - The unit connects to the redirection server using the embedded URL and gets the {mac}.cfg file. The provisioning URL is contained in the {mac}.cfg file and the root certificate URL may also be included depending on the information registered in step 1.
5. Get the initial configuration file
   - The unit connects to the provisioning server and gets initial configuration file ({MODEL}.cfg).
6. Get device configuration file
   - The unit connects to the provisioning server and gets the device configuration file (Config{MAC}.cfg).

7. Connect to the SIP server

2.2.2 Manual Configuration of the Provisioning URL

2.2.2.1 Web User Interface, Phone User Interface

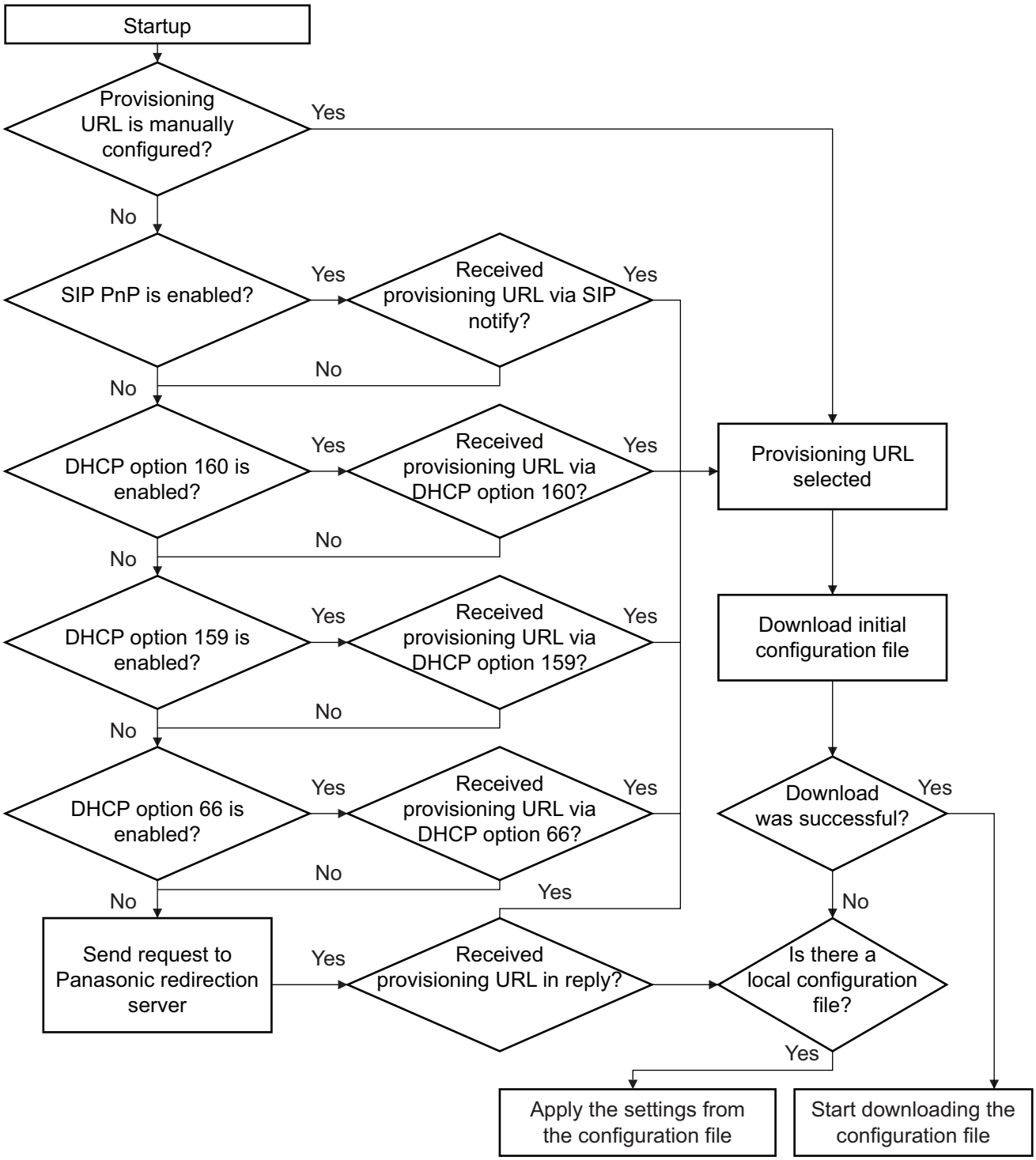
If the automatic discovery of the provisioning server address is unavailable, the end user or administrator may use the local interface to manually configure the provisioning server.

For more information about the related parameters

- USR_PROV_SVR_URL (Page 217)
- USR_PROV_SVR_AUTH_ID (Page 218)
- USR_PROV_SVR_AUTH_PASSWORD (Page 218)

2.3 Processing Flow of Provisioning URL Setting Selection

Flowchart (for IPv4 only)



1. The device loads the configuration settings stored on the flash memory. These settings are either the factory default settings or the settings that were previously changed when restarting.
2. The device checks if the provisioning URL setting has been changed manually either by web programming or phone programming.
   If it has been changed manually, go to step 8.
   If it has not been changed manually, go to the next step.
3. If SIP PnP is enabled, the device sends a multicast SIP SUBSCRIBE message. The device waits for a response and then checks whether a SIP NOTIFY reply is received that contains the provisioning URL setting in the body of the message.
   If a valid SIP NOTIFY is received, go to step 8.
   If a valid SIP NOTIFY is not received, go to the next step.
4. If DHCP option 160 is enabled, the device checks whether DHCP option 160 has been received.
   If it has been received, go to step 8.
   If it has not been received, go to the next step.
5. If DHCP option 159 is enabled, the device checks whether DHCP option 159 has been received.
   If it has been received, go to step 8.
   If it has not been received, go to the next step.
6. If DHCP option 66 is enabled, the device checks whether DHCP option 66 have been received.
   If it has been received, go to step 8.
   If it has not been received, go to the next step.
7. If none of the above steps could be applied, the device sends an HTTP request to the Panasonic redirection server.
   If successful, go to step 8. If it fails, go to step 9.
8. The device attempts to download the initial configuration file.
   If it can be downloaded, the device downloads the device configuration file.
   If it cannot be downloaded, go to the next step.
9. The device checks whether there are any locally saved configuration files.
   If there are locally saved configuration files, the settings are applied.
   If there are no locally saved configuration files, provisioning has failed.
   The device will try provisioning again according to the interval specified by the CFG_RTRY_INTVL parameter.

2.4 Configuration File

2.4.1 Configuration File Format

The configuration file must meet the following conditions.

- XML format
- Maximum file size of 240 KB
- Must be begin with the element **`PANASipPhoneConfig`**, followed by the "initial" element, which indicates initial configurations, and the "device" element, which indicates device configurations.

The initial configuration file may contain the following.

- Root certification URL
- Configuration URL

Example

```
<PANASIPPhoneConfig>
   <Initial>
      <Certs>
         <CFG_ROOT_CERTIFICATE_PATH1></CFG_ROOT_CERTIFICATE_PATH1>
         <CFG_ROOT_CERTIFICATE_PATH2></CFG_ROOT_CERTIFICATE_PATH2>
         <CFG_ROOT_CERTIFICATE_PATH3></CFG_ROOT_CERTIFICATE_PATH3>
      </Certs>
      <CfgFiles>
         <CFG_STANDARD_FILE_PATH>http://prov.com/Config{MAC}.cfg</CFG_STANDARD_FILE_PATH>
         <CFG_PRODUCT_FILE_PATH>http:/prov.com/Config{MODEL}.cfg</CFG_PRODUCT_FILE_PATH>
         <CFG_MASTER_FILE_PATH>http://prov.com/ConfigCom.cfg</CFG_MASTER_FILE_PATH>
      </CfgFiles>
   </Initial>
</PANASIPPhoneConfig>
```

The device configuration file contains all other parameters except <Certs> and <CfgFiles> parameters.

Example

```
<PANASIPPhoneConfig>
   <Device>
      <System>
         <LoginAcc>
            <ADMIN_ID>admin</ADMIN_ID>
            <ADMIN_PASS>admin_pass</ADMIN_PASS>
         </LoginAcc>
      </System>
   </Device>
</PANASIPPhoneConfig>
```

Note

- If the same parameter is specified in a same configuration file more than once, the last setting is effective.

2.4.2 Flexible Enabling/Disabling of Parameters

Each parameter in the configuration file uses permission flags to indicate special manipulation of the parameter. The following manipulations are supported.

1. Controlling enabling/disabling of parameters through web programming and phone programming
   This is useful when the administrator would like to prevent users from changing parameters that could affect services. Disabled parameters appear as read-only when accessing web programming and phone programming.
2. Forcing changes to parameters regardless of priority
   This is useful when the administrator would like to use the configuration file to overwrite parameters that may have been set by users via web programming and phone programming.

The permission flag can be assigned to the desired parameter using the attribute **perm**, as shown in the examples below.

Permission attribute value	Description and example
perm="R"	The parameter is read-only, i.e., the user cannot use web programming or phone programming to change the parameter. **Example** **<SIPPNP_ENABLE perm="R">Y</SIPPNP_ENABLE>**

Permission attribute value	Description and example
• Permission attribute not assigned • **perm=""** • **perm="RW"**	The parameter is read/write, i.e., the user can use web programming or phone programming to change the parameter. **Example** • **<SIPPNP_ENABLE>Y</SIPPNP_ENABLE>** • **<SIPPNP_ENABLE perm="">Y</SIPPNP_ENABLE>** • **<SIPPNP_ENABLE perm=RW">Y</SIPPNP_ENABLE>**
perm="!"	The parameter can be overwritten via provisioning, even if the user has already changed the parameter via web programming or phone programming. The priority of the configuration setting must be considered when using this attribute value. **Example** • **<SIPPNP_ENABLE perm="!">Y</SIPPNP_ENABLE>** • **<SIPPNP_ENABLE perm="!R">Y</SIPPNP_ENABLE>** • **<SIPPNP_ENABLE perm="!RW">Y</SIPPNP_ENABLE>**

2.4.3 Device Configuration File Types

The device can download up to three configuration files. There are three types of configuration files. Depending on the situation, all three types of configuration files can be used; in most situations, only a standard configuration file is needed.

Configuration file type	Typical usage
Master configuration file (Common to all devices)	Used to configure settings that are common to all devices, such as the SIP server address, the IP addresses of the DNS and NTP servers managed by your phone system dealer, etc. These settings are applied to all devices. Example of the master configuration file's URL: **http://prov.example.com/Panasonic/ConfigCommon.cfg**
Product configuration file (Common to all devices of the same model type)	Used to configure settings that are required for a particular model. This configuration file is used by all the devices of the same model type. Example of a product configuration file's URL: **http://prov.example.com/Panasonic/Config**{MODEL}**.cfg** (The model number is used in place of "MODEL".)
Standard configuration file (Unique to each device)	Used to configure settings that are unique to each device, such as the phone number, user ID, password, etc. Example of a standard configuration file's URL: **http://prov.example.com/Panasonic/Config**{MAC}**.cfg** (The corresponding device's MAC address is used in place of "MAC".)

2.4.4 Priority Given to Each Programming Method

Settings that can be configured via provisioning can also be configured via web programming and phone programming. The following table explains the priority given to each method.

Priority	Programming method
Highest	Web programming and phone programming
	Provisioning via the standard configuration file (unique to each device)
	Provisioning via the product configuration file (common to each model type)
	Provisioning with the master configuration file (common to all devices)
Lowest	Factory default setting for the device

2.4.5 Timing of Configuration File Downloads

Each device can download configuration files at the following times.
– When the device starts up
– At regular intervals
– At a specific time of day
– When directed to download by the SIP server

Regular intervals

Specified by using **CFG_CYCLIC_INTVL=**"{number of minutes}".
For example, **CFG_CYCLIC_INTVL="4320"** configures the device to download configuration files every three days (4320 minutes) beginning when the device starts up.

Specific time of day

Specified by using **CFG_RESYNC_TIME=**"{time}". For example, **CFG_RESYNC_TIME="23:00"** configures the device to download configuration files each day at 11:00 PM.

When directed by the SIP server

If a setting needs to be applied immediately, the SIP server can send a NOTIFY message to the devices directing them to download their configuration files. This feature is enabled by specifying **CFG_RESYNC_FROM_SIP** in the configuration file.
Example of the NOTIFY message sent from the SIP server:

```
NOTIFY sip:1234567890@sip.example.com SIP/2.0
Via: SIP/2.0/UDP xxx.xxx.xxx.xxx:5060;branch=abcdef-ghijkl
From: sip:prov@sip.example.com
To: sip:1234567890@sip.example.com
Date: Thu, 1 Jan 2014 01:01:01 GMT
Call-ID: 123456-12345678912345678
CSeq: 1 NOTIFY
Contact: sip:xxx.xxx.xxx.xxx:5060
Event: check-sync
Content-Length: 0
```

For more information about the related parameters

- CFG_CYCLIC (Page 216)
- CFG_CYCLIC_INTVL (Page 216)
- CFG_RESYNC_TIME (Page 216)
- CFG_RESYNC_FROM_SIP (Page 217)

2.5 Processing Flow of Configuration File Download Sequence

The device downloads the configuration file in the following specified order.
CFG_STANDARD_FILE_PATH → CFG_PRODUCT_FILE_PATH → CFG_MASTER_FILE_PATH

```
<PANASIPPhoneConfig>
   <Initial>
      <CfgFiles>
         <CFG_STANDARD_FILE_PATH>http://prov.com/Config{MAC}.cfg</CFG_STANDARD_FILE_PATH>
         <CFG_PRODUCT_FILE_PATH>http:/prov.com/Config{MODEL}.cfg</CFG_PRODUCT_FILE_PATH
         <CFG_MASTER_FILE_PATH>http://prov.com/ConfigCom.cfg</CFG_MASTER_FILE_PATH>
      </CfgFiles>
      </CfgFiles>
   </Initial>
</PANASIPPhoneConfig>
```

Since the files are processed according to the downloading order, any parameter which appears in **CFG_PRODUCT_FILE_PATH** will not override the same parameter in **CFG_STANDARD_FILE_PATH**. Similarly, any parameter in **CFG_MASTER_FILE_PATH** will not override the same parameter in **CFG_PRODUCT_FILE_PATH**.

Note

- If the device is unsuccessful in reaching the provisioning server or if an invalid configuration file format is detected, the device will use the local saved configuration (i.e., the previously downloaded configuration) in order to provide the most reliable service possible to the end-user.

2.6 Secure Provisioning

2.6.1 Using Encryption When Transferring Configuration Files

This method involves transferring the configuration files in a encrypted format, where a symmetric key is used to encrypt and decrypt the file.

Provisioning Server Requirements

In order to use this method, the server must be designed to comply with the following process in regards to how the server gives the device its key and how the key is changed.

1. The server must be capable of generating a unique 32-byte key for each device. This key is used to encrypt the configuration files.
2. Prior to the device's first download of its MAC-specific configuration file (known as the standard configuration file), the server must generate a plain text MAC-specific configuration file for the device. This is where the key is placed and how the device gets its key.
3. After the device's first download, the server must delete the plain text MAC-specific configuration file, and generate an encrypted version for the device configuration files using the key. The server encrypts the file using OpenSSL and the device's key.
   – At this point, when the phone downloads the device configuration files, it will decrypt the files using the previously obtained key.
4. If the device ever needs a new key, there must be a method for an administrator to access the server and generate a new key for the device. This will force the server to delete the existing encrypted configuration files of the device and generate a new key as well as a new plain text MAC-specific configuration file. Once

the device downloads the new plain text MAC-specific configuration file, the server again deletes it and encrypts the configuration files with the new key.

– Devices always accept a plain text MAC-specific configuration file if the server provides one.

Note

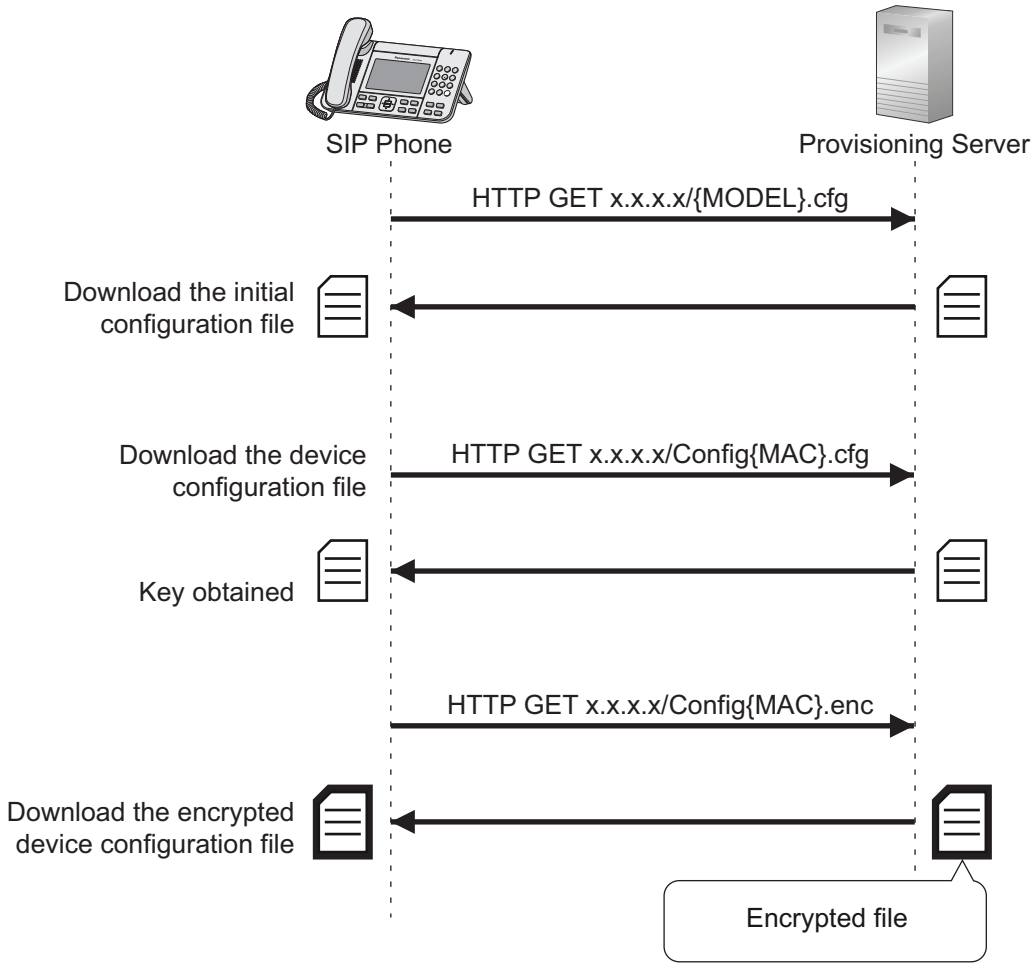
1. We strongly recommended that the server pass the key to the device using the standard configuration file.
2. Use an OpenSSL command to encrypt the configuration file and assign the file extension ".enc" to the encrypted configuration file.
   – OpenSSL command for encrypting a file:
   ```
   openssl enc -aes-128-cbc -a -salt -pass pass:
   12341234abcdabcd12341234abcdabcd -in plain.txt -out encrypted.enc
   ```
   – OpenSSL command for decrypting a file:
   ```
   openssl enc -d -aes-128-cbc -a -pass pass:
   12341234abcdabcd12341234abcdabcd -in encrypted.enc
   ```
3. The supported algorithms for encryption and decryption are:
   AES-128-CBC, AES-196-CBC, and AES-256-CBC
4. Use the following parameters to specify the key information in the plain text MAC-specific configuration file.
   – CFG_FILE_KEY (see → Page 215): used to specify the key
   – CFG_FILE_KEY_LENGTH (see → Page 215): used to specify the encrypt/decrypt algorithm

Example

This example assumes the following:

1. The initial configuration file only specifies to use the standard configuration file.
2. After the device downloads the initial configuration file and the standard configuration file, it detects that a key is provided by the server.

3. The device is now switched to encryption mode, and it downloads the encrypted version of the standard configuration file again by changing the file extension to ".enc".



Note

- When more than one device configuration file is being used, the device downloads the encrypted version of all the device configuration files.

2.6.2 Using HTTPS When Transferring Configuration Files

HTTPS can be used to secure provisioning connections. This method uses TLS to establish a secure connection, which involves client/server authentication using an x.509 certificate.

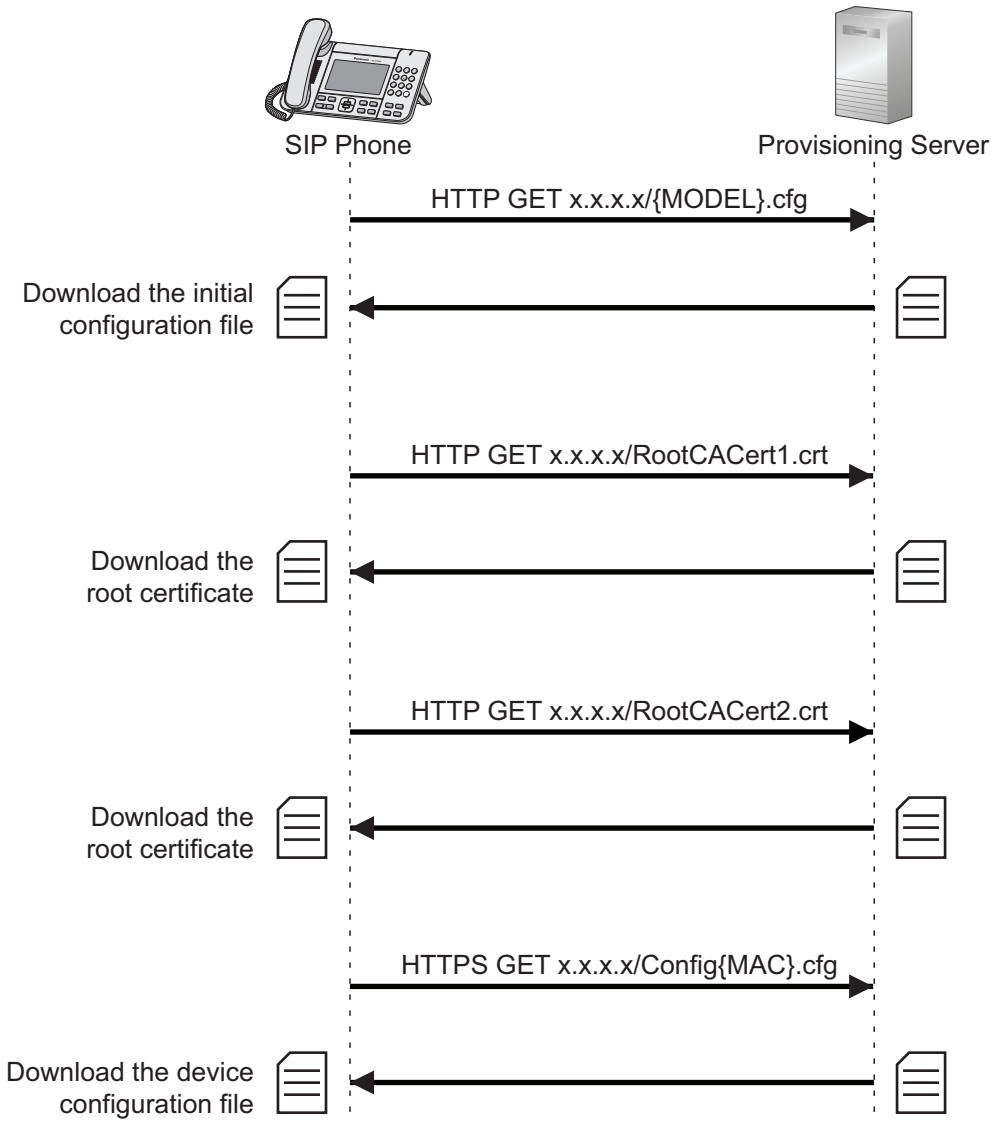
Note

- The following certificates and keys are installed on the unit:
  - Client certificate and private key
  - Root CA certificate
- Supported certificate format: ".pem"

Root certificate updating

Root certificates can be loaded or updated via provisioning by specifying the certificates' URL in the initial configuration file. The device checks if the root certificate URL has changed and then downloads the root certificate sequentially.

Parameter	Purpose
CFG_ROOT_CERTIFICATE_PATH1	Used to load a Root CA certificate that is either self-signed or from a trusted CA to the device **Note** • If a new Root CA certificate has been loaded using this parameter, the newly loaded Root CA certificate will be used to authenticate the server certificate instead of using the built-in Root CA certificate.
CFG_ROOT_CERTIFICATE_PATH2	Used to load a Root CA certificate that is either self-signed or from a trusted CA to the device
CFG_ROOT_CERTIFICATE_PATH3	Used to load a Root CA certificate that is either self-signed or from a trusted CA to the device



For more information about the related parameters

- CFG_ROOT_CERTIFICATE_PATH1 (Page 218)

- CFG_ROOT_CERTIFICATE_PATH2 (Page 218)
- CFG_ROOT_CERTIFICATE_PATH3 (Page 219)

2.7 Firmware Updates

2.7.1 Updating the Unit’s Firmware

After configuring the firmware update settings in the device configuration file, firmware will be updated after provisioning. The firmware update procedure is as follows.

1. The device downloads its configuration file from the provisioning server.
2. The device compares the version number of the firmware in the configuration file to the device’s current firmware version.
3. If a newer firmware version is specified in the configuration file, the device downloads the firmware from the address specified by FIRM_FILE_PATH in the configuration file.
4. After the firmware is downloaded, it is applied to the device and the device restarts.

For more information about the related parameters

- FIRM_UPGRADE_ENABLE (Page 210)
- FIRM_VERSION (Page 210)
- FIRM_FILE_PATH (Page 210)
- FIRM_UPGRADE_AUTO (Page 211)

2.7.2 Updating the KX-UTA336 Add-on Key Module's Firmware

After configuring the add-on key module update settings in the device configuration file, the connected add-on key module (or add-on key modules) will be updated after provisioning. The add-on key module update procedure is as follows.

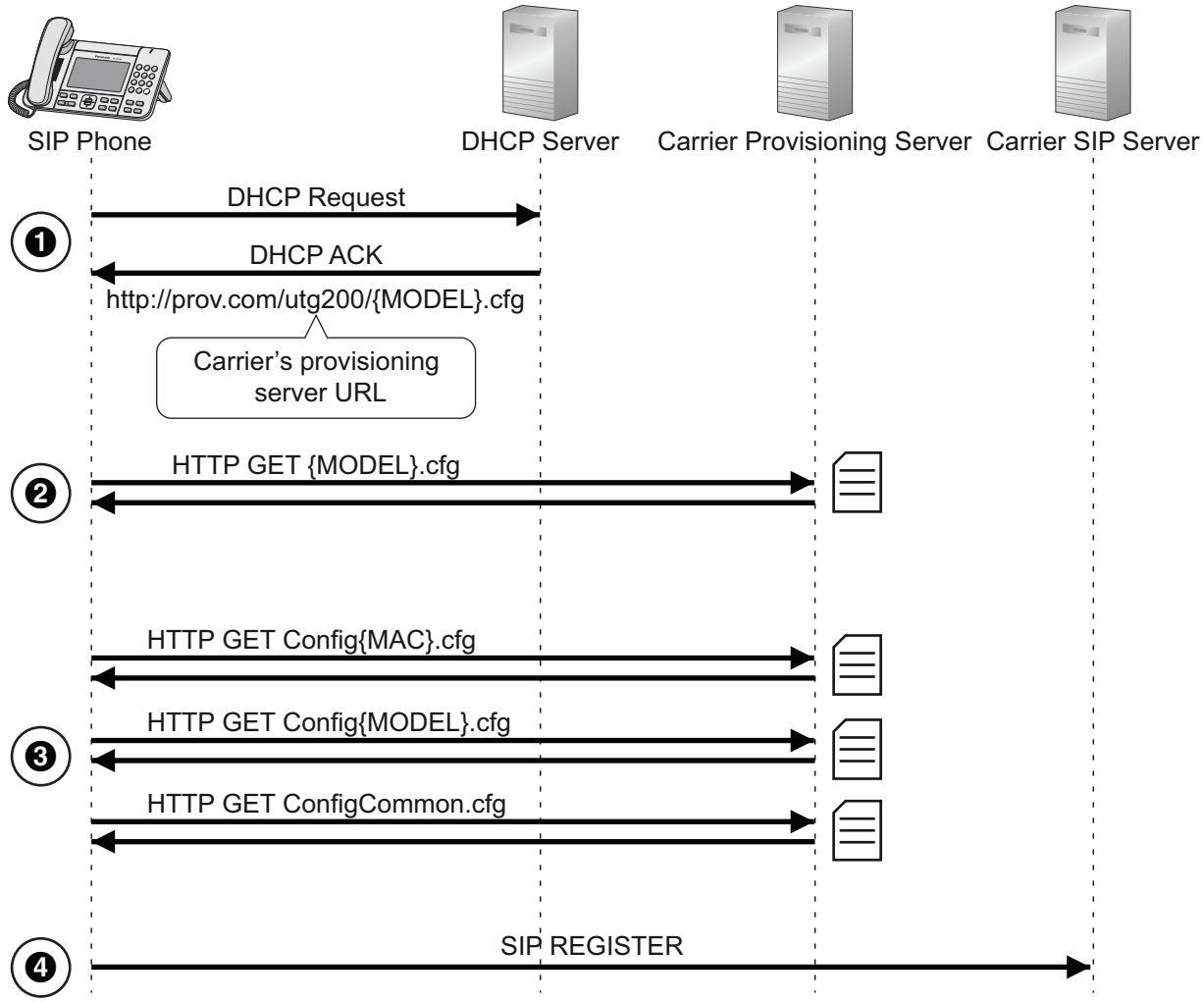
1. The device downloads its configuration file from the provisioning server.
2. The device compares the version number of the add-on key module in the configuration file to the connected add-on key module's current firmware version.
3. If a newer firmware version is specified in the configuration file, the device downloads the add-on key module's firmware from the address specified by KEM_FILE_PATH in the configuration file.
4. After the KEM firmware is downloaded, it is applied to the connected add-on key module (or add-on key modules).

For more information about the related parameters

- KEM_UPGRADE_ENABLE (Page 208)
- KEM_VERSION (Page 208)
- KEM_FILE_PATH (Page 209)
- KEM_UPGRADE_AUTO (Page 209)

2.8 DHCP Provisioning

The following illustration depicts an overview of DHCP provisioning.



1. Connect device to network
   - The device is assigned an IP address by the DHCP server, and also receives the provisioning URL from the DHCP server using DHCP option 160/159/66.
2. Get initial configuration file
   - The device attempts to connect to the carrier's provisioning server and get the initial configuration file.
3. Get device configuration files
   - The device checks for the device configuration URL in the initial configuration file and downloads the device configuration files accordingly.
4. Connect to the SIP server

Section 3

Phone User Interface Programming

This section explains how to configure the unit by entering direct commands through the phone user interface.

3.1 Phone User Interface Programming

This section provides information about the features that can be configured directly from the unit, but that are not mentioned in the Operating Instructions.
To enter direct commands, use the dial keys and soft buttons on the unit.
For details about the other available features, settings and key operations on the phone user interface, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).

3.1.1 Phone User Interface Feature List and Direct Commands

The following table shows additional features programmable with direct commands. These commands are hidden from end users.

Direct Command	Feature	Ref.
[#][1][3][6]	Resetting the unit	Page 31
[#][5][3][4]	Embedded web	Page 26
[#][5][9][0]	Port Mirroring	Page 52

3.1.2 Port Mirroring Settings

Port mirroring is used for network monitoring and debugging purposes.
You can enable port mirroring by performing the procedure below from the unit.

To enable port mirroring

1. On the Home screen, select .
2. Press **[#][5][9][0]**.
3. Select Yes.

Section 4

Web User Interface Programming

This section provides information about the settings available in the Web user interface.

4.1 Web User Interface Setting List

The following tables show all the settings that you can configure from the Web user interface and the access levels. For details about each setting, see the reference pages listed.
For details about setting up Web user interface programming, see **1.1.5 Web User Interface Programming**.
The settings that can be accessed may be limited by the configuration file programming.

Status

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Version Information	Version Information	Model	✓	✓	Page 71
		Operating Bank	✓	✓	Page 71
		Firmware Version (Bank1)	✓	✓	Page 71
		Firmware Version (Bank2)	✓	✓	Page 71
Network Status	Network Status	MAC Address	✓	✓	Page 72
		Ethernet Link Status (LAN Port)	✓	✓	Page 72
		Ethernet Link Status (PC Port)	✓	✓	Page 72
		IP Address Mode	✓	✓	Page 73
		Connection Mode	✓	✓	Page 73
		IP Address	✓	✓	Page 73
		Subnet Mask	✓	✓	Page 73
		Default Gateway	✓	✓	Page 73
		DNS1	✓	✓	Page 74
		DNS2	✓	✓	Page 74
		IPv6 Connection Mode	✓	✓	Page 74
		IPv6 Address	✓	✓	Page 74
		IPv6 Prefix Length	✓	✓	Page 74
		IPv6 Default Gateway	✓	✓	Page 75
		IPv6 DNS1	✓	✓	Page 75
		IPv6 DNS2	✓	✓	Page 75
		IP Phone VLAN ID	✓	✓	Page 75
		PC VLAN ID	✓	✓	Page 75
		IEEE802.1X Status	✓	✓	Page 76

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
VoIP Status	VoIP Status	Line No.	✓	✓	Page 76
		Phone Number	✓	✓	Page 77
		VoIP Status	✓	✓	Page 77
		Default Line	✓	✓	Page 77
QoS Status	QoS Status	Codec	✓	✓	Page 78
		MOS-CQ	✓	✓	Page 78
		MOS_LQ	✓	✓	Page 78
		Voice Quality	✓	✓	Page 78

[*1] The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

Network

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Basic Network Settings	Connection Settings	Host Name		✓	Page 80
		IP Address Mode	✓	✓	Page 80
		Signal Prefer Mode	✓	✓	Page 80
		Media Prefer Mode	✓	✓	Page 80
IPv4 Network Settings	Connection Settings	IP Connection Mode	✓	✓	Page 81
		DNS Connection Mode	✓	✓	Page 81
	Static Settings	Static IP Address	✓	✓	Page 82
		Subnet Mask	✓	✓	Page 82
		Default Gateway	✓	✓	Page 82
		DNS1	✓	✓	Page 83
		DNS2	✓	✓	Page 83

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
IPv6 Network Settings	Connection Settings	IPv6 Connection Mode	✓	✓	Page 84
		IPv6 DNS Connection Mode	✓	✓	Page 84
		Allow Auto Configuration	✓	✓	Page 84
		Enable IPv6 Privacy	✓	✓	Page 84
	Static Settings	Static IPv6 Address	✓	✓	Page 84
		IPv6 Prefix Length	✓	✓	Page 85
		IPv6 Default Gateway	✓	✓	Page 85
		IPv6 DNS1	✓	✓	Page 85
		IPv6 DNS2	✓	✓	Page 85
Ethernet Port Settings	Link Speed/Duplex Mode	LAN Port		✓	Page 86
		PC Port		✓	Page 86
	LLDP Settings	Enable LLDP		✓	Page 87
		LLDP-MED Interval timer		✓	Page 87
	CDP Settings	Enable CDP		✓	Page 87
		CDP Interval timer		✓	Page 87
	VLAN Settings	Enable IP Phone VLAN		✓	Page 88
		IP Phone VLAN ID		✓	Page 88
		Enable PC VLAN		✓	Page 88
		PC VLAN ID		✓	Page 88
IEEE802.1X Settings	IEEE802.1X Settings	Enable IEEE802.1X		✓	Page 89
	IEEE802.1X Authentication	Authentication Protocol		✓	Page 89
		Authentication ID		✓	Page 90
		Authentication Password		✓	Page 90
HTTP Client Settings	HTTP Client Settings	HTTP Version		✓	Page 91
		HTTP User Agent		✓	Page 91
	HTTP Authentication	Authentication ID	✓	✓	Page 92
		Authentication Password	✓	✓	Page 92
	Proxy Server Settings	Enable Proxy	✓	✓	Page 92
		Proxy Server Address	✓	✓	Page 93
		Proxy Server Port	✓	✓	Page 93

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Global Address Detection	STUN Server	STUN Server Address		✓	Page 93
		STUN Server Port		✓	Page 94

[*1] The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

System

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Web Language	Web Language	Language	✓	✓	Page 94
Administrator Password	Administrator Password	Current Password		✓	Page 95
		New Password		✓	Page 95
		Confirm New Password		✓	Page 95
User Password	User Password	Current Password	✓	✓	Page 96
		New Password	✓	✓	Page 96
		Confirm New Password	✓	✓	Page 97
Web Server Settings	Web Server Settings	Web Server Port		✓	Page 97
		Port Close Timer		✓	Page 98

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Time Adjust Settings	Synchronization	Synchronization by NTP	✓	✓	Page 98
		Synchronization Interval	✓	✓	Page 99
		NTP Server Address	✓	✓	Page 99
		Time Zone	✓	✓	Page 99
	Daylight Saving Time	Enable DST	✓	✓	Page 99
		DST Offset	✓	✓	Page 100
	Start Day and Time of DST	Month	✓	✓	Page 100
		Day	✓	✓	Page 100
		Week	✓	✓	Page 101
		Time	✓	✓	Page 101
	End Day and Time of DST	Month	✓	✓	Page 101
		Day	✓	✓	Page 102
		Week	✓	✓	Page 102
		Time	✓	✓	Page 102

[*1] The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

VoIP

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
SIP Settings [Line 1]–[Line x]	Line n	Enable Line		✓	Page 103
	Phone Number	Phone Number		✓	Page 104
		SIP URI		✓	Page 104
	SIP Server	Registrar Server Address		✓	Page 104
		Registrar Server Port		✓	Page 104
		Proxy Server Address		✓	Page 105
		Proxy Server Port		✓	Page 105
		Presence Server Address		✓	Page 105
		Presence Server Port		✓	Page 105

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
	Outbound Proxy Server	Outbound Proxy Server Address		✓	Page 106
		Outbound Proxy Server Port		✓	Page 106
	SIP Service Domain	Service Domain		✓	Page 106
	SIP Source Port	Source Port		✓	Page 106
	SIP Authentication	Authentication ID		✓	Page 107
		Authentication Password		✓	Page 107
	SIP Settings	SIP User Agent		✓	Page 107
	DNS	Enable DNS SRV lookup		✓	Page 107
		SRV lookup Prefix for UDP		✓	Page 108
		SRV lookup Prefix for TCP		✓	Page 108
	Transport Protocol for SIP	Transport Protocol		✓	Page 108
	Timer Settings	T1 Timer		✓	Page 109
		T2 Timer		✓	Page 109
		Timer B		✓	Page 109
		Timer D		✓	Page 110
		Timer F		✓	Page 110
		Timer H		✓	Page 110
		Timer J		✓	Page 110
	Quality of Service (QoS)	SIP Packet QoS (DSCP)		✓	Page 110
	SIP extensions	Supports 100rel (RFC 3262)		✓	Page 111
		Supports Session Timer (RFC 4028)		✓	Page 111
	NAT Identity	Keep Alive Interval		✓	Page 111
		Supports Rport (RFC 3581)		✓	Page 112
		STUN		✓	Page 112
	Security	Enable SSAF (SIP Source Address Filter)		✓	Page 112
VoIP Settings	RTP Settings	RTP Packet Time		✓	Page 113
		Minimum RTP Port Number		✓	Page 113
		Maximum RTP Port Number		✓	Page 113

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
VoIP Settings [Line 1]–[Line x]	Max Connection	Max Connection		✓	Page 114
		RTP Packet QoS (DSCP)		✓	Page 114
		RTCP Packet QoS (DSCP)		✓	Page 115
	Statistical Information	RTCP Enable		✓	Page 115
		RTCP-XR		✓	Page 115
	Jitter Buffer	Maximum Delay		✓	Page 115
		Minimum Delay		✓	Page 116
		Initial Delay		✓	Page 116

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
	DTMF	DTMF Type		✓	Page 116
		DTMF Relay		✓	Page 117
		Telephone-event Payload Type		✓	Page 117
	Call Hold	Supports RFC 2543 (c=0.0.0.0)		✓	Page 117
	CODEC Preferences	G722			
		Enable		✓	Page 118
		Priority		✓	Page 118
		PCMA			
		Enable		✓	Page 118
		Priority		✓	Page 118
		G726-32			
		Enable		✓	Page 118
		Priority		✓	Page 119
		G729A			
		Enable		✓	Page 119
		Priority		✓	Page 119
		Annexb		✓	Page 119
		PCMU			
		Enable		✓	Page 119
		Priority		✓	Page 120
	NAT Identity	RTP Keep Alive Interval		✓	Page 120

[*1] The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

Telephone

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Call Control	Call Control	Inter-digit Timeout		✓	Page 121
		Timer for Dial Plan		✓	Page 121

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
		International Call Prefix		✓	Page 121
		Country Calling Code		✓	Page 122
		National Access Code		✓	Page 122
		Default Line	✓	✓	Page 122
	Call Rejection Phone Numbers	1–30	✓	✓	Page 123
Call Control [Line 1]–[Line x]	Call Control	Display Name	✓	✓	Page 124
		Send SUBSCRIBE to Voice Mail Server		✓	Page 124
		Voice Mail Access Number		✓	Page 125
		Enable Shared Call		✓	Page 125
		Feature Key Synchronization		✓	Page 125
		Conference Server URI		✓	Page 126
		Resource List URI		✓	Page 126
		MoH Server URI		✓	Page 126
	Dial Plan	Dial Plan (max 1024 characters)		✓	Page 127
		Call Even If Dial Plan Does Not Match		✓	Page 127
	Call Features	Block Caller ID	✓	✓	Page 127
		Block Anonymous Call	✓	✓	Page 128
		Do Not Disturb	✓	✓	Page 128
		Return Code When DND		✓	Page 128
		Return Code When Refuse		✓	Page 128
		Auto Answer	✓	✓	Page 129

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
	Call Forward	Unconditional			
		Enable Call Forward	✓	✓	Page 129
		Phone Number	✓	✓	Page 129
		Busy			
		Enable Call Forward	✓	✓	Page 130
		Phone Number	✓	✓	Page 130
		No Answer			
		Enable Call Forward	✓	✓	Page 131
		Phone Number	✓	✓	Page 131
		Ring Count	✓	✓	Page 132
	Call Park & Call Pickup	Call Park			
		Enable		✓	Page 132
		Code		✓	Page 132
		Call Park Retrieve			
		Enable		✓	Page 132
		Code		✓	Page 133
		Call Park Subscribe Enable		✓	Page 133
		Call Pickup			
		Enable		✓	Page 133
		Code		✓	Page 133
		Group Pickup			
		Enable		✓	Page 133
		Code		✓	Page 134
		Directed Call Pickup			
		Enable		✓	Page 134
		Code		✓	Page 134
Flexible Button Settings	Flexible Button Settings	Type (No. 1–24)	✓	✓	Page 135
		Parameter (No. 1–24)	✓	✓	Page 135
		Label Name (No. 1–24)	✓	✓	Page 135

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Flexible Button Settings (KEM) (KX-UTG300 only)	KEM 1	Type (No. 1-36)	✓	✓	Page 136
		Parameter (No. 1-36)	✓	✓	Page 136
		Label Name (No. 1-36)	✓	✓	Page 137
	KEM 2	Type (No. 1-36)	✓	✓	Page 137
		Parameter (No. 1-36)	✓	✓	Page 137
		Label Name (No. 1-36)	✓	✓	Page 137
Bluetooth (KX-UTG300 only)	Bluetooth	Enable Bluetooth	✓	✓	Page 138
Tone Settings	Dial Tone	Tone Frequencies		✓	Page 139
		Tone Timings		✓	Page 140
	Busy Tone	Tone Frequencies		✓	Page 140
		Tone Timings		✓	Page 140
	Ringing Tone	Tone Frequencies		✓	Page 141
		Tone Timings		✓	Page 141
	Stutter Tone	Tone Frequencies		✓	Page 141
		Tone Timings		✓	Page 142
	Reorder Tone	Tone Frequencies		✓	Page 142
		Tone Timings		✓	Page 142

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Telephone Settings	Telephone Settings	Key Click Tone	✓	✓	Page 143
		Extension PIN	✓	✓	Page 143
		Number Matching Lower Digit		✓	Page 144
	Hotline	Enable Hotline	✓	✓	Page 144
		Phone Number	✓	✓	Page 144
		Delay Time (0–10)	✓	✓	Page 144
	Multicast Paging	Enable Multicast Paging		✓	Page 144
		Send Paging Timeout		✓	Page 145
		Disconnect Paging Timeout		✓	Page 145
		Paging Codec		✓	Page 145
		Paging DND	✓	✓	Page 145
		Address (No. 1-10)		✓	Page 146
		Port (No. 1-10)		✓	Page 146
		Priority (No. 1-10)		✓	Page 146
		Label (No. 1-10)		✓	Page 146
		Send Paging (No. 1-10)		✓	Page 146
Phonebook	Import Phonebook	File Name	✓	✓	Page 147
	Export Phonebook	–	✓	✓	Page 147
LDAP	LDAP	Enable LDAP		✓	Page 148
		LDAP Server Address		✓	Page 148
		LDAP Server Port		✓	Page 148
		LDAP Authentication ID		✓	Page 149
		LDAP Authentication Password		✓	Page 149
		LDAP Search Base		✓	Page 149

[*1] The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

Application

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Application Settings	Application Settings	Enable Application	✓	✓	Page 150
		Application Server	✓	✓	Page 150
	Service Settings	Service URL	✓	✓	Page 150
		User ID	✓	✓	Page 150
		Password	✓	✓	Page 150
Broadsoft Settings [Remote Office]	Remote Office Settings	Enable Remote office	✓	✓	Page 151
		Remote Phone Number	✓	✓	Page 151
Broadsoft Settings [Hide Number]	Hide Number Settings	Enable Hide Number (Caller ID Blocking)	✓	✓	Page 152
Broadsoft Settings [Simultaneous Ring]	Simultaneous Ring Settings	Enable Simultaneous Ring	✓	✓	Page 152
		Do not ring my Simultaneous Ring Numbers if I'm already on a call	✓	✓	Page 153
		Phone Number (1-10)	✓	✓	Page 153
		Answer confirmation required (1-10)	✓	✓	Page 153
Broadsoft Settings [Anywhere]	Anywhere Settings	Alert all locations for Click-to-Dial calls	✓	✓	Page 154
	Location Settings	Action	✓	✓	Page 154
		Phone Number	✓	✓	Page 154
		Description	✓	✓	Page 155
	Phone Number	Enable this Location (1-10)	✓	✓	Page 155
		Phone Number (1-10)	✓	✓	Page 155
		Description (1-10)	✓	✓	Page 155
		Enable Diversion Inhibitor	✓	✓	Page 155
		Require Answer Confirmation	✓	✓	Page 155
		Use BroadWorks-based Call Control Services	✓	✓	Page 156
Branding Settings	Branding Settings	Logo URL		✓	Page 156

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
		Wallpaper URL		✓	Page 156

[*1] The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

Maintenance

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Import Configuration File	Web Configuration	File Name		✓	Page 157
	Provision Configuration	File Name		✓	Page 157
Export Configuraiton File	Web Configuration	–		✓	Page 158
	Provision Configuration	–		✓	Page 158
Firmware Maintenance	Firmware Maintenance	Enable Firmware Update		✓	Page 159
		Firmware File URL		✓	Page 159
Local Firmware Update	Local Firmware Update	File Name		✓	Page 160
Provisioning Maintenance	Provisioning Maintenance	Enable Provisioning		✓	Page 160
		Provision Server		✓	Page 161
		Authentication ID		✓	Page 161
		Authentication Password		✓	Page 161
		Enable SIP PnP		✓	Page 161
		Enable DHCP Option 160		✓	Page 162
		Enable DHCP Option 159		✓	Page 162
		Enable DHCP Option 66		✓	Page 162
		Enable DHCPv6 Sub Option 1		✓	Page 162
		Cyclic Auto Resync		✓	Page 162
		Resync Interval		✓	Page 163
		Header Value for Resync Event		✓	Page 163
SSH	SSH	Enable SSH		✓	Page 164

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Reset & Restart	Reset Excluding Private Settings	–	✓	✓	Page 164
	Reset Excluding Network Settings	–	✓	✓	Page 164
	Reset Web Settings	–	✓	✓	Page 165
	Factory Reset	–	✓	✓	Page 165
	Restart	–	✓	✓	Page 165

[*1] The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

Diagnostic

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
Log Settings	General Settings	Log to standard output	✓	✓	Page 165
		Log to file	✓	✓	Page 166
		Log file max size	✓	✓	Page 166
	Upload Settings	Upload log file to server	✓	✓	Page 166
		Upload log server	✓	✓	Page 166
		Upload log base file name	✓	✓	Page 166
		Upload file name append mode	✓	✓	Page 166
		Upload period	✓	✓	Page 167
		Upload immediately once file is full	✓	✓	Page 167
	Syslog Settings	Report log to sysLog server	✓	✓	Page 167
		SysLog server	✓	✓	Page 167
		SysLog port	✓	✓	Page 167
		SysLog severity	✓	✓	Page 168
	Log Level Settings	All	✓	✓	Page 168
		CENTRAL	✓	✓	Page 168
		DHCPv4	✓	✓	Page 169

Menu Item	Section Title	Setting	Access Level[*1]		Ref.
			U	A	
		DHCPv6	✓	✓	Page 169
		FHAL	✓	✓	Page 169
		HTTP Server	✓	✓	Page 170
		HTTP CGI	✓	✓	Page 170
		I18N	✓	✓	Page 171
		IPPS	✓	✓	Page 171
		LLDPCDP	✓	✓	Page 171
		MCABBER_CLIENT	✓	✓	Page 172
		MCU	✓	✓	Page 172
		MMI	✓	✓	Page 172
		NETWORK_CONTROL	✓	✓	Page 173
		PCU	✓	✓	Page 173
		PJCU-0	✓	✓	Page 174
		PJCU-1	✓	✓	Page 174
		PJCU-2	✓	✓	Page 174
		PJCU-3	✓	✓	Page 175
		PJCU-4	✓	✓	Page 175
		PJCU-5	✓	✓	Page 175
		PJCU-6	✓	✓	Page 176
		PJCU-7	✓	✓	Page 176
		PROVISION	✓	✓	Page 177
		SIP_PNP	✓	✓	Page 177
		SWITCH_CONF	✓	✓	Page 177
		UPGRADER	✓	✓	Page 178
		CONFIGSYS	✓	✓	Page 178
		DCM	✓	✓	Page 178
		FDT	✓	✓	Page 179
		NTP	✓	✓	Page 179
		FILESAVER	✓	✓	Page 180
		FOS	✓	✓	Page 180
		DNS	✓	✓	Page 180

Menu Item	Section Title	Setting	Access Level*1		Ref.
			U	A	
		FTPC	✓	✓	Page 181
		NET	✓	✓	Page 181
		SUU	✓	✓	Page 181
		PHONE_BOOK	✓	✓	Page 182
		CALL_HISTORY	✓	✓	Page 182
		ACU	✓	✓	Page 183
		XML_APP	✓	✓	Page 183
		WPA_SUPPLICANT	✓	✓	Page 183
Log Display	Filter	Modules	✓	✓	Page 184
		Classes	✓	✓	Page 185
	Log	Log	✓	✓	Page 186
System Dump	Running Information	–		✓	Page 186
Sniffer Dump	Sniffer Log	Enable Log		✓	Page 187

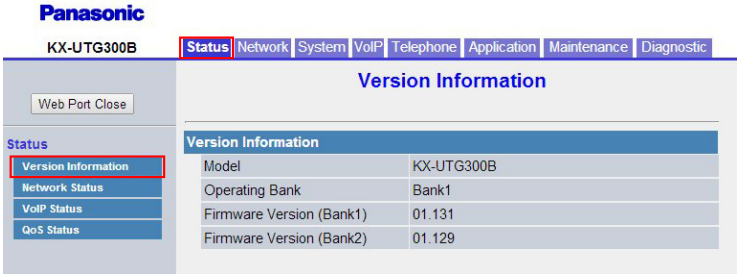
*1 The access levels are abbreviated as follows:
U: User; A: Administrator
A check mark indicates that the setting is available for that access level.

4.2 Status

This section provides detailed descriptions about all the settings classified under the **[Status]** tab.

4.2.1 Version Information

This screen allows you to view the current version information such as the model number and the firmware version of the unit.



4.2.1.1 Version Information

Model

Description	Indicates the model number of the unit (reference only).
Value Range	Model number
Default Value	Current model number

Operating Bank

Description	Indicates the storage area of the firmware that is currently operating (reference only).
Value Range	• Bank1 • Bank2
Default Value	Not applicable.

Firmware Version (Bank1)

Description	Indicates the Bank1 firmware version (reference only).
Value Range	Firmware version ("APPUTG300B_nn.nnn"/"APPUTG200B_nn.nnn" [n=0-9])
Default Value	Current firmware version

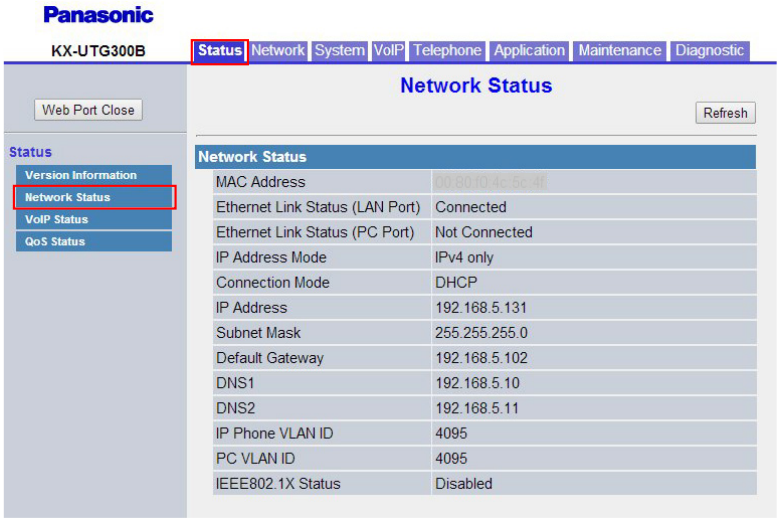
Firmware Version (Bank2)

Description	Indicates the Bank2 firmware version (reference only).
Value Range	Firmware version ("APPUTG300B_nn.nnn"/"APPUTG200B_nn.nnn" [n=0-9])
Default Value	Current firmware version

4.2.2 Network Status

This screen allows you to view the current network information of the unit, such as the MAC address, IP address, Ethernet port status, etc.

Clicking **[Refresh]** updates the information displayed on the screen.



4.2.2.1 Network Status

MAC Address

Description	Indicates the MAC address of the unit (reference only).
Value Range	Default MAC address (example: 00:80:F0:AB:CD:EF)
Default Value	Not applicable.

Ethernet Link Status (LAN Port)

Description	Indicates the current connection status of the Ethernet LAN port (reference only).
Value Range	• Connected • Not Connected
Default Value	Not applicable.

Ethernet Link Status (PC Port)

Description	Indicates the current connection status of the Ethernet PC port (reference only).
Value Range	• Connected • Not Connected
Default Value	Not applicable.

IP Address Mode

Description	Indicates whether the unit uses IPv4 addresses, IPv6 addresses, or both (reference only).
Value Range	• Dual stack • IPv4 only • IPv6 only
Default Value	Dual stack

Connection Mode

Description	Indicates whether the IP address of the unit is assigned automatically (DHCP) or manually (static) (reference only).
Value Range	• DHCP • Static
Default Value	Not applicable.

IP Address

Description	Indicates the IP address currently assigned to the unit (reference only).
Value Range	IP address
Default Value	Current IP address

Subnet Mask

Description	Indicates the specified subnet mask for the unit (reference only).
Value Range	Subnet mask
Default Value	Current subnet mask

Default Gateway

Description	Indicates the specified IP address of the default gateway for the network (reference only). **Note** • If the default gateway address is not specified, this field will be left blank.
Value Range	IP address of the default gateway
Default Value	Not applicable.

DNS1

Description	Indicates the specified IP address of the primary DNS server (reference only). **Note** • If the primary DNS server address is not specified, this field will be left blank.
Value Range	IP address of the primary DNS1 server
Default Value	Not applicable.

DNS2

Description	Indicates the specified IP address of the secondary DNS server (reference only). **Note** • If the secondary DNS server address is not specified, this field will be left blank.
Value Range	IP address of the secondary DNS2 server
Default Value	Not applicable.

IPv6 Connection Mode

Description	Indicates the IPv6 connection mode (reference only).
Value Range	• DHCPv6 • Static • Auto Configuration • Privacy
Default Value	Not applicable.

IPv6 Address

Description	Indicates the IPv6 address currently assigned to the unit (reference only).
Value Range	IPv6 address
Default Value	Not applicable.

IPv6 Prefix Length

Description	Indicates the IPv6 prefix length (reference only).
Value Range	NULL, 1–128

Default Value	Not applicable.

IPv6 Default Gateway

Description	Indicates the specified IPv6 address of the default gateway for the network (reference only).
Value Range	IPv6 address of the default gateway
Default Value	Not applicable.

IPv6 DNS1

Description	Indicates the specified IPv6 address of the primary DNS server (reference only).
Value Range	IPv6 address of the DNS1 server
Default Value	Not applicable.

IPv6 DNS2

Description	Indicates the specified IPv6 address of the secondary DNS server (reference only).
Value Range	IPv6 address of the DNS2 server
Default Value	Not applicable.

IP Phone VLAN ID

Description	Indicates the VLAN ID assigned to the unit (reference only).
Value Range	• 0–4094 • No Answer • Disabled
Default Value	Not applicable.

PC VLAN ID

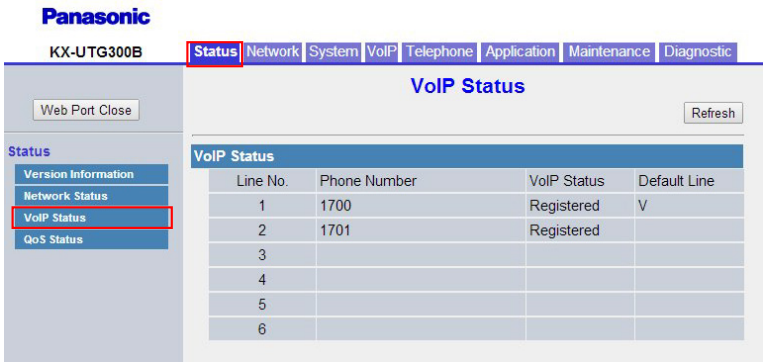
Description	Indicates the VLAN ID assigned to the PC (reference only).
Value Range	• 0–4094 • Disabled
Default Value	Not applicable.

IEEE802.1X Status

Description	Indicates the current status of IEEE 802.1X settings.
Value Range	• Logoff • Disconnected • Connecting • Authenticating • Authenticated • Failed (Time Out) • Failed • Disabled
Default Value	Not applicable.

4.2.3 VoIP Status

This screen allows you to view the current status of each line's unit.
Clicking **[Refresh]** updates the information displayed on the screen.



4.2.3.1 VoIP Status

Line No.

Description	Indicates the line number to which a phone number is assigned (reference only). **Note** • The available line number varies depending on the type of the unit being used.
Value Range	• Line 1–Line 4 (for KX-UTG200) • Line 1–Line 6 (for KX-UTG300)
Default Value	Not applicable.

Phone Number

Description	Indicates the currently assigned phone numbers (reference only). **Note** • The corresponding field is blank if a line has not yet been leased or if the unit has not been configured.
Value Range	Max. 32 digits
Default Value	Not applicable.
Configuration File Reference	PHONE_NUMBER (Page 268)

VoIP Status

Description	Indicates the current VoIP status of each line (reference only).
Value Range	• Registered: The unit has been registered to the SIP server, and the line can be used. • Registering: The unit is being registered to the SIP server, and the line cannot be used. • Blank: The line has not been leased, the unit has not been configured yet, or a SIP authentication failure has occurred. • Register failed: The unit failed to register to the SIP server. **Note** • Immediately after starting up the unit, the phone numbers of the lines will be displayed, but the status of the line may not be displayed because the unit is still being registered to the SIP server. To display the status, wait about 30 to 60 seconds, and then click **[Refresh]** to obtain updated status information.
Default Value	Not applicable.

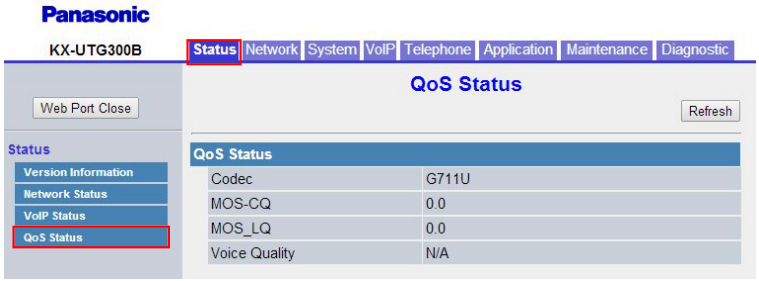
Default Line

Description	Indicates which line is the default line.
Value Range	• Blank • V
Default Value	Not applicable.

4.2.4 QoS Status

This screen allows you to view the current QoS status.

Clicking **[Refresh]** updates the information displayed on the screen.



4.2.4.1 QoS Status

Codec

Description	Indicates the codec used for QoS (reference only).
Value Range	• G711 • G722 • G729
Default Value	Not applicable.

MOS-CQ

Description	Indicates the mean opinion score for conversational quality (reference only).
Value Range	0-5
Default Value	Not applicable.

MOS_LQ

Description	Indicates the mean opinion score for listening quality (reference only).
Value Range	0-5
Default Value	Not applicable.

Voice Quality

Description	Indicates the voice quality of the current call.

Value Range	• 1–5 **Note** • Refer to the following for voice quality values. – 5: Perfect. Like face-to-face conversation or radio reception. – 4.5: Network or toll quality. – 4: Good. Imperfections can be perceived, but sound is clear. – 3.5: Cell phone quality. – 2.5: Voices sound synthetic. – 2: Poor. Nearly impossible to communicate. – 1: Bad. Impossible to communicate.
Default Value	Not applicable.

4.3 Network

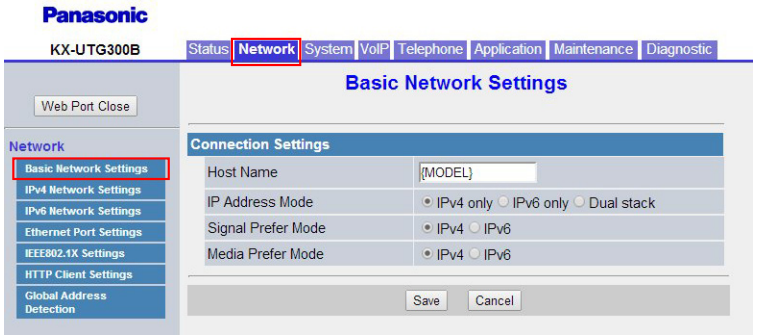
This section provides detailed descriptions about all the settings classified under the **[Network]** tab.

4.3.1 Basic Network Settings

This screen allows you to change basic network settings such as whether to use a DHCP server, and the IP address of the unit.

Note

- Changes to the settings on this screen are applied when the message "Save Complete!" appears after clicking **[Save]**. Because the IP address of the unit will probably be changed if you change these settings, you will not be able to continue using the Web user interface. To continue configuring the unit from the Web user interface, log in to the Web user interface again after confirming the newly assigned IP address of the unit using the phone user interface. In addition, if the IP address of the PC from which you try to access the Web user interface has been changed, close the Web port once by selecting "**Off**" for "**Embedded web**" on the unit (→ see **Opening/Closing the Web Port** in **1.1.5.2 Before Accessing the Web User Interface**).



4.3.1.1 Connection Settings

Host Name

Description	Specifies the host name for the unit to send to the DHCP server. **Note** • This setting is available only when **[Connection Mode]** is set to **[DHCP]**.
Value Range	Max. 63 characters **Note** • You cannot leave this field empty. • If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name.
Default Value	{MODEL}

IP Address Mode

Description	Specifies whether the unit operates in IPv4 mode, IPv6 mode, or both.
Value Range	• Dual stack • IPv4 only • IPv6 only
Default Value	Dual stack
Configuration File Reference	IP_ADDR_MODE (Page 219)

Signal Prefer Mode

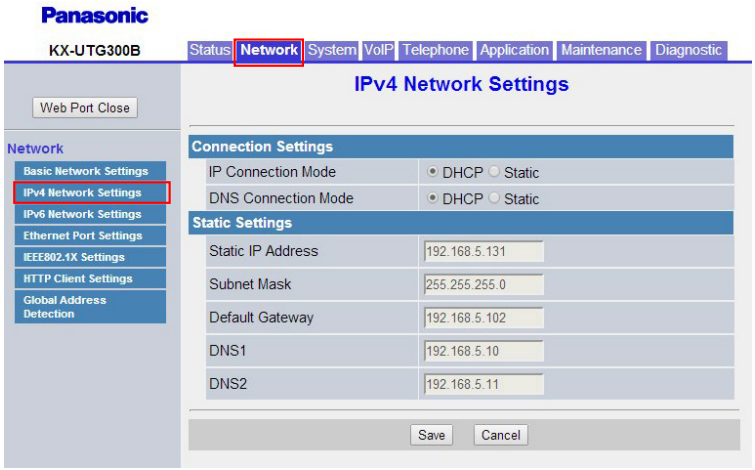
Description	Specifies the preferred IP mode (IPv4 or IPv6) for sending SIP packets.
Value Range	• IPv4 • IPv6
Default Value	IPv4
Configuration File Reference	IP_MODE_PREF_SIGNAL (Page 220)

Media Prefer Mode

Description	Specifies the preferred IP mode (IPv4 or IPv6) for sending voice packets (RTP).
Value Range	• IPv4 • IPv6
Default Value	IPv4
Configuration File Reference	IP_MODE_PREF_MEDIA (Page 220)

4.3.2 IPv4 Network Settings

This screen allows you to change the IPv4 settings.



4.3.2.1 Connection Settings

IP Connection Mode

Description	Specifies whether the unit has a static IP address or receives its address from a DHCP server.
Value Range	• DHCP • Static
Default Value	DHCP

DNS Connection Mode

Description	Specifies whether the DNS servers that the unit refers to are specified via static IP addresses, or if the unit receives the IP addresses from DHCP server.
Value Range	• DHCP • Static
Default Value	DHCP

4.3.2.2 Static Settings

Static IP Address

Description	Specifies the IP address of the unit. **Note** • This setting is available only when **[Connection Mode]** is set to **[Static]**.
Value Range	Max. 15 characters ("n.n.n.n" [n=0–255], except "0.0.0.0", "255.255.255.255", "127.0.0.1", etc.)
Default Value	Not stored.
Phone User Interface Reference	Configuring the Network Settings of the Unit (Page 23)

Subnet Mask

Description	Specifies the subnet mask of the unit. **Note** • This setting is available only when **[Connection Mode]** is set to **[Static]**.
Value Range	Max. 15 characters ("n.n.n.n" [n=0–255], except "0.0.0.0", "255.255.255.255", "127.0.0.1", etc.)
Default Value	Not stored.
Phone User Interface Reference	Configuring the Network Settings of the Unit (Page 23)

Default Gateway

Description	Specifies the IP address of the default gateway for the network where the unit is connected. **Note** • This setting is available only when **[Connection Mode]** is set to **[Static]**.
Value Range	Max. 15 characters ("n.n.n.n" [n=0–255], except "0.0.0.0", "255.255.255.255", "127.0.0.1", etc.)
Default Value	Not stored.
Phone User Interface Reference	Configuring the Network Settings of the Unit (Page 23)

DNS1

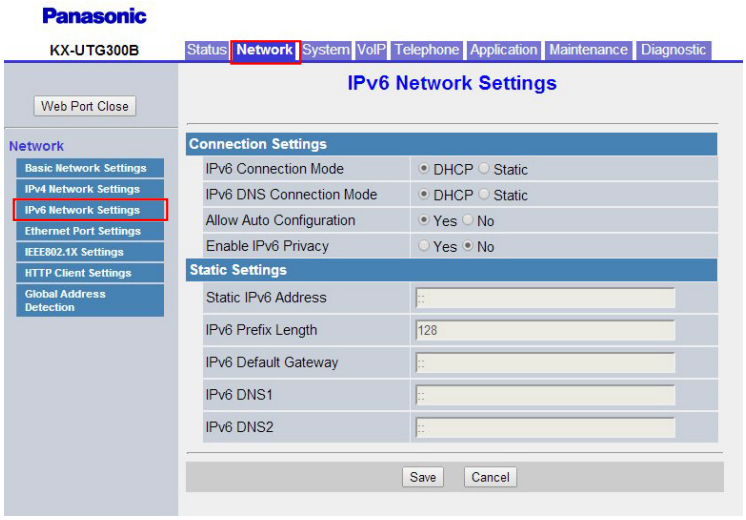
Description	Specifies the IP address of the primary DNS server. **Note** • This setting is available only when **[Connection Mode]** is set to **[Static]**.
Value Range	Max. 15 characters ("n.n.n.n" [n=0–255], except "0.0.0.0", "255.255.255.255", "127.0.0.1", etc.)
Default Value	Not stored.
Phone User Interface Reference	Configuring the Network Settings of the Unit (Page 23)

DNS2

Description	Specifies the IP address of the secondary DNS server. **Note** • This setting is available only when **[Connection Mode]** is set to **[Static]**.
Value Range	Max. 15 characters ("n.n.n.n" [n=0–255], except "0.0.0.0", "255.255.255.255", "127.0.0.1", etc.)
Default Value	Not stored.
Phone User Interface Reference	Configuring the Network Settings of the Unit (Page 23)

4.3.3 IPv6 Network Settings

This screen allows you to change the IPv6 settings.



4.3.3.1 Connection Settings

IPv6 Connection Mode

Description	Specifies whether the unit has a static IP address or receives its address from a DHCP server.
Value Range	• DHCP • Static
Default Value	DHCP

IPv6 DNS Connection Mode

Description	Specifies whether the DNS servers that the unit refers to are specified via static IP addresses, or if the unit receives the IP addresses from DHCP server.
Value Range	• DHCP • Static
Default Value	DHCP

Allow Auto Configuration

Description	Enables or disables auto configuration.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	ALLOW_AUTO_CFG (Page 220)

Enable IPv6 Privacy

Description	Enables or disables IPv6 privacy.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	IPV6_PRIVACY (Page 220)

4.3.3.2 Static Settings

Static IPv6 Address

Description	Specifies the IPv6 address of the unit.
Value Range	Max. 46 characters

Default Value	Not stored.

IPv6 Prefix Length

Description	Specifies the IPv6 prefix length.
Value Range	NULL, 1-128
Default Value	Not stored.

IPv6 Default Gateway

Description	Specifies the IPv6 address of the default gateway for the network where the unit is connected.
Value Range	Max. 46 characters
Default Value	Not stored.

IPv6 DNS1

Description	Specifies the IPv6 address of the primary DNS server.
Value Range	Max. 46 characters
Default Value	Not stored.

IPv6 DNS2

Description	Specifies the IPv6 address of the secondary DNS server.
Value Range	Max. 46 characters
Default Value	Not stored.

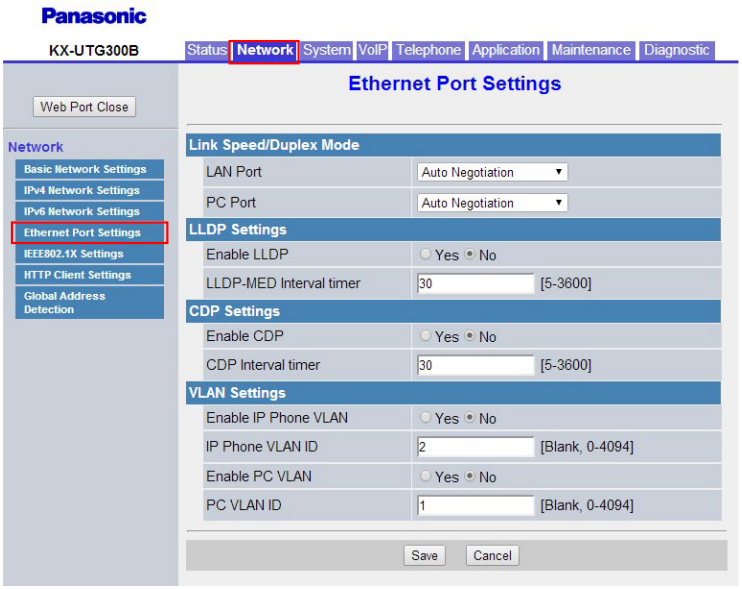
4.3.4 Ethernet Port Settings

This screen allows you to change the connection mode of the Ethernet ports and the VLAN settings.

Note

- When you change the settings on this screen and click **[Save]**, after the message "Save Complete!" has been displayed, the unit will restart automatically with the new settings applied. If a unit is on a call when "Save Complete!" has been displayed, the unit will restart after the unit returns to idle.
- Incorrect settings may cause a network failure. In such a case, you cannot access the Web user interface anymore. To access it again, you need to correct the speed/duplex settings or perform IP

Reset through phone user interface programming. For details, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).



4.3.4.1 Link Speed/Duplex Mode

LAN Port

Description	Selects the connection mode (link speed and duplex mode) of the LAN port.
Value Range	• Auto Negotiation • 1000 Mbps/Full Duplex • 100 Mbps/Full Duplex • 100 Mbps/Half Duplex • 10 Mbps/Full Duplex • 10 Mbps/Half Duplex
Default Value	Auto Negotiation

PC Port

Description	Selects the connection mode (link speed and duplex mode) of the PC port.
Value Range	• Auto Negotiation • 1000 Mbps/Full Duplex • 100 Mbps/Full Duplex • 100 Mbps/Half Duplex • 10 Mbps/Full Duplex • 10 Mbps/Half Duplex
Default Value	Auto Negotiation

4.3.4.2 LLDP Settings

Enable LLDP

Description	Selects whether to enable or disable sending and receiving LLDP frames. **Note** • You should specify "**Yes**" for only one of "**LLDP**", "**VLAN**" or "**IEEE802.1X**". • If "**Yes**" is specified for two or more of the parameters above, the settings are prioritized as follows: "**IEEE802.1X**" > "**VLAN**" > "**LLDP**". Therefore, if "**Yes**" is specified for both "**VLAN**" and "**LLDP**", the VLAN-related settings are used.
Value Range	• Yes • No
Default Value	No

LLDP-MED Interval timer

Description	Specifies the interval, in seconds, between sending each LLDP frame.
Value Range	5–3600
Default Value	30

4.3.4.3 CDP Settings

Enable CDP

Description	Enables or disables CDP.
Value Range	• Yes • No
Default Value	No

CDP Interval timer

Description	Specifies the time between CDP messages.
Value Range	5–3600
Default Value	30

4.3.4.4 VLAN Settings

Enable IP Phone VLAN

Description	Selects whether to use the VLAN feature to perform VoIP communication securely. **Note** • You should specify "**Yes**" for only one of "**LLDP**", "**VLAN**" or "**IEEE802.1X**". • If "**Yes**" is specified for two or more of the parameters above, the settings are prioritized as follows: "**IEEE802.1X**" > "**VLAN**" > "**LLDP**". Therefore, if "**Yes**" is specified for both "**VLAN**" and "**LLDP**", the VLAN-related settings are used.
Value Range	• Yes • No
Default Value	No

IP Phone VLAN ID

Description	Specifies the VLAN ID for this unit. **Note** • You cannot set this parameter if **[Enable IEEE802.1X]** is set to **[Yes]**.
Value Range	NULL, 0–4094
Default Value	2

Enable PC VLAN

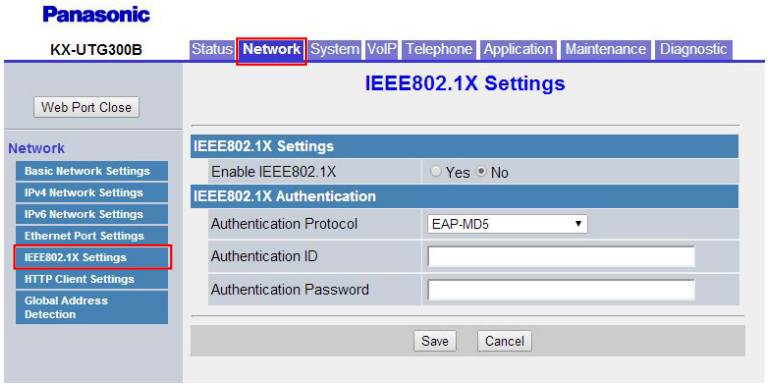
Description	Determines whether PC VLAN is enabled or disabled.
Value Range	• Yes • No
Default Value	No

PC VLAN ID

Description	Specifies the VLAN ID for the PC. **Note** • You cannot set this parameter if **[Enable IEEE802.1X]** is set to **[Yes]**.
Value Range	NULL, 0–4094
Default Value	1

4.3.5 IEEE802.1X Settings

This screen allows you to configure settings relating to the IEEE 802.1X networking protocol.



4.3.5.1 IEEE802.1X Settings

Enable IEEE802.1X

Description	Selects whether to use the IEEE 802.1X protocol. **Note** • You should specify "**Yes**" for only one of "**LLDP**", "**VLAN**" or "**IEEE802.1X**". • If "**Yes**" is specified for two or more of the parameters above, the settings are prioritized as follows: "**IEEE802.1X**" > "**VLAN**" > "**LLDP**". Therefore, if "**Yes**" is specified for both "**VLAN**" and "**LLDP**", the VLAN-related settings are used.
Value Range	• Yes • No
Default Value	No

4.3.5.2 IEEE802.1X Authentication

Authentication Protocol

Description	Specifies the authentication method used with the IEEE 802.1X protocol. **Note** • You cannot set this parameter if **[Enable VLAN]** is set to **[Yes]**.

Value Range	• EAP-MD5 • EAP-TLS • EAP-FAST • EAP-PEAP-GTC • EAP-PEAP-MSCHAPv2 • EAP-TTLS-GTC • EAP-TTLS-MSCHAPv2
Default Value	EAP-MD5

Authentication ID

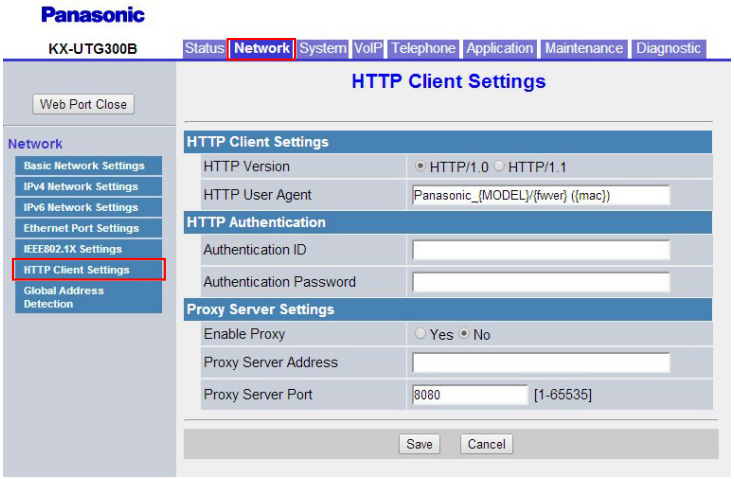
Description	Specifies the authentication ID required for IEEE 802.1X authentication. **Note** • You cannot set this parameter if **[Enable VLAN]** is set to **[Yes]**.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored.

Authentication Password

Description	Specifies the authentication password used for IEEE 802.1X authentication. **Note** • You cannot set this parameter if **[Enable VLAN]** is set to **[Yes]**.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored.

4.3.6 HTTP Client Settings

This screen allows you to change the HTTP client settings for the unit in order to access the HTTP server of your phone system and download configuration files.



4.3.6.1 HTTP Client Settings

HTTP Version

Description	Selects which version of the HTTP protocol to use for HTTP communication.
Value Range	• HTTP/1.0 • HTTP/1.1 **Note** • For this unit, it is strongly recommended that you select **[HTTP/1.0]**. However, if the HTTP server does not function well with HTTP/1.0, try changing the setting **[HTTP/1.1]**.
Default Value	HTTP/1.0
Configuration File Reference	HTTP_VER (Page 223)

HTTP User Agent

Description	Specifies the text string to send as the user agent in the header of HTTP requests.

Value Range	1-64 characters **Note** • You cannot leave this field empty. • If "{mac}" is included in this field, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this field, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this field, it will be replaced with the unit's model name. • If "{fwver}" is included in this field, it will be replaced with the firmware version of the unit.
Default Value	Panasonic_{MODEL}/{fwver} ({mac})
Configuration File Reference	HTTP_USER_AGENT (Page 223)

4.3.6.2 HTTP Authentication

Authentication ID

Description	Specifies the ID for the User account. If set, this name must be entered to access the Web user interface at the User access level.
Value Range	Max. 127 characters
Default Value	Not stored.

Authentication Password

Description	Specifies the password for the User account. If set, this password must be entered to access the Web user interface at the User access level.
Value Range	Max. 127 characters
Default Value	Not stored.

4.3.6.3 Proxy Server Settings

Enable Proxy

Description	Selects whether to use the proxy server.
Value Range	• Yes • No
Default Value	No

Proxy Server Address

Description	Specifies the IP address or FQDN of the proxy server.
Value Range	Max. 127 characters **Note** • You cannot leave this field empty if **[Enable Proxy]** is set to **[Yes]**.
Default Value	Not stored.

Proxy Server Port

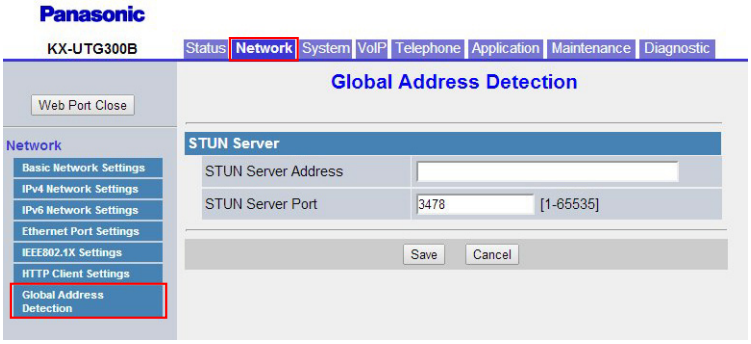
Description	Specifies the port number of the proxy server.
Value Range	1–65535
Default Value	8080

4.3.7 Global Address Detection

This screen allows you to configure STUN server settings for the Global Address Detection feature. The global IP address of the network the unit is connected to will be detected by STUN Protocol. If the global IP address has changed, the new address will be registered to the SIP server.

Note

- If the unit is connected directly to the Internet, you do not need to configure Global Address Detection.



4.3.7.1 STUN Server

STUN Server Address

Description	Specifies the IP address or FQDN of the STUN server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	STUN_SERV_ADDR (Page 225)

STUN Server Port

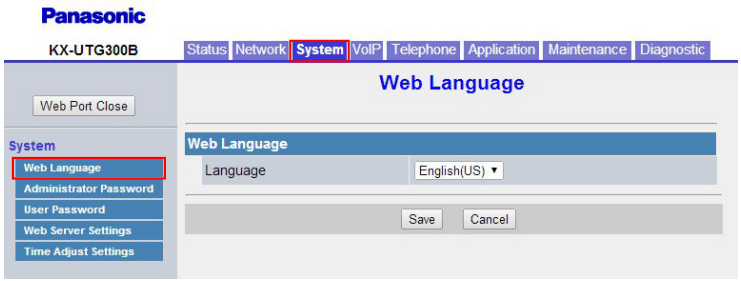
Description	Specifies the port number of the STUN server.
Value Range	1–65535
Default Value	3478
Configuration File Reference	STUN_SERV_PORT (Page 226)

4.4 System

This section provides detailed descriptions about all the settings classified under the **[System]** tab.

4.4.1 Web Language

This screen allows you to select the language used for the Web user interface.



4.4.1.1 Web Language

Language

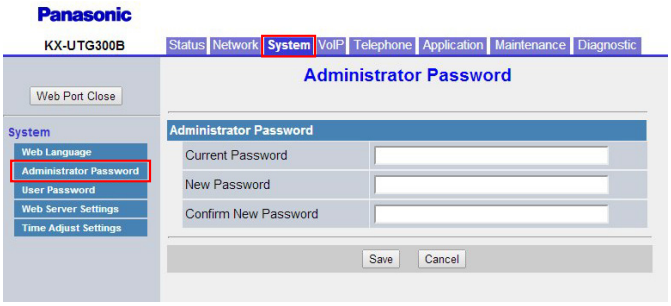
Description	Selects the language used for the Web user interface.
Value Range	English (US)
Default Value	English (US)

4.4.2 Administrator Password

This screen allows you to change the password used to authenticate the Administrator account when logging in to the Web user interface.

Note

- For security reasons, the characters entered for the password are masked by special characters, which differ depending on the Web browser.



4.4.2.1 Administrator Password

Current Password

Description	Specifies the current password to use to authenticate the Administrator account when logging in to the Web user interface.
Value Range	6–16 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored.
Configuration File Reference	ADMIN_PASS (Page 202)

New Password

Description	Specifies the new password to use to authenticate the Administrator account when logging in to the Web user interface.
Value Range	6–16 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored.
Configuration File Reference	ADMIN_PASS (Page 202)

Confirm New Password

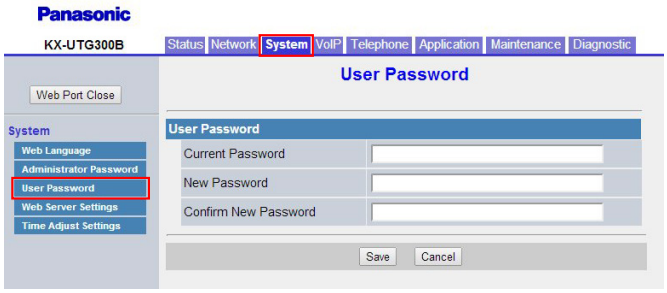
Description	Specifies the same password that you entered in **[New Password]** for confirmation.
Value Range	6–16 characters (except ", &, ', :, <, >, and space) **Note** • This value must be the same as the value entered in **[New Password]**.
Default Value	Not stored.
Configuration File Reference	ADMIN_PASS (Page 202)

4.4.3 User Password

This screen allows you to change the password used to authenticate the User account when logging in to the Web user interface.

Note

- For security reasons, the characters entered for the password are masked by special characters, which differ depending on the Web browser.



4.4.3.1 User Password

Current Password

Description	Specifies the current password to use to authenticate the User account when logging in to the Web user interface.
Value Range	6–16 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored.
Configuration File Reference	USER_PASS (Page 202)

New Password

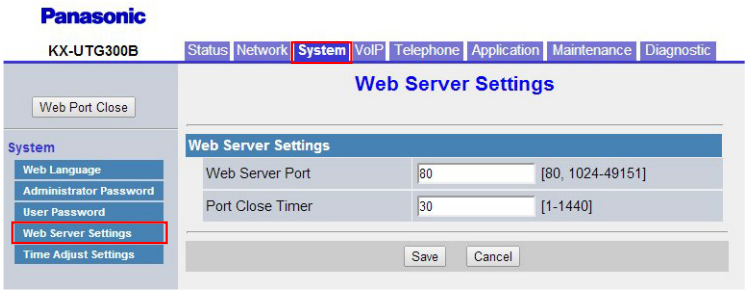
Description	Specifies the new password to use to authenticate the User account when logging in to the Web user interface.
Value Range	6–16 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored. **Note** • When a user logs in to the Web user interface for the first time, after clicking **OK** on the authentication dialog box, the **[Change User Password]** screen is displayed automatically to make the user set a password.
Configuration File Reference	USER_PASS (Page 202)

Confirm New Password

Description	Specifies the same password that you entered in **[New Password]** for confirmation.
Value Range	6–16 characters (except ", &, ', :, <, >, and space) **Note** • This value must be the same as the value entered in **[New Password]**.
Default Value	Not stored.
Configuration File Reference	USER_PASS (Page 202)

4.4.4 Web Server Settings

This screen allows you to change the Web server settings.



4.4.4.1 Web Server Settings

Web Server Port

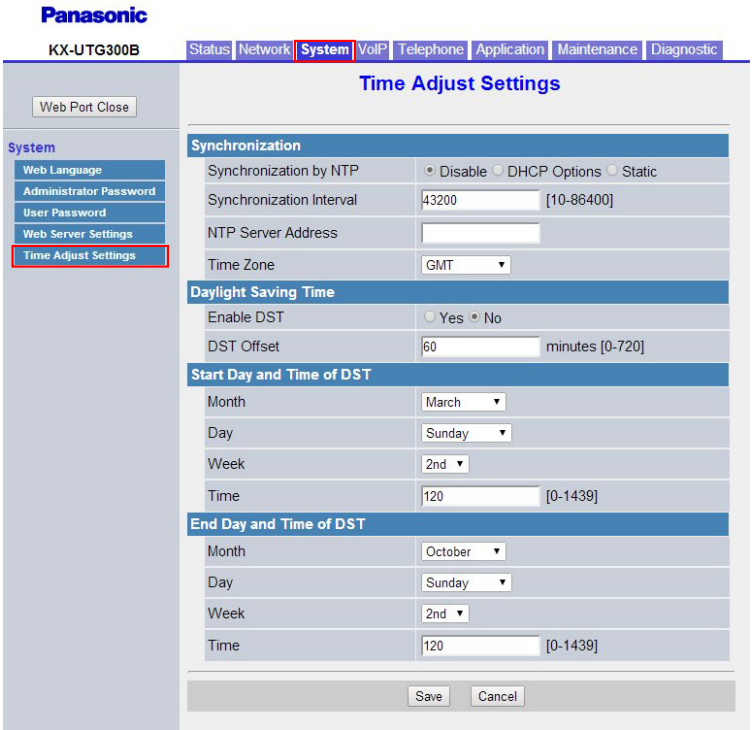
Description	Specifies the port number used by the Web server.
Value Range	80, 1024–49151 **Note** • You cannot specify here the same port number as any of the port numbers specified for the individual lines in **[Source Port]** in **4.5.1.6 SIP Source Port**.
Default Value	80 **Note** • When you change the default value of the port number to a value other than "80", such as "8080", enter the URL for accessing the Web user interface using the following format: "http://192.168.0.100:8080/" (192.168.0.100: IP address of the unit)

Port Close Timer

Description	Specifies the length of time, in minutes, to keep the Web port open when there has been no communication between the unit and the PC. If the specified length of time elapses without any communication, the Web port closes automatically. Communication is detected when you click a tab, menu item, the **[Save]** button, or by reloading the application or pressing the F5 key.
Value Range	1–1440
Default Value	30

4.4.5 Time Adjust Settings

This screen allows you to enable automatic clock adjustment using an NTP server and configure the settings for DST (Daylight Saving Time), also known as Summer Time.



4.4.5.1 Synchronization

Synchronization by NTP

Description	Selects whether to enable the unit to automatically adjust its clock according to the time information provided by an NTP server.

Value Range	• Disable • DHCP Options • Static **Note** • Even if you select **[DHCP Options]** or **[Static]**, this feature will not function properly if the NTP server address setting is invalid.
Default Value	Disable
Configuration File Reference	NTP_MODE (Page 224)

Synchronization Interval

Description	Specifies the interval, in seconds, between synchronizations with the NTP server.
Value Range	10–86400
Default Value	43200
Configuration File Reference	TIME_SYNC_INTVL (Page 225)

NTP Server Address

Description	Specifies the IP address or FQDN of the NTP server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	NTP_ADDR (Page 225)

Time Zone

Description	Selects your time zone.
Value Range	GMT -12:00–GMT +13:00
Default Value	GMT
Configuration File Reference	TIME_ZONE (Page 203)

4.4.5.2 Daylight Saving Time

Enable DST

Description	Selects whether to enable DST (Summer Time).
Value Range	• Yes • No

Default Value	No
Configuration File Reference	DST_ENABLE (Page 203)

DST Offset

Description	Specifies the amount of time, in minutes, to change the time when **[Enable DST (Enable Summer Time)]** is set to **[Yes]**.
Value Range	0–720
Default Value	60
Configuration File Reference	DST_OFFSET (Page 204)

4.4.5.3 Start Day and Time of DST

Month

Description	Selects the month in which DST (Summer Time) starts.
Value Range	• January • February • March • April • May • June • July • August • September • October • November • December
Default Value	March
Configuration File Reference	DST_START_MONTH (Page 204)

Day

Using the 2 following settings, specify on which day of the selected month DST (Summer Time) starts. For example, to specify the second Sunday, select **[Second]** and **[Sunday]**.

Description	Selects the day of the week on which DST (Summer Time) starts.
Value Range	• Sunday • Monday • Tuesday • Wednesday • Thursday • Friday • Saturday

Default Value	Sunday
Configuration File Reference	DST_START_DAY_OF_WEEK (Page 205)

Week

Description	Selects the number of the week on which DST (Summer Time) starts.
Value Range	• 1st • 2nd • 3rd • 4th • Last
Default Value	2nd
Configuration File Reference	DST_START_ORDINAL_DAY (Page 204)

Time

Description	Specifies the start time of DST (Summer Time) in minutes after 12:00 AM.
Value Range	0–1439
Default Value	120
Configuration File Reference	DST_START_TIME (Page 205)

4.4.5.4 End Day and Time of DST

Month

Description	Selects the month in which DST (Summer Time) ends.
Value Range	• January • February • March • April • May • June • July • August • September • October • November • December
Default Value	October
Configuration File Reference	DST_STOP_MONTH (Page 206)

Day

Using the 2 following settings, specify on which day of the selected month DST (Summer Time) ends. For example, to specify the second Sunday, select **[Second]** and **[Sunday]**.

Description	Selects the day of the week on which DST (Summer Time) ends.
Value Range	• Sunday • Monday • Tuesday • Wednesday • Thursday • Friday • Saturday
Default Value	Sunday
Configuration File Reference	DST_STOP_DAY_OF_WEEK (Page 206)

Week

Description	Selects the number of the week on which DST (Summer Time) ends.
Value Range	• 1st • 2nd • 3rd • 4th • Last
Default Value	2nd
Configuration File Reference	DST_STOP_ORDINAL_DAY (Page 206)

Time

Description	Specifies the end time of DST (Summer Time) in minutes after 12:00 AM.
Value Range	0–1439
Default Value	120
Configuration File Reference	DST_STOP_TIME (Page 207)

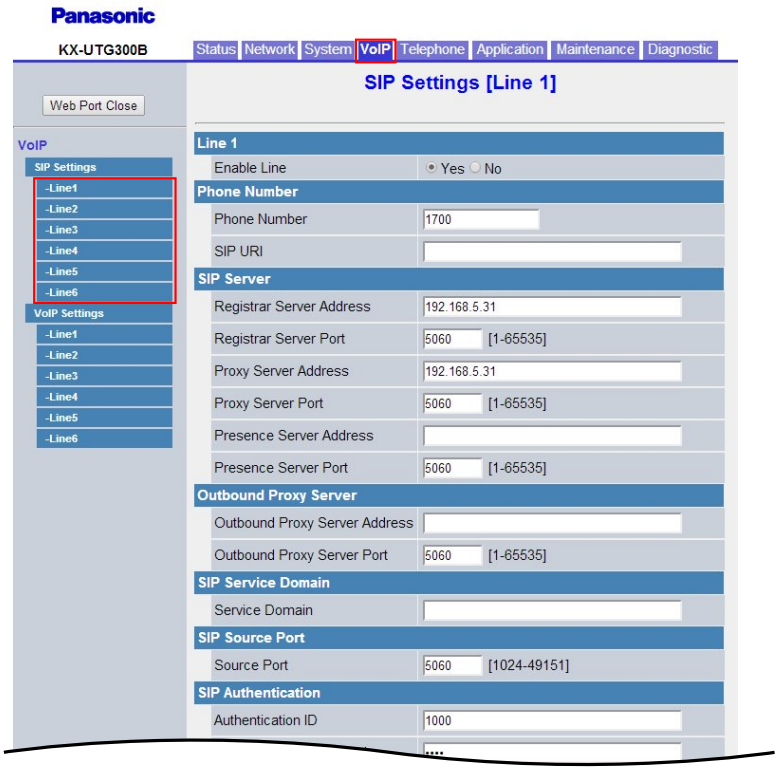
4.5 VoIP

This section provides detailed descriptions about all the settings classified under the **[VoIP]** tab.

4.5.1 SIP Settings [Line 1]–[Line n]

This screen allows you to change the SIP settings that are specific to each line. The number of lines available varies depending on the phone being used, as follows:

- KX-UTG200: 1–4
- KX-UTG300: 1–6



4.5.1.1 Line 1

Enable Line

Description	Specifies whether the line is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	LINE_ENABLE (Page 269)

4.5.1.2 Phone Number

Phone Number

Description	Specifies the phone number to use as the user ID required for registration to the SIP registrar server. **Note** • When registering using a user ID that is not a phone number, you should use the **[SIP URI]** setting.
Value Range	Max. 32 characters
Default Value	Not stored.
Configuration File Reference	PHONE_NUMBER (Page 268)

SIP URI

Description	Specifies the unique ID used by the SIP registrar server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:user@example.com". **Note** • When registering using a user ID that is not a phone number, you should use this setting. • In a SIP URI, the user part ("user" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 127 characters.
Value Range	Max. 195 characters (except ", &, ', :, ;, <, >, and space)
Default Value	Not stored.
Configuration File Reference	SIP_URI (Page 268)

4.5.1.3 SIP Server

Registrar Server Address

Description	Specifies the IP address or FQDN of the SIP registrar server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	SIP_RGSTR_ADDR (Page 270)

Registrar Server Port

Description	Specifies the port number to use for communication with the SIP registrar server.

Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_RGSTR_PORT (Page 271)

Proxy Server Address

Description	Specifies the IP address or FQDN of the SIP proxy server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	SIP_PRXY_ADDR (Page 270)

Proxy Server Port

Description	Specifies the port number to use for communication with the SIP proxy server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_PRXY_PORT (Page 270)

Presence Server Address

Description	Specifies the IP address or FQDN of the presence server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	SIP_PRSNC_ADDR (Page 275)

Presence Server Port

Description	Specifies the port number to use for communication with the presence server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_PRSNC_PORT (Page 275)

4.5.1.4 Outbound Proxy Server

Outbound Proxy Server Address

Description	Specifies the IP address or FQDN of the SIP outbound proxy server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	SIP_OUTPROXY_ADDR (Page 277)

Outbound Proxy Server Port

Description	Specifies the port number to use for communication with the SIP outbound proxy server.
Value Range	1–65535
Default Value	5060
Configuration File Reference	SIP_OUTPROXY_PORT (Page 278)

4.5.1.5 SIP Service Domain

Service Domain

Description	Specifies the domain name provided by your phone system dealer. The domain name is the part of the SIP URI that comes after the "@" symbol.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	SIP_SVCDOMAIN (Page 271)

4.5.1.6 SIP Source Port

Source Port

Description	Specifies the source port number used by the unit for SIP communication.
Value Range	1024–49151 **Note** • The SIP port number for each line must be unique. • You cannot specify the same port number as the port number specified in **[Web Server Port]** in **4.4.4.1 Web Server Settings**.

Default Value	5060 (for Line 1) 5070 (for Line 2) 5080 (for Line 3) 5090 (for Line 4) 5100 (for Line 5) 5110 (for Line 6)
Configuration File Reference	SIP_SRC_PORT (Page 270)

4.5.1.7 SIP Authentication

Authentication ID

Description	Specifies the authentication ID required to access the SIP server.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored.
Configuration File Reference	SIP_AUTHID (Page 269)

Authentication Password

Description	Specifies the authentication password used to access the SIP server.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Not stored.
Configuration File Reference	SIP_PASS (Page 269)

4.5.1.8 SIP Settings

SIP User Agent

Description	Specifies the text string to send as the user agent in the headers of SIP messages.
Value Range	1-64 characters
Default Value	Panasonic_{MODEL}/{fwver} ({mac})
Configuration File Reference	SIP_USER_AGENT (Page 269)

4.5.1.9 DNS

Enable DNS SRV lookup

Description	Selects whether to request the DNS server to translate domain names into IP addresses using the SRV record.

Value Range	• Yes • No **Note** • If you select **[Yes]**, the unit will perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server. If you select **[No]**, the unit will not perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server.
Default Value	Yes
Configuration File Reference	SIP_DNSSRV_ENA (Page 274)

SRV lookup Prefix for UDP

Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using UDP. **Note** • This setting is available only when **[Enable DNS SRV lookup]** is set to **[Yes]**.
Value Range	Max. 32 characters
Default Value	_sip._udp.
Configuration File Reference	SIP_UDP_SRV_PREFIX (Page 274)

SRV lookup Prefix for TCP

Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using TCP. **Note** • This setting is available only when **[Enable DNS SRV lookup]** is set to **[Yes]**.
Value Range	Max. 32 characters
Default Value	_sip._tcp.
Configuration File Reference	SIP_TCP_SRV_PREFIX (Page 274)

4.5.1.10 Transport Protocol for SIP

Transport Protocol

Description	Selects which transport layer protocol to use for sending SIP packets.

Value Range	• UDP • TCP • TLS
Default Value	UDP
Configuration File Reference	SIP_TRANSPORT (Page 278)

4.5.1.11 Timer Settings

T1 Timer

Description	Selects the default interval, in milliseconds, between transmissions of SIP messages. For details, refer to RFC 3261.
Value Range	• 250 • 500 • 1000 • 2000 • 4000
Default Value	500
Configuration File Reference	SIP_TIMER_T1 (Page 272)

T2 Timer

Description	Selects the maximum interval, in seconds, between transmissions of SIP messages. For details, refer to RFC 3261.
Value Range	• 2 • 4 • 8 • 16 • 32
Default Value	4
Configuration File Reference	SIP_TIMER_T2 (Page 272)

Timer B (milliseconds)

Description	Specifies the value of SIP timer B (INVITE transaction timeout timer), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000
Configuration File Reference	SIP_TIMER_B (Page 279)

Timer D (milliseconds)

Description	Specifies the value of SIP timer D (wait time for answer resending), in milliseconds. For details, refer to RFC 3261.
Value Range	0, 250–64000
Default Value	5000
Configuration File Reference	SIP_TIMER_D (Page 279)

Timer F (milliseconds)

Description	Specifies the value of SIP timer F (non-INVITE transaction timeout timer), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000
Configuration File Reference	SIP_TIMER_F (Page 280)

Timer H (milliseconds)

Description	Specifies the value of SIP timer H (wait time for ACK reception), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000
Configuration File Reference	SIP_TIMER_H (Page 280)

Timer J (milliseconds)

Description	Specifies the value of SIP timer J (wait time for non-INVITE request resending), in milliseconds. For details, refer to RFC 3261.
Value Range	0, 250–64000
Default Value	5000
Configuration File Reference	SIP_TIMER_J (Page 280)

4.5.1.12 Quality of Service (QoS)

SIP Packet QoS (DSCP)

Description	Selects the DSCP (Differentiated Services Code Point) level of DiffServ applied to SIP packets.
Value Range	0–63

Default Value	0
Configuration File Reference	DSCP_SIP (Page 272)

4.5.1.13 SIP extensions

Supports 100rel (RFC 3262)

Description	Selects whether to add the option tag 100rel to the "Supported" header of the INVITE message. For details, refer to RFC 3262.
Value Range	• Yes • No **Note** • If you select **[Yes]**, the Reliability of Provisional Responses function will be enabled. The option tag 100rel will be added to the "Supported" header of the INVITE message and to the "Require" header of the "1xx" provisional message. If you select **[No]**, the option tag 100rel will not be used.
Default Value	No
Configuration File Reference	SIP_100REL_ENABLE (Page 275)

Supports Session Timer (RFC 4028)

Description	Specifies the length of time, in seconds, that the unit waits before terminating SIP sessions when no reply to repeated requests is received. For details, refer to RFC 4028.
Value Range	0, 60–65535 (0: Disable)
Default Value	0
Configuration File Reference	SIP_SESSION_TIME (Page 272)

4.5.1.14 NAT Identity

Keep Alive Interval

Description	Specifies the interval, in seconds, between transmissions of the Keep Alive packet to the unit in order to maintain the NAT binding information. **Note** • This setting is available only when **[Transport Protocol]** is set to **[UDP]**.
Value Range	0, 10–300 (0: Disable)
Default Value	0
Configuration File Reference	PORT_PUNCH_INTVL (Page 276)

Supports Rport (RFC 3581)

Description	Selects whether to add the 'rport' parameter to the top Via header field value of requests generated. For details, refer to RFC 3581.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SIP_ADD_RPORT (Page 276)

STUN

Description	Select whether to enable the STUN service.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SIP_STUN_ENABLE (Page 276)

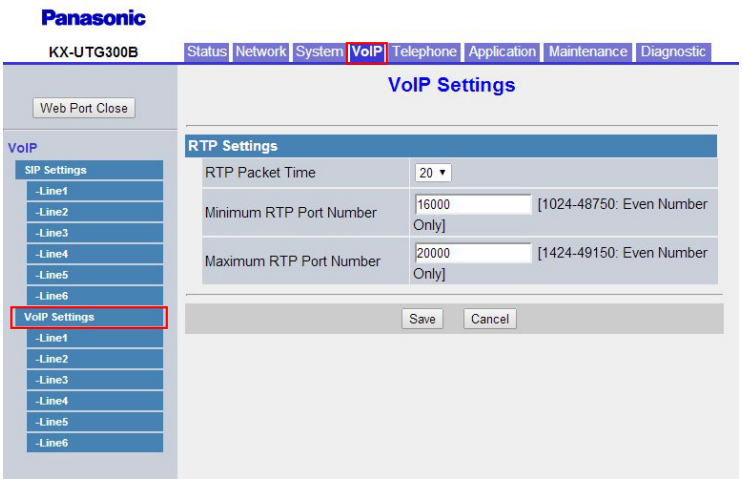
4.5.1.15 Security

Enable SSAF (SIP Source Address Filter)

Description	Selects whether to enable SSAF (SIP Source Address Filter) for the SIP servers (registrar server, proxy server, and presence server).
Value Range	• Yes • No **Note** • If you select **[Yes]**, the unit receives SIP messages only from the source addresses stored in the SIP servers (registrar server, proxy server, and presence server), and not from other addresses. However, if **[Outbound Proxy Server Address]** in **4.5.1.4 Outbound Proxy Server** is specified, the unit also receives SIP messages from the source address stored in the SIP outbound proxy server.
Default Value	No
Configuration File Reference	SIP_DETECT_SSAF (Page 279)

4.5.2 VoIP Settings

This screen allows you to change the VoIP settings that are common to all lines.



4.5.2.1 RTP Settings

RTP Packet Time

Description	Selects the interval, in milliseconds, between transmissions of RTP packets.
Value Range	• 20 • 30 • 40
Default Value	20
Configuration File Reference	RTP_PTIME (Page 250)

Minimum RTP Port Number

Description	Specifies the lowest port number that the unit will use for RTP packets.
Value Range	1024–48750 (even number only)
Default Value	16000
Configuration File Reference	RTP_PORT_MIN (Page 250)

Maximum RTP Port Number

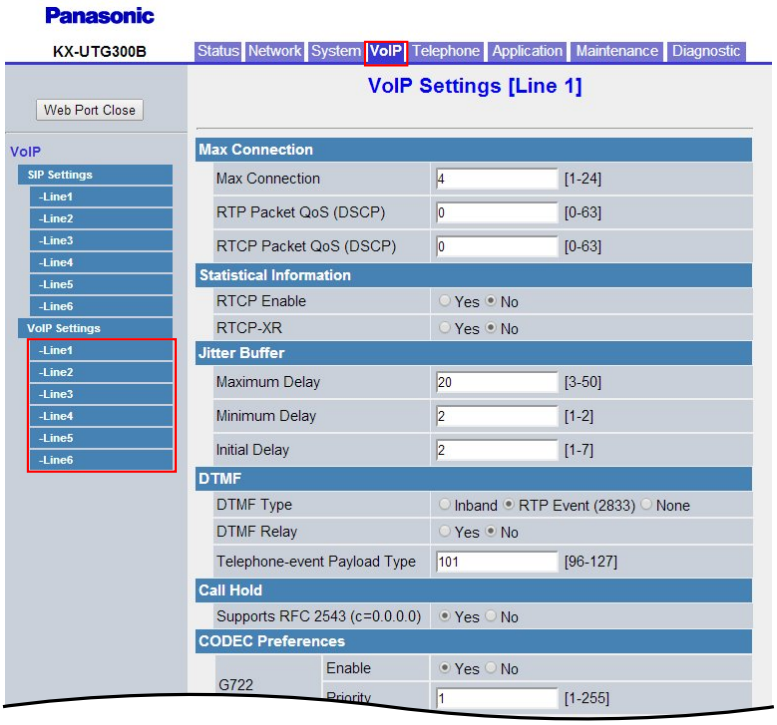
Description	Specifies the highest port number that the unit will use for RTP packets.
Value Range	1424–49150 (even number only)
Default Value	20000

Configuration File Reference	RTP_PORT_MAX (Page 250)

4.5.3 VoIP Settings [Line 1]–[Line n]

This screen allows you to change the VoIP settings that are specific to each line. The number of lines available varies depending on the phone being used, as follows:

- KX-UTG200: 1-4
- KX-UTG300: 1–6



4.5.3.1 Max Connection

Max Connection

Description	Specifies the maximum number of connections for the line.
Value Range	1–24
Default Value	4
Configuration File Reference	MAX_CONNECTION (Page 257)

RTP Packet QoS (DSCP)

Description	Selects the DSCP level of DiffServ applied to RTP packets.

Value Range	0–63
Default Value	0
Configuration File Reference	DSCP_RTP (Page 254)

RTCP Packet QoS (DSCP)

Description	Selects the DSCP level of DiffServ applied to RTCP packets.
Value Range	0–63
Default Value	0
Configuration File Reference	DSCP_RTCP (Page 254)

4.5.3.2 Statistical Information

RTCP Enable

Description	Selects whether to enable or disable RTCP (Real-Time Transport Control Protocol). For details, refer to RFC 3550.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	RTCP_ENABLE (Page 255)

RTCP-XR

Description	Selects whether to enable or disable RTCP-XR (RTP Control Protocol Extended Reports).
Value Range	• Yes • No
Default Value	No
Configuration File Reference	RTCPXR_ENABLE (Page 255)

4.5.3.3 Jitter Buffer

Maximum Delay

Description	Specifies the maximum delay, in 10-millisecond units, of the jitter buffer.

Value Range	3–50 (× 10 ms) **Note** • This setting is subject to the following conditions: – This value must be greater than **[Initial Delay]** – This value must be greater than **[Minimum Delay]** – **[Initial Delay]** must be greater than or equal to **[Minimum Delay]**
Default Value	20 (× 10 ms)
Configuration File Reference	MAX_DELAY (Page 254)

Minimum Delay

Description	Specifies the minimum delay, in 10-millisecond units, of the jitter buffer.
Value Range	1 or 2 (× 10 ms) **Note** • This setting is subject to the following conditions: – This value must be less than or equal to **[Initial Delay]** – This value must be less than **[Maximum Delay]** – **[Maximum Delay]** must be greater than **[Initial Delay]**
Default Value	2 (× 10 ms)
Configuration File Reference	MIN_DELAY (Page 255)

Initial Delay

Description	Specifies the initial delay, in 10-millisecond units, of the jitter buffer.
Value Range	1–7 (× 10 ms) **Note** • This setting is subject to the following conditions: – This value must be greater than or equal to **[Minimum Delay]** – This value must be less than **[Maximum Delay]**
Default Value	2 (× 10 ms)
Configuration File Reference	NOM_DELAY (Page 255)

4.5.3.4 DTMF

DTMF Type

Description	Selects the method for transmitting DTMF (Dual Tone Multi-Frequency) tones.

Value Range	• Inband • RTP Event (2833) **Note** • If you select RTP Event (2833), DTMF tones will be sent via 2833 event.
Default Value	RTP Event (2833)
Configuration File Reference	DTMF_MODE (Page 256)

DTMF Relay

Description	Specifies whether DTMF relay is enabled or disabled.
Value Range	• Yes • No **Note** • When set to "Yes", DTMF tones will be sent through SDP regardless of the DTMF Type setting.
Default Value	No

Telephone-event Payload Type

Description	Specifies the RFC 2833 payload type for DTMF tones.
Value Range	96–127
Default Value	101
Configuration File Reference	TELEVENT_PAYLOAD (Page 256)

4.5.3.5 Call Hold

Supports RFC 2543 (c=0.0.0.0)

Description	Selects whether to enable the RFC 2543 Call Hold feature on this line.
Value Range	• Yes • No **Note** • If you select **[Yes]**, the "c=0.0.0.0" syntax will be set in SDP when sending a re-INVITE message to hold the call. If you select **[No]**, the "c=x.x.x.x" syntax will be set in SDP.
Default Value	Yes
Configuration File Reference	RFC2543_HOLD_ENABLE (Page 257)

4.5.3.6 CODEC Preferences

G722 (Enable)

Description	Selects whether to enable the G.722 codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLE_G722 (Page 251)

G722 (Priority)

Description	Specifies the numerical order usage priority for the G.722 codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITY_G722 (Page 252)

PCMA (Enable)

Description	Selects whether to enable the PCMA codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLE_PCMA (Page 252)

PCMA (Priority)

Description	Specifies the numerical order usage priority for the PCMA codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITY_PCMA (Page 253)

G726–32 (Enable)

Description	Selects whether to enable the G.726-32 codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes

Configuration File Reference	CODEC_ENABLE_G726_32 (Page 252)

G726–32 (Priority)

Description	Specifies the numerical order usage priority for the G.726-32 codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITY_G726_32 (Page 253)

G729A (Enable)

Description	Selects whether to enable the G.729A codec for voice data transmission.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLE_G729A (Page 252)

G729A (Priority)

Description	Specifies the numerical order usage priority for the G.729A codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITY_G729A (Page 253)

G729A (Annexb)

Description	Selects whether to enable the G.729A B Annex codec for voice data transmission.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	CODEC_ANNEXB_G729A (Page 253)

PCMU (Enable)

Description	Selects whether to enable the PCMU codec for voice data transmission.

Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	CODEC_ENABLE_PCMU (Page 252)

PCMU (Priority)

Description	Specifies the numerical order usage priority for the PCMU codec.
Value Range	1–255
Default Value	1
Configuration File Reference	CODEC_PRIORITY_PCMU (Page 253)

4.5.3.7 NAT Identity

RTP Keep Alive Interval

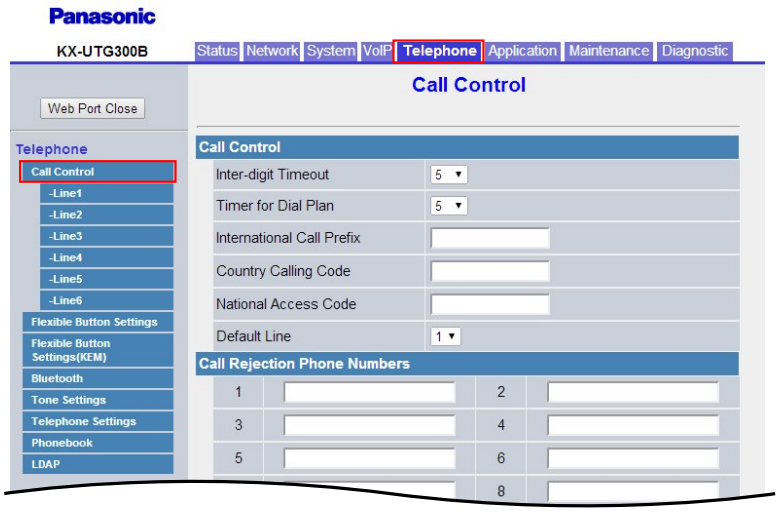
Description	Specifies the interval, in seconds, between transmissions of the Keep Alive packet to the unit in order to maintain the NAT binding information. **Note** • This setting is available only when **[Transport Protocol]** is set to **[UDP]**.
Value Range	0, 10–300 (0: Disable)
Default Value	0
Configuration File Reference	SIP_RTP_KA_INTVL (Page 276)

4.6 Telephone

This section provides detailed descriptions about all the settings classified under the **[Telephone]** tab.

4.6.1 Call Control

This screen allows you to configure various call features that are common to all lines.



4.6.1.1 Call Control

Inter-digit Timeout

Description	Specifies the length of time, in seconds, within which subsequent digits of a dial number must be dialed. When this timer expires after the last key was pressed, dialing will start.
Value Range	1–15
Default Value	5
Configuration File Reference	INTDIGIT_TIM (Page 228)

Timer for Dial Plan

Description	Specifies the length of time, in seconds, that the unit waits when a "T" or "t" has been entered in the dial plan.
Value Range	1–15
Default Value	5
Configuration File Reference	MACRODIGIT_TIM (Page 228)

International Call Prefix

Description	Specifies the number to be shown in the place of the first "+" symbol when the phone number for incoming international calls contains "+".

Value Range	Max. 8 characters (consisting of 0–9, *, and #)
Default Value	Not stored.
Configuration File Reference	INTERNATIONAL_ACCESS_CODE (Page 228)

Country Calling Code

Description	Specifies the country/area calling code to be used for comparative purposes when dialing a number from the incoming call log that contains a "+" symbol.
Value Range	Max. 8 characters (consisting of 0–9)
Default Value	Not stored.
Configuration File Reference	COUNTRY_CALLING_CODE (Page 228)

National Access Code

Description	When dialing a number from the incoming call log that contains a "+" symbol and the country calling code matches, the country calling code is removed and the national access code is added.
Value Range	Max. 8 characters (consisting of 0–9, *, and #)
Default Value	Not stored.
Configuration File Reference	NATIONAL_ACCESS_CODE (Page 229)

Default Line

Description	Specifies the line used to make an outgoing call when no line is specified in the dialing operation. **Note** • The available line number may vary depending on the type of the unit being used.
Value Range	1–4 (for KX-UTG200) 1–6 (for KX-UTG300)
Default Value	1
Configuration File Reference	DEFAULT_LINE (Page 231)

4.6.1.2 Call Rejection Phone Numbers

1–30

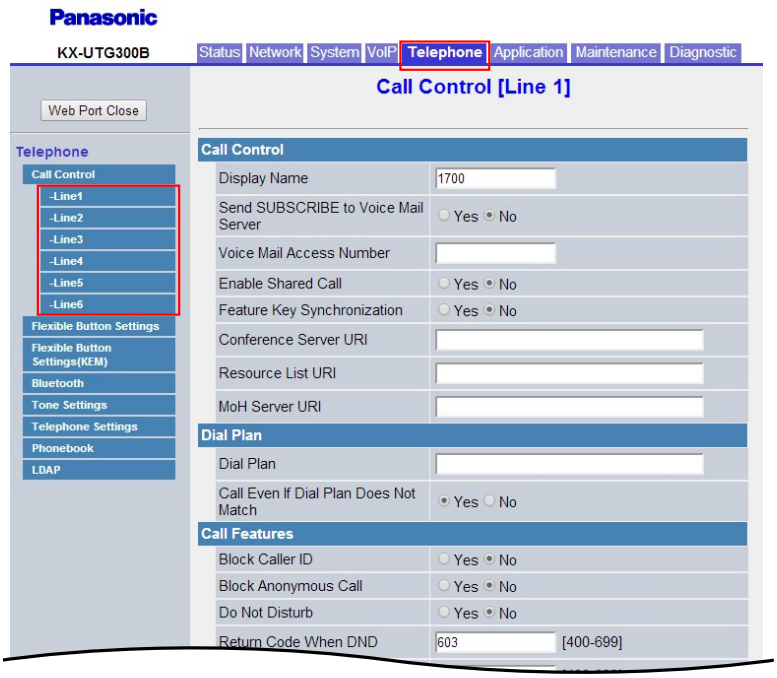
Description	Specifies the phone numbers to reject incoming calls from. A maximum of 30 phone numbers can be specified. **Note** • You can also configure this setting through the phone user interface. If these settings are changed through the phone user interface while being changed through the Web user interface, the settings made through the phone user interface will be overwritten by the settings made through the Web user interface.
Value Range	Max. 32 characters **Note** • Even if you specify nonconsecutive fields (e.g., fields 1, 5, and 30), they will be rearranged into consecutive fields after you save the settings (i.e., 1, 2, and 3). • If the phone number contains characters other than 0–9, *, #, and +, the number may not be rejected correctly.
Default Value	Not stored.

4.6.2 Call Control [Line 1]–[Line n]

This screen allows you to configure various call features that are specific to each line. The number of lines available varies depending on the phone being used, as follows:

- KX-UTG200: 1–4

- KX-UTG300: 1–6



4.6.2.1 Call Control

Display Name

Description	Specifies the name to display as the caller on the other party's phone when you make a call.
Value Range	Max. 24 characters **Note** • You can use Unicode characters for this setting.
Default Value	Not stored.
Configuration File Reference	DISPLAY_NAME (Page 258)

Send SUBSCRIBE to Voice Mail Server

Description	Specifies whether a SUBSCRIBE request is sent to the voice mail server. **Note** • Your phone system must support voice mail.
Value Range	• Yes • No

Default Value	No
Configuration File Reference	VM_SUBSCRIBE_ENABLE (Page 258)

Voice Mail Access Number

Description	Specifies the phone number used to access the voice mail server. **Note** • Your phone system must support voice mail.
Value Range	Max. 32 characters
Default Value	Not stored.
Configuration File Reference	VM_NUMBER (Page 259)

Enable Shared Call

Description	Selects whether to enable the Shared Call feature of the SIP server, which is used to share one line among the units. **Note** • You cannot set both **[Enable Shared Call]** and **[Feature Key Synchronization]** to **[Yes]** at the same time. • Availability depends on your phone system.
Value Range	• Yes • No **Note** • If you select **[Yes]**, the SIP server will control the line by using a shared-call signaling method. If you select **[No]**, the SIP server will control the line by using a standard signaling method.
Default Value	No
Configuration File Reference	SHARED_CALL_ENABLE (Page 260)

Feature Key Synchronization

Description	Selects whether to synchronize the feature key settings, configured via the Web user interface or phone user interface, between the unit and the portal server that is provided by your phone system dealer. **Note** • Even if you select **[Yes]**, this feature may not function properly if your phone system does not support it. Before you configure Feature Key Synchronization, consult your phone system dealer.

Value Range	• Yes • No
Default Value	No
Configuration File Reference	FWD_DND_SYNCHRO_ENABLE (Page 260)

Conference Server URI

Description	Specifies the Uniform Resource Identifier string for a conference server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:conference@example.com". **Note** • In a SIP URI, the user part ("conference" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 127 characters.
Value Range	Max. 195 characters
Default Value	Not stored.
Configuration File Reference	CONFERENCE_SERVER_URI (Page 258)

Resource List URI

Description	Specifies the Uniform Resource Identifier string for the resource list, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:user@example.com". For details, refer to RFC 4662. **Note** • In a SIP URI, the user part ("user" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 127 characters. • When the BLF feature is assigned to a flexible button, it may be necessary to specify this parameter depending on your phone system. For details about flexible buttons, see **6.3 Flexible Buttons**.
Value Range	Max. 195 characters (except ", &, ', :, ;, <, >, and space)
Default Value	Not stored.
Configuration File Reference	RESOURCELIST_URI (Page 261)

MoH Server URI

Description	Specifies the Uniform Resource Identifier string for a MoH (Music on Hold) server.
Value Range	Max. 195 characters

Default Value	Not stored.

4.6.2.2 Dial Plan

Dial Plan (max 1024 characters)

Description	Specifies a dial format, such as specific phone numbers, that control which numbers can be dialed or how to handle the call when making a call. For details, see **6.2 Dial Plan**.
Value Range	Max. 1024 characters **Note** • Entering more than 1024 characters in this field causes an error and the previous value remains effective.
Default Value	Not stored.
Configuration File Reference	DIAL_PLAN (Page 259)

Call Even If Dial Plan Does Not Match

Description	Selects whether to make a call even if the dialed number does not match any of the dial formats specified in **[Dial Plan]**.
Value Range	• Yes • No **Note** • If you select **[Yes]**, calls will be made even if the dialed number does not match the dial formats specified in **[Dial Plan]** (i.e., dial plan filtering is disabled). If you select **[No]**, calls will not be made if the dialed number does not match one of the dial formats specified in **[Dial Plan]** (i.e., dial plan filtering is enabled).
Default Value	Yes
Configuration File Reference	DIAL_PLAN_NOT_MATCH_ENABLE (Page 259)

4.6.2.3 Call Features

Block Caller ID

Description	Selects whether to make calls without transmitting the phone number to the called party. **Note** • Availability depends on your phone system.
Value Range	• Yes • No

Default Value	No

Block Anonymous Call

Description	Selects whether to reject incoming calls that do not show the caller's number.
Value Range	• Yes • No
Default Value	No

Do Not Disturb

Description	Selects whether to enable the Do Not Disturb feature for incoming calls. **Note** • If Do Not Disturb has been enabled on the server, the server rejects incoming calls and the unit does not receive any calls, even if you have selected **[No]** for this setting. • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.
Value Range	• Yes • No
Default Value	No

Return Code When DND

Description	Specifies the return code sent when the unit is in Do Not Disturb mode.
Value Range	400–699
Default Value	403
Configuration File Reference	SIP_RESPONSE_CODE_DND (Page 281)

Return Code When Refuse

Description	Specifies the return code sent when the unit refuses a call.
Value Range	400–699
Default Value	603
Configuration File Reference	SIP_RESPONSE_CODE_CALL_REJECT (Page 281)

Auto Answer

Description	Specifies whether auto answer is enabled or disabled.
Value Range	• Yes • No
Default Value	No

4.6.2.4 Call Forward

Unconditional (Enable Call Forward)

Description	Selects whether to forward all incoming calls to a specified destination. **Note** • If Do Not Disturb has been enabled on the server, the server rejects incoming calls and the unit does not receive any calls, even if you have selected **[Yes]** for this setting. • If you have selected **[Yes]** for this setting and Call Forward has been enabled on the server, but the forwarding destinations differ, incoming calls are forwarded to the destination set on the server. • If Call Forward has been enabled on the server, incoming calls are forwarded to the destination set on the server, even if you have selected **[No]** for this setting. • You can synchronize the Do Not Disturb and Call Forward settings from the Web user interface (→ see **[Feature Key Synchronization]** in **4.6.2.1 Call Control**) or through configuration file programming (→ see "**FWD_DND_SYNCHRO_ENABLE**" in **5.7.2 Per Line - Call Control Settings**). • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.
Value Range	• Yes • No
Default Value	No

Unconditional (Phone Number)

Description	Specifies the phone number of the destination to forward all incoming calls to. **Note** • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.

Value Range	Max. 32 characters **Note** • You cannot leave this field empty if **[Unconditional (Enable Call Forward)]** is set to **[Yes]**.
Default Value	Not stored.

Busy (Enable Call Forward)

Description	Selects whether to forward incoming calls to a specified destination when the line is in use. **Note** • If Do Not Disturb has been enabled on the server, the server rejects incoming calls and the unit does not receive any calls, even if you have selected **[Yes]** for this setting. • If you have selected **[Yes]** for this setting and Call Forward has been enabled on the server, but the forwarding destinations differ, incoming calls are forwarded to the destination set on the server. • If Call Forward has been enabled on the server, incoming calls are forwarded to the destination set on the server, even if you have selected **[No]** for this setting. • You can synchronize the Do Not Disturb and Call Forward settings from the Web user interface (→ see **[Feature Key Synchronization]** in **4.6.2.1 Call Control**) or through configuration file programming (→ see "**FWD_DND_SYNCHRO_ENABLE**" in **5.7.2 Per Line - Call Control Settings**). • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.
Value Range	• Yes • No
Default Value	No

Busy (Phone Number)

Description	Specifies the phone number of the destination to forward calls to when the line is in use. **Note** • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.

Value Range	Max. 32 characters **Note** • You cannot leave this field empty if **[Busy (Enable Call Forward)]** is set to **[Yes]**.
Default Value	Not stored.

No Answer (Enable Call Forward)

Description	Selects whether to forward incoming calls to a specified destination when a call is not answered after it has rung a specified number of times. **Note** • If Do Not Disturb has been enabled on the server, the server rejects incoming calls and the unit does not receive any calls, even if you have selected **[Yes]** for this setting. • If you have selected **[Yes]** for this setting and Call Forward has been enabled on the server, but the forwarding destinations differ, incoming calls are forwarded to the destination set on the server. • If Call Forward has been enabled on the server, incoming calls are forwarded to the destination set on the server, even if you have selected **[No]** for this setting. • You can synchronize the Do Not Disturb and Call Forward from the Web user interface (→ see **[Feature Key Synchronization]** in **4.6.2.1 Call Control**) or through configuration file programming (→ see "**FWD_DND_SYNCHRO_ENABLE**" in **5.7.2 Per Line - Call Control Settings**). • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.
Value Range	• Yes • No
Default Value	No

No Answer (Phone Number)

Description	Specifies the phone number of the destination to forward calls to when a call is not answered after it has rung a specified number of times. **Note** • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.

Value Range	Max. 32 characters **Note** • You cannot leave this field empty if **[No Answer (Enable Call Forward)]** is set to **[Yes]**.
Default Value	Not stored.

No Answer (Ring Count)

Description	Specifies the number of times that an incoming call rings until the call is forwarded. **Note** • If you change this setting when **[Feature Key Synchronization]** is set to **[Yes]**, the change to this setting is not immediately applied on this screen. In this case, reload the screen to confirm that the change is applied.
Value Range	0, 2–20 (0: No ring)
Default Value	3

4.6.2.5 Call Park & Call Pickup

Call Park (Enable)

Description	Specifies whether call park is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	PARK_ENABLE (Page 264)

Call Park (Code)

Description	Specifies the code used for call park.
Value Range	Max. 32 characters (0-9, *, #)
Default Value	Not stored.
Configuration File Reference	PARK_CODE (Page 264)

Call Park Retrieve (Enable)

Description	Specifies whether call park retrieve is enabled or disabled.

Value Range	• Yes • No
Default Value	No
Configuration File Reference	PARK_RETRIEVE_ENABLE (Page 264)

Call Park Retrieve (Code)

Description	Specifies the code used for call park retrieve.
Value Range	Max. 32 characters (0-9, *, #)
Default Value	Not stored.
Configuration File Reference	PARK_RETRIEVE_CODE (Page 264)

Call Park Subscribe Enable

Description	Specifies whether call park subscribe is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	CALLPARK_SUBSCRIBE_ENABLE (Page 260)

Call Pickup (Enable)

Description	Specifies whether call pickup is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	PICKUP_ENABLE (Page 265)

Call Pickup (Code)

Description	Specifies the code used for call pickup.
Value Range	Max. 32 characters (0-9, *, #)
Default Value	Not stored.
Configuration File Reference	PICKUP_CODE (Page 265)

Group Pickup (Enable)

Description	Specifies whether group pickup is enabled or disabled.

Value Range	• Yes • No
Default Value	No
Configuration File Reference	GPICKUP_ENABLE (Page 265)

Group Pickup (Code)

Description	Specifies the code used for group pickup.
Value Range	Max. 32 characters (0-9, *, #)
Default Value	Not stored.
Configuration File Reference	GPICKUP_CODE (Page 265)

Directed Call Pickup (Enable)

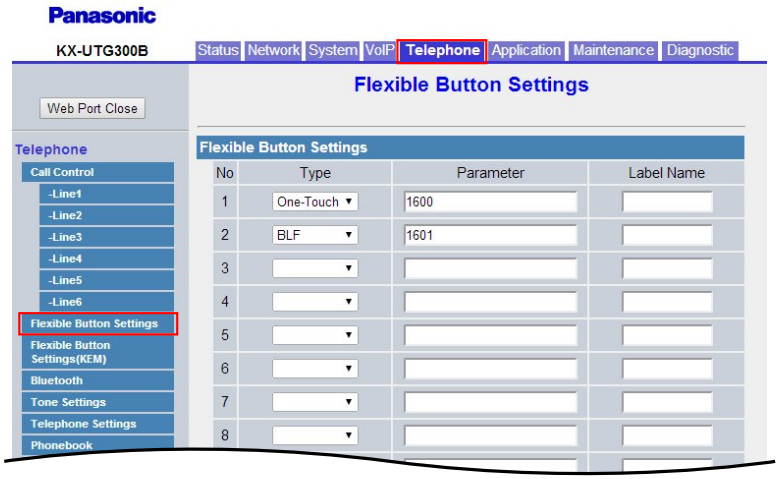
Description	Specifies whether directed call pickup is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	DPICKUP_ENABLE (Page 265)

Directed Call Pickup (Code)

Description	Specifies the code used for directed call pickup.
Value Range	Max. 32 characters (0-9, *, #)
Default Value	Not stored.
Configuration File Reference	DPICKUP_CODE (Page 266)

4.6.3 Flexible Button Settings

This screen allows you to configure various features for each flexible button. For more details, see **6.3 Flexible Buttons**.



4.6.3.1 Flexible Button Settings

Type (No. 1–24)

Description	Selects the feature to be assigned to each flexible button.
Value Range	• <Blank> • One-Touch • BLF
Default Value	<Blank>
Configuration File Reference	FLEX_BUTTON_FACILITY_ACT (Page 245)

Parameter (No. 1–24)

Description	Specifies the necessary values for the features assigned to flexible buttons.
Value Range	Max. 32 characters
Default Value	<Blank>
Configuration File Reference	FLEX_BUTTON_FACILITY_ARG (Page 245)

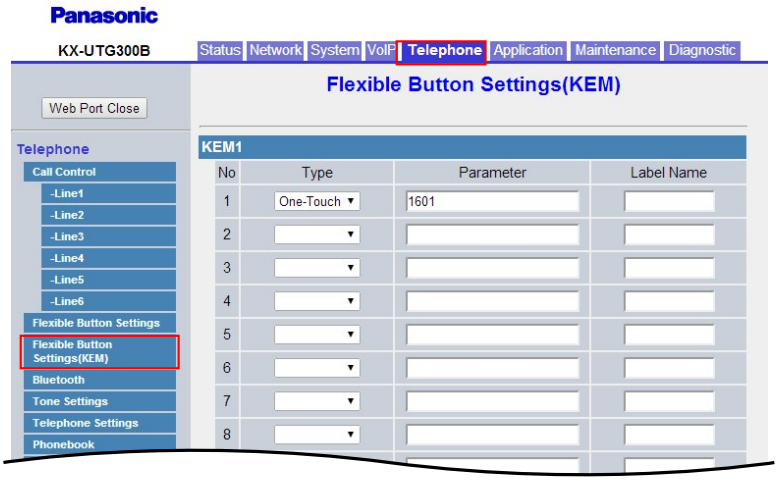
Label Name (No. 1–24)

Description	Specifies the message to be displayed on the screen when the flexible button is pressed.

Value Range	Max. 10 characters **Note** • You can use Unicode characters for this setting.
Default Value	<Blank>
Configuration File Reference	FLEX_BUTTON_LABEL (Page 246)

4.6.4 Flexible Button Settings (KEM) (KX-UTG300 only)

This screen allows you to configure various features for each flexible button of the KX-UTA336 Add-on Key Module (KEM). For more details, see Using Flexible Buttons with the KX-UTA336 Add-on Key Module (KX-UTG300 only) (Page 293).



4.6.4.1 KEM 1

Type (No. 1–36)

Description	Specifies the button type.
Value Range	• <Blank> • One-Touch • BLF
Default Value	<Blank>
Configuration File Reference	KEM1_BUTTON_FACILITY_ACT (Page 246)

Parameter (No. 1–36)

Description	Specifies the parameter assigned to the button.
Value Range	Max. 32 characters

Default Value	<Blank>
Configuration File Reference	KEM1_BUTTON_FACILITY_ARG (Page 246)

Label Name (No. 1–36)

Description	Specifies the label assigned to the button.
Value Range	Max. 10 characters **Note** • You can use Unicode characters for this setting.
Default Value	<Blank>
Configuration File Reference	KEM1_BUTTON_FACILITY_LABEL (Page 247)

4.6.4.2 KEM 2

Type (No. 1–36)

Description	Specifies the button type.
Value Range	• <Blank> • One-Touch • BLF
Default Value	<Blank>
Configuration File Reference	KEM2_BUTTON_FACILITY_ACT (Page 247)

Parameter (No. 1–36)

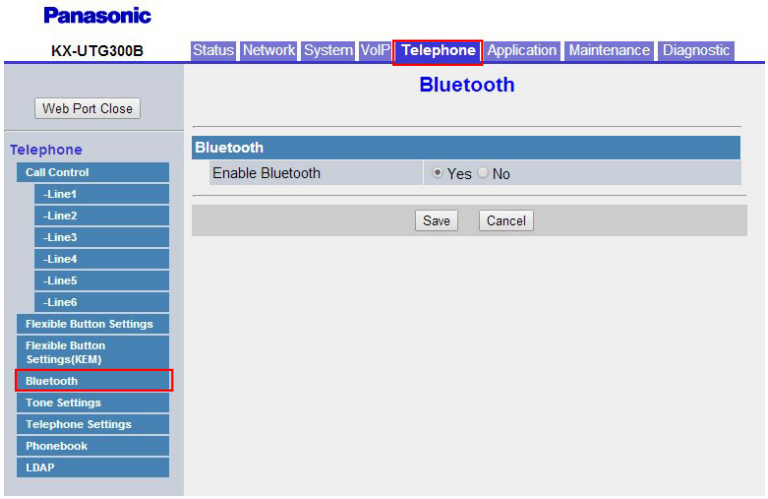
Description	Specifies the parameter assigned to the button.
Value Range	Max. 32 characters
Default Value	<Blank>
Configuration File Reference	KEM2_BUTTON_FACILITY_ARG (Page 247)

Label Name (No. 1–36)

Description	Specifies the label assigned to the button.
Value Range	Max. 10 characters **Note** • You can use Unicode characters for this setting.
Default Value	<Blank>
Configuration File Reference	KEM2_BUTTON_FACILITY_LABEL (Page 247)

4.6.5 Bluetooth (KX-UTG300 only)

This screen allows you to enable or disable Bluetooth settings.



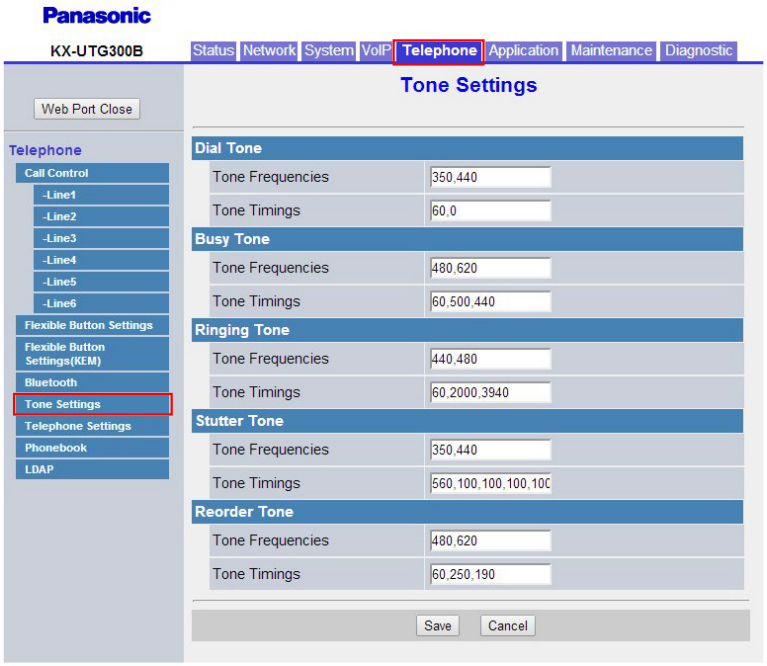
4.6.5.1 Bluetooth

Enable Bluetooth

Description	Specifies whether the unit's Bluetooth feature is enabled or disabled.
Value Range	• Yes • No
Default Value	No

4.6.6 Tone Settings

This screen allows you to configure the dual-tone frequencies and ringtone patterns of each tone.



4.6.6.1 Dial Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of dial tones using 2 whole numbers separated by a comma.
Value Range	1–9 characters 0, 200–2000 (0: No tone) **Note** • If the value for this setting is "350,440", the unit will use a mixed signal of a 350 Hz tone and a 440 Hz tone.
Default Value	350,440
Configuration File Reference	DIAL_TONE1_FRQ (Page 235)

Tone Timings

Description	Specifies the pattern, in milliseconds, of dial tones using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • The unit will not play the tone for the duration of the first value, play it for the duration of the second value, stop it for the duration of the third value, play it again for the duration of the fourth value, and so on. The whole sequence will then repeat. For example, if the value for this setting is "100,100,100,0", the unit will not play the tone for 100 ms, play it for 100 ms, stop it for 100 ms, and then play it continuously. • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	1–60 characters 0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	60,0
Configuration File Reference	DIAL_TONE1_TIMING (Page 235)

4.6.6.2 Busy Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of busy tones using 2 whole numbers separated by a comma.
Value Range	1–9 characters 0, 200–2000 (0: No tone)
Default Value	480,620
Configuration File Reference	BUSY_TONE_FRQ (Page 237)

Tone Timings

Description	Specifies the pattern, in milliseconds, of busy tones using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	1–60 characters 0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.

Default Value	60,500,440
Configuration File Reference	BUSY_TONE_TIMING (Page 237)

4.6.6.3 Ringing Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of ringback tones using 2 whole numbers separated by a comma.
Value Range	1–9 characters 0, 200–2000 (0: No tone)
Default Value	440,480
Configuration File Reference	RINGBACK_TONE_FRQ (Page 238)

Tone Timings

Description	Specifies the pattern, in milliseconds, of ringback tones using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	1–60 characters 0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	60,2000,3940
Configuration File Reference	RINGBACK_TONE_TIMING (Page 238)

4.6.6.4 Stutter Tone

Tone Frequencies

Description	Specifies the dual-tone frequencies, in hertz, of stutter dial tones to notify that a voice mail is waiting, using 2 whole numbers separated by a comma.
Value Range	1–9 characters 0, 200–2000 (0: No tone)
Default Value	350,440
Configuration File Reference	DIAL_TONE4_FRQ (Page 239)

Tone Timings

Description	Specifies the pattern, in milliseconds, of stutter dial tones to notify that a voice mail is waiting, using up to 22 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 560 milliseconds or more for the first value (off 1).
Value Range	1–132 characters 0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	560,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,0
Configuration File Reference	DIAL_TONE4_TIMING (Page 239)

4.6.6.5 Reorder Tone

Tone Frequencies

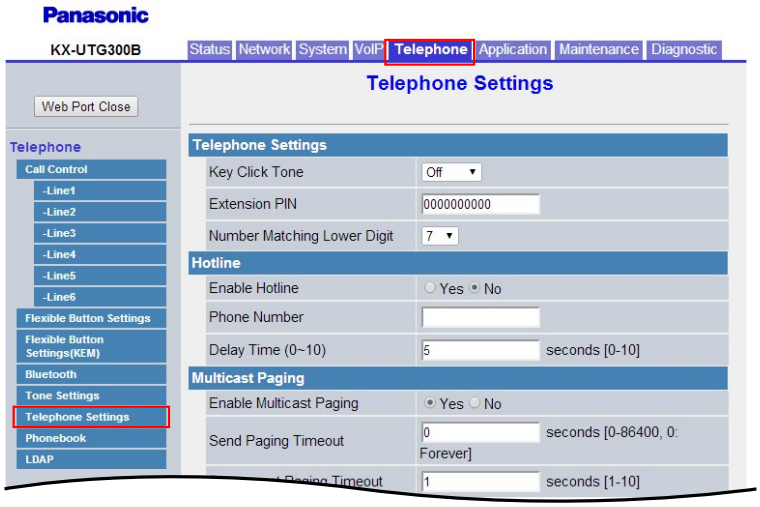
Description	Specifies the dual-tone frequencies, in hertz, of reorder tones using 2 whole numbers separated by a comma.
Value Range	1–9 characters 0, 200–2000 (0: No tone)
Default Value	480,620
Configuration File Reference	REORDER_TONE_FRQ (Page 240)

Tone Timings

Description	Specifies the pattern, in milliseconds, of reorder tones using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	1–60 characters 0–16000 (0: Infinite time)
Default Value	60,250,190 **Note** • Avoid setting 1–50 for any of the values.
Configuration File Reference	REORDER_TONE_TIMING (Page 241)

4.6.7 Telephone Settings

This screen allows you to configure various telephone settings.



4.6.7.1 Telephone Settings

Key Click Tone

Description	Selects whether a tone is heard in response to key presses.
Value Range	• High • Middle • Low • Off
Default Value	High
Configuration File Reference	KEY_PAD_TONE (Page 229)

Extension PIN

Description	Specifies the Personal Identification Number (PIN) of the extension. This is used to lock access to the call log and phonebook list. For details, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).
Value Range	Max. 10 digits
Default Value	0000000000
Configuration File Reference	EXTENSION_PIN (Page 231)

Number Matching Lower Digit

Description	Specifies the minimum number of digits with which to match a phonebook entry with an incoming call's caller ID. To specify exact matching of entire numbers only, specify "0".
Value Range	0–15
Default Value	7
Configuration File Reference	NUMBER_MATCHING_LOWER_DIGIT (Page 230)

4.6.7.2 Hotline

Enable Hotline

Description	Specifies whether the hotline feature is enabled or disabled. When enabled, the unit dials the programmed phone number automatically when the handset is lifted, the speakerphone button is pressed, etc.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	HOT_LINE_ENABLE (Page 234)

Phone Number

Description	Specifies the phone number assigned to the hotline feature.
Value Range	Max. 32 characters
Default Value	Not stored.
Configuration File Reference	HOT_LINE_NUMBER (Page 234)

Delay Time (0-10)

Description	Specifies the delay time for the hotline feature.
Value Range	0–10
Default Value	5
Configuration File Reference	HOT_LINE_DELAY_TIME (Page 234)

4.6.7.3 Multicast Paging

Enable Multicast Paging

Description	Specifies whether multicast paging is enabled or disabled.

Value Range	• Yes • No
Default Value	No
Configuration File Reference	MPAGE_ENABLE (Page 233)

Send Paging Timeout

Description	Specifies the send paging timeout for multicast paging.
Value Range	0–86400, 0: Forever
Default Value	0
Configuration File Reference	MPAGE_SEND_TIMER (Page 233)

Disconnect Paging Timeout

Description	Specifies the disconnect paging timeout for multicast paging.
Value Range	1–10
Default Value	1
Configuration File Reference	MPAGE_DISC_TIM (Page 234)

Paging Codec

Description	Specifies the codec used for multicast paging.
Value Range	• G722 • PCMA • G726-32 • G729A • PCMU
Default Value	G722
Configuration File Reference	MPAGE_CODEC (Page 233)

Paging DND

Description	Specifies whether paging DND is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	MPAGE_DND_ENABLE (Page 234)

Address (No. 1-10)

Description	Specifies the addresses used for multicast paging.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	MPAGE_ADDR (Page 232)

Port (No. 1-10)

Description	Specifies the port used for multicast paging.
Value Range	0–65535
Default Value	0
Configuration File Reference	MPAGE_PORT (Page 232)

Priority (No. 1-10)

Description	Specifies the priority used for multicast paging.
Value Range	1–11
Default Value	11
Configuration File Reference	MPAGE_PRIORITY (Page 232)

Label (No. 1-10)

Description	Specifies the label used for multicast paging.
Value Range	Max. 24 characters
Default Value	Not stored.
Configuration File Reference	MPAGE_ LABEL (Page 232)

Send Paging (No. 1-10)

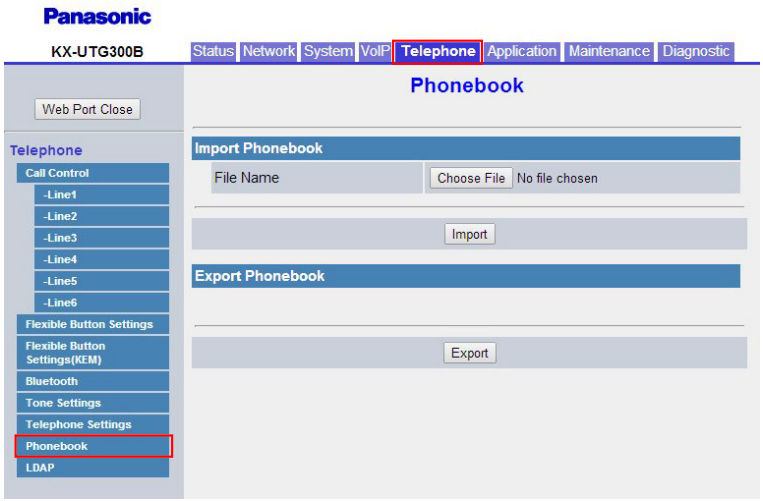
Description	Enables or disables multicast paging for the specified address.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	MPAGE_SEND_ENABLE (Page 233)

4.6.8 Phonebook

This screen allows you to import phonebook data from a PC and save it on the unit, and export the unit's phonebook data and save it on a PC. For details, see **6.1.1 Import/Export Operation**.

Note

- If the existing phonebook data has an entry with the same name and phone number as an imported entry, the imported entry is not added as a new entry.



4.6.8.1 Import Phonebook

File Name

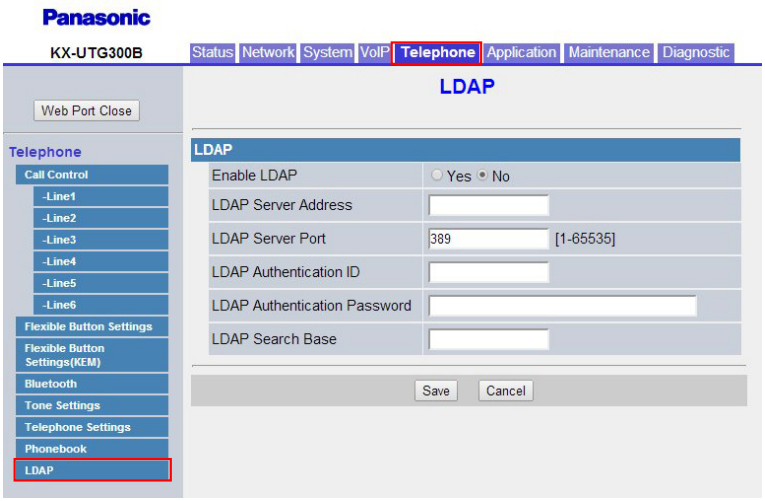
Description	Specifies the path of the file to import from the PC.
Value Range	No limitation **Note** • There are no limitations for the field entry. However, it is recommended that paths of less than 256 characters be used: longer paths may cause longer data transfer times and result in an internal error.
Default Value	Not stored.

4.6.8.2 Export Phonebook

For details on exporting, see **6.1.1 Import/Export Operation**.

4.6.9 LDAP

This screen allows you to change the LDAP settings.



4.6.9.1 LDAP

Enable LDAP

Description	Specifies whether LDAP is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	LDAP_ENABLE (Page 227)

LDAP Server Address

Description	Specifies the address used when accessing the LDAP server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	LDAP_SERVER (Page 226)

LDAP Server Port

Description	Specifies the port used when accessing the LDAP server.
Value Range	0–65535
Default Value	389
Configuration File Reference	LDAP_PORT (Page 226)

LDAP Authentication ID

Description	Specifies the authentication ID used when accessing the LDAP server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	LDAP_USER_DN (Page 227)

LDAP Authentication Password

Description	Specifies the password used when accessing the LDAP server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	LDAP_PASSWORD (Page 227)

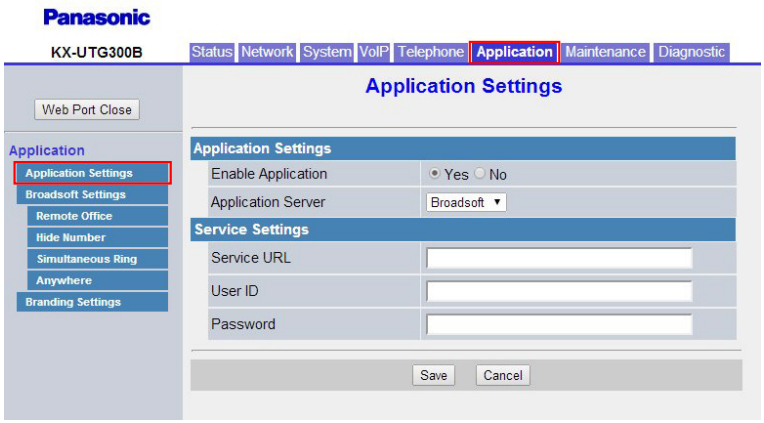
LDAP Search Base

Description	Specifies the search base used when querying the LDAP server.
Value Range	Max. 256 characters
Default Value	Not stored.
Configuration File Reference	LDAP_SEARCH_BASE_DN (Page 226)

4.7 Application

4.7.1 Application Settings

This screen allows you to configure the various URLs used with the XML application feature.



4.7.1.1 Application Settings

Enable Application

Description	Specifies whether the specified application is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	XMLAPP_ENABLE (Page 248)

Application Server

Description	Specifies the application.
Value Range	• Broadsoft • Switchvox
Default Value	Broadsoft
Configuration File Reference	XMLAPP_SERVER_TYPE (Page 248)

4.7.1.2 Service Settings

Service URL

Description	Specifies the URL used when accessing the specified application.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_SERVICEURL (Page 249)

User ID

Description	Specifies the user ID used when accessing the specified application.
Value Range	Max. 64 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_USERID (Page 248)

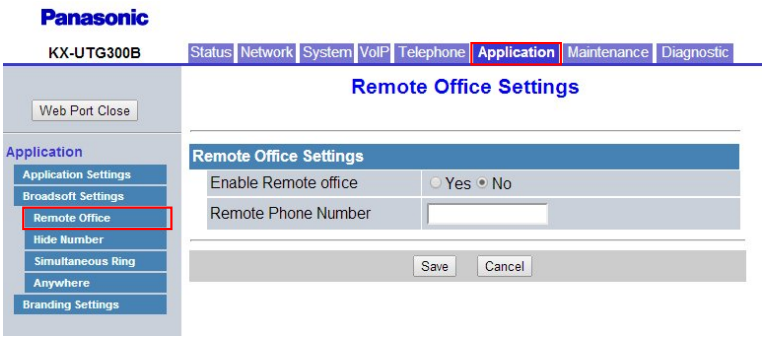
Password

Description	Specifies the password used when accessing the specified application.
Value Range	Max. 64 characters
Default Value	Not stored.

Configuration File Reference	XMLAPP_USERPASS (Page 248)

4.7.2 Broadsoft Settings [Remote Office]

This screen allows you to change the Broadsoft Remote Office settings.



4.7.2.1 Remote Office Settings

Enable Remote office

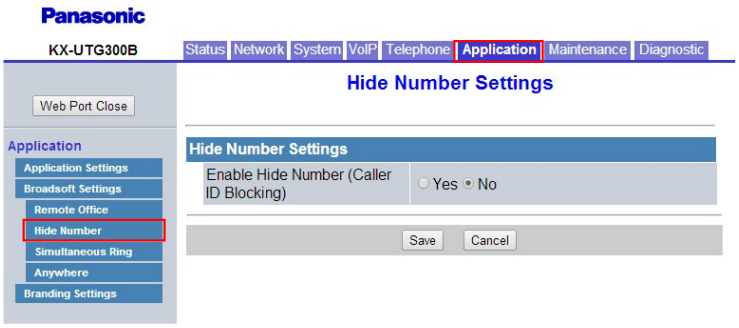
Description	Specifies whether Remote Office is enabled or disabled. Remote Office allows the user to use an off-site phone, such as a home phone, cell phone, hotel room phone, etc., as a business phone.
Value Range	• Yes • No
Default Value	No

Remote Phone Number

Description	Specifies the phone number used for Remote Office.
Value Range	Max. 128 characters
Default Value	Not stored.

4.7.3 Broadsoft Settings [Hide Number]

This screen allows you to change the Broadsoft Hide Number settings.



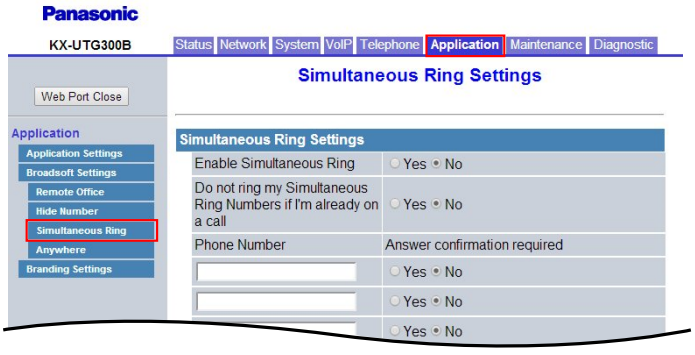
4.7.3.1 Hide Number Settings

Enable Hide Number (Caller ID Blocking)

Description	Specifies whether the hide number feature of Remote Office is enabled or disabled.
Value Range	• Yes • No
Default Value	No

4.7.4 Broadsoft Settings [Simultaneous Ring]

This screen allows you to change the Broadsoft Simultaneous Ring settings.



4.7.4.1 Simultaneous Ring Settings

Enable Simultaneous Ring

Description	Specifies whether the simultaneous ring feature of Remote Office is enabled or disabled.

Value Range	• Yes • No
Default Value	No

Do not ring my Simultaneous Ring Numbers if I'm already on a call

Description	Specifies whether the phone numbers specified for the simultaneous ring feature ring when the user is already on a call.
Value Range	• Yes • No
Default Value	No

Phone Number (1-10)

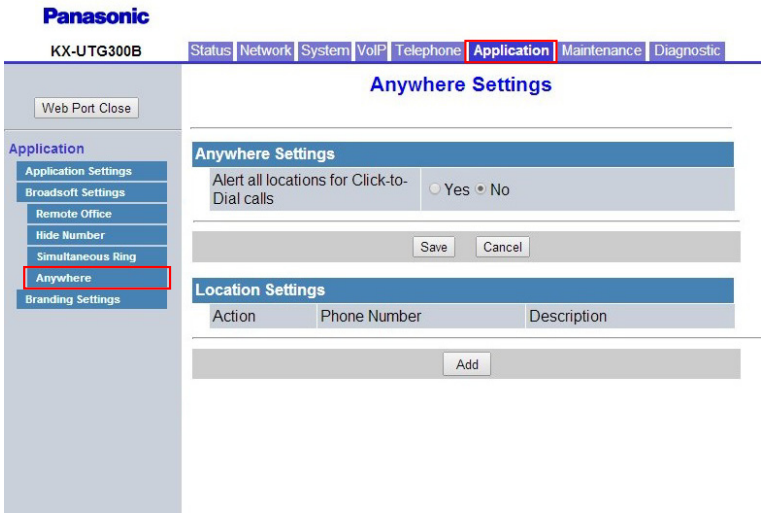
Description	Specifies the phone numbers used for the simultaneous ring feature.
Value Range	Max. 128 characters
Default Value	Not stored.

Answer confirmation required (1-10)

Description	Specifies whether answer confirmation is required when calling the simultaneous ring numbers.
Value Range	• Yes • No
Default Value	No

4.7.5 Broadsoft Settings [Anywhere]

This screen allows you to change the Broadsoft Anywhere settings.



4.7.5.1 Anywhere Settings

Alert all locations for Click-to-Dial calls

Description	Specifies whether all locations are alerted for click-to-dial calls.
Value Range	• Yes • No
Default Value	No

4.7.5.2 Location Settings

Action

Description	Indicates the action configured for the location.
Value Range	Not applicable.
Default Value	Not applicable.

Phone Number

Description	Indicates the phone number configured for the location.
Value Range	0-20
Default Value	Not applicable.

Description

Description	Indicates the description configured for the location.
Value Range	0-128
Default Value	Not applicable.

4.7.5.3 Phone Number

Enable this Location (1-10)

Description	Specifies whether each location is enabled or disabled.
Value Range	• Yes • No
Default Value	No

Phone Number (1-10)

Description	Specifies the phone number of each location.
Value Range	Max. 20 characters
Default Value	Not stored.

Description (1-10)

Description	Specifies a text description for each location.
Value Range	Max. 128 characters
Default Value	Not stored.

Enable Diversion Inhibitor

Description	Specifies whether to prevents calls that are redirected by a user from being redirected again by the caller.
Value Range	• Yes (prevents calls from being redirected again by the caller) • No (allows the caller to redirect calls)
Default Value	No

Require Answer Confirmation

Description	Specifies whether answer confirmation is required.

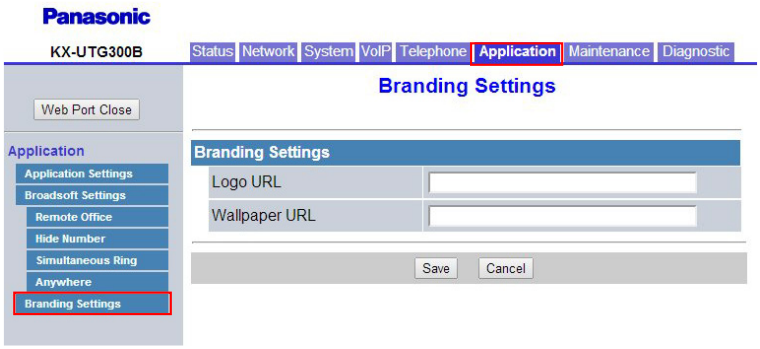
Value Range	• Yes • No
Default Value	No

Use BroadWorks-based Call Control Services

Description	Specifies whether BroadWorks-based call control services are used.
Value Range	• Yes • No
Default Value	No

4.7.6 Branding Settings

This screen allows you to change the Branding settings.



4.7.6.1 Branding Settings

Logo URL

Description	Specifies the URL of the logo which is downloaded from the application service.
Value Range	Max. 128 characters
Default Value	Not stored.
Configuration File Reference	XMLAPP_LOGO_URL (Page 249)

Wallpaper URL

Description	Specifies the URL of the wallpaper which is downloaded from the application service.
Value Range	Max. 128 characters
Default Value	Not stored.

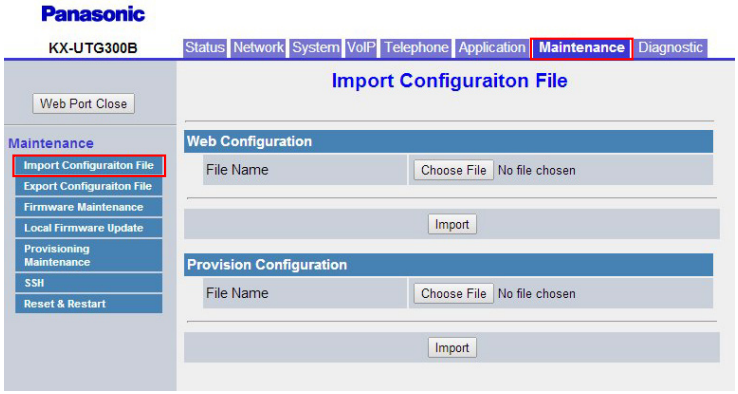
Configuration File Reference	XMLAPP_WALLPAPER_URL (Page 249)

4.8 Maintenance

This section provides detailed descriptions about all the settings classified under the **[Maintenance]** tab.

4.8.1 Import Configuraiton File

This screen allows you to import web user interface configuration settings and provisioning configuration settings.



4.8.1.1 Web Configuration

File Name

Description	Displays the name of the web configuration file selected to be imported. **Note** • Click [Choose File] to select the file to be imported and then click [Import] to import it.
Value Range	No limitation
Default Value	Not stored.

4.8.1.2 Provision Configuration

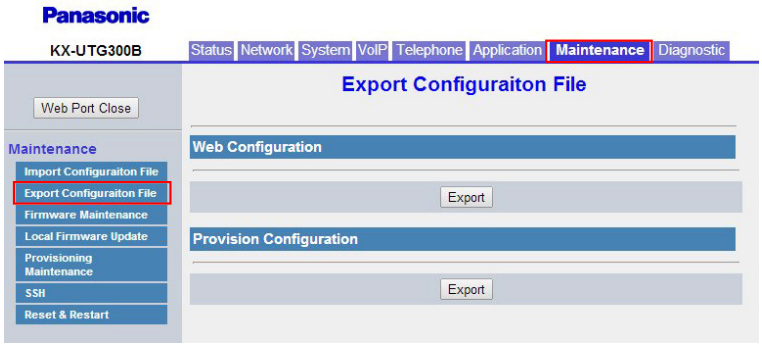
File Name

Description	Displays the name of the provisioning configuration file selected to be imported. **Note** • Click [Choose File] to select the file to be imported and then click [Import] to import it.

Value Range	No limitation
Default Value	Not stored.

4.8.2 Export Configuraiton File

This screen allows you to export web user interface configuration settings and provisioning configuration settings.



4.8.2.1 Web Configuration

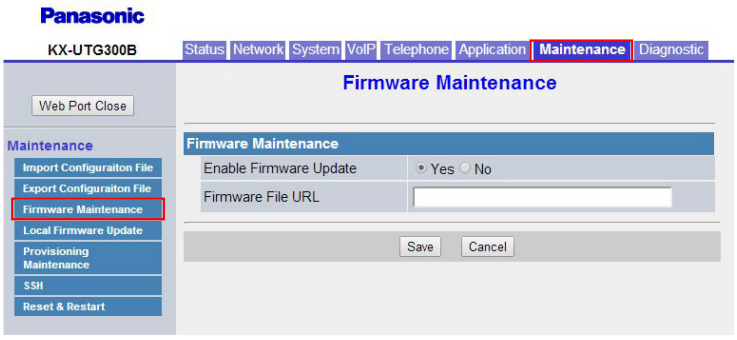
Click [Export] to export the web configuration file.

4.8.2.2 Provision Configuration

Click [Export] to export the provisioning configuration file.

4.8.3 Firmware Maintenance

This screen allows you to perform firmware updates automatically or manually.



4.8.3.1 Firmware Maintenance

Enable Firmware Update

Description	Selects whether to perform firmware updates when the unit detects a newer version of firmware. **Note** • Changing this setting may require restarting the unit. • Local firmware updates from the Web user interface (→ see **4.8.4 Local Firmware Update**) can be performed regardless of this setting.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	FIRM_UPGRADE_ENABLE (Page 210)

Firmware File URL

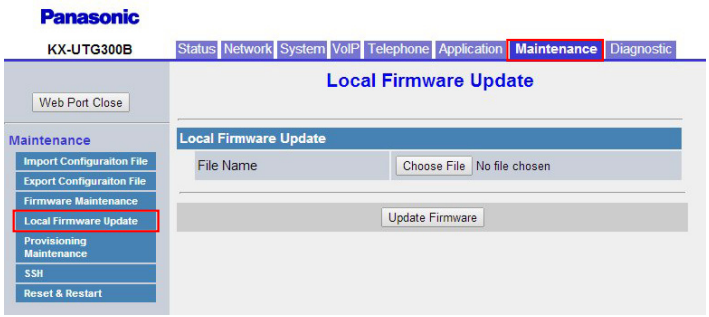
Description	Specifies the URL where the firmware file is stored. **Note** • This setting is available only when **[Enable Firmware Update]** is set to **[Yes]**. • Changing this setting may require restarting the unit.
Value Range	Max. 1024 characters
Default Value	Not stored.
Configuration File Reference	FIRM_FILE_PATH (Page 210)

4.8.4 Local Firmware Update

This screen allows you to manually update the unit's firmware from a PC by clicking **[Update Firmware]**.

Note

- After the firmware has been successfully updated, the unit will restart automatically.



4.8.4.1 Local Firmware Update

File Name

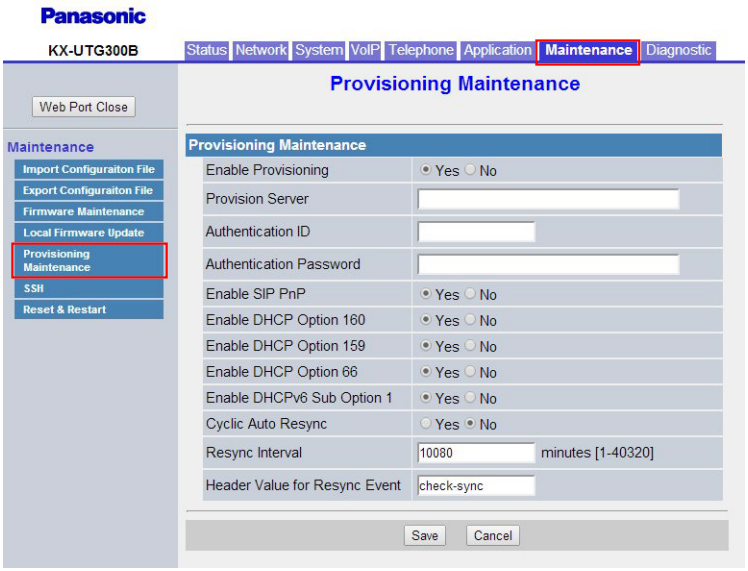
Description	Specifies the path of the firmware file to be imported.
Value Range	No limitation **Note** • There are no limitations for the field entry. However, it is recommended that paths of less than 256 characters be used: longer paths may cause longer data transfer times and result in an internal error.
Default Value	Not stored.

4.8.5 Provisioning Maintenance

This screen allows you to change the provisioning setup to download the configuration files from the provisioning server of your phone system.

Note

- Each unit can accept up to 3 configuration files. For details about provisioning, see **Section 2 Provisioning** .



4.8.5.1 Provisioning Maintenance

Enable Provisioning

Description	Selects whether the unit is automatically configured by downloading the configuration files from the provisioning server of your phone system.

Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	PROVISION_ENABLE (Page 211)

Provision Server

Description	Specifies the URL of the provisioning server.
Value Range	Max. 1024 characters
Default Value	Not stored.
Configuration File Reference	USR_PROV_SVR_URL (Page 217)

Authentication ID

Description	Specifies the authentication ID required to access the provisioning server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	USR_PROV_SVR_AUTH_ID (Page 218)

Authentication Password

Description	Specifies the password required to access the provisioning server.
Value Range	Max. 127 characters
Default Value	Not stored.
Configuration File Reference	USR_PROV_SVR_AUTH_PASSWORD (Page 218)

Enable SIP PnP

Description	Specifies whether the unit can use SIP PnP to discover the URL of the provisioning server.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	PROVISION_ENABLE (Page 211)

Enable DHCP Option 160

Description	Specifies whether the unit can use DHCP option 160 to discover the URL of the provisioning server.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	OPTION160_ENABLE (Page 212)

Enable DHCP Option 159

Description	Specifies whether the unit can use DHCP option 159 to discover the URL of the provisioning server.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	OPTION159_ENABLE (Page 212)

Enable DHCP Option 66

Description	Specifies whether the unit can use DHCP option 66 to discover the URL of the provisioning server.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	OPTION66_ENABLE (Page 212)

Enable DHCPv6 Sub Option 1

Description	Specifies whether the unit can use DHCPv6 sub-option 1 to discover the URL of the provisioning server.
Value Range	• Yes • No
Default Value	Yes
Configuration File Reference	IPV6_SUB_OPTION_ENABLE (Page 212)

Cyclic Auto Resync

Description	Selects whether the unit periodically checks for updates of configuration files.

Value Range	• Yes • No
Default Value	No
Configuration File Reference	CFG_CYCLIC (Page 216)

Resync Interval

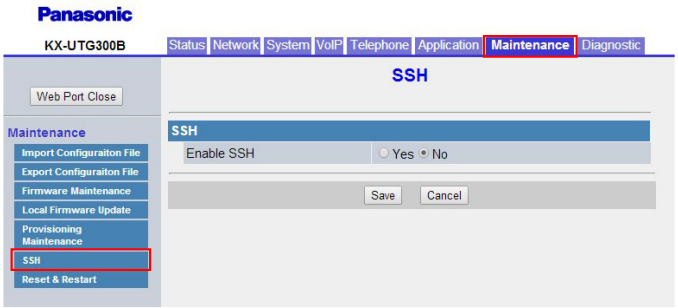
Description	Specifies the interval, in minutes, between periodic checks for updates of the configuration files.
Value Range	1–40320
Default Value	10080
Configuration File Reference	CFG_CYCLIC_INTVL (Page 216)

Header Value for Resync Event

Description	Specifies the value of the "Event" header sent from the SIP server to the unit so that the unit can access the configuration files on the provisioning server.
Value Range	Max. 15 characters **Note** • You cannot leave this field empty.
Default Value	check-sync
Configuration File Reference	CFG_RESYNC_FROM_SIP (Page 217)

4.8.6 SSH

This screen allows you to enable or disable the SSH settings.



4.8.6.1 SSH

Enable SSH

Description	Specifies whether SSH is enabled or disabled.
Value Range	• Yes • No
Default Value	No
Configuration File Reference	SSH_ACCESS_DISABLE (Page 283)

4.8.7 Reset & Restart

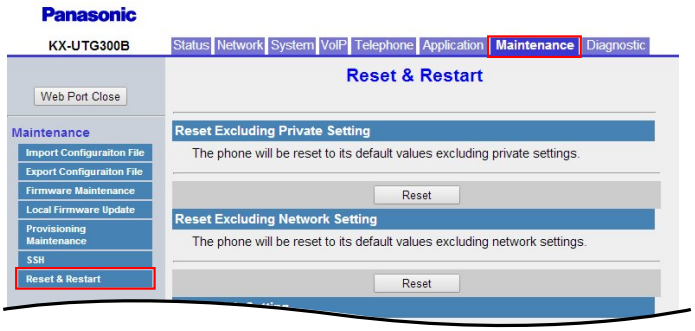
This screen allows you to reset various settings and also restart the unit.

Notice

- After resetting the settings, the unit will restart even if it is being accessed through the phone user interface, or on calls.

Note

- If you have changed the default password for the Administrator account and successfully reset the settings (the message "Save Complete!" is displayed), the next time you access the Web user interface, the authentication dialog box appears.



4.8.7.1 Reset Excluding Private Settings

Resets all settings excluding private settings. Private settings include ringtone volume, brightness, phonebook, and call history.

4.8.7.2 Reset Excluding Network Settings

Resets all settings excluding network settings. Private settings and Bluetooth settings (KX-UTG300 only) are also reset.

4.8.7.3 Reset Web Settings

Resets web-related settings.

4.8.7.4 Factory Reset

Resets all settings.

4.8.7.5 Restart

Restarts the unit.

Notice

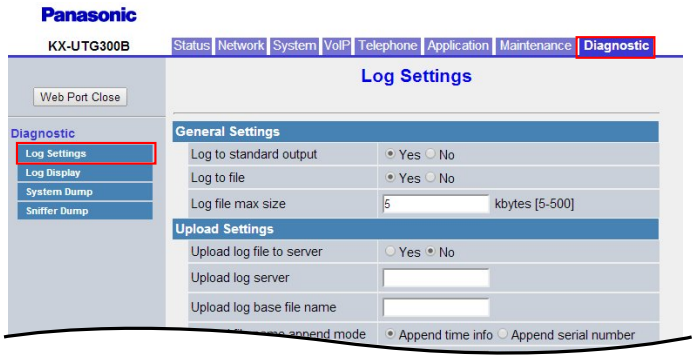
- The unit will restart even if it is being accessed through the phone user interface, or on calls.

4.9 Diagnostic

This screen allows you to export a file containing reports on various unit details and activities.

4.9.1 Log Settings

This screen allows you to change the log settings.



4.9.1.1 General Settings

Log to standard output

Description	Enables or disables output of logs to the standard output.
Value Range	• Yes • No
Default Value	Yes

Log to file

Description	Enables or disables output of logs to a file.
Value Range	• Yes • No
Default Value	Yes

Log file max size

Description	Specifies the maximum size of the log file.
Value Range	5–500
Default Value	5

4.9.1.2 Upload Settings

Upload log file to server

Description	Specifies whether the log file is uploaded to a file server.
Value Range	• Yes • No
Default Value	Yes

Upload log server

Description	Specifies the URL of the file server where the log file will be uploaded.
Value Range	Max. 256 characters
Default Value	Not stored.

Upload log base file name

Description	Specifies the base name of the log file.
Value Range	Max. 64 characters
Default Value	Not stored.

Upload file name append mode

Description	Specifies the information added to the base file name of uploaded log files.

Value Range	• Append time info • Append serial number
Default Value	Append time info

Upload period

Description	Specifies the time that passes until a log is uploaded.
Value Range	1–65535
Default Value	60

Upload immediately once file is full

Description	Specifies whether the log file is uploaded once it is full.
Value Range	• Yes • No
Default Value	Yes

4.9.1.3 Syslog Settings

Report log to sysLog server

Description	Specifies whether the log is reported to a sysLog server.
Value Range	• Yes • No
Default Value	No

SysLog server

Description	Specifies the URL of the sysLog server.
Value Range	Max. 256 characters
Default Value	Not stored.

SysLog port

Description	Specifies the port used to upload to the sysLog server.
Value Range	1–65535
Default Value	514

SysLog severity

Description	Specifies the level of severity for items that are reported to the sysLog server.
Value Range	• Debug • Info • Notice • Warn • Error • Critical • Alert • Emerg
Default Value	Error

4.9.1.4 Log Level Settings

All

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

CENTRAL

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL

Default Value	• WARN • ERR • FATAL

DHCPv4

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

DHCPv6

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

FHAL

Description	Specifies the type/severity of items that are logged.

Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

HTTP Server

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

HTTP CGI

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

I18N

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

IPPS

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

LLDPCDP

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL

Default Value	• WARN • ERR • FATAL

MCABBER_CLIENT

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

MCU

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

MMI

Description	Specifies the type/severity of items that are logged.

Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

NETWORK_CONTROL

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PCU

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PJCU-0

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PJCU-1

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PJCU-2

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL

Default Value	• WARN • ERR • FATAL

PJCU-3

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PJCU-4

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PJCU-5

Description	Specifies the type/severity of items that are logged.

Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PJCU-6

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PJCU-7

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PROVISION

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

SIP_PNP

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

SWITCH_CONF

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL

Default Value	• WARN • ERR • FATAL

UPGRADER

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

CONFIGSYS

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

DCM

Description	Specifies the type/severity of items that are logged.

Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

FDT

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

NTP

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

FILESAVER

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

FOS

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

DNS

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL

Default Value	• WARN • ERR • FATAL

FTPC

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

NET

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

SUU

Description	Specifies the type/severity of items that are logged.

Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

PHONE_BOOK

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

CALL_HISTORY

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

ACU

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

XML_APP

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

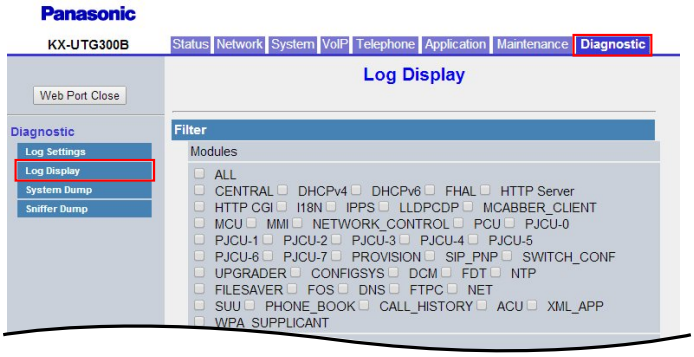
WPA_SUPPLICANT

Description	Specifies the type/severity of items that are logged.
Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL

Default Value	• WARN • ERR • FATAL

4.9.2 Log Display

This screen allows you to display the selected logs.



4.9.2.1 Filter

Modules

Description	Specifies the modules displayed in the log.

Value Range	• All • CENTRAL • DHCPv4 • DHCPv6 • FHAL • HTTP Server • HTTP CGI • I18N • IPPS • LLDPCDP • MCABBER_CLIENT • MCU • MMI • NETWORK_CONTROL • PCU • PJCU-0 • PJCU-1 • PJCU-2 • PJCU-3 • PJCU-4 • PJCU-5 • PJCU-6 • PJCU-7 • PROVISION • SIP_PNP • SWITCH_CONF • UPGRADER • CONFIGSYS • DCM • FDT • NTP • FILESAVER • FOS • DNS • FTPC • NET • SUU • PHONE_BOOK • CALL_HISTORY • ACU • XML_APP • WPA_SUPPLICANT
Default Value	All

Classes

Description	Specifies the classes of items displayed in the log.

Value Range	• VERB • IN • OUT • STATE • TIMEOUT • SEMA • WARN • ERR • FATAL
Default Value	• WARN • ERR • FATAL

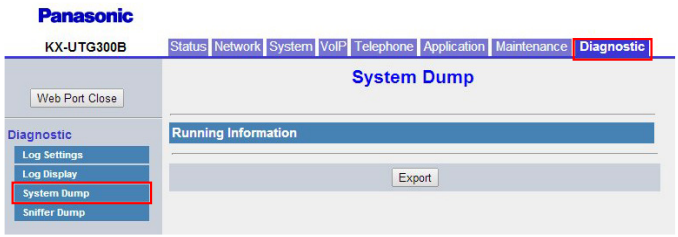
4.9.2.2 Log

Log

Description	Displays the content of the log.
Value Range	Not applicable.
Default Value	Not applicable.

4.9.3 System Dump

This screen allows you to export the running information for system dump.

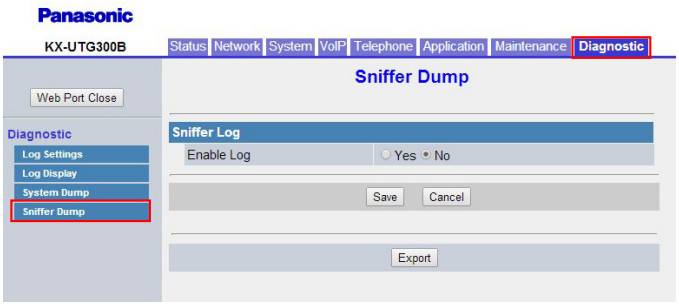


4.9.3.1 Running Information

Click [Export] to export a system dump of running information.

4.9.4 Sniffer Dump

This screen allows you to enable and disable sniffer dump as well as export sniffer dump information.



4.9.4.1 Sniffer Log

Enable Log

Description	Specifies whether the sniffer log is enabled or disabled.
Value Range	• Yes • No
Default Value	No

4.9.4 Sniffer Dump

Section 5

Configuration File Programming

This section provides information about the configuration parameters used in the configuration files.

5.1 Configuration File Parameter List

The following tables show all the parameters that can be programmed using configuration file programming. For details about each parameter, see the reference pages listed.
For details about configuration file specifications, see 2.4.3 Device Configuration File Types (Page 43).

System Settings

Category	Parameter Name	Ref.
Login Account Settings	ADMIN_ID	Page 202
	ADMIN_PASS	Page 202
	USER_ID	Page 202
	USER_PASS	Page 202
System Time Settings	TIME_ZONE	Page 203
	DST_ENABLE	Page 203
	DST_OFFSET	Page 204
	DST_START_MONTH	Page 204
	DST_START_ORDINAL_DAY	Page 204
	DST_START_DAY_OF_WEEK	Page 205
	DST_START_TIME	Page 205
	DST_STOP_MONTH	Page 206
	DST_STOP_ORDINAL_DAY	Page 206
	DST_STOP_DAY_OF_WEEK	Page 206
	DST_STOP_TIME	Page 207
Syslog Settings	SYSLOG_ADDR	Page 207
	SYSLOG_PORT	Page 207
	SYSLOG_SERVER_ENABLE	Page 208
	SYSLOG_SEVERITY	Page 208
KEM (KX-UTA336 Add-on Key Module) Update Settings	KEM_UPGRADE_ENABLE	Page 208
	KEM_VERSION	Page 208
	KEM_FILE_PATH	Page 209
	KEM_UPGRADE_AUTO	Page 209
Firmware Update Settings	FIRM_UPGRADE_ENABLE	Page 210
	FIRM_VERSION	Page 210
	FIRM_FILE_PATH	Page 210

Category	Parameter Name	Ref.
	FIRM_UPGRADE_AUTO	Page 211
Provisioning Settings	PROVISION_ENABLE	Page 211
	OPTION160_ENABLE	Page 212
	OPTION159_ENABLE	Page 212
	OPTION66_ENABLE	Page 212
	IPV6_SUB_OPTION_ENABLE	Page 212
	SIPPNP_ENABLE	Page 212
	CFG_STANDARD_FILE_PATH	Page 213
	CFG_PRODUCT_FILE_PATH	Page 213
	CFG_MASTER_FILE_PATH	Page 214
	CFG_FILE_KEY	Page 215
	CFG_FILE_KEY_LENGTH	Page 215
	CFG_CYCLIC	Page 216
	CFG_CYCLIC_INTVL	Page 216
	CFG_RTRY_INTVL	Page 216
	CFG_RESYNC_TIME	Page 216
	CFG_RESYNC_FROM_SIP	Page 217
	USR_PROV_SVR_URL	Page 217
	USR_PROV_SVR_AUTH_ID	Page 218
	USR_PROV_SVR_AUTH_PASSWORD	Page 218
	CFG_ROOT_CERTIFICATE_PATH1	Page 218
	CFG_ROOT_CERTIFICATE_PATH2	Page 218
	CFG_ROOT_CERTIFICATE_PATH3	Page 219

Network Settings

Category	Parameter Name	Ref.
IP Settings	IP_ADDR_MODE	Page 219
	ALLOW_AUTO_CFG	Page 220
	IP_MODE_PREF_SIGNAL	Page 220
	IP_MODE_PREF_MEDIA	Page 220
	IPV6_PRIVACY	Page 220

Category	Parameter Name	Ref.
LLDP-MED Settings	LLDP_TRAFFIC_TO_PC_PORT	Page 221
	LLDP_ASSTID	Page 221
	LLDP_POWER_PRIORITY	Page 221
CDP	CDP_TRAFFIC_TO_PC_PORT	Page 221
IEEE 802.1X Settings	IEEE8021X_ENABLE	Page 222
	IEEE8021X_AUTH_PRTCL	Page 222
	IEEE8021X_USER_ID	Page 222
	IEEE8021X_USER_PASS	Page 222
HTTP Settings	HTTPD_PORTOPEN_AUTO	Page 223
	HTTP_VER	Page 223
	HTTP_USER_AGENT	Page 223
	HTTP_SSL_VERIFY	Page 224
NTP Settings	NTP_MODE	Page 224
	NTP_ADDR	Page 225
	TIME_SYNC_INTVL	Page 225
	TIME_QUERY_INTVL	Page 225
STUN Settings	STUN_SERV_ADDR	Page 225
	STUN_SERV_PORT	Page 226
LDAP Settings	LDAP_SERVER	Page 226
	LDAP_PORT	Page 226
	LDAP_SEARCH_BASE_DN	Page 226
	LDAP_ENABLE	Page 227
	LDAP_USER_DN	Page 227
	LDAP_PASSWORD	Page 227

Telephone Settings

Category	Parameter Name	Ref.
Call Control Settings	FIRSTDIGIT_TIM	Page 227
	INTDIGIT_TIM	Page 228
	MACRODIGIT_TIM	Page 228
	INTERNATIONAL_ACCESS_CODE	Page 228
	COUNTRY_CALLING_CODE	Page 228

Category	Parameter Name	Ref.
	NATIONAL_ACCESS_CODE	Page 229
	HOLD_RECALL_TIM	Page 229
	AUTO_ANS_RING_TIM	Page 229
	ONHOOK_TRANSFER_ENABLE	Page 229
	KEY_PAD_TONE	Page 229
Telephone Settings	NUMBER_MATCHING_LOWER_DIGIT	Page 230
	DISPLAY_DATE_PATTERN	Page 230
	DISPLAY_TIME_PATTERN	Page 230
	DEFAULT_LINE	Page 231
	DEFAULT_LANGUAGE	Page 231
	EXTENSION_PIN	Page 231
	POUND_KEY_DELIMITER_ENABLE	Page 231
Multicast paging	MPAGE_ADDR	Page 232
	MPAGE_PORT	Page 232
	MPAGE_PRIORITY	Page 232
	MPAGE_ LABEL	Page 232
	MPAGE_SEND_ENABLE	Page 233
	MPAGE_ENABLE	Page 233
	MPAGE_SEND_TIMER	Page 233
	MPAGE_CODEC	Page 233
	MPAGE_DISC_TIM	Page 234
	MPAGE_DND_ENABLE	Page 234
Hotline Settings	HOT_LINE_ENABLE	Page 234
	HOT_LINE_NUMBER	Page 234
	HOT_LINE_DELAY_TIME	Page 234
Tone Settings	DIAL_TONE1_FRQ	Page 235
	DIAL_TONE1_GAIN	Page 235
	DIAL_TONE1_RPT	Page 235
	DIAL_TONE1_TIMING	Page 235
	DIAL_TONE2_FRQ	Page 236
	DIAL_TONE2_GAIN	Page 236
	DIAL_TONE2_RPT	Page 236
	DIAL_TONE2_TIMING	Page 239

Category	Parameter Name	Ref.
	BUSY_TONE_FRQ	Page 237
	BUSY_TONE_GAIN	Page 237
	BUSY_TONE_RPT	Page 237
	BUSY_TONE_TIMING	Page 237
	RINGBACK_TONE_FRQ	Page 238
	RINGBACK_TONE_GAIN	Page 238
	RINGBACK_TONE_RPT	Page 238
	RINGBACK_TONE_TIMING	Page 238
	DIAL_TONE4_FRQ	Page 239
	DIAL_TONE4_GAIN	Page 239
	DIAL_TONE4_RPT	Page 239
	DIAL_TONE4_TIMING	Page 239
	REORDER_TONE_FRQ	Page 240
	REORDER_TONE_GAIN	Page 240
	REORDER_TONE_RPT	Page 240
	REORDER_TONE_TIMING	Page 241
	HOLD_TONE_FRQ	Page 241
	HOLD_TONE_GAIN	Page 241
	HOLD_TONE_RPT	Page 241
	HOLD_TONE_TIMING	Page 242
	HOLD_ALARM_FRQ	Page 242
	HOLD_ALARM_GAIN	Page 242
	HOLD_ALARM_RPT	Page 242
	HOLD_ALARM_TIMING	Page 242
	CW_TONE1_FRQ	Page 243
	CW_TONE1_GAIN	Page 243
	CW_TONE1_RPT	Page 243
	CW_TONE1_TIMING	Page 243
	BELL_CORE_PATTERN1_TIMING	Page 244
	BELL_CORE_PATTERN2_TIMING	Page 244
	BELL_CORE_PATTERN3_TIMING	Page 244
	BELL_CORE_PATTERN4_TIMING	Page 245
	BELL_CORE_PATTERN5_TIMING	Page 245

Category	Parameter Name	Ref.
Flexible Button Settings	FLEX_BUTTON_FACILITY_ACT	Page 245
	FLEX_BUTTON_FACILITY_ARG	Page 245
	FLEX_BUTTON_LABEL	Page 246
KEM1 (KX-UTA336 Add-on Key Module 1) Button Settings	KEM1_BUTTON_FACILITY_ACT	Page 246
	KEM1_BUTTON_FACILITY_ARG	Page 246
	KEM1_BUTTON_FACILITY_LABEL	Page 247
KEM2 (KX-UTA336 Add-on Key Module 2) Button Settings	KEM2_BUTTON_FACILITY_ACT	Page 247
	KEM2_BUTTON_FACILITY_ARG	Page 247
	KEM2_BUTTON_FACILITY_LABEL	Page 247
XML Application Settings	XMLAPP_ENABLE	Page 248
	XMLAPP_USERID	Page 248
	XMLAPP_USERPASS	Page 248
	XMLAPP_SERVER_TYPE	Page 248
	XMLAPP_SERVICEURL	Page 249
	XMLAPP_LOGO_URL	Page 249
	XMLAPP_WALLPAPER_URL	Page 249

All Line Settings

Category	Parameter Name	Ref.
All Lines - Codec Settings	CODEC_G729_PARAM	Page 249
All Lines - VoIP Settings	RTP_PORT_MIN	Page 250
	RTP_PORT_MAX	Page 250
	RTP_PTIME	Page 250
	OUTBANDDTMF_VOL	Page 251
	INBANDDTMF_VOL	Page 251
All Lines - Call Control Settings	RETURN_VOL_SET_DEFAULT_ENABLE	Page 251

Per Line Settings

Category	Parameter Name	Ref.
Per Line - VoIP	CODEC_ENABLE_G722	Page 251

Category	Parameter Name	Ref.
	CODEC_ENABLE_PCMA	Page 252
	CODEC_ENABLE_G726_32	Page 252
	CODEC_ENABLE_G729A	Page 252
	CODEC_ENABLE_PCMU	Page 252
	CODEC_PRIORITY_G722	Page 252
	CODEC_PRIORITY_PCMA	Page 253
	CODEC_PRIORITY_G726_32	Page 253
	CODEC_PRIORITY_G729A	Page 253
	CODEC_PRIORITY_PCMU	Page 253
	CODEC_ANNEXB_G729A	Page 253
	DSCP_RTP	Page 254
	DSCP_RTCP	Page 254
	RTCP_INTVL	Page 254
	MAX_DELAY	Page 254
	MIN_DELAY	Page 255
	NOM_DELAY	Page 255
	RTCP_ENABLE	Page 255
	RTCPXR_ENABLE	Page 255
	RTP_CLOSE_ENABLE	Page 256
	DTMF_RELAY	Page 256
	DTMF_MODE	Page 256
	TELEVENT_PAYLOAD	Page 256
	RFC2543_HOLD_ENABLE	Page 257
	MAX_CONNECTION	Page 257
	VQM_PUBLISH	Page 257
	RTCPXR_IN_SDP_ENABLE	Page 257
Per Line - Call Control Settings	VM_SUBSCRIBE_ENABLE	Page 258
	CONFERENCE_SERVER_URI	Page 258
	DISPLAY_NAME	Page 258
	VM_NUMBER	Page 259
	DIAL_PLAN	Page 259
	DIAL_PLAN_NOT_MATCH_ENABLE	Page 259
	SHARED_CALL_ENABLE	Page 260

Category	Parameter Name	Ref.
	CALLPARK_SUBSCRIBE_ENABLE	Page 260
	FWD_DND_SYNCHRO_ENABLE	Page 260
	RESOURCELIST_URI	Page 261
	CW_ENABLE	Page 261
	BLOCK_CALLER_ID	Page 262
	BLOCK_ANONYMOUS_CALL	Page 262
	DND_ENABLE	Page 262
	FWD_UNCONDITIONAL_ENABLE	Page 262
	FWD_UNCONDITIONAL_NUMBER	Page 262
	FWD_BUSY_ENABLE	Page 263
	FWD_BUSY_NUMBER	Page 263
	FWD_NO_ANSWER_ENABLE	Page 263
	FWD_NO_ANSWER_NUMBER	Page 263
	FWD_NO_ANSWER_TIMEOUT	Page 264
	PARK_ENABLE	Page 264
	PARK_CODE	Page 264
	PARK_RETRIEVE_ENABLE	Page 264
	PARK_RETRIEVE_CODE	Page 264
	PICKUP_ENABLE	Page 265
	PICKUP_CODE	Page 265
	GPICKUP_ENABLE	Page 265
	GPICKUP_CODE	Page 265
	DPICKUP_ENABLE	Page 265
	DPICKUP_CODE	Page 266
	TALK_PACKAGE	Page 266
	HOLD_PACKAGE	Page 266
	EMERGENCY_NUMBER	Page 266
	ACD_ENABLE	Page 267
	ACD_CCSTATUS_ENABLE	Page 267
	ACD_REASONCODE_ACTIVE[1-10]	Page 267
	ACD_REASONCODEAME[1-10]	Page 267
	ACD_REASONCODE_VALUE[1-10]	Page 267
	HOTELING_ENABLE	Page 268

Category	Parameter Name	Ref.
Per Line - SIP Settings	PHONE_NUMBER	Page 268
	SIP_URI	Page 268
	LINE_ENABLE	Page 269
	SIP_USER_AGENT	Page 269
	SIP_AUTHID	Page 269
	SIP_PASS	Page 269
	SIP_SRC_PORT	Page 270
	SIP_PRXY_ADDR	Page 270
	SIP_PRXY_PORT	Page 270
	SIP_RGSTR_ADDR	Page 270
	SIP_RGSTR_PORT	Page 271
	SIP_SVCDOMAIN	Page 271
	REG_EXPIRE_TIME	Page 271
	REG_INTERVAL_RATE	Page 271
	SIP_SESSION_TIME	Page 272
	DSCP_SIP	Page 272
	SIP_TIMER_T1	Page 272
	SIP_TIMER_T2	Page 272
	SIP_TIMER_T4	Page 273
	SIP_FOVR_NORSP	Page 273
	SIP_FOVR_MAX	Page 273
	SIP_DNSSRV_ENA	Page 274
	SIP_UDP_SRV_PREFIX	Page 274
	SIP_100REL_ENABLE	Page 275
	SIP_INVITE_EXPIRE	Page 275
	SIP_PRSNC_ADDR	Page 275
	SIP_PRSNC_PORT	Page 275
	PORT_PUNCH_INTVL	Page 276
	SIP_ADD_RPORT	Page 276
	SIP_STUN_ENABLE	Page 276
	SIP_RTP_KA_INTVL	Page 276
	SIP_SUBS_EXPIRE	Page 277
	SUB_RTX_INTVL	Page 277

Category	Parameter Name	Ref.
	REG_RTX_INTVL	Page 277
	SIP_PRIVACY	Page 277
	SIP_OUTPROXY_ADDR	Page 277
	SIP_OUTPROXY_PORT	Page 278
	SIP_TRANSPORT	Page 278
	SIP_ANM_DISPNAME	Page 278
	SIP_ANM_USERNAME	Page 278
	SIP_ANM_HOSTNAME	Page 279
	SIP_DETECT_SSAF	Page 279
	SIP_TIMER_B	Page 279
	SIP_TIMER_D	Page 279
	SIP_TIMER_F	Page 280
	SIP_TIMER_H	Page 280
	SIP_TIMER_J	Page 280
	ADD_TRANSPORT_UDP	Page 280
	SIP_RESPONSE_CODE_DND	Page 281
	SIP_RESPONSE_CODE_CALL_REJECT	Page 281
	SIP_FOVR_MODE	Page 281
	SIP_403_REG_SUB_RTX	Page 281
	SIP_DUAL_STACK_SDP_MODE	Page 281
	AUTH_INCOMING_INVITE	Page 282
	SIP_RINGIN_TIMER	Page 282

SSH Settings

Category	Parameter Name	Ref.
SSH Settings	SSH_USER_NAME	Page 282
	SSH_PASSWORD	Page 282
	SSH_ACCESS_DISABLE	Page 283

5.2 General Information on the Configuration Files

5.2.1 Configuration File Parameters

The information on each parameter that can be written in a configuration file is shown in the tables below. The information includes parameter name (as the title of the table), value format, description, permitted value range, default value of each parameter, phone user interface reference, and Web user interface reference.

Note

- Configuration file templates and other information about configuration files are provided at the Panasonic website:
  http://www.panasonic.com/sip

Parameter Name

This is the system-predefined parameter name and cannot be changed.

Value Format

Each parameter value is categorized into Integer, Boolean, or String. Some parameters require a composite form such as "Comma-separated Integer" or "Comma-separated String".

- **Integer**: a numerical value, described as a sequence of numerical characters, optionally preceded by a "-" (minus)
  An empty string is not allowed.
- **Boolean**: "**Y**" or "**N**"
- **String**: sequence of alphanumerical characters
  For details about available characters, see **5.2.2 Characters Available for String Values**.
- **Comma-separated Integer**: a list of integers, separated by commas
  No space characters are allowed.
- **Comma-separated String**: a list of strings, separated by commas
  No space characters are allowed.

Description

Describes the details of the parameter.

Value Range

Indicates the permitted value range of the parameter.

Default Value

Indicates the factory default value of the parameter.
Actual default values may vary depending on your phone system dealer.

Phone User Interface Reference

Provides the reference page of the corresponding parameter in phone user interface programming.

Web User Interface Reference

Provides the reference page of the corresponding parameter in Web user interface programming.

5.2.2 Characters Available for String Values

Unless noted otherwise in "Value Range", only ASCII characters can be used for parameter values. Unicode characters can also be used in some parameter values.

Available ASCII characters are shown in the following table:

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
20	SP	!	"	#	$	%	&	'	(	)	*	+	,	-	.	/
30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
40	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
50	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
60	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
70	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	

5.2.3 XML Formatting Basics

Configuration parameters are stored in an XML format. The following are guidelines for using XML.

- XML files have a in hierarchical structured that uses elements and attributes to identify the structure and content of data.
- XML documents must contain a root element.
- All elements in an XML file can contain sub elements and attributes.
- An XML file starts at the root element and branches to the lowest level of elements.
- Elements are delimited by angle brackets. Elements begin with a start-tag: <element>, and end with an end-tag: </element>.
- Attributes are name-value pairs that occur inside start-tags after the element name.
- Comments begin with "<!--" and end with "-->". Comments can contain any data except the literal string "--".

Predefined Entities of XML

The following entities must be used when rendering the following characters in XML.

Character	Entity	Description
"	"	Quotation mark
&	&	Ampersand
'	'	Apostrophe
<	<	Less-than sign
>	>	Greater-than sign

5.3 System Settings

5.3.1 Login Account Settings

ADMIN_ID

Value Format	String
Description	Specifies the account ID used to access the Web user interface with the Administrator account.
Value Range	Max. 16 characters (except ", &, ', :, <, >, and space) **Note** • An empty string is not allowed.
Default Value	admin

ADMIN_PASS

Value Format	String
Description	Specifies the password to use to authenticate the Administrator account when logging in to the Web user interface.
Value Range	6–16 characters (except ", &, ', :, <, >, and space)
Default Value	adminpass
Web User Interface Reference	• Current Password (Page 95) • New Password (Page 95) • Confirm New Password (Page 95)

USER_ID

Value Format	String
Description	Specifies the account ID used to access the Web user interface with the User account.
Value Range	Max. 16 characters (except ", &, ', :, <, >, and space) **Note** • An empty string is not allowed.
Default Value	user

USER_PASS

Value Format	String

Description	Specifies the password to use to authenticate the User account when logging in to the Web user interface.
Value Range	6–16 characters (except ", &, ', :, <, >, and space)
Default Value	userpass
Web User Interface Reference	• Current Password (Page 96) • New Password (Page 96) • Confirm New Password (Page 97)

5.3.2 System Time Settings

TIME_ZONE

Value Format	Integer
Description	Specifies the offset of local standard time from UTC (GMT), in minutes.
Value Range	-720–780 **Note** • Only the following values are available: -720 (GMT -12:00), -660 (GMT -11:00), -600 (GMT -10:00), -540 (GMT -09:00), -480 (GMT -08:00), -420 (GMT -07:00), -360 (GMT -06:00), -300 (GMT -05:00), -240 (GMT -04:00), -210 (GMT -03:30), -180 (GMT -03:00), -120 (GMT -02:00), -60 (GMT -01:00), 0 (GMT), 60 (GMT +01:00), 120 (GMT +02:00), 180 (GMT +03:00), 210 (GMT +03:30), 240 (GMT +04:00), 270 (GMT +04:30), 300 (GMT +05:00), 330 (GMT +05:30), 345 (GMT +05:45), 360 (GMT +06:00), 390 (GMT +06:30), 420 (GMT +07:00), 480 (GMT +08:00), 540 (GMT +09:00), 570 (GMT +09:30), 600 (GMT +10:00), 660 (GMT +11:00), 720 (GMT +12:00), 780 (GMT +13:00) • If your location is west of Greenwich (0 [GMT]), the value should be minus. For example, the value for New York City, U.S.A. is "-300" (Eastern Standard Time being 5 hours behind GMT). • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Default Value	0
Web User Interface Reference	Time Zone (Page 99)

DST_ENABLE

Value Format	Boolean

Description	Specifies whether to enable DST (Summer Time). **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	• **Y** (Enable DST [Summer Time]) • **N** (Disable DST [Summer Time])
Default Value	**N**
Web User Interface Reference	Enable DST (Page 99)

DST_OFFSET

Value Format	Integer
Description	Specifies the amount of time, in minutes, to change the time when "**DST_ENABLE**" is set to "**Y**". **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	0–720 **Note** • This parameter is usually set to "60".
Default Value	60
Web User Interface Reference	DST Offset (Page 100)

DST_START_MONTH

Value Format	Integer
Description	Specifies the month in which DST (Summer Time) starts. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	1–12
Default Value	3
Web User Interface Reference	Month (Page 100)

DST_START_ORDINAL_DAY

Value Format	Integer

Description	Specifies the number of the week on which DST (Summer Time) starts. The actual start day is specified in "**DST_START_DAY_OF_WEEK**". For example, to specify the second Sunday, specify "2" in this parameter, and "0" in the next parameter. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	1–5 – 1: the first week of the month – 2: the second week of the month – 3: the third week of the month – 4: the fourth week of the month – 5: the fifth week of the month
Default Value	2
Web User Interface Reference	Day (Page 100)

DST_START_DAY_OF_WEEK

Value Format	Integer
Description	Specifies the day of the week on which DST (Summer Time) starts. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	0–6 – 0: Sunday – 1: Monday – 2: Tuesday – 3: Wednesday – 4: Thursday – 5: Friday – 6: Saturday
Default Value	0
Web User Interface Reference	Day (Page 100)

DST_START_TIME

Value Format	Integer
Description	Specifies the start time of DST (Summer Time) in minutes after 12:00 AM. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.

Value Range	0–1439
Default Value	120
Web User Interface Reference	Time (Page 101)

DST_STOP_MONTH

Value Format	Integer
Description	Specifies the month in which DST (Summer Time) ends. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	1–12
Default Value	10
Web User Interface Reference	Month (Page 101)

DST_STOP_ORDINAL_DAY

Value Format	Integer
Description	Specifies the number of the week on which DST (Summer Time) ends. The actual end day is specified in "**DST_STOP_DAY_OF_WEEK**". For example, to specify the second Sunday, specify "2" in this parameter, and "0" in the next parameter. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	1–5 – 1: the first week of the month – 2: the second week of the month – 3: the third week of the month – 4: the fourth week of the month – 5: the fifth week of the month
Default Value	2
Web User Interface Reference	Day (Page 102)

DST_STOP_DAY_OF_WEEK

Value Format	Integer

Description	Specifies the day of the week on which DST (Summer Time) ends. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	0–6 – 0: Sunday – 1: Monday – 2: Tuesday – 3: Wednesday – 4: Thursday – 5: Friday – 6: Saturday
Default Value	0
Web User Interface Reference	Day (Page 102)

DST_STOP_TIME

Value Format	Integer
Description	Specifies the end time of DST (Summer Time) in minutes after 12:00 AM. **Note** • This parameter is disabled when the "**LOCAL_TIME_ZONE_POSIX**" parameter is specified.
Value Range	0–1439
Default Value	120
Web User Interface Reference	Time (Page 102)

5.3.3 Syslog Settings

SYSLOG_ADDR

Value Format	String
Description	Specifies the IP address or FQDN of the syslog server.
Value Range	Max. 127 characters (IP address in dotted-decimal notation or FQDN)
Default Value	Empty string

SYSLOG_PORT

Value Format	Integer
Description	Specifies the port number of the syslog server.

Value Range	1–65535
Default Value	514

SYSLOG_SERVER_ENABLE

Value Format	Boolean
Description	Specifies whether to enable syslog.
Value Range	• **Y** (Enable syslog) • **N** (Disable syslog)
Default Value	N

SYSLOG_SEVERITY

Value Format	Integer
Description	Specifies the severity of system logs sent to the syslog server.
Value Range	0–7 – 0: emerg – 1: alert – 2: critical – 3: error – 4: warn – 5: notice – 6: info – 7: debug
Default Value	3

5.3.4 KEM (KX-UTA336 Add-on Key Module) Update Settings

KEM_UPGRADE_ENABLE

Value Format	Boolean
Description	Specifies whether to perform KEM updates when the unit detects a newer version.
Value Range	• **Y** (Enable KEM updates) • **N** (Disable KEM updates)
Default Value	Y

KEM_VERSION

Value Format	String

Description	Specifies the target KEM version (e.g. n.nnn [n=0-9]).
Value Range	Not applicable.
Default Value	Empty string

KEM_FILE_PATH

Value Format	String
Description	Specifies the URL where the KEM file is stored.
Value Range	Max. 1024 characters **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>". – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number. • If "{mac}" is included in this URL, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this URL, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this URL, it will be replaced with the unit's model name. • If "{fwver}" is included in this URL, it will be replaced with "**FIRM_VERSION**" depending on the system. Note that this rule differs from other parameters such as "**SIP_USER_AGENT**".
Default Value	Empty string

KEM_UPGRADE_AUTO

Value Format	Boolean
Description	Specifies whether to display a confirmation message asking the user to perform a KEM update (manual) or perform the KEM update without asking the user (automatic) when the unit detects a newer version of KEM.
Value Range	• **Y** (Enable automatic KEM update) • **N** (Disable automatic KEM update)
Default Value	Y

5.3.5 Firmware Update Settings

FIRM_UPGRADE_ENABLE

Value Format	Boolean
Description	Specifies whether to perform firmware updates when the unit detects a newer version of firmware. **Note** • Changing this setting may require restarting the unit. • Local firmware updates from the Web user interface (→ see **4.8.4 Local Firmware Update**) can be performed regardless of this setting.
Value Range	• **Y** (Enable firmware updates) • **N** (Disable firmware updates)
Default Value	**Y**
Web User Interface Reference	Enable Firmware Update (Page 159)

FIRM_VERSION

Value Format	String
Description	Specifies the firmware version of the unit (e.g. nn.nnn [n=0-9]). **Note** • Changing this setting may require restarting the unit.
Value Range	Not applicable.
Default Value	Empty string

FIRM_FILE_PATH

Value Format	String
Description	Specifies the URL where the firmware file is stored. **Note** • This setting is available only when "**FIRM_UPGRADE_ENABLE**" is set to "**Y**". • Changing this setting may require restarting the unit.

Value Range	Max. 1024 characters **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>". – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number. • If "{mac}" is included in this URL, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this URL, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this URL, it will be replaced with the unit's model name. • If "{fwver}" is included in this URL, it will be replaced with "**FIRM_VERSION**" depending on the system. Note that this rule differs from other parameters such as "**SIP_USER_AGENT**".
Default Value	Empty string
Web User Interface Reference	Firmware File URL (Page 159)

FIRM_UPGRADE_AUTO

Value Format	Boolean
Description	Specifies whether to display a confirmation message asking the user to perform a firmware update (manual) or perform the firmware update without asking the user (automatic) when the unit detects a newer version of firmware.
Value Range	• **Y** (Enable automatic firmware update) • **N** (Disable automatic firmware update)
Default Value	**Y**

5.3.6 Provisioning Settings

PROVISION_ENABLE

Value Format	Boolean
Description	Specifies whether to enable auto provisioning.
Value Range	• **Y** (Enable auto provisioning) • **N** (Disable auto provisioning)
Default Value	**Y**
Web User Interface Reference	Enable Provisioning (Page 160)

OPTION160_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the device to look for the Provisioning URL in DHCP option 160.
Value Range	• **Y** (Enable DHTPv4 option 160) • **N** (Disable DHTPv4 option 160)
Default Value	Y

OPTION159_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the device to look for the Provisioning URL in DHCP option 159.
Value Range	• **Y** (Enable DHTPv4 option 159) • **N** (Disable DHTPv4 option 159)
Default Value	Y

OPTION66_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the device to look for the Provisioning URL in DHCP option 66.
Value Range	• **Y** (Enable DHTPv4 option 66) • **N** (Disable DHTPv4 option 66)
Default Value	**Y**

IPV6_SUB_OPTION_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the device to look for the Provisioning URL in DHCPv6 sub-option 1.
Value Range	• **Y** (Enable DHTPv6 sub-option 1) • **N** (Disable DHTPv6 sub-option 1)
Default Value	Y

SIPPNP_ENABLE

Value Format	Boolean

Description	Specifies whether to enable the device to acquire the Provisioning URL using the SIP PnP method.
Value Range	• **Y** (Enable SIP PnP) • **N** (Disable SIP PnP)
Default Value	Y

CFG_STANDARD_FILE_PATH

Value Format	String
Description	Specifies the URL of the standard configuration file, which is used when every unit needs different settings. **Note** • When you change this setting, set "**PROVISION_ENABLE**" to "**Y**" at the same time.
Value Range	Max. 1024 characters **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>" – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number. • If "{mac}" is included in this URL, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this URL, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this URL, it will be replaced with the unit's model name. • If "{fwver}" is included in this URL, it will be replaced with the unit's firmware version. • If this URL ends with "/" (slash), "Config{mac}.cfg" is automatically added at the end of the URL. For example, **CFG_STANDARD_FILE_PATH="http://host/dir/"** becomes **CFG_STANDARD_FILE_PATH="http://host/dir/Config{mac}.cfg"**.
Default Value	Empty string

CFG_PRODUCT_FILE_PATH

Value Format	String

Description	Specifies the URL of the product configuration file, which is used when all units with the same model number need the same settings. **Note** • When you change this setting, set "**PROVISION_ENABLE**" to "**Y**" at the same time.
Value Range	Max. 1024 characters **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>" – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number. • If "{mac}" is included in this URL, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this URL, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this URL, it will be replaced with the unit's model name. • If "{fwver}" is included in this URL, it will be replaced with the unit's firmware version. • If this URL ends with "/" (slash), "{MODEL}.cfg" is automatically added at the end of the URL. For example, **CFG_PRODUCT_FILE_PATH="http://host/dir/"** becomes **CFG_PRODUCT_FILE_PATH="http://host/dir/{MODEL}.cfg"**.
Default Value	Empty string **Note** • The URL specified by your phone system dealer may be preset in the unit.

CFG_MASTER_FILE_PATH

Value Format	String
Description	Specifies the URL of the master configuration file, which is used when all units need the same settings. **Note** • When you change this setting, set "**PROVISION_ENABLE**" to "**Y**" at the same time.

Value Range	Max. 1024 characters **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>" – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number. • If "{mac}" is included in this URL, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this URL, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this URL, it will be replaced with the unit's model name. • If "{fwver}" is included in this URL, it will be replaced with the unit's firmware version. • If this URL ends with "/" (slash), "sip.cfg" is automatically added at the end of the URL. For example, **`CFG_MASTER_FILE_PATH="http://host/dir/"`** becomes **`CFG_MASTER_FILE_PATH="http://host/dir/sip.cfg"`**.
Default Value	Empty string **Note** • The URL specified by your phone system dealer may be preset in the unit.

CFG_FILE_KEY

Value Format	String
Description	Specifies the encryption key (password) used to decrypt configuration files. **Note** • If the extension of the configuration file is ".enc", the configuration file will be decrypted using this key.
Value Range	Max. 32 characters **Note** • If an empty string is set for this parameter, decryption with this value is disabled.
Default Value	Empty string

CFG_FILE_KEY_LENGTH

Value Format	Integer

Description	Specifies the key lengths in bits used to decrypt configuration files.
Value Range	128, 196, 256
Default Value	128

CFG_CYCLIC

Value Format	Boolean
Description	Specifies whether the unit periodically checks for updates of configuration files.
Value Range	• **Y** (Enable periodic synchronization of configuration files) • **N** (Disable periodic synchronization of configuration files)
Default Value	**N**
Web User Interface Reference	Cyclic Auto Resync (Page 162)

CFG_CYCLIC_INTVL

Value Format	Integer
Description	Specifies the interval, in minutes, between periodic checks for updates of the configuration files.
Value Range	1–40320
Default Value	10080
Web User Interface Reference	Resync Interval (Page 163)

CFG_RTRY_INTVL

Value Format	Integer
Description	Specifies the period of time, in minutes, that the unit will retry checking for an update of the configuration files after a configuration file access error has occurred. **Note** • This setting is available only when "**CFG_CYCLIC**" is set to "**Y**".
Value Range	1–1440
Default Value	30

CFG_RESYNC_TIME

Value Format	String

Description	Specifies the time (hour:minute) that the unit checks for updates of configuration files.
Value Range	00:00–23:59 **Note** • If the value for this setting is any valid value other than an empty string, the unit downloads the configuration files at the fixed time, and the settings specified in "**CFG_CYCLIC**", "**CFG_CYCLIC_INTVL**", and "**CFG_RTRY_INTVL**" are disabled. • If the value for this setting is an empty string, downloading the configuration files at the fixed time are disabled.
Default Value	Empty string

CFG_RESYNC_FROM_SIP

Value Format	String
Description	Specifies the value of the "Event" header sent from the SIP server to the unit so that the unit can access the configuration files on the provisioning server.
Value Range	Max. 15 characters **Note** • An empty string is not allowed.
Default Value	check-sync
Web User Interface Reference	Header Value for Resync Event (Page 163)

USR_PROV_SVR_URL

Value Format	String
Description	Specifies the Provisioning Server URL. **Note** • The format of the IP address must be in dotted-decimal notation, FQDN, or URL, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>" • If "{mac}" is included in this URL, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this URL, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this URL, it will be replaced with the unit's model name. • If "{fwver}" is included in this URL, it will be replaced with the unit's firmware version.
Value Range	Max. 1024 characters

Default Value	Empty string

USR_PROV_SVR_AUTH_ID

Value Format	String
Description	Specifies the authentication ID used to access the provisioning server.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string

USR_PROV_SVR_AUTH_PASSWORD

Value Format	String
Description	Specifies the authentication password used to access the provisioning server.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string

CFG_ROOT_CERTIFICATE_PATH1

Value Format	String
Description	Specifies the URL of the root certificate. When this parameter is specified, the Embedded root certificate is ignored. This setting should only be placed in the initial configuration file. **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>" – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number.
Value Range	Max. 1024 characters
Default Value	Empty string

CFG_ROOT_CERTIFICATE_PATH2

Value Format	String

Description	Specifies the URL of the root certificate. This setting should only be placed in the initial configuration file. **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>" – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number.
Value Range	Max. 1024 characters
Default Value	Empty string

CFG_ROOT_CERTIFICATE_PATH3

Value Format	String
Description	Specifies the URL of the root certificate. This setting should only be placed in the initial configuration file. **Note** • The format must be RFC 1738 compliant, as follows: "<scheme>://<user>:<password>@<host>:<port>/<url-path>" – "<user>" must be less than 127 characters. – "<password>" must be less than 127 characters. – "<user>:<password>@" may be empty. – ":<port>" can be omitted if you do not need to specify the port number.
Value Range	Max. 1024 characters
Default Value	Empty string

5.4 Network Settings

5.4.1 IP Settings

IP_ADDR_MODE

Value Format	Integer
Description	Specifies the IP address mode.
Value Range	0-2 – 0: IPv4 – 1: IPv6 – 2: dual

Default Value	2

ALLOW_AUTO_CFG

Value Format	Boolean
Description	Specifies whether to allow IPv6 auto configuration.
Value Range	• **Y** (Enable IPv6 auto configuration) • **N** (Disable IPv6 auto configuration)
Default Value	**Y**

IP_MODE_PREF_SIGNAL

Value Format	Integer
Description	Specifies the preferred signal IPv6 mode.
Value Range	0-1 – 0: IPv4 – 1: IPv6
Default Value	0

IP_MODE_PREF_MEDIA

Value Format	Integer
Description	Specifies the preferred media IPv6 mode.
Value Range	0-1 – 0: IPv4 – 1: IPv6
Default Value	0

IPV6_PRIVACY

Value Format	Boolean
Description	Specifies whether to enable IPv6 privacy.
Value Range	• **Y** (IPv6 privacy (RFC3041) is not supported) • **N** (IPv6 privacy (RFC3041) is supported)
Default Value	**N**

5.4.2 LLDP-MED Settings

LLDP_TRAFFIC_TO_PC_PORT

Value Format	Boolean
Description	Specifies whether to forward LLDP packets received from the LAN port to the PC port.
Value Range	• **Y** (Forward LLDP received to PC port) • **N** (Do not forward LLDP received to PC port)
Default Value	**N**

LLDP_ASSTID

Value Format	String
Description	Specifies the asset ID of the phone that is advertised through LLDP for inventory management.
Value Range	Max. 32 characters
Default Value	Empty string

LLDP_POWER_PRIORITY

Value Format	Integer
Description	Specifies the power priority of the phone that is advertised through LLDP for power management.
Value Range	0–3 – 0: unknown – 1: low – 2: high – 3: critical
Default Value	0

5.4.3 CDP

CDP_TRAFFIC_TO_PC_PORT

Value Format	Boolean
Description	Specifies whether to forward CDP packets received from the LAN port to the PC port.
Value Range	• **Y** (Forward CDP received to PC port) • **N** (Do not forward CDP received to PC port)
Default Value	**N**

5.4.4 IEEE 802.1X Settings

IEEE8021X_ENABLE

Value Format	Boolean
Description	Selects whether to use the IEEE 802.1X protocol.
Value Range	• **Y** (Enable) • **N** (Disable)
Default Value	**N**
Web User Interface Reference	Enable IEEE802.1X (Page 89)

IEEE8021X_AUTH_PRTCL

Value Format	Integer
Description	Specifies the authentication method used with the IEEE 802.1X protocol.
Value Range	0–6 – 0: EAP-MD5 – 1: EAP-TLS – 2: EAP-FAST – 3: EAP-PEAP-GTC – 4: EAP-PEAP-MSCHAPV2 – 5: EAP-TTLS-GTC – 6: EAP-TTLS-MSCHAPV2
Default Value	0
Web User Interface Reference	Authentication Protocol (Page 89)

IEEE8021X_USER_ID

Value Format	String
Description	Specifies the authentication ID required for IEEE 802.1X authentication.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Authentication ID (Page 90)

IEEE8021X_USER_PASS

Value Format	String
Description	Specifies the authentication password used for IEEE 802.1X authentication.

Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Authentication Password (Page 90)

5.4.5 HTTP Settings

HTTPD_PORTOPEN_AUTO

Value Format	Boolean
Description	Specifies whether the unit's Web port is always open.
Value Range	• **Y** (Web port is always open) • **N** (Web port is closed [can be opened temporarily through phone user interface programming]) **Notice** • If you want to set to "**Y**", please fully recognize the possibility of unauthorized access to the unit through the Web user interface and change this setting at your own risk. In addition, please take full security measures for connecting to an external network and control all passwords for logging in to the Web user interface.
Default Value	**N**

HTTP_VER

Value Format	Integer
Description	Specifies which version of the HTTP protocol to use for HTTP communication.
Value Range	• 1 (Use HTTP 1.0) • 0 (Use HTTP 1.1) **Note** • For this unit, it is strongly recommended that you specify "1" for this setting. However, if the HTTP server does not function well with HTTP 1.0, try changing the setting "0".
Default Value	1
Web User Interface Reference	HTTP Version (Page 91)

HTTP_USER_AGENT

Value Format	String
Description	Specifies the text string to send as the user agent in the header of HTTP requests.

Value Range	Max. 64 characters **Note** • An empty string is not allowed. • If "{mac}" is included in this parameter, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this parameter, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name. • If "{fwver}" is included in this parameter, it will be replaced with the firmware version of the unit.
Default Value	Panasonic_{MODEL}/{fwver} ({mac})
Web User Interface Reference	HTTP User Agent (Page 91)

HTTP_SSL_VERIFY

Value Format	Integer
Description	Specifies whether to enable the verification of the root certificate.
Value Range	• 0 (No verification of root certificate) • 1 (Simple verification of root certificate) • 2 (Precise verification of root certificate) **Note** • If set to "0", the verification of the root certificate is disabled. • If set to "1", the verification of the root certificate is enabled. In this case, the validity of the certificate's date, certificate's chain, and the confirmation of the root certificate will be verified. • If set to "2", precise certificate verification is enabled. In this case, the validity of the server name will be verified in addition to the items verified when "1" is set. • If the unit has not obtained the current time, verification will not be performed irrelevant of this setting. In order to perform verification it is necessary to first set up the NTP server.
Default Value	0

5.4.6 Time Adjust Settings

NTP_MODE

Value Format	Integer
Description	Specifies the NTP synchronization mode.

Value Range	0-2 – 0: Disable NTP – 1: Automatically (NTP server assigned by DHCP server) – 2: Manually (assigned via prov/web)
Default Value	0

NTP_ADDR

Value Format	String
Description	Specifies the IP address or FQDN of the NTP server.
Value Range	Max. 127 characters (IP address in dotted-decimal notation or FQDN)
Default Value	Empty string
Web User Interface Reference	NTP Server Address (Page 99)

TIME_SYNC_INTVL

Value Format	Integer
Description	Specifies the interval, in seconds, to resynchronize after having detected no reply from the NTP server.
Value Range	10–86400
Default Value	60

TIME_QUERY_INTVL

Value Format	Integer
Description	Specifies the interval, in seconds, between synchronizations with the NTP server.
Value Range	10–86400
Default Value	43200
Web User Interface Reference	Synchronization Interval (Page 99)

5.4.7 STUN Settings

STUN_SERV_ADDR

Value Format	String
Description	Specifies the IP address or FQDN of the STUN server.
Value Range	Max. 127 characters (IP address in dotted-decimal notation or FQDN)

Default Value	Empty string
Web User Interface Reference	STUN Server Address (Page 93)

STUN_SERV_PORT

Value Format	Integer
Description	Specifies the port number of the STUN server.
Value Range	1–65535
Default Value	3478
Web User Interface Reference	STUN Server Port (Page 94)

5.4.8 LDAP Settings

LDAP_SERVER

Value Format	String
Description	Specifies the IP address or host name of the LDAP server. **Note** • The format of the IP address must be in dotted-decimal notation or FQDN.
Value Range	Max. 127 characters
Default Value	Empty string

LDAP_PORT

Value Format	Integer
Description	Specifies the port to connect to on the server. **Note** • You should specify a port that is not used by any other features.
Value Range	0-65535
Default Value	389

LDAP_SEARCH_BASE_DN

Value Format	String
Description	Specifies the base domain name which is the starting point for making queries on the LDAP server.
Value Range	Max. 256 characters

Default Value	Empty string

LDAP_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the LDAP feature.
Value Range	• Y (Enable LDAP) • N (Disable LDAP)
Default Value	N

LDAP_USER_DN

Value Format	String
Description	Specifies the user DN required to access the LDAP server.
Value Range	Max. 64 characters
Default Value	Empty string

LDAP_PASSWORD

Value Format	String
Description	Specifies the password used to access the LDAP server.
Value Range	Max. 16 characters
Default Value	Empty string

5.5 Telephone Settings

5.5.1 Call Control Settings

FIRSTDIGIT_TIM

Value Format	Integer
Description	Specifies the length of time, in seconds, within which the first digits of a dial number must be dialed. When this timer expires, the unit will play a busy tone.
Value Range	1–600
Default Value	30

INTDIGIT_TIM

Value Format	Integer
Description	Specifies the length of time, in seconds, within which subsequent digits of a dial number must be dialed. When this timer expires after the last key was pressed, dialing will start.
Value Range	1–15
Default Value	5
Web User Interface Reference	Inter-digit Timeout (Page 121)

MACRODIGIT_TIM

Value Format	Integer
Description	Specifies the length of time, in seconds, that the unit waits when a "T" or "t" has been entered in the dial plan.
Value Range	1–15
Default Value	5
Web User Interface Reference	Timer for Dial Plan (Page 121)

INTERNATIONAL_ACCESS_CODE

Value Format	String
Description	Specifies the number to be shown in the place of the first "+" symbol when the phone number for incoming international calls contains "+".
Value Range	Max. 8 characters (consisting of 0–9, *, and #) **Note** • No other characters are allowed.
Default Value	Empty string ("+" is deleted)
Web User Interface Reference	International Call Prefix (Page 121)

COUNTRY_CALLING_CODE

Value Format	String
Description	Specifies the country/area calling code to be used for comparative purposes when dialing a number from the incoming call log that contains a "+" symbol.
Value Range	Max. 8 characters (consisting of 0–9)
Default Value	Empty string
Web User Interface Reference	Country Calling Code (Page 122)

NATIONAL_ACCESS_CODE

Value Format	String
Description	When dialing a number from the incoming call log that contains a "+" symbol and the country calling code matches, the country calling code is removed and the national access code is added.
Value Range	Max. 8 characters (consisting of 0–9, *, and #)
Default Value	Empty string
Web User Interface Reference	National Access Code (Page 122)

HOLD_RECALL_TIM

Value Format	Integer
Description	Specifies the duration of the hold recall timer. If set to "0", the function is disabled.
Value Range	0–240 (0: Disable)
Default Value	60

AUTO_ANS_RING_TIM

Value Format	Integer
Description	Specifies the number of seconds a phone in Auto Answer mode will ring before a conversation is established automatically when it receives a call.
Value Range	0–15
Default Value	5

ONHOOK_TRANSFER_ENABLE

Value Format	Boolean
Description	Specifies whether transfer operations are permitted while on-hook.
Value Range	• **Y** (Enable On-hook Transfer) • **N** (Disable On-hook Transfer)
Default Value	**Y**

KEY_PAD_TONE

Value Format	Integer
Description	Selects whether a tone is heard in response to key presses.

Value Range	0–3 – 0: high – 1: middle – 2: low – 3: off
Default Value	0
Web User Interface Reference	Key Click Tone (Page 143)

5.5.2 Telephone Settings

NUMBER_MATCHING_LOWER_DIGIT

Value Format	Integer
Description	Specifies the minimum number of digits with which to match a phonebook entry with an incoming call's caller ID. To specify exact matching of entire numbers only, specify "0".
Value Range	0–15
Default Value	7
Web User Interface Reference	Number Matching Lower Digit (Page 144)

DISPLAY_DATE_PATTERN

Value Format	Integer
Description	Selects the display order pattern for the day and month of the date.
Value Range	0–7 – 0: mm/dd – 1: dd/mm – 2: dd/mm/yyyy – 3: dd/mm/yy – 4: mm/dd/yyyy – 5: mm/dd/yy – 6: yyyy/mm/dd – 7: yy/mm/dd
Default Value	0

DISPLAY_TIME_PATTERN

Value Format	Integer
Description	Selects the display type for the time (12- or 24-hour format).

Value Range	0–1 – 0: 12-hour format – 1: 24-hour format
Default Value	0

DEFAULT_LINE

Value Format	Integer
Description	Specifies the line for default FB and selected line. **Note** • The KX-UTG200 has a maximum of 4 lines. • The KX-UTG300 has a maximum of 6 lines.
Value Range	1–6
Default Value	1

DEFAULT_LANGUAGE

Value Format	String
Description	Selects the language to use for the menus and display items on the phone.
Value Range	Only the following value is available: • **en-US** (English (US))
Default Value	**en-US**

EXTENSION_PIN

Value Format	String
Description	Specifies the PIN (Personal Identification Number) of the extension. This is used to lock access to the call log and phonebook list. For details, refer to the Operating Instructions on the Panasonic Web site (→ see **Introduction**).
Value Range	Max. 10 digits (consisting of 0–9)
Default Value	0000000000
Web User Interface Reference	Extension PIN (Page 143)

POUND_KEY_DELIMITER_ENABLE

Value Format	Boolean
Description	Specifies whether the # key is treated as a regular dialed digit or a delimiter, when dialed as or after the second digit.

Value Range	• **Y** (# is treated as the end of dialing delimiter) • **N** (# is treated as a regular dialed digit)
Default Value	**Y**

5.5.3 Multicast paging

MPAGE_ADDR

Value Format	String
Description	Specifies the multicast IP address for sending and receiving page audio.
Value Range	Max. 127 characters (multicast IP address ranges from 224.0.0.0 to 239.255.255.255)
Default Value	Empty string

MPAGE_PORT

Value Format	Integer
Description	Specifies the port for sending and receiving page audio. **Note** • You should specify a port that is not used by any other features.
Value Range	0–65535
Default Value	0

MPAGE_PRIORITY

Value Format	Integer
Description	Specifies the priority of the group/channel. **Note** • 1 is high priority. • 3 is priority for voice call. • (1 > 2 > voice call > 4 > ... > 11)
Value Range	1–11
Default Value	11

MPAGE_ LABEL

Value Format	String

Description	Specifies the name of the group/channel. This name is displayed on the screen when operating outgoing and incoming pages.
Value Range	Max. 24 characters
Default Value	Empty string

MPAGE_SEND_ENABLE

Value Format	Boolean
Description	Specifies whether to enable or disable outgoing pages.
Value Range	• **Y** (Enable outgoing pages) • **N** (Disable outgoing pages)
Default Value	**N**

MPAGE_ENABLE

Value Format	Boolean
Description	Specifies whether to enable Paging.
Value Range	• **Y** (Enable Paging) • **N** (Disable Paging)
Default Value	**N**

MPAGE_SEND_TIMER

Value Format	Integer
Description	Specifies the number of seconds available for outgoing pages.
Value Range	0–86400 (0: unlimited)
Default Value	0

MPAGE_CODEC

Value Format	Integer
Description	Selects the audio CODEC type for outgoing pages.
Value Range	0–4 – 0: G.722 – 1: PCMA – 2: G.726-32 – 3: G.729 – 4: PCMU
Default Value	0

MPAGE_DISC_TIM

Value Format	Integer
Description	Specifies the length of time, in seconds, within which the unit cannot receive pages. When this timer expires, the incoming page will finish.
Value Range	1–10
Default Value	1

MPAGE_DND_ENABLE

Value Format	Boolean
Description	Specifies whether to enable or disable the Do Not Disturb parameter.
Value Range	• **Y** (Enable play paging) • **N** (Disable play paging)
Default Value	N

5.5.4 Hotline Settings

HOT_LINE_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the hotline feature.
Value Range	• **Y** (Enable hotline) • **N** (Disable hotline)
Default Value	**N**

HOT_LINE_NUMBER

Value Format	String
Description	Specifies the hotline number.
Value Range	Max. 32 characters
Default Value	Empty string

HOT_LINE_DELAY_TIME

Value Format	Integer
Description	Specifies the time interval, in seconds, in which the phone dials a preconfigured hotline number when the user goes off-hook.
Value Range	0–10

Default Value	5

5.5.5 Tone Settings

DIAL_TONE1_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of Dial Tone 1 using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	350,440
Web User Interface Reference	Tone Frequencies (Page 139)

DIAL_TONE1_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of Dial Tone 1.
Value Range	(-80)–0
Default Value	0

DIAL_TONE1_RPT

Value Format	Boolean
Description	Specifies whether Dial Tone 1 is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	N

DIAL_TONE1_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of Dial Tone 1 using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).

Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	60,0
Web User Interface Reference	Tone Timings (Page 140)

DIAL_TONE2_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of Dial Tone 2 using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	350,440

DIAL_TONE2_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of Dial Tone 2.
Value Range	(-80)–0
Default Value	0

DIAL_TONE2_RPT

Value Format	Boolean
Description	Specifies whether Dial Tone 2 is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	N

DIAL_TONE2_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of Dial Tone 2 using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).

Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	60,0

BUSY_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of busy tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	480,620
Web User Interface Reference	Tone Frequencies (Page 140)

BUSY_TONE_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of the busy tone.
Value Range	(-80)–0
Default Value	0

BUSY_TONE_RPT

Value Format	Boolean
Description	Specifies whether the busy tone is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	Y

BUSY_TONE_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of busy tones using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).

Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	60,500,440
Web User Interface Reference	Tone Timings (Page 140)

RINGBACK_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of ringback tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	440,480
Web User Interface Reference	Tone Frequencies (Page 141)

RINGBACK_TONE_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of the ringback tone.
Value Range	(-80)–0
Default Value	0

RINGBACK_TONE_RPT

Value Format	Boolean
Description	Specifies whether the ringback tone is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	Y

RINGBACK_TONE_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of ringback tones using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).

Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	60,2000,3940
Web User Interface Reference	Tone Timings (Page 141)

DIAL_TONE4_FRQ

Value Format	Integer
Description	Specifies the dual-tone frequencies, in hertz, of Dial Tone 4 (stutter dial tones) to notify that a voice mail is waiting, using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	350,440
Web User Interface Reference	Tone Frequencies (Page 141)

DIAL_TONE4_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of Dial Tone 4 (stutter-type dial tone).
Value Range	(-80)–0
Default Value	0

DIAL_TONE4_RPT

Value Format	Boolean
Description	Specifies whether Dial Tone 4 (stutter-type dial tone) is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	N

DIAL_TONE4_TIMING

Value Format	Comma-separated Integer

Description	Specifies the pattern, in milliseconds, of Dial Tone 4 (stutter dial tones) to notify that a voice mail is waiting, using up to 22 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 560 milliseconds or more for the first value (off 1).
Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	560,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100,0
Web User Interface Reference	Tone Timings (Page 142)

REORDER_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of reorder tones using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	480,620
Web User Interface Reference	Tone Frequencies (Page 142)

REORDER_TONE_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of the reorder tone.
Value Range	(-80)–0
Default Value	0

REORDER_TONE_RPT

Value Format	Boolean
Description	Specifies whether the reorder tone is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	Y

REORDER_TONE_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of reorder tones using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 60 milliseconds or more for the first value (off 1).
Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	60,250,190
Web User Interface Reference	Tone Timings (Page 142)

HOLD_TONE_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of the hold tone using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	425

HOLD_TONE_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of the hold tone.
Value Range	(-80)–0
Default Value	0

HOLD_TONE_RPT

Value Format	Boolean
Description	Specifies whether the hold tone is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	Y

HOLD_TONE_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of the hold tone using up to 10 whole numbers (off 1, on 1, off 2, on 2…) separated by commas. **Note** • It is recommended that you set a value of 500 milliseconds or more for the first value (off 1).
Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	500,190,190,190,2890

HOLD_ALARM_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of the hold alarm using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	425

HOLD_ALARM_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of the hold alarm.
Value Range	(-80)–0
Default Value	0

HOLD_ALARM_RPT

Value Format	Boolean
Description	Specifies whether the hold alarm is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	Y

HOLD_ALARM_TIMING

Value Format	Comma-separated Integer

Description	Specifies the pattern, in milliseconds, of the hold alarm using up to 10 whole numbers (on 1, off 1, on 2, off 2…) separated by commas.
Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	120,14880

CW_TONE1_FRQ

Value Format	Comma-separated Integer
Description	Specifies the dual-tone frequencies, in hertz, of call waiting tone 1 using 2 whole numbers separated by a comma.
Value Range	0, 200–2000 (0: No tone)
Default Value	425

CW_TONE1_GAIN

Value Format	Integer
Description	Specifies the gain, in decibels, of call waiting tone 1.
Value Range	(-80)–0
Default Value	0

CW_TONE1_RPT

Value Format	Boolean
Description	Specifies whether call waiting tone 1 is repeated.
Value Range	• Y (Repeat) • N (No Repeat)
Default Value	Y

CW_TONE1_TIMING

Value Format	Comma-separated Integer
Description	Specifies the pattern, in milliseconds, of call waiting tone 1 using up to 10 whole numbers (on 1, off 1, on 2, off 2…) separated by commas.
Value Range	0–16000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.

Default Value	120,120,120,120,120,14400

BELL_CORE_PATTERN1_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 1, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2…) separated by commas.
Value Range	0–5000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	2000,4000

BELL_CORE_PATTERN2_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 2, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2…) separated by commas.
Value Range	0–5000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	800,400,800,4000

BELL_CORE_PATTERN3_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 3, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2…) separated by commas.
Value Range	0–5000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	400,200,400,200,800,4000

BELL_CORE_PATTERN4_TIMING

Value Format	Comma-separated Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 4, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2…) separated by commas.
Value Range	0–5000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	300,200,1000,200,300,4000

BELL_CORE_PATTERN5_TIMING

Value Format	Integer
Description	Specifies the cadence, in milliseconds, of pattern ID 5, described in the LSSGR, GR-506-CORE, "Signaling for Analog Interfaces" section 14, using up to 8 whole numbers (on 1, off 1, on 2, off 2…) separated by commas.
Value Range	0–5000 (0: Infinite time) **Note** • Avoid setting 1–50 for any of the values.
Default Value	500

5.5.6 Flexible Button Settings

FLEX_BUTTON_FACILITY_ACT

Value Format	Integer
Description	Specifies a particular Facility Action for the flexible button. No facility action will be taken for the button if the string is empty or invalid.
Value Range	0–2 – 0: Empty – 1: ONETOUCH – 2: BLF
Default Value	0
Web User Interface Reference	Type (No. 1–24) (Page 135)

FLEX_BUTTON_FACILITY_ARG

Value Format	String

Description	Specifies the necessary values for the features assigned to flexible buttons.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Parameter (No. 1–24) (Page 135)

FLEX_BUTTON_LABEL

Value Format	String
Description	Specifies the message to be displayed on the screen when the flexible button is pressed.
Value Range	Max. 10 characters **Note** • You can use Unicode characters for this setting.
Default Value	Empty string
Web User Interface Reference	Label Name (No. 1–24) (Page 135)

5.5.7 KEM1 (KX-UTA336 Add-on Key Module 1) Button Settings

KEM1_BUTTON_FACILITY_ACT

Value Format	Integer
Description	Specifies a particular Facility Action for the flexible button on KEM1. No facility action will be taken for the button if the string is empty or invalid.
Value Range	0–2 – 0: Empty – 1: ONETOUCH – 2: BLF
Default Value	0
Web User Interface Reference	Type (No. 1–36) (Page 136)

KEM1_BUTTON_FACILITY_ARG

Value Format	String
Description	Specifies the necessary values for the features assigned to flexible buttons on KEM1.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Parameter (No. 1–36) (Page 136)

KEM1_BUTTON_FACILITY_LABEL

Value Format	String
Description	Specifies the message to be displayed on the screen when the flexible button on KEM1 is pressed.
Value Range	Max. 10 characters
Default Value	Empty string
Web User Interface Reference	Label Name (No. 1–36) (Page 137)

5.5.8 KEM2 (KX-UTA336 Add-on Key Module 2) Button Settings

KEM2_BUTTON_FACILITY_ACT

Value Format	Integer
Description	Specifies a particular Facility Action for the flexible button on KEM2. No facility action will be taken for the button if the string is empty or invalid.
Value Range	0–2 – 0: Empty – 1: ONETOUCH – 2: BLF
Default Value	0
Web User Interface Reference	Type (No. 1–36) (Page 137)

KEM2_BUTTON_FACILITY_ARG

Value Format	String
Description	Specifies the necessary values for the features assigned to flexible buttons on KEM2.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Parameter (No. 1–36) (Page 137)

KEM2_BUTTON_FACILITY_LABEL

Value Format	String
Description	Specifies the message to be displayed on the screen when the flexible button on KEM2 is pressed.
Value Range	Max. 10 characters
Default Value	Empty string

Web User Interface Reference	Label Name (No. 1–36) (Page 137)

5.5.9 XML Application Settings

XMLAPP_ENABLE

Value Format	Boolean
Description	Selects whether to enable the XML application feature.
Value Range	• **Y** • **N**
Default Value	**N**
Web User Interface Reference	Enable Application (Page 150)

XMLAPP_USERID

Value Format	String
Description	Specifies the authentication ID required to access the XML application server.
Value Range	Max. 63 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string
Web User Interface Reference	User ID (Page 150)

XMLAPP_USERPASS

Value Format	String
Description	Specifies the authentication password used to access the XML application server.
Value Range	Max. 64 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Password (Page 150)

XMLAPP_SERVER_TYPE

Value Format	Integer
Description	Specifies the type of XML server.
Value Range	0–1 – 0: Broadsoft – 1: Switchvox

Default Value	0

XMLAPP_SERVICEURL

Value Format	String
Description	Specifies the Broadsoft KSI service URL, such as "http(s)://<host:port>/com.broadsoft.xsi-actions/v2.0/user/<userid>/".
Value Range	Max. 128 characters
Default Value	Empty string

XMLAPP_LOGO_URL

Value Format	String
Description	Specifies the URL of the log, which is used for downloading logos via XML service.
Value Range	Max. 128 characters
Default Value	Empty string

XMLAPP_WALLPAPER_URL

Value Format	String
Description	Specifies the URL of the wallpaper, which is used for downloading wallpaper via XML service.
Value Range	Max. 128 characters
Default Value	Empty string

5.6 All Lines Settings

5.6.1 All Lines - Codec Settings

CODEC_G729_PARAM

Value Format	Boolean
Description	Specifies whether to add an attribute line, "a=fmtp:18 annexb=no", to SDP when the codec is set to "**G729A**".
Value Range	• Y (Add "a=fmtp:18 annexb=no") • N (Do not add "a=fmtp:18 annexb=no")
Default Value	N

5.6.2 All Lines - VoIP Settings

RTP_PORT_MIN

Value Format	Integer
Description	Specifies the lowest port number that the unit will use for RTP packets.
Value Range	1024–48750 (even number only) **Note** • The value for this setting must be less than or equal to "**RTP_PORT_MAX**" - 400. • Changing this setting may affect the number of simultaneous calls that can be made.
Default Value	16000
Web User Interface Reference	Minimum RTP Port Number (Page 113)

RTP_PORT_MAX

Value Format	Integer
Description	Specifies the highest port number that the unit will use for RTP packets.
Value Range	1424–49150 (even number only) **Note** • The value for this setting must be greater than or equal to "**RTP_PORT_MIN**" + 400. • Changing this setting may affect the number of simultaneous calls that can be made.
Default Value	20000
Web User Interface Reference	Maximum RTP Port Number (Page 113)

RTP_PTIME

Value Format	Integer
Description	Specifies the interval, in milliseconds, between transmissions of RTP packets.
Value Range	• 20 • 30 • 40
Default Value	20
Web User Interface Reference	RTP Packet Time (Page 113)

OUTBANDDTMF_VOL

Value Format	Integer
Description	Specifies the volume (in decibels [dB]) of the DTMF tone using RFC 2833.
Value Range	(-63)–0
Default Value	-10

INBANDDTMF_VOL

Value Format	Integer
Description	Specifies the volume (in decibels [dB]) of in-band DTMF tones.
Value Range	(-46)–0
Default Value	-10

5.6.3 All Lines - Call Control Settings

RETURN_VOL_SET_DEFAULT_ENABLE

Value Format	Boolean
Description	Specifies whether the volume is returned to its default setting after each call.
Value Range	• **Y** (Volume returns to the default setting after each call) • **N** (Volume does not change after each call)
Default Value	**N**

5.7 Per Line Settings

5.7.1 Per Line - VoIP

CODEC_ENABLE_G722

Value Format	Boolean
Description	Specifies whether to enable G722 codec.
Value Range	• **Y** (Enable) • **N** (Disable)
Default Value	**Y**

CODEC_ENABLE_PCMA

Value Format	Boolean
Description	Specifies whether to enable PCMA codec.
Value Range	• **Y** (Enable) • **N** (Disable)
Default Value	**Y**

CODEC_ENABLE_G726_32

Value Format	Boolean
Description	Specifies whether to enable G726_32 codec.
Value Range	• **Y** (Enable) • **N** (Disable)
Default Value	**Y**

CODEC_ENABLE_G729A

Value Format	Boolean
Description	Specifies whether to enable G729A codec.
Value Range	• **Y** (Enable) • **N** (Disable)
Default Value	**Y**

CODEC_ENABLE_PCMU

Value Format	Boolean
Description	Specifies whether to enable PCMU codec.
Value Range	• **Y** (Enable) • **N** (Disable)
Default Value	**Y**

CODEC_PRIORITY_G722

Value Format	Integer
Description	Specifies the priority order for G722 codec.
Value Range	1-5
Default Value	**1**

CODEC_PRIORITY_PCMA

Value Format	Integer
Description	Specifies the priority order for PCMA codec.
Value Range	1-5
Default Value	**1**

CODEC_PRIORITY_G726_32

Value Format	Integer
Description	Specifies the priority order for G726_32 codec.
Value Range	1-5
Default Value	**1**

CODEC_PRIORITY_G729A

Value Format	Integer
Description	Specifies the priority order for G729A codec.
Value Range	1-5
Default Value	**1**

CODEC_PRIORITY_PCMU

Value Format	Integer
Description	Specifies the priority order for PCMU codec.
Value Range	1-5
Default Value	**1**

CODEC_ANNEXB_G729A

Value Format	Boolean
Description	Specifies whether to enable the annexb when using G729 codec.
Value Range	• **Y** (Enable annexb (G729)) • **N** (Disable annexb (G729))
Default Value	**N**

DSCP_RTP

Value Format	Integer
Description	Selects the DSCP level of DiffServ applied to RTP packets.
Value Range	0–63
Default Value	0
Web User Interface Reference	RTP Packet QoS (DSCP) (Page 114)

DSCP_RTCP

Value Format	Integer
Description	Selects the DSCP level of DiffServ applied to RTCP packets.
Value Range	0–63
Default Value	0
Web User Interface Reference	RTCP Packet QoS (DSCP) (Page 115)

RTCP_INTVL

Value Format	Integer
Description	Specifies the interval, in seconds, between RTCP packets.
Value Range	5–65535
Default Value	5
Web User Interface Reference	RTCP-XR (Page 115)

MAX_DELAY

Value Format	Integer
Description	Specifies the maximum delay, in 10-millisecond units, of the jitter buffer.
Value Range	3–50 (× 10 ms) **Note** • This setting is subject to the following conditions: – This value must be greater than "**NOM_DELAY**" – This value must be greater than "**MIN_DELAY**" – "**NOM_DELAY**" must be greater than or equal to "**MIN_DELAY**"
Default Value	20
Web User Interface Reference	Maximum Delay (Page 115)

MIN_DELAY

Value Format	Integer
Description	Specifies the minimum delay, in 10-millisecond units, of the jitter buffer.
Value Range	1 or 2 (× 10 ms) **Note** • This setting is subject to the following conditions: – This value must be less than or equal to "**NOM_DELAY**" – This value must be less than "**MAX_DELAY**" – "**MAX_DELAY**" must be greater than "**NOM_DELAY**"
Default Value	2
Web User Interface Reference	Minimum Delay (Page 116)

NOM_DELAY

Value Format	Integer
Description	Specifies the initial delay, in 10-millisecond units, of the jitter buffer.
Value Range	1–7 (× 10 ms) **Note** • This setting is subject to the following conditions: – This value must be greater than or equal to "**MIN_DELAY**" – This value must be less than "**MAX_DELAY**"
Default Value	2
Web User Interface Reference	Initial Delay (Page 116)

RTCP_ENABLE

Value Format	Boolean
Description	Selects whether to enable or disable RTCP (Real-Time Transport Control Protocol). For details, refer to RFC 3550.
Value Range	• **Y** (Enable RTCP) • **N** (Disable RTCP)
Default Value	**N**
Web User Interface Reference	RTCP Enable (Page 115)

RTCPXR_ENABLE

Value Format	Boolean
Description	Selects whether to enable RTCPXR.

Value Range	• **Y** (Enable RTCPXR) • **N** (Disable RTCPXR)
Default Value	**N**
Web User Interface Reference	RTCP-XR (Page 115)

RTP_CLOSE_ENABLE

Value Format	Boolean
Description	Specifies whether to enable processing to close held RTP sockets.
Value Range	• **Y** (Enable RTP Close) • **N** (Disable RTP Close)
Default Value	**Y**

DTMF_RELAY

Value Format	Boolean
Description	Selects whether DTMF tones are sent in the SIP INFO message.
Value Range	• **Y** (DTMF tones will be sent in the SIP INFO message.) • **N** (The method selected in "DTMF_MODE" will be used.)
Default Value	**Y**

DTMF_MODE

Value Format	Integer
Description	Specifies DTMF mode.
Value Range	0–2 – 0: Inband – 1: RTP event (2833) – 2: None
Default Value	1

TELEVENT_PAYLOAD

Value Format	Integer
Description	Specifies the RFC 2833 payload type for DTMF tones. **Note** • This setting is available only when "DTMF_MODE" is set to "**Y**".

Value Range	96–127
Default Value	101
Web User Interface Reference	Telephone-event Payload Type (Page 117)

RFC2543_HOLD_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the RFC 2543 Call Hold feature on this line.
Value Range	• **Y** (Enable RFC 2543 Call Hold) • **N** (Disable RFC 2543 Call Hold) **Note** • If set to "**Y**", the "c=0.0.0.0" syntax will be set in SDP when sending a re-INVITE message to hold the call. • If set to "**N**", the "c=x.x.x.x" syntax will be set in SDP.
Default Value	**Y**
Web User Interface Reference	Supports RFC 2543 (c=0.0.0.0) (Page 117)

MAX_CONNECTION

Value Format	Integer
Description	Specifies the MAX connections per line.
Value Range	1–24
Default Value	4

VQM_PUBLISH

Value Format	Boolean
Description	Specifies whether to enable/disable VQM PUBLISH.
Value Range	• **Y** (Enable VQM publish) • **N** (Disable VQM publish)
Default Value	**N**

RTCPXR_IN_SDP_ENABLE

Value Format	Boolean
Description	Specifies whether to enable/disable RTCPXR in SDP.
Value Range	• **Y** (Enable RTCPXR in SDP) • **N** (Disable RTCPXR in SDP)

Default Value	**N**

5.7.2 Per Line - Call Control Settings

VM_SUBSCRIBE_ENABLE

Value Format	Boolean
Description	Specifies whether to send the SUBSCRIBE request to a voice mail server. **Note** • Your phone system must support voice mail.
Value Range	• **Y** (Send the SUBSCRIBE request) • **N** (Do not send the SUBSCRIBE request)
Default Value	**N**
Web User Interface Reference	Send SUBSCRIBE to Voice Mail Server (Page 124)

CONFERENCE_SERVER_URI

Value Format	String
Description	Specifies the URI for a conference server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:conference@example.com". **Note** • In a SIP URI, the user part ("conference" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 127 characters. • Availability depends on your phone system.
Value Range	Max. 195 characters
Default Value	Empty string
Web User Interface Reference	Conference Server URI (Page 126)

DISPLAY_NAME

Value Format	String
Description	Specifies the name to display as the caller on the other party's phone when you make a call.
Value Range	Max. 24 characters **Note** • You can use Unicode characters for this setting.

Default Value	Empty string
Web User Interface Reference	Display Name (Page 124)

VM_NUMBER

Value Format	String
Description	Specifies the phone number used to access the voice mail server. **Note** • Your phone system must support voice mail.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Voice Mail Access Number (Page 125)

DIAL_PLAN

Value Format	String
Description	Specifies a dial format, such as specific phone numbers, that control which numbers can be dialed or how to handle the call when making a call. For details, see **6.2 Dial Plan**.
Value Range	Max. 500 characters
Default Value	Empty string
Web User Interface Reference	Dial Plan (max 1024 characters) (Page 127)

DIAL_PLAN_NOT_MATCH_ENABLE

Value Format	Boolean
Description	Specifies whether to enable dial plan filtering so that a call is not made when the dialed number does not match any of the dial formats specified in "**DIAL_PLAN**".
Value Range	• **Y** (Enable dial plan filtering) • **N** (Disable dial plan filtering) **Note** • If set to "**Y**", the dialed number will not be sent to the line when the number dialed by the user does not match any of the dial formats specified in the dial plan. • If set to "**N**", the dialed number will be sent to the line, even if the number dialed by the user does not match any of the dial formats specified in the dial plan.
Default Value	**Y**

Web User Interface Reference	Call Even If Dial Plan Does Not Match (Page 127)

SHARED_CALL_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the Shared Call feature of the SIP server, which is used to share one line among the units. **Note** • You cannot set both "**SHARED_CALL_ENABLE**" and "**FWD_DND_SYNCHRO_ENABLE**" to "**Y**" at the same time. • Availability depends on your phone system.
Value Range	• **Y** (Enable shared call) • **N** (Disable shared call) **Note** • If set to "**Y**", the SIP server will control the line by using a shared-call signaling method. • If set to "**N**", the SIP server will control the line by using a standard signaling method.
Default Value	**N**
Web User Interface Reference	Enable Shared Call (Page 125)

CALLPARK_SUBSCRIBE_ENABLE

Value Format	Boolean
Description	Specifies whether to enable callpark event subscription after registering.
Value Range	• **Y** (Enable callpark subscription) • **N** (Disable callpark subscription)
Default Value	**N**

FWD_DND_SYNCHRO_ENABLE

Value Format	Boolean

Description	Specifies whether to synchronize the Do Not Disturb and Call Forward settings, configured via the Web user interface or phone user interface, between the unit and the portal server that is provided by your phone system dealer. **Note** • Even if you specify "**Y**", this feature may not function properly if your phone system does not support it. Before you configure this setting, consult your phone system dealer. • You cannot set both "**SHARED_CALL_ENABLE**" and "**FWD_DND_SYNCHRO_ENABLE**" to "**Y**" at the same time.
Value Range	• **Y** (Enable Do Not Disturb/Call Forward synchronization) • **N** (Disable Do Not Disturb/Call Forward synchronization)
Default Value	**N**
Web User Interface Reference	Feature Key Synchronization (Page 125)

RESOURCELIST_URI

Value Format	String
Description	Specifies the Uniform Resource Identifier string for the resource list, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:user@example.com". For details, refer to RFC 4662. **Note** • In a SIP URI, the user part ("user" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 127 characters. • When the BLF feature is assigned to a flexible button, it may be necessary to specify this parameter depending on your phone system. For details about flexible buttons, see **6.3 Flexible Buttons**.
Value Range	Max. 195 characters (except ", &, ', :, ;, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Resource List URI (Page 126)

CW_ENABLE

Value Format	Boolean
Description	Specifies whether automatic call waiting is enabled.
Value Range	• **Y** (Enable Call Waiting) • **N** (Disable Call Waiting)
Default Value	**Y**

BLOCK_CALLER_ID

Value Format	Boolean
Description	Specifies whether to make calls without transmitting the phone number to the called party.
Value Range	• **Y** (Enable block caller ID) • **N** (Disable block caller ID)
Default Value	**N**

BLOCK_ANONYMOUS_CALL

Value Format	Boolean
Description	Specifies whether to reject incoming calls that do not show the caller's number.
Value Range	• **Y** (Enable reject anonymous call) • **N** (Disable reject anonymous call)
Default Value	**N**

DND_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the Do Not Disturb feature for incoming calls.
Value Range	• **Y** (Enable DND) • **N** (Disable DND)
Default Value	**N**

FWD_UNCONDITIONAL_ENABLE

Value Format	Boolean
Description	Specifies whether to forward all incoming calls to a specified destination.
Value Range	• **Y** (Enable unconditional call forward) • **N** (Disable unconditional call forward)
Default Value	**N**

FWD_UNCONDITIONAL_NUMBER

Value Format	String

Description	Specifies the phone number of the destination to forward all incoming calls to.
Value Range	Max. 32 characters
Default Value	Empty string

FWD_BUSY_ENABLE

Value Format	Boolean
Description	Specifies whether to forward incoming calls to a specified destination when the line is in use.
Value Range	• **Y** (Enable call forward when line in use) • **N** (Disable call forward when line in use)
Default Value	**N**

FWD_BUSY_NUMBER

Value Format	String
Description	Specifies the phone number of the destination to forward calls to when the line is in use.
Value Range	Max. 32 characters
Default Value	Empty string

FWD_NO_ANSWER_ENABLE

Value Format	Boolean
Description	Specifies whether to forward incoming calls to a specified destination when a call is not answered after it has rung a specified number of times.
Value Range	• **Y** (Enable No answer call forward) • **N** (Disable No answer call forward)
Default Value	**N**

FWD_NO_ANSWER_NUMBER

Value Format	String
Description	Specifies the phone number of the destination to forward calls to when a call is not answered after it has rung a specified number of times.
Value Range	Max. 32 characters
Default Value	Empty string

FWD_NO_ANSWER_TIMEOUT

Value Format	Integer
Description	Specifies the number of times that an incoming call rings until the call is forwarded (0: no ring).
Value Range	0, 2–60
Default Value	3

PARK_ENABLE

Value Format	Boolean
Description	Specifies whether to show soft key for call park.
Value Range	• **Y** (Show soft key for Call Park) • **N** (Do not show soft key for Call Park)
Default Value	**N**

PARK_CODE

Value Format	String
Description	Specifies the code sent when the call park soft key is being pressed.
Value Range	Max. 32 characters
Default Value	Empty string

PARK_RETRIEVE_ENABLE

Value Format	Boolean
Description	Specifies whether to show soft key for call park retrieve.
Value Range	• **Y** (Show soft key for Call Park Retrieve) • **N** (Do not show soft key for Call Park Retrieve)
Default Value	**N**

PARK_RETRIEVE_CODE

Value Format	String
Description	Specifies the code sent when the call park retrieve soft key is being pressed.
Value Range	Max. 32 characters
Default Value	Empty string

PICKUP_ENABLE

Value Format	Boolean
Description	Specifies whether to show soft key for call pick up.
Value Range	• **Y** (Show soft key for Call Pick Up) • **N** (Do not show soft key for Call Pick Up)
Default Value	**N**

PICKUP_CODE

Value Format	String
Description	Specifies the code sent when the call pick up soft key is being pressed.
Value Range	Max. 32 characters
Default Value	Empty string

GPICKUP_ENABLE

Value Format	Boolean
Description	Specifies whether to show soft key for group pick up.
Value Range	• **Y** (Show soft key for Group Pick Up) • **N** (Do not show soft key for Group Pick Up)
Default Value	**N**

GPICKUP_CODE

Value Format	String
Description	Specifies the code sent when the group pick up soft key is being pressed.
Value Range	Max. 32 characters
Default Value	Empty string

DPICKUP_ENABLE

Value Format	Boolean
Description	Specifies whether to show soft key for directed call pick up.
Value Range	• **Y** (Show soft key for Directed Call Pick Up) • **N** (Do not show soft key for Directed Call Pick Up)
Default Value	**N**

DPICKUP_CODE

Value Format	String
Description	Specifies the code sent when the directed call pick up soft key is being pressed.
Value Range	Max. 32 characters
Default Value	Empty string

TALK_PACKAGE

Value Format	Boolean
Description	Specifies whether to enable the Click to Answer/Retrieve functions. **Note** • When this parameter is set to "Y", "talk" is added to the Allow-Events header.
Value Range	• **Y** (Enable Talk Package) • **N** (Disable Talk Package)
Default Value	**N**

HOLD_PACKAGE

Value Format	Boolean
Description	Specifies whether to enable the Click to Hold function. **Note** • When this parameter is set to "Y", "hold" is added to the Allow-Events header.
Value Range	• **Y** (Enable Hold Package) • **N** (Disable Hold Package)
Default Value	**N**

EMERGENCY_NUMBER

Value Format	String
Description	Specifies the phone number of the emergency call.
Value Range	Max. 32 characters
Default Value	Empty string

ACD_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the ACD function.
Value Range	• **Y** (Enable ACD function) • **N** (Disable ACD function)
Default Value	N

ACD_CCSTATUS_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the Call Center Status function.
Value Range	• **Y** (Enable ACD Call Center status) • **N** (Disable ACD Call Center status)
Default Value	Y

ACD_REASONCODE_ACTIVE[1-10]

Value Format	Boolean
Description	Specifies whether to enable the reason code setting when user change the ACD state to unavailable.
Value Range	• **Y** (Enable reason code) • **N** (Disable reason code)
Default Value	N

ACD_REASONCODEAME[1-10]

Value Format	String
Description	Specifies the name of the reason code when user change the ACD state to unavailable.
Value Range	Max. 32 characters
Default Value	Empty string

ACD_REASONCODE_VALUE[1-10]

Value Format	String
Description	Specifies the value of the reason code when user change the ACD state to unavailable.
Value Range	Max. 32 characters

Default Value	Empty string

HOTELING_ENABLE

Value Format	Boolean
Description	Specifies whether to enable the Hoteling event.
Value Range	• **Y** (Enable Hoteling event) • **N** (Disable Hoteling event)
Default Value	N

5.7.3 Per Line - SIP Settings

PHONE_NUMBER

Value Format	String
Description	Specifies the phone number to use as the user ID required for registration to the SIP registrar server. **Note** • When registering using a user ID that is not a phone number, you should use the "**SIP_URI**" setting.
Value Range	Max. 32 characters
Default Value	Empty string
Web User Interface Reference	Phone Number (Page 104)

SIP_URI

Value Format	String
Description	Specifies the unique ID used by the SIP registrar server, which consists of "sip:", a user part, the "@" symbol, and a host part, for example, "sip:user@example.com". **Note** • When registering using a user ID that is not a phone number, you should use this setting. • In a SIP URI, the user part ("user" in the example above) can contain up to 63 characters, and the host part ("example.com" in the example above) can contain up to 127 characters.
Value Range	Max. 195 characters (except ", &, ', :, ;, <, >, and space)
Default Value	Empty string
Web User Interface Reference	SIP URI (Page 104)

LINE_ENABLE

Value Format	String
Description	Specifies whether a line is enabled or disabled.
Value Range	• `Disabled` • `Enabled`
Default Value	`Enabled`

SIP_USER_AGENT

Value Format	String
Description	Specifies the text string to send as the user agent in the headers of SIP messages.
Value Range	Max. 64 characters **Note** • An empty string is not allowed. • If "{mac}" is included in this parameter, it will be replaced with the unit's MAC address in lower-case. • If "{MAC}" is included in this parameter, it will be replaced with the unit's MAC address in upper-case. • If "{MODEL}" is included in this parameter, it will be replaced with the unit's model name. • If "{fwver}" is included in this parameter, it will be replaced with the firmware version of the unit.
Default Value	Panasonic_{MODEL}/{fwver} ({mac})
Web User Interface Reference	SIP User Agent (Page 107)

SIP_AUTHID

Value Format	String
Description	Specifies the authentication ID required to access the SIP server.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)
Default Value	Empty string
Web User Interface Reference	Authentication ID (Page 107)

SIP_PASS

Value Format	String
Description	Specifies the authentication password used to access the SIP server.
Value Range	Max. 127 characters (except ", &, ', :, <, >, and space)

Default Value	Empty string
Web User Interface Reference	Authentication Password (Page 107)

SIP_SRC_PORT

Value Format	Integer
Description	Specifies the source port number used by the unit for SIP communication.
Value Range	1024–49151 **Note** • The SIP port number for each line must be unique.
Default Value	5060 (for **SIP_SRC_PORT_1**) 5070 (for **SIP_SRC_PORT_2**) 5080 (for **SIP_SRC_PORT_3**) 5090 (for **SIP_SRC_PORT_4**) 5100 (for **SIP_SRC_PORT_5**) 5110 (for **SIP_SRC_PORT_6**)
Web User Interface Reference	Source Port (Page 106)

SIP_PRXY_ADDR

Value Format	String
Description	Specifies the IP address or FQDN of the SIP proxy server.
Value Range	Max. 127 characters (IP address in dotted-decimal notation or FQDN)
Default Value	Empty string
Web User Interface Reference	Proxy Server Address (Page 105)

SIP_PRXY_PORT

Value Format	Integer
Description	Specifies the port number to use for communication with the SIP proxy server.
Value Range	1–65535
Default Value	5060
Web User Interface Reference	Proxy Server Port (Page 105)

SIP_RGSTR_ADDR

Value Format	String

Description	Specifies the IP address or FQDN of the SIP registrar server.
Value Range	Max. 127 characters (IP address in dotted-decimal notation or FQDN)
Default Value	Empty string
Web User Interface Reference	Registrar Server Address (Page 104)

SIP_RGSTR_PORT

Value Format	Integer
Description	Specifies the port number to use for communication with the SIP registrar server.
Value Range	1–65535
Default Value	5060
Web User Interface Reference	Registrar Server Port (Page 104)

SIP_SVCDOMAIN

Value Format	String
Description	Specifies the domain name provided by your phone system dealer. The domain name is the part of the SIP URI that comes after the "@" symbol.
Value Range	Max. 127 characters
Default Value	Empty string
Web User Interface Reference	Service Domain (Page 106)

REG_EXPIRE_TIME

Value Format	Integer
Description	Specifies the length of time, in seconds, that the registration remains valid. This value is set in the "Expires" header of the REGISTER request.
Value Range	1–65535
Default Value	3600

REG_INTERVAL_RATE

Value Format	Integer
Description	Specifies the percentage of the "expires" value after which to refresh registration by sending a new REGISTER message in the same dialog.
Value Range	1–100

Default Value	90

SIP_SESSION_TIME

Value Format	Integer
Description	Specifies the length of time, in seconds, that the unit waits before terminating SIP sessions when no reply to repeated requests is received. For details, refer to RFC 4028.
Value Range	0, 60–65535 (0: Disable)
Default Value	0
Web User Interface Reference	Supports Session Timer (RFC 4028) (Page 111)

DSCP_SIP

Value Format	Integer
Description	Selects the DSCP level of DiffServ applied to SIP packets.
Value Range	0–63
Default Value	0
Web User Interface Reference	SIP Packet QoS (DSCP) (Page 110)

SIP_TIMER_T1

Value Format	Integer
Description	Specifies the default interval, in milliseconds, between transmissions of SIP messages. For details, refer to RFC 3261.
Value Range	• 250 • 500 • 1000 • 2000 • 4000
Default Value	500
Web User Interface Reference	T1 Timer (Page 109)

SIP_TIMER_T2

Value Format	Integer
Description	Specifies the maximum interval, in seconds, between transmissions of SIP messages. For details, refer to RFC 3261.

Value Range	• 2 • 4 • 8 • 16 • 32
Default Value	4
Web User Interface Reference	T2 Timer (Page 109)

SIP_TIMER_T4

Value Format	Integer
Description	Specifies the maximum period, in seconds, that a message can remain on the network.
Value Range	• 0 • 1 • 2 • 3 • 4 • 5
Default Value	0

SIP_FOVR_NORSP

Value Format	Boolean
Description	Specifies whether to perform the fail-over process when the unit detects that the SIP server is not replying to SIP message.
Value Range	• **Y** (Enable fail-over) • **N** (Disable fail-over) **Note** • If set to "**Y**", the unit will try to use the other SIP servers via the DNS SRV and A records. • If set to "**N**", the unit will not try to use the other SIP servers.
Default Value	**Y**

SIP_FOVR_MAX

Value Format	Integer
Description	Specifies the maximum number of servers (including the first [normal] server) used in the fail-over process.
Value Range	1–4
Default Value	2

SIP_DNSSRV_ENA

Value Format	Boolean
Description	Specifies whether to request the DNS server to translate domain names into IP addresses using the SRV record.
Value Range	• **Y** (Enable DNS SRV lookup) • **N** (Disable DNS SRV lookup) **Note** • If set to "**Y**", the unit will perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server. • If set to "**N**", the unit will not perform a DNS SRV lookup for a SIP registrar server, SIP proxy server, SIP outbound proxy server, or SIP presence server.
Default Value	**Y**
Web User Interface Reference	Enable DNS SRV lookup (Page 107)

SIP_UDP_SRV_PREFIX

Value Format	String
Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using UDP. **Note** • This setting is available only when "**SIP_DNSSRV_ENA**" is set to "**Y**".
Value Range	Max. 32 characters
Default Value	_sip._udp.
Web User Interface Reference	SRV lookup Prefix for UDP (Page 108)

SIP_TCP_SRV_PREFIX

Value Format	String
Description	Specifies a prefix to add to the domain name when performing a DNS SRV lookup using TCP. **Note** • This setting is available only when "**SIP_DNSSRV_ENA**" is set to "**Y**".
Value Range	Max. 32 characters
Default Value	_sip._tcp.
Web User Interface Reference	SRV lookup Prefix for TCP (Page 108)

SIP_100REL_ENABLE

Value Format	Boolean
Description	Specifies whether to add the option tag 100rel to the "Supported" header of the INVITE message. For details, refer to RFC 3262.
Value Range	• **Y** (Enable 100rel function) • **N** (Disable 100rel function) **Note** • If set to "**Y**", the Reliability of Provisional Responses function will be enabled. The option tag 100rel will be added to the "Supported" header of the INVITE message and to the "Require" header of the "1xx" provisional message. • If set to "**N**", the option tag 100rel will not be used.
Default Value	**N**
Web User Interface Reference	Supports 100rel (RFC 3262) (Page 111)

SIP_INVITE_EXPIRE

Value Format	Integer
Description	Specifies the retransmission interval, in seconds, for "18x" responses.
Value Range	0, 60 - 65535
Default Value	0 (Disable)

SIP_PRSNC_ADDR

Value Format	String
Description	Specifies the IP address or FQDN of the SIP presence server.
Value Range	0 - 127
Default Value	Empty string

SIP_PRSNC_PORT

Value Format	Integer
Description	Specifies the port number to use for communication with the SIP presence server.
Value Range	1 - 65535
Default Value	5060

PORT_PUNCH_INTVL

Value Format	Integer
Description	Specifies the interval, in seconds, between transmissions of the Keep Alive packet to the unit in order to maintain the NAT binding information. **Note** • This setting is available only when "**SIP_TRANSPORT**" is set to "0" for UDP.
Value Range	0, 10–300 (0: Disable)
Default Value	0
Web User Interface Reference	Keep Alive Interval (Page 111)

SIP_ADD_RPORT

Value Format	Boolean
Description	Selects whether to add the 'rport' parameter to the top Via header field value of requests generated. For details, refer to RFC 3581.
Value Range	• **Y** (Add Rport [RFC 3581]) • **N** (Do not add Rport [RFC 3581])
Default Value	**N**
Web User Interface Reference	Supports Rport (RFC 3581) (Page 112)

SIP_STUN_ENABLE

Value Format	Boolean
Description	Specifies whether to enable STUN service.
Value Range	• **Y** (Enable STUN) • **N** (Disable STUN)
Default Value	**N**

SIP_RTP_KA_INTVL

Value Format	Integer
Description	Specifies the interval, in seconds, for sending RTP Keep Alive packets to the unit in order to maintain the NAT binding information (0: Disable).
Value Range	0, 10–300
Default Value	0

SIP_SUBS_EXPIRE

Value Format	Integer
Description	Specifies the length of time, in seconds, that the subscription remains valid. This value is set in the "Expires" header of the SUBSCRIBE request.
Value Range	1 - 65536
Default Value	3600

SUB_RTX_INTVL

Value Format	Integer
Description	Specifies the interval, in seconds, between transmissions of SUBSCRIBE requests when a subscription results in failure (server no reply or error reply).
Value Range	10 - 86400
Default Value	10

REG_RTX_INTVL

Value Format	Integer
Description	Specifies the interval, in seconds, between transmissions of the REGISTER request when a registration results in failure (server no reply or error reply).
Value Range	10–86400
Default Value	10

SIP_PRIVACY

Value Format	Boolean
Description	Specifies whether to add the "Privacy" header to SIP messages.
Value Range	• **Y** (Add the "Privacy" header) • **N** (Do not add the "Privacy" header)
Default Value	**N**

SIP_OUTPROXY_ADDR

Value Format	String
Description	Specifies the IP address or FQDN of the SIP outbound proxy server.

Value Range	Max. 127 characters (IP address in dotted-decimal notation or FQDN)
Default Value	Empty string
Web User Interface Reference	Outbound Proxy Server Address (Page 106)

SIP_OUTPROXY_PORT

Value Format	Integer
Description	Specifies the port number to use for communication with the SIP outbound proxy server.
Value Range	1–65535
Default Value	5060
Web User Interface Reference	Outbound Proxy Server Port (Page 106)

SIP_TRANSPORT

Value Format	Integer
Description	Specifies which transport layer protocol to use for sending SIP packets.
Value Range	• 0 (UDP) • 1 (TCP)
Default Value	0
Web User Interface Reference	Transport Protocol (Page 108)

SIP_ANM_DISPNAME

Value Format	String
Description	Specifies the text string to set as the display name in the "From" header when making anonymous calls.
Value Range	Max. 64 characters
Default Value	anonymous

SIP_ANM_USERNAME

Value Format	String
Description	Specifies the text string to set as the user name in the "From" header when making anonymous calls.
Value Range	Max. 64 characters
Default Value	anonymous

SIP_ANM_HOSTNAME

Value Format	String
Description	Specifies whether to set an anonymous host name in the "From" header when making anonymous calls.
Value Range	Max. 64 characters
Default Value	anonymous.invalid

SIP_DETECT_SSAF

Value Format	Boolean
Description	Specifies whether to enable SSAF for the SIP servers (registrar server, proxy server, and presence server).
Value Range	• **Y** (Enable SSAF) • **N** (Disable SSAF) **Note** • If set to "**Y**", the unit receives SIP messages only from the source addresses stored in the SIP servers (registrar server, proxy server, and presence server), and not from other addresses. However, if "**SIP_OUTPROXY_ADDR**" in **5.7.3 Per Line - SIP Settings** is specified, the unit also receives SIP messages from the source address stored in the SIP outbound proxy server.
Default Value	**N**
Web User Interface Reference	Enable SSAF (SIP Source Address Filter) (Page 112)

SIP_TIMER_B

Value Format	Integer
Description	Specifies the value of SIP timer B (INVITE transaction timeout timer), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000
Web User Interface Reference	Timer B (milliseconds) (Page 109)

SIP_TIMER_D

Value Format	Integer
Description	Specifies the value of SIP timer D (wait time for answer resending), in milliseconds. For details, refer to RFC 3261.

Value Range	0, 250–64000
Default Value	5000
Web User Interface Reference	Timer D (milliseconds) (Page 110)

SIP_TIMER_F

Value Format	Integer
Description	Specifies the value of SIP timer F (non-INVITE transaction timeout timer), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000
Web User Interface Reference	Timer F (milliseconds) (Page 110)

SIP_TIMER_H

Value Format	Integer
Description	Specifies the value of SIP timer H (wait time for ACK reception), in milliseconds. For details, refer to RFC 3261.
Value Range	250–64000
Default Value	32000
Web User Interface Reference	Timer H (milliseconds) (Page 110)

SIP_TIMER_J

Value Format	Integer
Description	Specifies the value of SIP timer J (wait time for non-INVITE request resending), in milliseconds. For details, refer to RFC 3261.
Value Range	0, 250–64000
Default Value	5000
Web User Interface Reference	Timer J (milliseconds) (Page 110)

ADD_TRANSPORT_UDP

Value Format	Boolean
Description	Specifies whether to add the attribute "transport=udp" to the SIP header URI.
Value Range	• **Y** (Add Transport UDP) • **N** (Do not add Transport UDP)

Default Value	**N**

SIP_RESPONSE_CODE_DND

Value Format	Integer
Description	Selects the response code when a call is received in Do Not Disturb mode.
Value Range	400–699
Default Value	403

SIP_RESPONSE_CODE_CALL_REJECT

Value Format	Integer
Description	Selects the response code when a call is rejected.
Value Range	400–699
Default Value	603

SIP_FOVR_MODE

Value Format	Boolean
Description	Specifies whether INVITE/SUBSCRIBE will also follow the REGISTER Failover result.
Value Range	• **Y** (INVITE/SUBSCRIBE will follow the REGISTER Failover result.) • **N** (INVITE/SUBSCRIBE will not follow the REGISTER Failover result.)
Default Value	**N**

SIP_403_REG_SUB_RTX

Value Format	Boolean
Description	Specifies whether or not to send a request when a 403 Forbidden reply is received from the server in response to an INVITE or SUBSCRIBE.
Value Range	• **Y** (Send) • **N** (Do not send)
Default Value	**N**

SIP_DUAL_STACK_SDP_MODE

Value Format	Integer

Description	Specifies whether to bring IPv4 and IPv6 media separately in SDP.
Value Range	0–1 – 0 (Use alternate connectivity for dual stack) – 1 (Use both IPv4 and IPv6 together for dual stack)
Default Value	0

AUTH_INCOMING_INVITE

Value Format	Boolean
Description	Specifies whether to authenticate the incoming INVITE.
Value Range	• **Y** (Authenticate incoming INVITE) • **N** (Not authenticate incoming INVITE)
Default Value	**N**

SIP_RINGIN_TIMER

Value Format	Integer
Description	Specifies the timer, in seconds, for an incoming call. It would disconnect the call if the timer expires (0: Disable).
Value Range	0, 10 - 65535
Default Value	0

5.8 SSH Settings

SSH_USER_NAME

Value Format	String
Description	Specifies the user name required for SSH access.
Value Range	Max. 64 characters
Default Value	Empty string

SSH_PASSWORD

Value Format	String
Description	Specifies the password required for SSH access.
Value Range	Max. 64 characters
Default Value	Empty string

SSH_ACCESS_DISABLE

Value Format	Boolean
Description	Specifies whether to disable SSH access.
Value Range	• `Y` (Enable SSH) • `N` (Disable SSH)
Default Value	`Y`

Section 6

Useful Telephone Functions

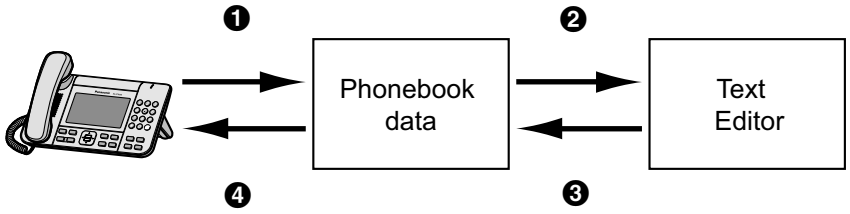
This section explains phone number settings, dial plan, and phonebook import/export function.

6.1 Phonebook Import and Export

This section explains how to import and export phonebook data. Phonebook data of the unit includes names and phone numbers.
Phonebook data on the unit can be exported, edited with editor tools, and imported again.
You can use the phonebook import and export functions as follows.

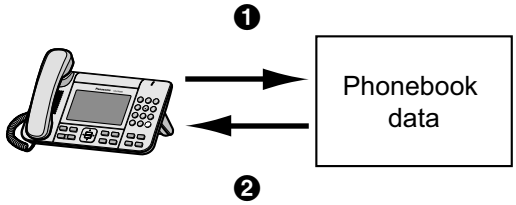
Editing Phonebook Data on a PC

The phonebook data stored on the unit can be edited using a program such as spreadsheet software or a text editor.
You can export the phonebook data to the PC, edit the exported file using appropriate software, and then import it into the unit.



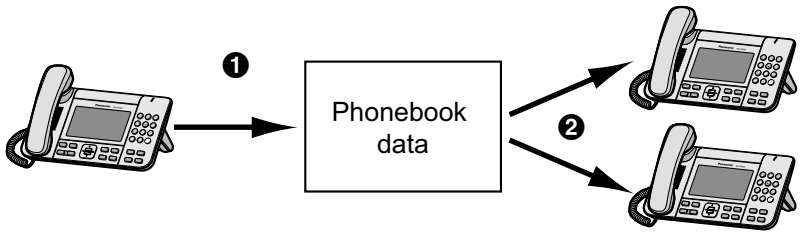
Backing up Phonebook Data

You can export the phonebook data from the unit to a PC and keep the file as a backup in case of data loss or for use when exchanging the unit.

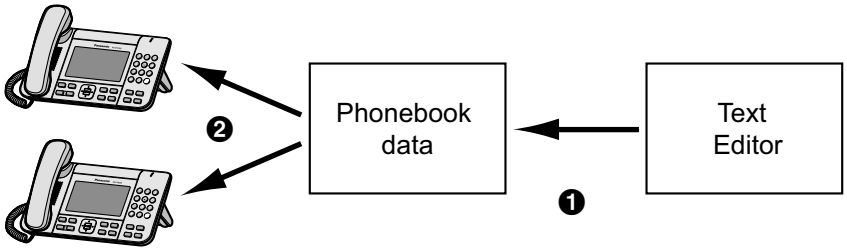


Importing the Same Phonebook Data to other Units

You can export the phonebook data created on a unit to a PC, and then import it into other units.



You can also import phonebook data created on a PC to other units.



Import/Export File Format

The file format used for importing and exporting the phonebook data is "CSV (Comma-separated Value)". The text data can be edited using any text editing software that supports UTF-16 encoding with a BOM and little endian byte ordering. When you save the text file, it must be saved using the same format, or the text might become garbled.
A phonebook entry in the unit has 15 fields and appears as follows in a text file:
`RecordID,Name,NumPrefID,NumID,Number,NumID,Number,NumID,Number,NumID,Number,NumID,Number,RingTone,GroupID`

Field	Description
RecordID	A unique ID for each record. Range of 1-65535.
Name	The phonebook entry name. This must be entered in order to import the phonebook.
NumPrefID	The preference value for the phone number. Range of 1-5.
NumID	The sequence ID of the first phone number.
Number	The phone number entered first. Up to 32 digits can be entered.
NumID	The sequence ID of the second phone number.
Number	The phone number entered second. Up to 32 digits can be entered.
NumID	The sequence ID of the third phone number.
Number	The phone number entered third. Up to 32 digits can be entered.
NumID	The sequence ID of the fourth phone number.
Number	The phone number entered fourth. Up to 32 digits can be entered.
NumID	The sequence ID of the fifth phone number.
Number	The phone number entered fifth. Up to 32 digits can be entered.
RingTone	The ringtone selected for the phonebook entry. Range of 1-11 (1 is automatic and 2 is silence).
GroupID	The group ID selected for the phonebook entry. Range of 1-2.

6.1.1 Import/Export Operation

The following procedures explain how to import phonebook data to units, and how to export phonebook data from units to a PC through the Web user interface.
For details about the settings, see **4.6.8 Phonebook** or **4.6.8.2 Export Phonebook**.

To import phonebook data

1. Click the **[Telephone]** tab, and then click **[Phonebook]**.
2. Under **[Import Phonebook]**, click **[Choose File]** to select the phonebook data file that you want to import.
3. Click **[Import]**.

To export the phonebook data

1. Click the **[Telephone]** tab, and then click **[Export Phonebook]**.
2. Under **[Export Phonebook]**, click **[Export]**.
3. Click **Save** on **File Download** window.

Note

- Make sure that the import source or unit is in standby mode.
- The import source or unit must be specified at the time of import/export. The imported data is added to the existing phonebook data.
  - If the existing phonebook data has an entry with the same record ID as an imported entry, the entry is overwritten with the imported entry.
  - If the existing phonebook data has an entry with no record ID, it will be left in the phonebook.
  - If the imported phonebook data has an entry with no record ID, the imported entry is added as a new entry unless an existing entry with the same name and phone number is found.

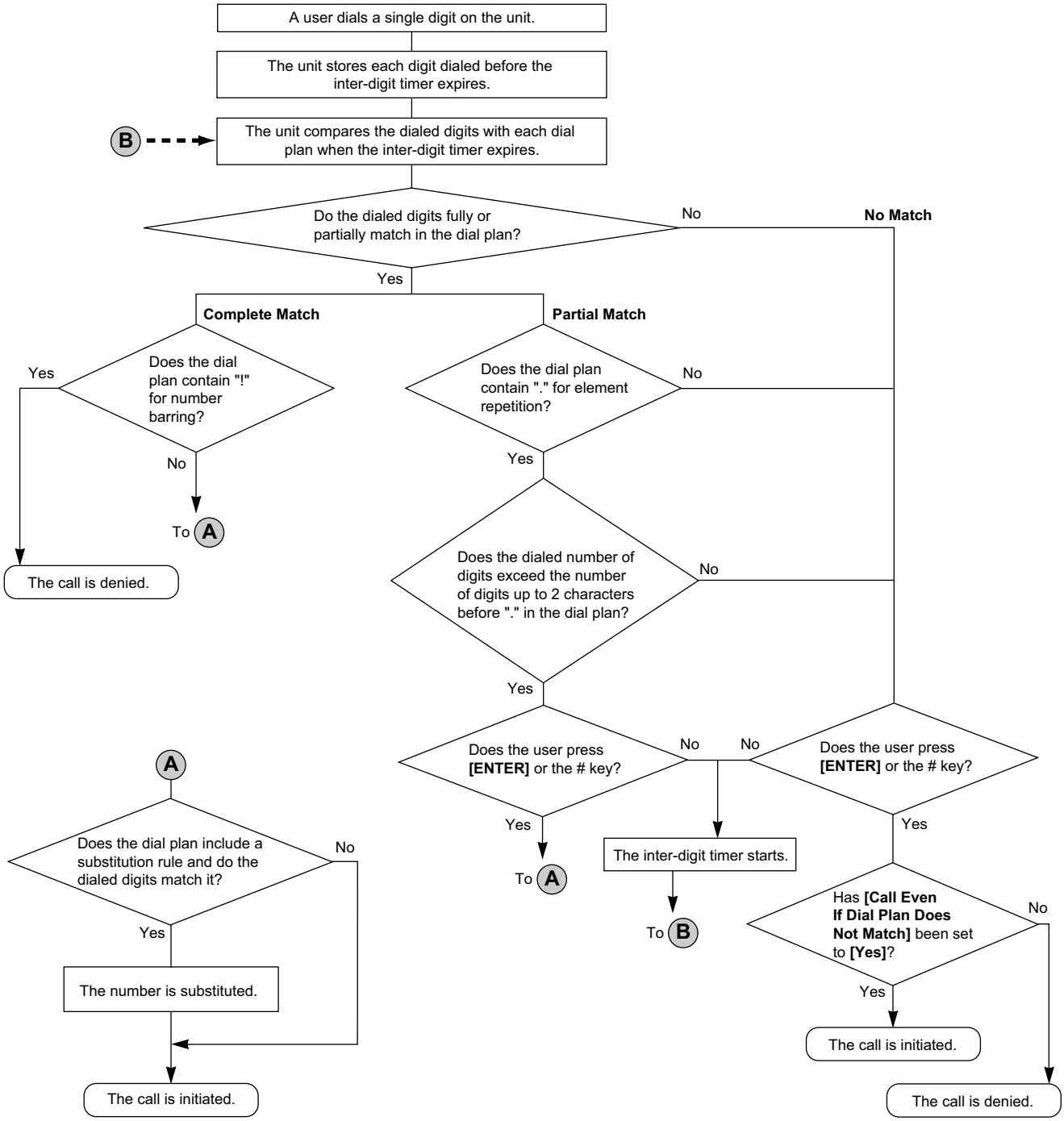
  Phonebook entries that are added via the unit are not assigned record IDs. Therefore, it is recommended to export phonebook data from the unit, assign record IDs manually and then re-import them. Doing so can help manage phonebook data.
- The phonebook for a unit has the following limitations:
  - A maximum of 1,000 phonebook entries can be stored in the unit. If the unit already has phonebook data, it accepts up to the 1,000th entry, including the existing entries. The rest of the entries will not be imported, and the message "Phonebook entries reach max count, the exceeded entry may not import to phone" is displayed on the web user interface.
  - The name can contain up to 24 characters.
  - The phone number can contain up to 32 digits.
  - Phonebook entries exceeding the characters or digits limits cannot be imported properly.
  - "Invalid file format" is displayed on web user interface if the imported file is not CSV file, or if there is a syntax error.
- If the export is interrupted by an operation on the unit, only the data that has been successfully exported before the interruption is exported to a file.

6.2 Dial Plan

The dial plan settings control how numbers dialed by the user are transmitted over the network. Dial plan settings can be configured on a per-line basis. These settings can be programmed either through the Web user interface (→ see **4.6.2.2 Dial Plan**) or by configuration file programming (→ see **5.7.2 Per Line - Call Control Settings**).

[Dial Plan Flowchart]

When a user dials a single digit on a unit, the following sequence of events begins.



6.2.1 Dial Plan Settings

To set Dial Plan

1. In the Web user interface, click the **[Telephone]** tab, and then click **[Call Control [Line 1]–[Line x]]**.
2. In **[Dial Plan]**, enter the desired dial format.
   The dial plan settings can be configured for each line separately.

For details about available characters for the dial format, see **Available Values for the Dial Plan Field** in this section.

3. Select **[Yes]** or **[No]** for **[Call Even If Dial Plan Does Not Match]**.
   - If you select **[Yes]**, the call will be made even if the user dials a phone number that does not match the dial format in **[Dial Plan]**.
   - If you select **[No]**, the call will be made only if the user dials a phone number that matches the dial format in **[Dial Plan]**.

Note

- For details about configuring these settings by configuration file programming, see "**DIAL_PLAN**" and "**DIAL_PLAN_NOT_MATCH_ENABLE**" in **5.7.2 Per Line - Call Control Settings**.

Available Values for the Dial Plan Field

The following table explains which characters you can use in the dial format, and what the characters mean.

Element	Available Value	Description
String	0–9, [, -,], <, :, >, *, #, !, S, s, T, t, X, x, ., |, +	You can enter dial plan descriptions using a combination of the characters listed as available values.
Digit	0–9, *, #, +	**Example: "123"** If the dialed phone number is "123", the call is made immediately.
Wildcard	X, x	**Example: "12xxxxx"** If the dialed phone number is "12" followed by any 5-digit number, the call is made immediately.
Range	[ ]	**Example: "[123]"** If the dialed phone number is either one of "1", "2", or "3", the call is made immediately.
Subrange	-	**Example: "[1-5]"** If the dialed phone number is "1", "2", "3", "4", or "5", the call is made immediately. • A subrange is only valid for single-digit numbers. For example, "[4-9]" is valid, but "[12-21]" is invalid.
Repeat	.	**Example: "1."** If the dialed phone number is "1" followed by zero or more "1"s (e.g., "11", "111"), the call is made.
Substitution	<(before):(after)>	**Example: "<101:9999>"** If the dialed phone number is "101", "101" is replaced by "9999", and then the call is made immediately.
Timer	S, s (second)	**Example: "1x.S2"** If the dialed phone number begins with "1", the call is made after a lapse of 2 seconds. • The number (0–9) followed by "S" or "s" shows the duration in seconds until the call is made.

Element	Available Value	Description
Macro Timer	T, t	**Example: "1x.T"** If the dialed phone number begins with "1", the call is made after a lapse of "T" seconds. • The value of "T" or "t" can be configured through the Web user interface (→ see **[Timer for Dial Plan]** in **4.6.1.1 Call Control**).
Reject	!	**Example: "123xxx!"** If the dialed phone number is "123" followed by 3 digits, the call is not made.
Alternation	|	**Example: "1xxxx|2xxx"** If the dialed phone number is "1" followed by 4 digits, or "2" followed by 3 digits, the call is made immediately. You can use this element to specify multiple numbers.

Note

- You can enter up to 1024 characters in **[Dial Plan]**.
- You can assign up to 128 dial plans separated by "|" in **[Dial Plan]**.
- You can assign up to 1024 digits per dial plan in **[Dial Plan]**.
- After the user completes dialing, the unit immediately sends all the dialed digits if **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]** in the Web user interface or if "**DIAL_PLAN_NOT_MATCH_ENABLE**" is set to "**N**" in a configuration file. The unit recognizes the end of dialing as follows:
  - The inter-digit timer expires (→ see **[Inter-digit Timeout]** in **4.6.1.1 Call Control** in the Web user interface or "**INTDIGIT_TIM**" in **5.5.1 Call Control Settings** in the configuration file).
  - The user presses **[ENTER]** or the # key.
  - The call is initiated after going off-hook (pre-dial).

Dial Plan Example

The following example shows dial plans containing character sequences separated by "|".
Example: "[2346789]11|01[2-9]x.|[2-9]xxxxxxxxx"

Complete Match:

Example: "**[2346789]11**|01[2-9]x.|[2-9]xxxxxxxxx"

- If the dialed phone number is "211", "911" and so on, the call is made immediately.

Example: "[2346789]11|01[2-9]x.|**[2-9]xxxxxxxxx**"

- If the dialed phone number is "2123456789", "5987654321" and so on, the call is made immediately.

Partial Match (when the dial plan contains "."):

Example: "[2346789]11|**01[2-9]x.**|[2-9]xxxxxxxxx"

- If the dialed phone number is "01254", "012556" and so on, the call is made after the inter-digit timer expires.

Partial Match (when the dial plan does not contain "."):

Example: "**[2346789]11**|01[2-9]x.|[2-9]xxxxxxxxx"

- If the dialed phone number is "21", "91" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]**, the call is made after the inter-digit timer expires.
- If the dialed phone number is "21", "91" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[No]**, the call is denied after the inter-digit timer expires.

Example: "[2346789]11|01[2-9]x.|**[2-9]xxxxxxxxx**"

- If the dialed phone number is "21234567", "598765432" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]**, the call is made after the inter-digit timer expires.
- If the dialed phone number is "21234567", "598765432" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[No]**, the call is denied after the inter-digit timer expires.

No Match:

Example: "[2346789]11|01[2-9]x.|[2-9]xxxxxxxxx"

- If the dialed phone number is "0011", "1011" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[Yes]**, the call is made after the inter-digit timer expires.
- If the dialed phone number is "0011", "1011" and so on when **[Call Even If Dial Plan Does Not Match]** is set to **[No]**, the call is denied.

6.3 Flexible Buttons

You can customize the flexible buttons on the unit. They can then be used to make or receive outside calls or as feature buttons. These settings can be programmed either through the Web user interface (→ see **4.6.3 Flexible Button Settings**) or by configuration file programming (→ see **5.5.6 Flexible Button Settings**).

Note

- This feature may not be supported on your phone system.

The following types of flexible buttons are available:

Button	Description	Lamp Indication (KX-UTG200 only)
One-Touch	Used to access a desired party or system feature using the One-Touch Dialing feature.	–
BLF	Used to show the current status of another extension, call the extension and transfer calls to it. This button can also be used to perform Directed Call Pickup (→ see **[Direct Call Pickup]** in **4.6.1.1 Call Control** in the Web user interface. **Note** • BLF (Busy Lamp Field) is an optional feature and may not be supported on your phone system. • It may be necessary to specify the Resource List URI to use this feature, depending on your phone system (→ see **[Resource List URI]** in **4.6.2.1 Call Control** in the Web user interface or "**RESOURCELIST_URI**" in **5.7.2 Per Line - Call Control Settings** in the configuration file).	**Off**: The BLF extension is idle. **Red on**: A corresponding BLF extension is using the line. **Flashing green rapidly**: The BLF extension is receiving an incoming call.

Flexible Button Icons

Flexible button icons indicate the type and status of the flexible buttons in use.

Icon	Description
	Indicates a one-touch flexible button.
	Indicates a BLF flexible button is subscribing.
	Indicates a BLF flexible button is idle.
	Indicates a BLF flexible button is busy.
	Indicates a BLF flexible button is alert.
	Indicates a call with BLF flexible button is parked.

Using Flexible Buttons with the KX-UTA336 Add-on Key Module (KX-UTG300 only)

The optional KX-UTA336 (also referred to as "KEM") allows 36 additional flexible buttons (3 pages of 12) to be used with the KX-UTG300. The available flexible buttons (→ see Page 292) and their icons (→ see Page 293) are the same as for the unit. The flexible buttons for the KX-UTA336 can be programmed either through the Web user interface (→ see **4.6.4 Flexible Button Settings (KEM) (KX-UTG300 only)**) or by configuration file programming (→ see **5.5.7 KEM1 (KX-UTA336 Add-on Key Module 1) Button Settings** and **5.5.8 KEM2 (KX-UTA336 Add-on Key Module 2) Button Settings**).

6.3.1 Flexible Button Settings

To set Flexible Buttons

1. In the Web user interface, click the **[Telephone]** tab, and then click **[Flexible Button Settings]**.
2. Enter settings as described in the following table.

Button	Parameter	
	Description	Value
One-Touch	Phone Number	Up to 32 digits
BLF	Extension Number*1	Up to 32 digits

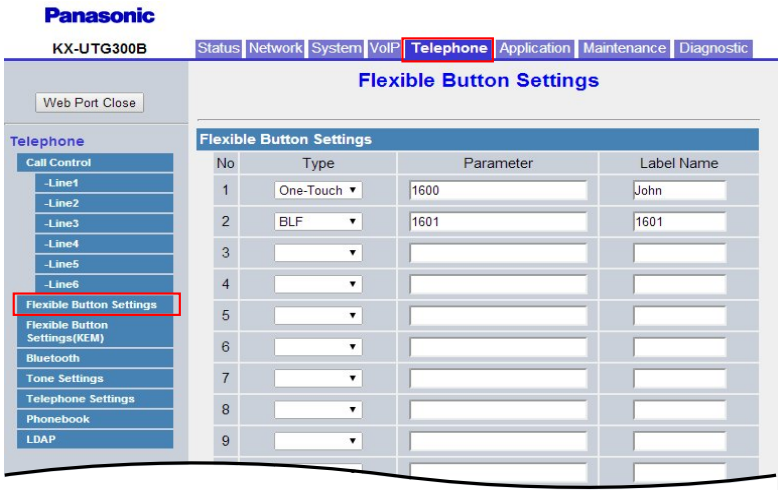
*1 You can also assign extension numbers automatically to BLF buttons using the information in the server's resource list without having to input information here.

Note

- For details about configuring these settings by configuration file programming, see **5.5.6 Flexible Button Settings**.

[Setting Example]

The following screen shows an example of setting flexible buttons.



Description:

- Button 1 is set to make calls to a certain destination using the One-Touch Dialing feature.
- Button 2 is set to show the status of a certain extension. It can also be used to call that extension and transfer calls to it.*1

*1 You can also assign extension numbers automatically to BLF buttons using the information in the server's resource list without having to input information here.

Section 7
Troubleshooting

This section provides information about troubleshooting.

7.1 Troubleshooting

If you still have difficulties after following the instructions in this section, disconnect the unit from the AC outlet, then connect the AC adaptor again. If using PoE, disconnect the LAN cable, then connect the LAN cable again.

General Use

Problem	Cause/Solution
I cannot hear a dial tone.	• Network settings may not be correct. • Many installation issues can be resolved by resetting all the equipment. First, shut down your modem, router, hub, unit, and PC. Then turn the devices back on, one at a time, in this order: modem, router, hub, unit, PC. • If you cannot access Internet Web pages using your PC, check to see if your phone system is having connection issues in your area. • Check the VoIP status in the Web user interface and confirm that each line is registered properly (→ see **To check the setting status in the Web user interface** in this section). • Check that the SIP server address, URLs of the configuration files, encryption key, and other required settings are correct. • Check the firewall and port forwarding settings on the router (→ see **1.1.6 Other Network Settings**). • For details about the settings, consult your network administrator or phone system dealer.
The unit will not start up correctly.	• Web user interface settings or configuration file settings may not be correct. Perform the following procedure to initialize the settings, and then reconfigure the unit correctly. **1.** On the Home screen, select . **2.** Press **[#][1][3][6]**. **3.** Enter the Admin Password, and then press **[ENTER]**. **4.** Select Yes. **Note** • After performing Factory Setting, the unit will restart automatically. • If settings were not initialized after performing this procedure, consult your phone system dealer.

Making/Answering Calls, Intercom

Problem	Cause/Solution
The unit does not ring.	• Check the VoIP status in the Web user interface and confirm that each line is registered properly (→ see **To check the setting status in the Web user interface** in this section). • Check that the SIP server address, URLs of the configuration files, encryption key, and other required settings are correct. • Check the firewall and port forwarding settings on the router (→ see **1.1.6 Other Network Settings**). • Check **[Call Control]** for each line in the **[Telephone]** tab in the Web user interface. – If **[Do Not Disturb]** is set to **[Yes]**, the unit does not receive calls (→ see **4.6.2.3 Call Features**). – If **[Unconditional (Enable Call Forward)]** is set to **[Yes]**, the unit does not receive calls (→ see **4.6.2.4 Call Forward**). – If **[Block Anonymous Call]** is set to **[Yes]**, the unit does not receive anonymous calls (→ see **4.6.2.3 Call Features**). • Check that **[Do Not Disturb]**, **[Enable Call Forward]**, and **[Block Anonymous Call]** are not controlled by your phone system. • For details about settings, consult your network administrator or phone system dealer.
I cannot make a call.	• Check the VoIP status in the Web user interface and confirm that each line is registered properly (→ see **To check the setting status in the Web user interface** in this section). • Check that the SIP server address, URLs of the configuration files, encryption key, and other required settings are correct. • Check the firewall and port forwarding settings on the router (→ see **1.1.6 Other Network Settings**). • For details about settings, consult your network administrator or phone system dealer.

Password for Web User Interface Programming

Problem	Cause/Solution
I have lost the login password of the Web user interface for the Administrator or User account.	• Reset the password from the unit. The passwords for both Administrator and User will be reset (→ see **1.2 Reset (Page 31) or 4.8.7 Reset & Restart (Page 164)**). For security reasons, it is recommended that the passwords are set again immediately (→ see **4.4.2 Administrator Password** or **4.4.3 User Password**).

Time

Problem	Cause/Solution
The time is not correct.	• In the Web user interface, you can set NTP synchronization and DST (Summer Time) control to adjust the time automatically (→ see **4.4.5 Time Adjust Settings**). • If the time is still incorrect even after setting NTP synchronization, check the firewall and port forwarding settings on the router (→ see **1.1.6 Other Network Settings**).

Checking the Status of the Unit

You can check the status of the unit by using Web user interface programming (→ see **4.2.2 Network Status** and **4.2.3 VoIP Status**) or by looking at system logs (→ see **5.3.3 Syslog Settings**) sent from the unit.

To check the setting status in the Web user interface

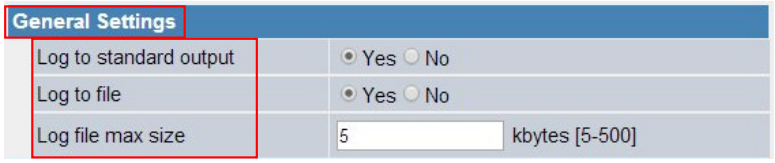
1. Click the **[Status]** tab, and then click **[Network Status]** to check the network settings.
2. Check the status displayed.
3. Click **[VoIP Status]** to check the VoIP settings.
4. Check the status displayed.

7.2 Diagnostic Settings

The [Diagnostic] tab (→ see Page 165) of the web user interface contains applications that can be used to gather system information about the unit in the form of logs.

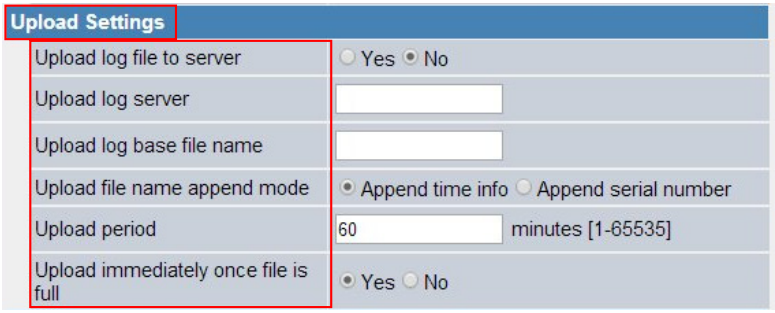
7.2.1 Log Settings

General Settings



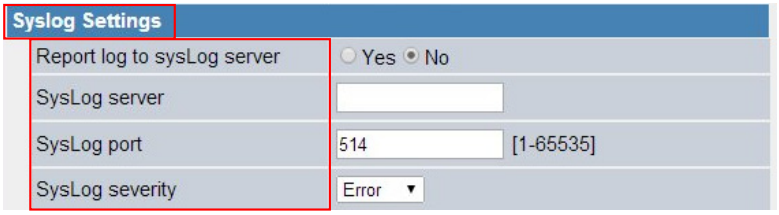
General Settings (→ see Page 165) is used to specify the type of logs outputted (→ see **Log to standard output (Page 165)** and **Log to file (Page 166)**) and the maximum log size (→ see **Log file max size (Page 166)**).

Upload Settings



Upload Setting (→ see Page 166) is used to specify the log server for uploading event logs and file names used for logs. Log files will be uploaded to the log server once the specified file size is reached (→ see **Upload immediately once file is full (Page 167)**) or the specified upload time has expired (→ see **Upload period (Page 167)**).

Syslog Settings



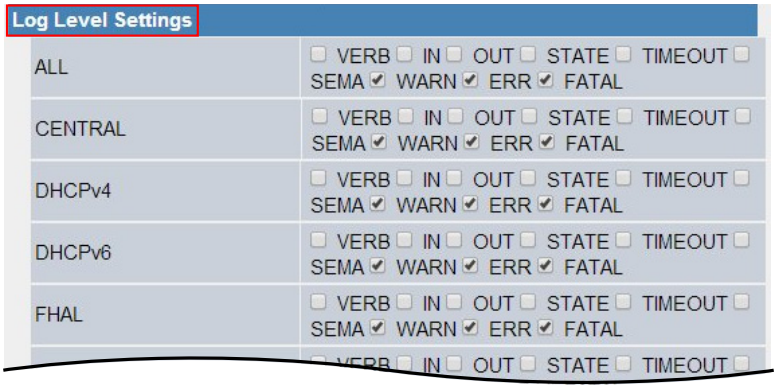
Syslog Settings (→ see Page 166) is used to enable syslog and specify a Syslog server for the unit to send log messages to. You can also specify the port used for the Syslog server and the type (severity) of logs sent

to the Syslog server. Syslog servers can manage analysis and debugging of messages from various devices and platforms.

Related configuration file parameters

- SYSLOG_ADDR (Page 207)
- SYSLOG_PORT (Page 207)
- SYSLOG_SERVER_ENABLE (Page 208)
- SYSLOG_SEVERITY (Page 208)

Log Level Settings



Log Level Settings (→ see Page 168) is used to specify the type and class of logs uploaded to the server.

7.2.2 Log Display

Log Display (→ see Page 184) is used to specify the type and class of logs and then display the specified logs.

7.2.3 System Dump

System Dump (→ see Page 186) is used to export the unit's running information, such as the IP address obtained from DHCP server, CDP/LLDP settings, and DHCP options. For details about the System Dump function, consult your phone system dealer.

7.2.4 Sniffer Dump

Sniffer Dump (→ see Page 187) is used to capture packets on the network and export them for analysis. For details about the Sniffer Dump function, consult your phone system dealer.

7.3 QoS Status (Voice Quality Monitoring)

QoS Status (→ see Page 78) under the [Status] tab of the web user interface can be used to check the codec used and the voice quality of phone calls with the unit. When on a phone call check the information displayed

under QoS Status to check the quality of communications. The following items are displayed under QoS Status.

Item	Description
Codec	Displays the codec used.
MOS-CQ	Displays the mean opinion score for conversation quality.
MOS_LQ	Displays the mean opinion score for listening quality.
Voice Quality	Displays the voice quality.

7.4 Importing/Exporting settings

Import Configuraiton File (→ see Page 157) and Export Configuraiton File (→ see Page 158) under the [Maintenance] tab of the web user interface can be used to import and export web user interface and provisioning settings that can be used for checking and adjusting settings.

7.5 SSH Settings (Debug Settings)

SSH (→ see Page 164) enables you to obtain detailed debugging information via an SSH client. For details about the SSH function, consult your phone system dealer.

Index

Numerics

1–30 123

A

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Panasonic Corporation of North America
Two Riverfront Plaza, Newark, NJ 07102-5490

http://www.panasonic.com/sip

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