



Grandstream Networks, Inc.

GXP2200

Enterprise Multimedia Phone for Android™

User Manual

Grandstream Networks, Inc.

www.grandstream.com

GXP2200 User Manual

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GNU GPL INFORMATION

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Grandstream GNU GPL related source code can be downloaded from Grandstream web site from:
http://www.grandstream.com/support/faq/gnu_gpl.

CHANGE LOG

This section documents significant changes from previous versions of GXP2200 user manuals. Only major new features or major document updates are listed here. Minor updates for corrections or editing are not documented here.

FIRMWARE VERSION 1.0.3.16

- Software Matrix: System 1.0.3.16, Boot 1.0.3.4, Kernel 1.0.3.4, Recovery 1.0.3.4
- GXP2200EXT software version 1.0.0.21
- Hardware version: GXP2200 V2.2A or higher, GXP2200EXT V1.2B or higher (Not supported on V1.1)
- Added MPK EXT settings via GXP2200 web GUI for GXP2200EXT. [ADVANCED SETTING/MPK EXT SETTINGS (FOR GXP2200EXT BOARD 1/2/3/4)]
- Added option "Disable DialPlan". [ADVANCED SETTINGS/CALL FEATURES]
- Added options "Disable Missed Call Indicator", "Disable MWI Indicator", "Disable New Message Indicator", "Disable Contact or Message Full Indicator" and "Disable Indicator When LCD is Off". [MAINTENANCE/DEVICE MANAGER]
- Added support for custom incoming call ring tone from LCD. [PERSONALIZED ACCOUNT]
- Added feature code *50 for enable call waiting and *51 for disable call waiting. [CALL FEATURES]
- Added local Music On Hold support. [ACCOUNT/CALL SETTINGS]
- Added hard key listener event API in GXP2200 SDK

FIRMWARE VERSION 1.0.3.2

- Software Matrix: System 1.0.3.2, Boot 1.0.3.1, Kernel 1.0.3.1, Recovery 1.0.3.1
- Hardware version: GXP2200 V2.2A or higher, GXP2200EXT V1.3A
- Updated GXP2200EXT information. [GXP2200 EXTENSION MODULE (GXP2200EXT)]
- Updated GXP2200 onscreen keyboard information. [ONSCREEN KEYBOARD]
- Added new LED indicator status for screen off. [USING THE MESSAGE WAITING INDICATOR]
- Added video call support.
- Added USB camera support.
- Updated transfer behavior for auto attended transfer. [CALL TRANSFER]
- Added Auto Conference information for 5 way conference. [5-WAY CONFERENCE]
- Added Call Recording support. [CALL RECORDING]
- Added MPK APP support. [MULTI-PURPOSE KEYS]
- Added Broadsoft Shared Call Appearance support. [SHARED CALL APPEARANCE (SCA)]
- Added Call Features support. [CALL FEATURES]

- Updated widgets and shortcuts information for idle screen. [ADDING AN ITEM TO IDLE SCREEN]
- Added LDAP support. [LDAP BOOK]
- Added Voice Assist support. [VOICE ASSIST]
- Added Voice Dialer support. [VOICE DIALER]
- Added Voice Recorder support. [VOICE RECORDER]
- Updated Web GUI option definitions for Broadsoft Call Center, SCA, BLF, Call Park Notification, Hoteling features, Enable Call Features, Dial Plan Prefix and etc. [DEFINITIONS]
- Added Account & Sync. [ACCOUNT & SYNC]
- Added Storage. [STORAGE]
- Added generic XML file provisioning support. [CONFIGURATION FILE DOWNLOAD]
- Added ADB support.

FIRMWARE VERSION 1.0.1.9

- This is the initial version.

WELCOME

Thank you for purchasing Grandstream GXP2200 Enterprise Multimedia Phone for Android™. GXP2200 represents the future of enterprise business telephones in modern Internet age. Featuring Android™ operating system 2.3 and its vast number of 3rd party applications, a 480x272 capacitive touch screen TFT LCD, dual Gigabit network ports, integrated PoE and Bluetooth. The GXP2200 delivers superior HD audio quality, leading edge telephony features, integration of rich Web content with access to the rapidly growing Android™ applications base and automated provisioning. Built with advanced security protection for privacy, this enterprise application phone also features broad interoperability with most 3rd party SIP based devices, IP PBX and major IMS platforms. The GXP2200 is an innovative smart desk phone loaded with tremendous value for Web-integrated business communications as well as unprecedented power for advanced custom business applications development and personalization.

This user manual is designed to help you understand how to configure and manage the GXP2200 Enterprise Application Phone. Besides demonstrating how to install this unit with ease, this manual will explain how to fully utilize the phone's voice calling features as well as explore all the built-in feature-rich applications.

 **Caution:**

Changes or modifications to this product not expressly approved by Grandstream, or operation of this product in any way other than as detailed by this User Manual, could void your manufacturer warranty.

 **Warning:**

Please do not use a different power adaptor with the GXP2200 as it may cause damage to the products and void the manufacturer warranty.

This document is subject to change without notice. The latest electronic version of this user manual is available for download here:

<http://www.grandstream.com/support>

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PRODUCT OVERVIEW

FEATURE HIGHLIGHTS

- 480x272 pixel capacitive touch screen TFT LCD
- HD wideband audio, superb full-duplex hands-free speakerphone with advanced acoustic echo cancellation and excellent double-talk performance
- 6 lines with up to 6 SIP accounts, up to 5-way conference, phonebook with up to 1000 contacts, call history with up to 500 records
- Support Android operating system 2.3 and the vast number of 3rd party Android applications (including Skype, Google Voice, Microsoft Lync Client, Youtube, Facebook, Twitter, Pandora, etc), advanced SDK toolkit for custom business application development and deployment control
- Dual switched auto-sensing 10/100/1000Mbps network ports, PoE, Bluetooth, USB, SD, EHS (Electronic Hook-Switch) with Plantronics headsets, capability to connect/power up to 4 cascaded extension modules with LCD display (GXP2200 EXT)
- Automated provisioning using TR-069 or AES encrypted XML configuration file, TLS/SRTP/HTTPS for advanced security and privacy



Figure 1: GXP2200 Front View

GXP2200 TECHNICAL SPECIFICATIONS

Table 1: GXP2200 Technical Specifications

Protocols and Standards	SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, ARP, ICMP, DNS (A record, SRV, NAPTR), DHCP, PPPoE, SSH, TFTP, NTP, STUN, SIMPLE, LLDP, LDAP, TR-069, 802.1x, TLS, SRTP
Network Interfaces	Dual switched 10/100/1000Mbps ports with integrated PoE
Graphic Display	480x272 capacitive touch screen TFT LCD
Bluetooth	Yes, integrated
Auxiliary Ports	RJ9 headset jack (allowing EHS with Plantronics headsets), USB, SD, extension module port
Feature Keys	10 function keys for MUTE, HOLD, PHONEBOOK, MESSAGE, HEADSET, TRANSFER, CONFERENCE, VOLUME, SPEAKERPHONE, SEND/REDIAL, 4 Android navigations control keys for HOME, MENU, SEARCH, RETURN
Voice Codec	Support for G.711u/a, G.722 (wide-band), G.729A/B in-band and out-of-band DTMF (in audio, RFC2833, SIP INFO)
Audio Codec	AAC, MP3, WMA, Real, Ogg-Vortis, FLAC
Video Decoder	H.264 BP/MP/HP, H.263/H.263+, MPEG4, up to 1080p resolution
Telephony Features	Hold, transfer, forward (unconditional/no-answer/busy), call park/pickup, 5-way conference, shared-call-appearance (SCA)/bridged-line-appearance (BLA), virtual BLF/speed-dial extensions, downloadable phone book (XML, LDAP, up to 1000 items), call waiting, call log (up to 500 records), boss-secretary virtual button, flexible dial plan, hot desking, personalized music ringtones, server redundancy and fail-over
Sample Applications	Skype, Google Voice, Microsoft LYNC, Web browser, Adobe Flash, Facebook, Twitter, Youtube, news, weather, stock, Internet Radio, Pandora, Last.fm, Yahoo Flickr, Photobucket, alarm clock, Google Calendar, mobile phone data import/export via Bluetooth and etc. API/SDK available for advanced custom application development
Applications Deployment	Allow various Android operating system 2.3 compliant applications to be developed, downloaded and run in the embedded device with provisioning control
HD Audio	Yes, HD handset and speakerphone with support for wideband audio
Extension Module	Yes, can power up to 4 GXP2200EXT modules which feature a 128x384 graphic LCD, 20 quick-dial/BLF keys with dual-color LED, 2 navigation keys, and less than

	1.2W power consumption per unit
Base Stand	Yes, integrated stand with 2 adjustable angles
QoS	Layer 2 (802.1Q, 802.1p) and Layer 3 (ToS, DiffServ, MPLS) QoS
Security	User and administrator level passwords, MD5 and MD5-sess based authentication, 256-bit AES encrypted configuration file, TLS, SRTP, HTTPS, 802.1x media access control
Multi-language	English, German, Italian, French, Spanish, Portuguese, Russian, Croatian, Chinese, Korean, Japanese and etc
Upgrade and Provisioning	Firmware upgrade via TFTP/HTTP/HTTPS or local HTTP upload, mass provisioning using TR-069 or AES encrypted XML configuration file
Power and Green Energy Efficiency	Universal power adapter: Input: 100-240VAC 50-60Hz; Output: 12VDC, 1.5A (supplying power for up to 4 cascaded GXP2200EXT); Integrated Power-over-Ethernet (802.3af, class 0); Max power consumption 10W (power adapter, no GXP2200EXT), 12W (PoE, no GXP2200EXT), or 18W (power adapter only, with 4 cascaded GXP2200EXT)
Physical	Unit dimension: 188mm (W) x 210mm (H) x 85mm (D) (handset on-hook) Unit weight: 0.86kg Package weight: 1.42kg
Temperature and Humidity	Operating: 32 - 104°F / 0 - 40°C, 10-90% (non-condensing); Storage: 14 - 140°F / -10 - 60°C
Package Content	GXP2200 phone, handset with cord, universal power supply, network cable, quick installation guide
Compliance	FCC Part 15 (CFR 47) Class B; EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, EN60950-1; AS/NZS CISPR 22 Class B, AS/NZS CISPR 24, RoHS; UL 60950 (power adapter)

INSTALLATION

EQUIPMENT PACKAGING

Table 2: GXP2200 Equipment Packaging

Main Case	Yes (1)
Handset	Yes (1)
Phone Cord	Yes (1)
Power Adaptor	Yes (1)
Ethernet Cable	Yes (1)
Phone Stand	Yes (1)
Quick Installation Guide	Yes (1)

CONNECTING YOUR PHONE

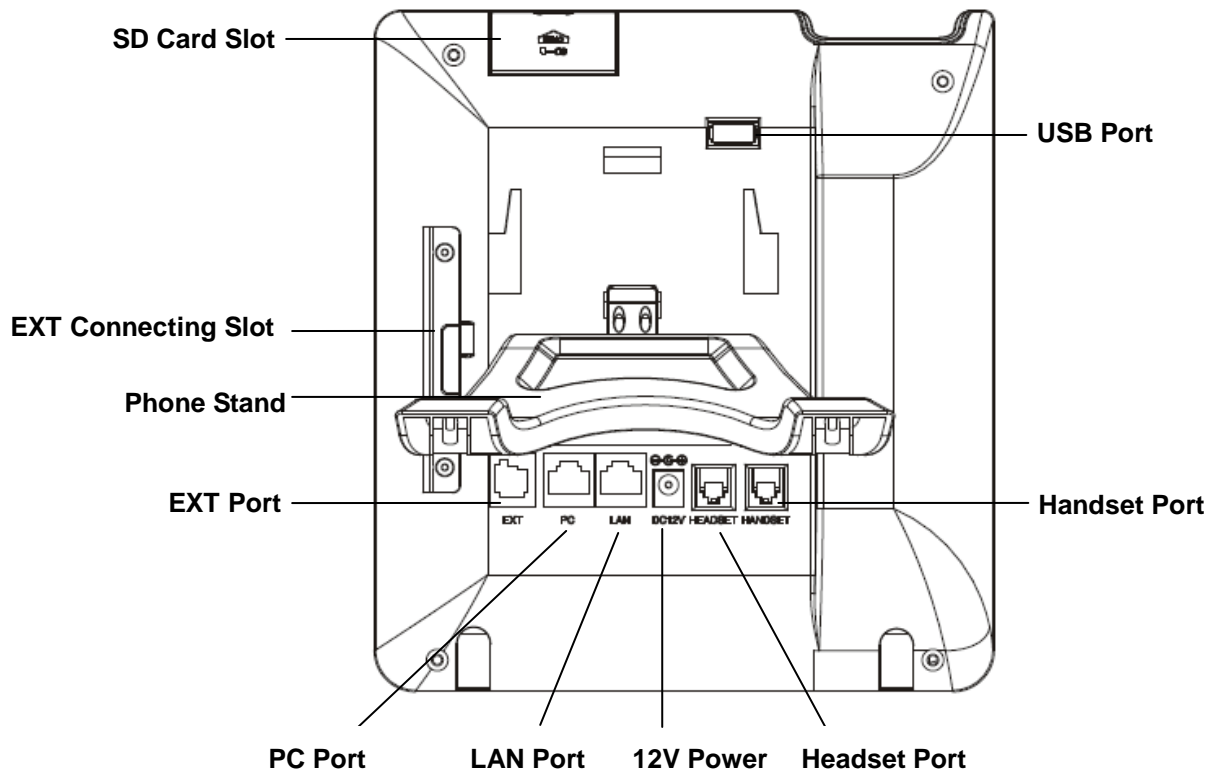


Figure 2: GXP2200 Back View

Table 3: GXP2200 Connectors

SD Card Slot	SD Card Slot
USB Port	<p>USB devices can be connected via the USB port.</p> <p>For example: Connect a USB flash drive to save captured pictures; Connect a USB Wi-Fi dongle to the GXP2200.</p>
Headset Port	RJ9 headset connector port (supporting EHS with Plantronics headset)
Handset Port	RJ9 handset connector port
PC Port	10/100/1000Mbps RJ-45 port connecting to PC
LAN Port	10/100/1000Mbps RJ-45 port connecting to Ethernet
Power Jack	12V DC Power connector port
EXT Port	RJ11 connector port to connect the GXP2200 Extension Board

To set up the GXP2200, follow the steps below:

1. Attach the phone stand to the back of the phone where there is a slot for the phone stand. Upper part and bottom part are available for two angles;
2. Connect the handset and main phone case with the phone cord;
3. Connect the LAN port of the phone to the RJ-45 socket of a hub/switch or a router (LAN side of the router) using the Ethernet cable;
4. Connect the 12V DC output plug to the power jack on the phone; plug the power adapter into an electrical outlet. If PoE switch is used in step 3, this step could be skipped;
5. The LCD will display the booting up screen. Before continuing, please wait for the main screen display to show up.

GXP2200 EXTENSION MODULE (GXP2200EXT)

The GXP2200 extension module (GXP2200EXT) is an ideal solution for the busy enterprise environment looking to add the ability to receive and dispatch calls efficiently. Each extension module has 20 programmable buttons, Left and Right buttons, supporting 40 Multiple Purpose Keys to be configured. GXP2200 supports up to 4 extension modules, adding 160 fully programmable phone extensions to the phone.

Table 4: GXP2200EXT Packaging

GXP2200EXT Main Case	Yes (1)
GXP2200EXT Stand	Yes (1)
RJ11-RJ11 Cable	Yes (1)
Connector Plate	Yes (1)
Screws	Yes (4)
Quick Installation Guide	Yes (1)

 **Note:**

The GXP2200EXT is an additional accessory for the GXP2200 and is not included in the GXP2200 box.

To set up the GXP2200EXT with the GXP2200, please follow the steps below:

1. On the back of the GXP2200 and the GXP2200EXT, there are slots for connector plate. Attach the connector plate between the slots for GXP2200 and the GXP2200EXT;
2. Apply the screws provided and securely tighten them in (See **Figure 3: GXP2200 Back View with GXP2200EXT**);
3. Connect the GXP2200EXT to the GXP2200 via EXT port using the RJ11-RJ11 cable provided;
4. Install the phone stand on the GXP2200 and the GXP2200EXT;
5. Power up the GXP2200. The GXP2200EXT will show the booting up screen with version information and connecting status;
6. After successfully booting up, the GXP2200EXT will stay in idle. Press and hold the Left button for 3 to 5 seconds to check the version information and status.

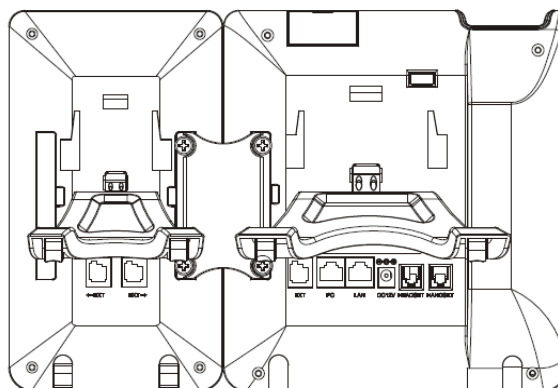


Figure 3: GXP2200 Back View with GXP2200EXT

The GXP2200EXT can be configured via the web GUI of the GXP2200 connected. After successfully configured, press Left or Right button on the GXP2200EXT and users could browse all the MPK's status in different pages.

For more information on installing, connecting and configuring the GXP2200EXT with GXP2200, please refer to the GXP2200EXT user manual:

<http://www.grandstream.com/support>

SAFETY COMPLIANCES

The GXP2200 phone complies with FCC/CE and various safety standards. The GXP2200 power adapter is compliant with the UL standard. Use the universal power adapter provided with the GXP2200 package only. The manufacturer's warranty does not cover damages to the phone caused by unsupported power adapters.

WARRANTY

If the GXP2200 phone was purchased from a reseller, please contact the company where the phone was purchased for replacement, repair or refund. If the phone was purchased directly from Grandstream, please contact Grandstream Support for a RMA (Return Materials Authorization) number before the product is returned. Grandstream reserves the right to remedy warranty policy without prior notification.

 **Warning:**

Use the power adapter provided with the phone. Do not use a different power adapter as this may damage the phone. This type of damage is not covered under warranty.

GETTING TO KNOW GXP2200

USING THE TOUCHSCREEN

When the phone boots up in HOME screen, the LCD will display as below. A registered account is shown in the following figure and users might need register their own account to have the account status displayed.

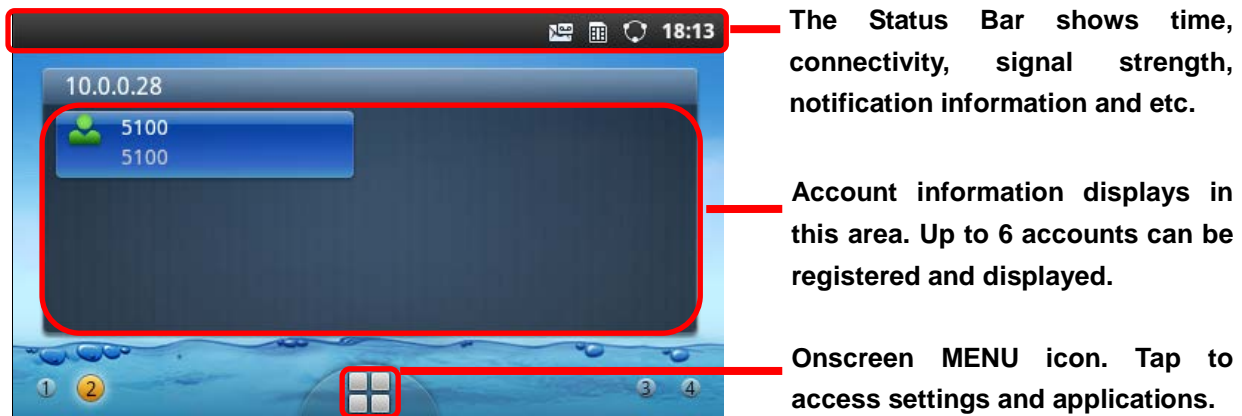


Figure 4: GXP2200 Default Main Screen

Tap the onscreen MENU icon, the settings and applications menu will be brought up as shown below.



Figure 5: GXP2200 Onscreen Menu


To fully manipulate the GXP2200 capacitive touch screen, use your fingers operate the following on the GXP2200 icons, buttons, menu items, onscreen keyboard and etc.

- **Tap**
To select items on the screen (e.g., setting options, apps);
To press onscreen buttons (e.g., "End" or "Options" softkey during the call) ;
To type letters and symbols using the onscreen keyboard.
- **Touch and Hold**
Touch the item on the screen and hold it without lifting your finger from the screen till an action occurs. For example, touch and hold on a picture to bring up operation options such as "Open", "Copy", "Move", "Rename" and etc.
- **Drag**
Touch and hold an item for a few seconds first. Once the item has a red frame activated, or a move option shows up, keep your finger on the screen and move it until the target position is reached. Then lift your finger up to release.
- **Slide**
Move your finger across the screen to slide. To view different idle screens or menu pages, slide left or right; to view the status bar on top of the screen, place your finger on the bar and slide it down. If your finger stays on the screen for too long, the item may be selected and sliding won't occur.
- **Pinch**
Place two fingers on the screen, then pinch them together (zoom out) or spread them apart (zoom in). This could be used in main screen, or apps like Browser and Gallery.

IDLE SCREEN

SETTING UP HOME SCREEN

By default, the HOME screen is the one with account registration status displayed. Users could change it by specifying the HOME screen as preferred. Follow the steps below to set up the HOME screen.

- GXP2200 is up and running on idle screen;
- Press the MENU button  and tap on "Edit" option. Or users could place two fingers on the screen and them pinch together. Then it will zoom out all the screens as shown in **Figure 6: Set GXP2200 HOME Screen**.






- The screen with  selected in a red frame is the HOME screen. Others are shown with icon . Tap on the icon  to select the corresponding screen as the new HOME screen.



Figure 6: Set GXP2200 HOME Screen

ADDING IDLE SCREENS

By default, there are four idle screens. To add more screens, firstly pinch on the idle screen, or press the MENU button  and then touch "Edit" option to bring up the display in *Figure 6: Set GXP2200 HOME*

Screen. Then tap on the icon  so one more idle screen will be added. To adjust the sequence for the idle screens to display, drag the screen and move to insert it before or after other screens.

DELETING IDLE SCREENS





The idle screens could be deleted. To delete, firstly remove all the widgets/shortcuts on that screen by dragging the icon to Recycle Bin  at the bottom. Then pinch on the idle screen, or press the MENU button  and then touch "Edit" option to bring up the display as the following figure shows. Now tap on the icon  for the screen you would like to delete.



Figure 7: Delete GXP2200 Idle Screen

 **Note:**




Removing the widgets/shortcuts from the screen to be deleted is necessary. Otherwise, users won't see

 show up for the screen.















IDLE SCREEN ICONS

The following table describes the icons used on the GXP2200 idle screen and MENU screen.

Table 5: GXP2200 Onscreen Icons

	<p>Onscreen MENU icon. Displayed on the bottom of each idle screen. Tap on it to access settings and all the installed applications.</p>
	<p>HOME icon. Displayed on the bottom of onscreen Menu screen. Tap on it to go back to the HOME screen.</p>
	<p>Screen indicator. Displayed on the bottom of each idle screen. Grey: The indicated screen is not the current displayed screen.</p>

	<p>Screen indicator. Displayed on the bottom of each idle screen. Orange: The current displayed screen.</p>
	<p>Account registered. Displayed on the default HOME screen when the account is registered. Tap on it to make calls via this account.</p>
	<p>Account unregistered. Displayed on the default HOME screen if the account is configured but not registered.</p>
	<p>SCA Account. Displayed on the default HOME screen if the account is registered as a SCA account.</p>
	<p>Recycle Bin. Displayed when holding and dragging a widget on idle screen. Drag the widget to Recycle Bin to remove it from the idle screen.</p>
	<p>Speaker. Displayed in status bar when speaker is being used.</p>
	<p>Tone silent. Displayed in status bar when speaker is turned off. When it's on silent, the incoming call/message won't produce ring tone/notification tone from phone's speaker.</p>
	<p>Headset. Displayed in status bar when headset is being used.</p>
	<p>Handset. Displayed in status bar when handset is off hook.</p>
	<p>Call forward (Account 1). Displayed in status bar when call forward is set up for account 1.</p>
	<p>Call forward (Account 2). Displayed in status bar when call forward is set up for account 2.</p>
	<p>Call forward (Account 3). Displayed in status bar when call forward is set up for account 3.</p>
	<p>Call forward (Account 4). Displayed in status bar when call forward is set up for account 4.</p>
	<p>Call forward (Account 5). Displayed in status bar when call forward is set up for account 5.</p>

	Call forward (Account 6). Displayed in status bar when call forward is set up for account 6.
	Alarm. Displayed in status bar when there is alarm set up.
	DND. Displayed in status bar when DND is on.
	Mute. Displayed in status bar when the ongoing call is muted.
	Network disconnected. Displayed in status bar when network is not connected.
	Network connected. Displayed in status bar when network is connected.
	USB connected. Displayed in status bar when USB storage device is connected.
	SD Card inserted. Displayed in status bar when SD card is inserted.
	SD Card space full. Displayed in status bar when the inserted SD card's space is full.
	Voicemail. Displayed in status bar when there is new voicemail.
	Bluetooth. Displayed in status bar when Bluetooth is enabled.
	Calendar event. Displayed in status bar when calendar has event scheduled.
	Playing. Media Player is currently playing files.
	Wi-Fi signal strength. Displayed in status bar when Wi-Fi is used.

ONSCREEN KEYBOARD

The GXP2200 onscreen keyboard can be activated by tapping on an input field.

- **English Keyboard**


This is the default keyboard on GXP2200. Tap on  to change keyboard/input options.



Figure 8: GXP2200 Onscreen Keyboard - English Keyboard

- **Chinese Keyboard**


When using Chinese Keyboard, users could input English and Chinese by switching input method. To switch input method to English when the current method is Chinese, tap on .



Figure 9: GXP2200 Onscreen Keyboard - Chinese Input Method


To switch input method to Chinese when the current method is English, tap on .



Figure 10: GXP2200 Onscreen Keyboard - English Input Method

- **Lowercase and Uppercase**




When using English input method, to switch input among lowercase, capital uppercase and all uppercase, tap on ,  or .



Figure 11: GXP2200 Onscreen Keyboard - Lowercase



Figure 12: GXP2200 Onscreen Keyboard - Capital Uppercase

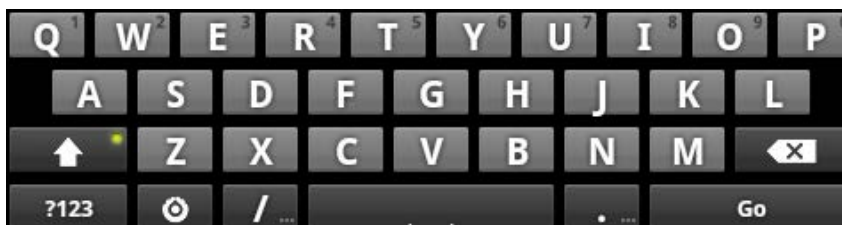


Figure 13: GXP2200 Onscreen Keyboard - All Uppercase

- **Number and symbols**

To input number and symbols, tap on **?123** to switch the mode and tap on **ALT** to go to another page for more symbols.



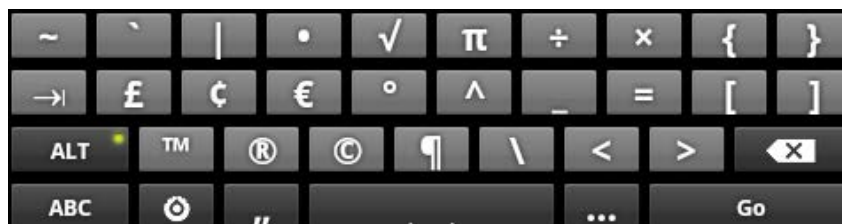


Figure 14: English Keyboard - Number and Symbols



Figure 15: Chinese Keyboard - Number and Symbols

 **Note:**

- To configure keyboard and input options, users could go to **Settings -> Language & Keyboard -> Keyboard Settings**.
 - Users could press and hold on the input field for 2-4 seconds to activate the window for Input method configuration.
-

USING THE KEYPAD

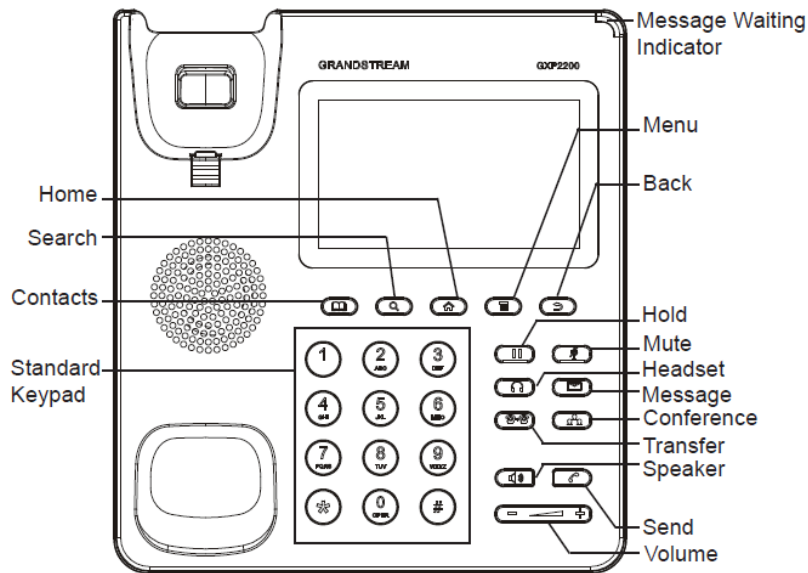















Figure 16: GXP2200 Keyboard

Table 6: GXP2200 Keypad Buttons

	Contacts. Press to view and edit contact information.
	Search. Press to search.
	Home. Press to go back to Home screen; or press and hold it for about 2 seconds, the current running applications and a Manage Applications button will show.
	Menu. Press to view options for different screen or applications.
	Back. Press to go back.
	Hold. Press to put call on hold or resume the call.
	Mute. Press to mute or unmute the call.
	Headset. Press to switch to headset mode.
	Message. Press to view voicemail messages.
	Transfer. Press to transfer call.
	Conference. Press to conference call.
	Speaker.

	Send/Redial.
	Volume.







 **Note:**

To capture a screenshot, press the MENU  and SEARCH  button at the same time. Then the screenshot picture will be saved under **File Manager->user_data->screenshot** folder.

USING THE MESSAGE WAITING INDICATOR

The GXP2200 message waiting indicator LED is on the top right corner of the device. It could notify the users with different messages and status of the phone. Please refer to the status description below. **The priority for the LED indicator is from high to low in the following table.**

Table 7: GXP2200 MWI LED Status

Color	LED Status	Description
	Fast Flashing	Incoming call
	Solid	Calling, Talking
	Slow Flashing	Call on hold
	Flashing	Missed call (s), New voicemail (s), New SIP Message (s)
	Solid	High memory usage, Maximum number of messages, Maximum contact storage
	Solid	Phone is on but the screen is off
OFF	OFF	Normal

MANAGING STATUS BAR

The GXP2200 status bar is located on the top of the screen. Touch the bar and slowly drag it down to display the full status list.



Figure 17: GXP2200 Status Bar

Once the status bar is opened, users could view the notifications, process and system settings.

- **Notification**

Users could tap on the notification message to open it and view the details. To remove all the notifications, tap on **Clear** button.



Figure 18: GXP2200 Status Bar - Notification

- **Process**


Tap on **Process** tab then users could view all the running processes on the GXP2200. Press on the process to open it, or tap on  to close the process.



Figure 19: GXP2200 Status Bar - Process

- **System Settings**

Users could access some of the frequently used features from system settings. For each option, please see the description below.



Figure 20: GXP2200 Status Bar - System Settings

 **Note:**




Handset Mode is for audio path and GXP2200 dialer control when running 3rd party app that uses media path. Currently there are three options supported:

- **Enabled:** Default mode. When handset is lifted, audio will come through handset and the GXP2200 default call screen will show.
 - **Disabled:** In this mode, when running the 3rd party app, if handset is lifted, the audio path will switch to handset but GXP2200 default call screen won't show (users won't hear dial tone either). Onhook the handset, the audio path will be switched to speaker. Under this mode, even the GXP2200 is not using the 3rd party app, picking up the handset will not activate the GXP2200 dialer. (Users can still use Speaker button to activate GXP2200 dialer under this mode.)
 - **Auto:** In this mode, the GXP2200 will automatically detect if the audio path is used by 3rd party app first. If so, it will use the handset mode "Disabled". Otherwise, keep it in "Enabled" mode. Please note that running the 3rd party app doesn't necessarily mean the audio path is used by the 3rd party app. If the audio path is not occupied by the 3rd party app, the GXP2200 will still use the handset mode "Enabled".
-

MAKING PHONE CALLS

REGISTERING SIP ACCOUNTS

The GXP2200 supports up to 6 independent SIP accounts. Each account may have separate SIP servers, usernames and NAT configurations.

For example, the user has configured 4 SIP accounts on GXP2200: Account 1, Account 2, Account 3 and Account 4. The registration status for each account is displayed on the main screen. The icon next to the account name will indicate the registration status ( Green: registered;  Grey: unregistered;  Yellow: registered as SCA account). The following figure shows Account 1 and Account 2 are registered, while Account 3 and Account 4 are configured but not registered.

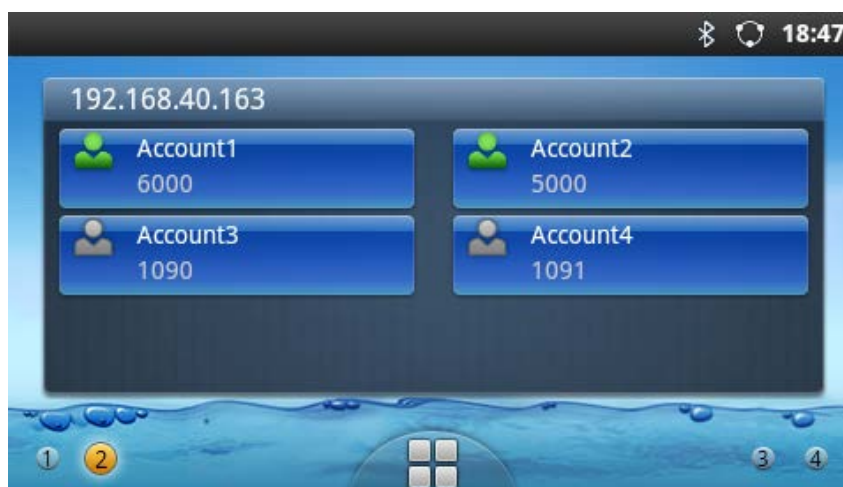




Figure 21: GXP2200 Account Registration Status

To register the account, users could directly configure from MENU button->**Settings**->**Advanced Settings**->**Account**. Or users could log in the GXP2200 web GUI->**Account** page to fill in the necessary registration information, i.e., Account active, Account name, SIP Server, SIP User ID, SIP Auth ID, SIP Auth Password and etc. Once the correct information is entered and saved, the account registration status will show on the main screen.

 **Note:**

For web GUI login and configuration information, please refer to section [**GXP2200 WEB GUI SETTINGS**].

HANDSET, SPEAKER AND HEADSET MODE

The GXP2200 allows users to switch among handset, speaker or headset when making calls. Press the Hook Switch to switch to handset; press the Headset button  to switch to headset; or press the Speaker button  to switch to speaker.

MAKING A CALL

Once the account is successfully registered, users could use the following ways to make a call.

1. Onhook dialing











- When the phone is in idle, press the digits to bring up the call screen and select the account on the right panel. Or, users could tap on the registered account icon in idle screen to select the account;
- Enter the necessary digits. When there is digit matching call history, or contacts name/number, the dropdown list will show the numbers. For example, if "John" is saved in the GXP2200 contacts, entering 5 (JKL) 6 (MNO) 4 (GHI) 6 (MNO) will show call log with 5646 as the first four digits, as well as John's number. Users could then directly select one of them from the list, instead of entering all the digits;
- To send the digits and call via Speaker, press  button or  Send button or tap on  (audio call) /  (video call) . To use handset, lift the handset up from the hook switch. If headset is used, press  to call via headset.




Figure 22: GXP2200 Call Screen



2. Off hook and dial

- Take the handset off hook, or press the speaker button , or press the headset button  to bring up the call screen;
- Select the account by tapping on the account name in the right panel;
- Enter the number;
- Tap on  (audio call) or  (video call) or  to send. If no key is pressed, the call will be automatically dialed out after 4 seconds timeout.

3. Redial

- When the phone is idle or offhook, press SEND  button to dial the last dialed-out number;
- For redialing, the phone will use the account that was used to call the last number. Therefore, if the last number dialed uses the third SIP account, the phone will also use the third SIP account when redialing.

4. Via Call History

- Access the Call History by tapping on the onscreen Menu icon->**Call History** icon  ;
- The LCD will display all call history types: "All", "Outgoing", "Incoming" and "Missed" calls;
- Select the call history you would like to view by sliding up/down and tapping on the corresponding number;
- Press on the dial icon  to dial out.

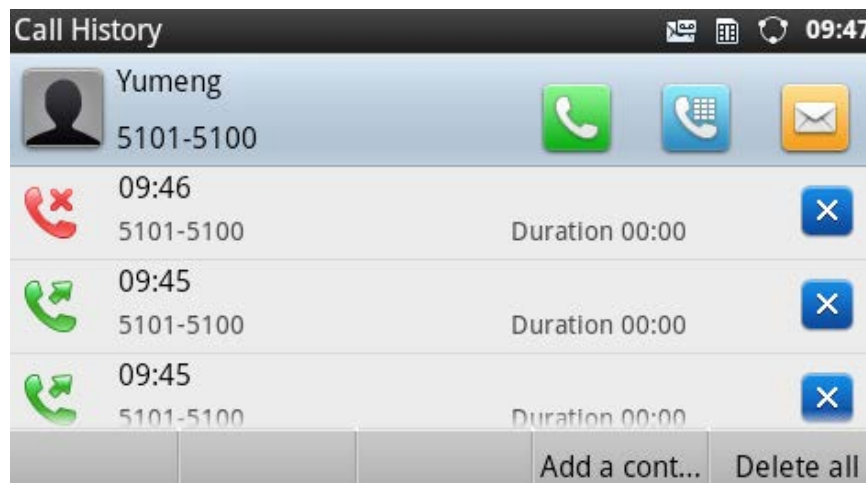




Figure 23: GXP2200 Call History Screen - One Entry Selected

5. Via Contacts

- Access the contacts information by tapping on the onscreen Menu icon->**Contacts** icon ;
- The LCD screen will display the records in the contacts;
- Navigate to the contacts by sliding up/down on the screen;
- Tap on the dial key  to dial the corresponding contact.

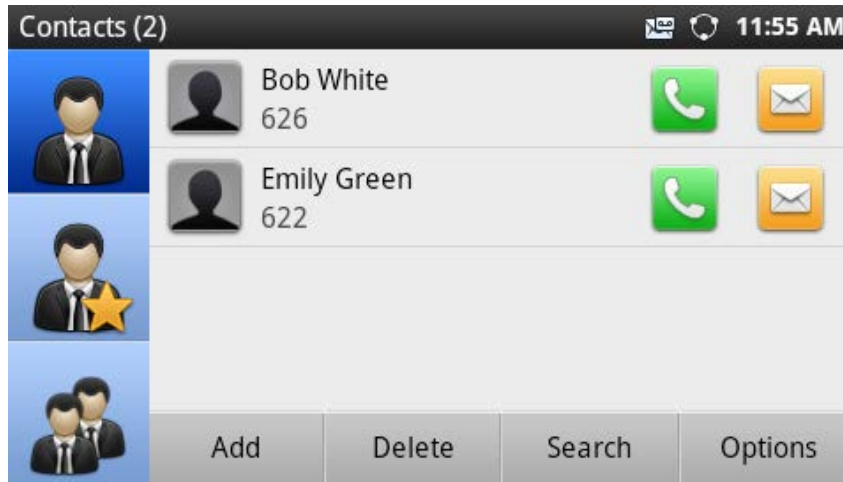




Figure 24: GXP2200 Contacts Screen

6. Via Messages

- Access the SMS by tapping on the onscreen Menu icon->**Message** ;
- The LCD screen will display the message information. Tap on the person you would like to call;
- Then the detailed information for the message will be displayed;
- Tap on  to dial.

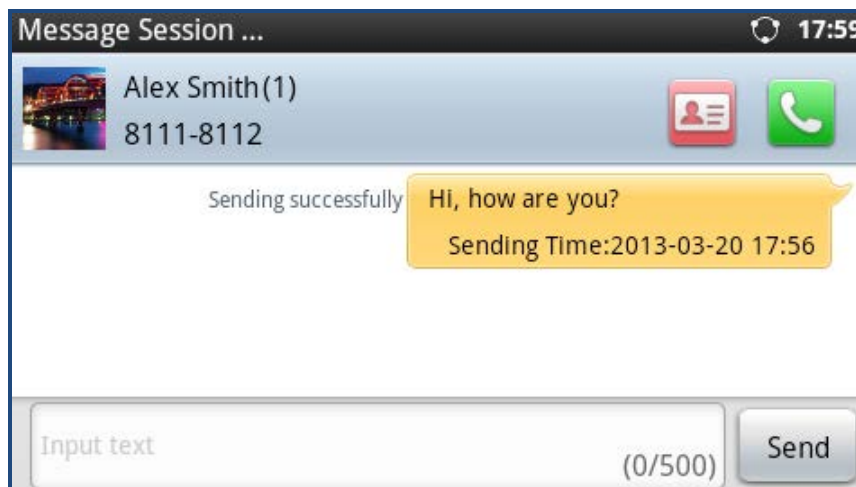


Figure 25: GXP2200 Messages Screen

7. Making Call Via Bluetooth Headset

- Connect Bluetooth headset with the GXP2200;
- Make an outgoing call;
- If the call is dialed out using Speaker, the Bluetooth headset will be activated and connected automatically;
- If the call is dialed using handset, users can press "Options" and tap on "Bluetooth" to switch to Bluetooth headset;
- Press the Bluetooth headset call control button can hang up the call.



Figure 26: Making Call Via Bluetooth Headset

DIRECT IP CALL

Direct IP Call allows two phones to talk to each other in an ad-hoc fashion without a SIP proxy. VoIP calls can be made between two phones if:

- Both phones have public IP addresses;
Or
- Both phones are on the same LAN/VPN using private or public IP addresses;
Or
- Both phones can be connected through a router using public or private IP addresses (with necessary port forwarding or DMZ).

To make a direct IP call, please follow the steps below:

- Off hook the phone or select account in the idle screen to bring up call screen on GXP2200;
- Under "Mode" button in the call screen, tap on it and select the mode as "IP Call";

- Input the 12-digit target IP address. For example, if the target IP address is 192.168.1.60 and the port is 5062 (i.e., 192.168.1.60:5062), input the following:

192*168*1*60#5062

The * key represents the dot (.) and the # key represents the colon (:).

- Press "SEND"  key or tap on  (audio call) /  (video call) button to dial.

 **Note:**

- The # will represent colon ":" in direct IP call rather than SEND key as in normal phone call;
 - Port number is not mandatory when making direct IP call;
 - Users need activate the first account on the GXP2200 to complete direct IP call;
 - If you have a SIP server configured, direct IP call still works. If the devices are behind NAT, users might need configure NAT Traversal before using direct IP call. If you are using STUN, direct IP call will also use STUN;
 - The phone needs to configure option "User Random Port" to "No" to accept direct IP calls;
 - In GXP2200 Contacts, if the number is using IP address, direct IP call can be made by dialing this contact.
-

ANSWERING A CALL

1. Single incoming call

When the phone rings, users could use the headset, handset or speaker to answer the call. Select "Accept audio" or "Accept video" to answer the call via Speaker.

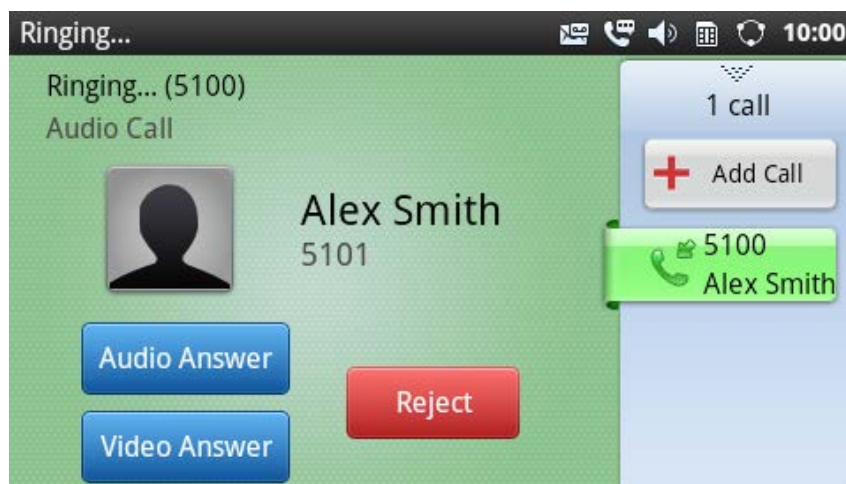


Figure 27: Single Incoming Call

2. Multiple Incoming Calls

- When there is another incoming call, users will hear a call waiting tone, with the LCD displaying the caller name and ID. In the right panel, the bar in green is the ringing line from "Alex Smith"; the bar in blue is the current active call with "John Doe". "5100" is the callee account name;
- Also, the LCD will show **Answer** buttons (if it's a video call, users can select "**Audio Answer**" or "**Video Answer**") and **Reject** button for the new call. If the call is answered, the current call will be placed on hold.

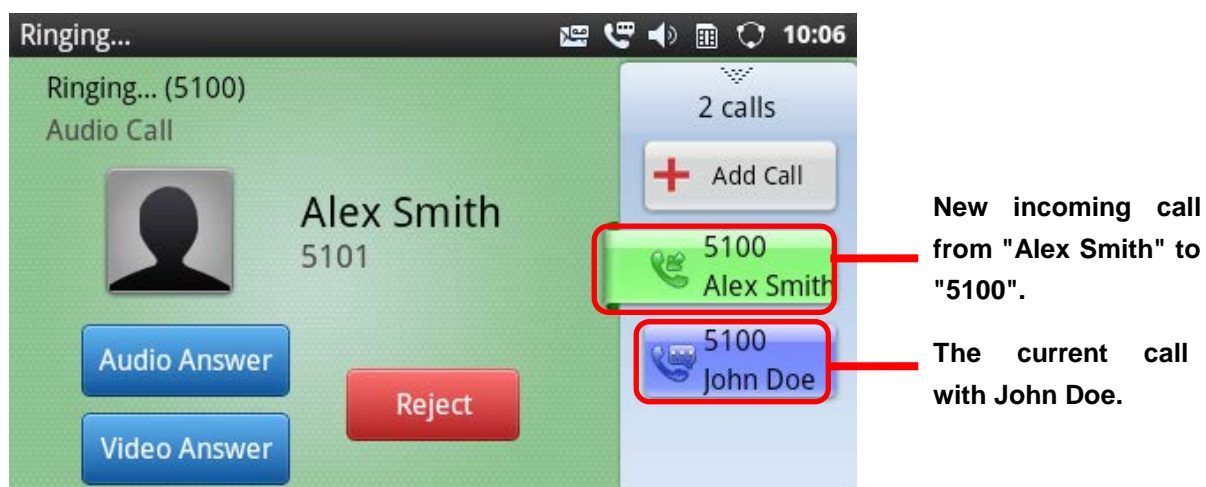


Figure 28: Multiple Incoming Calls

3. Missed Call

When there is missed call, a missed call window will pop out. Tap on it to check the missed call details.

4. Auto-Answer/Paging/Intercom

To enable auto-answer/paging/intercom feature, user could login GXP2200 Web GUI->**Account** page->**Call Settings** to select the options for "Auto Answer".

Or, users could use LCD onscreen MENU->**Settings**->**Personalized Account**->select **Account Name** to enable auto-answer.

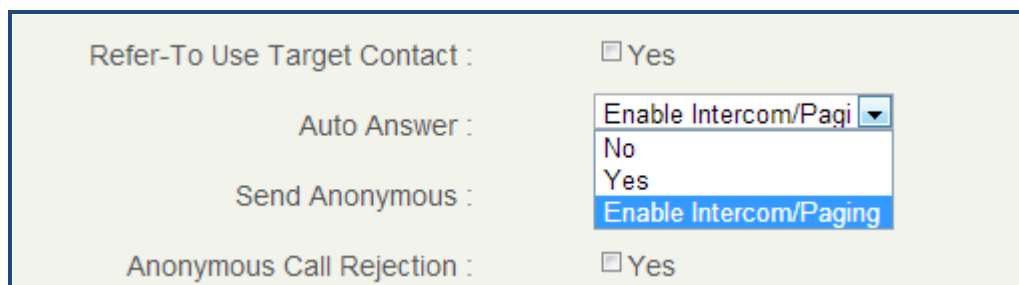


Figure 29: Auto Answer Option in Web GUI

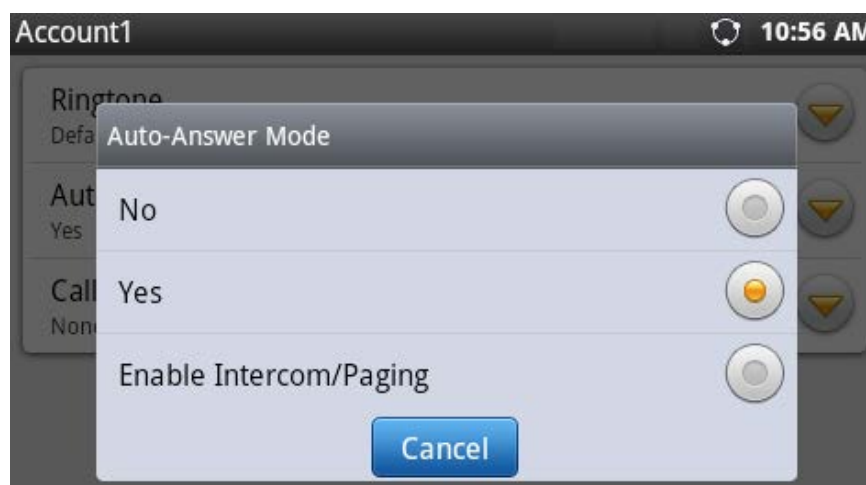


Figure 30: Auto Answer Option in LCD

Auto Answer options:

- **No:** Disable Auto-Answer feature. This is the default setting. Users can select to answer or reject the incoming call;
- **Yes:** Enable Auto-Answer feature. Incoming calls will be answered automatically via speaker if the phone is in idle;
- **Enable Intercom/Paging:** Incoming Paging/Intercom Call will be automatically answered via speaker if the phone is in idle. Other regular calls won't be automatically answered.

5. Incoming Call Using Bluetooth Headset

If the Bluetooth headset is connected to the GXP2200, users will hear the ring tone from Bluetooth headset when there is incoming call. Tap on the call button on the Bluetooth headset to pick up the call.

If the call is answered by handset or speakerphone already, users could switch to Bluetooth headset during the call. To switch the audio channel to Bluetooth headset during the call, press the "Options" softkey and tap on "Bluetooth" to enable Bluetooth headset channel (see figure below).



Figure 31: Switching To Bluetooth Headset

Press the Bluetooth headset call button to hang up the call.

CALL HOLD



During the active call, press HOLD button  to put the call on hold. The LCD screen will show pink background and icon  on the right panel indicates the call is on hold. To resume to call, press HOLD button again and the LCD will go back to the talking screen in green background.



Figure 32: Call On Hold

CALL WAITING

When there is an active call, tap on the right panel to open up another line or accept the new incoming call. This will automatically put the current call on hold. Touch the bars indicating different lines on the right panel to toggle among multiple calls.




Figure 33: GXP2200 Multiple Calls Screen

CALL TRANSFER

The GXP2200 supports blind transfer and attended transfer. The default transfer mode is blind transfer. Users could configure the "Default Transfer Mode" to be used on the GXP2200 under web GUI->**Advanced Settings->Call Features**.

1. Blind Transfer

- During the active call, press TRANSFER button  to bring up the transfer screen;
- The default transfer mode is "Blind". Users could also select transfer mode by tapping on the mode selection bar (see figure below);
- Enter the digits and then press the "Send" soft key on the right;
- The call will be transferred and GXP2200 will hang up the call.

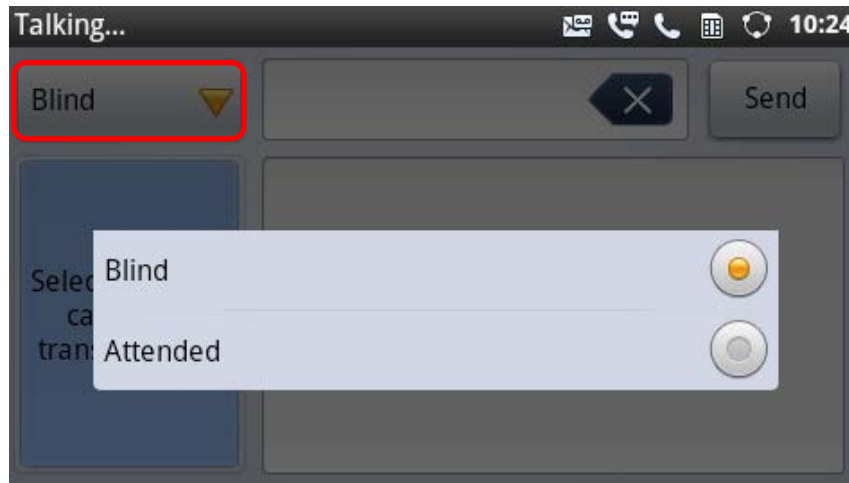





Figure 34: Blind Transfer

 **Note:**

- If wrong digits are entered, tap on  to delete the digit one by one;
 - If users would like to cancel the transfer, press  button to go back to the previous talking screen.
-

2. Auto Attended Transfer

The GXP2200 support auto attended transfer which provides users a fast and easy way to complete attended transfer.

- During the active call, press TRANSFER button  to bring up the transfer screen;
- Select transfer mode by tapping on the mode selection bar (see figure below);

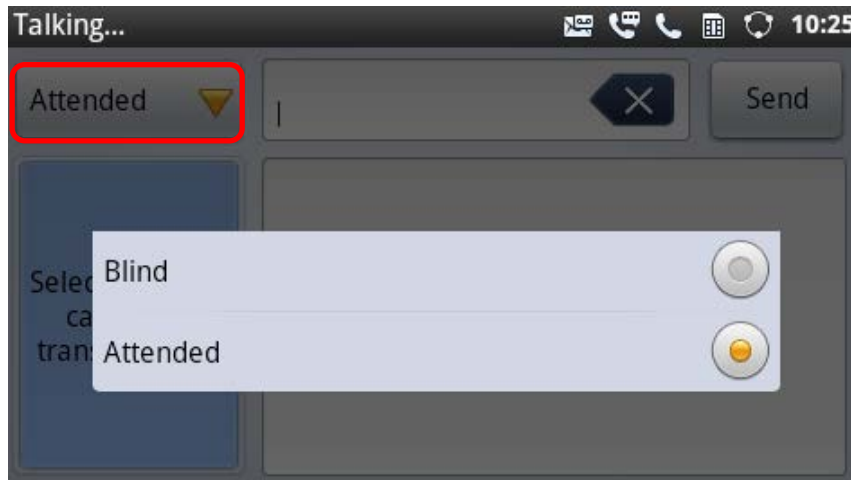


Figure 35: Auto Attended Transfer

- Enter the digits and then press the "Send" soft key on the right;
- When the GXP2200 hears the ringback tone, the following screen will show. Users could tap on "Cancel" to cancel the transfer or simply hang up the call to complete call transfer before answer;

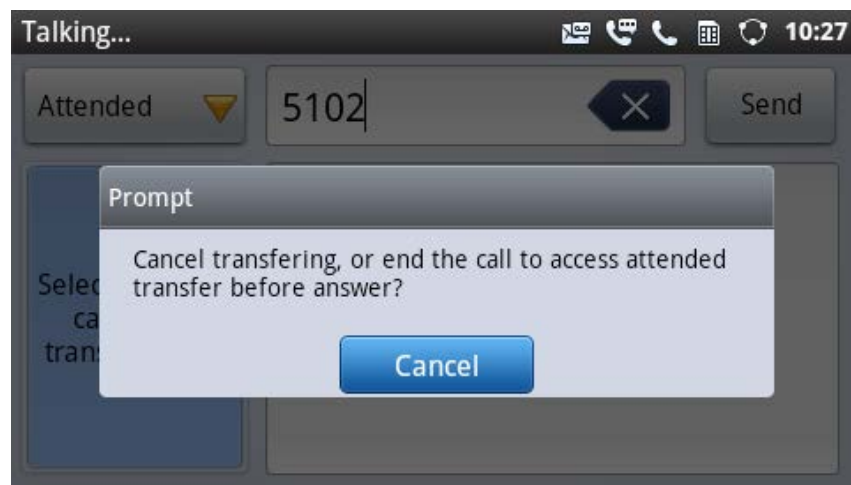



Figure 36: Auto Attended Transfer - Transferring

- If the call is answered, users could then simply hang up or press the "Transfer" soft key to complete the transfer. Also, before hanging up, users can tap on  in the following screen to separate the calls when talking to the second established call.

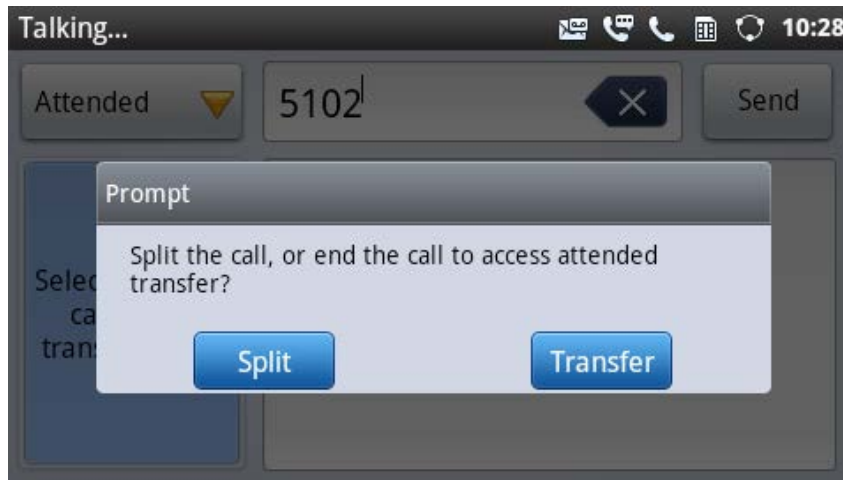





Figure 37: Auto Attended Transfer - Split

3. Attended Transfer with 1 Line on Hold and 1 Line Talking

- During the active call, tap on  Add Call in the right panel to make the second call. This will place the current call on hold;
- Dial the number for the second call;
- Press TRANSFER button  to bring up transfer screen with the line on hold;
- Tap on the line on hold  1086 to transfer the call;
- The call will be transferred and GXP2200 will hang up the call.

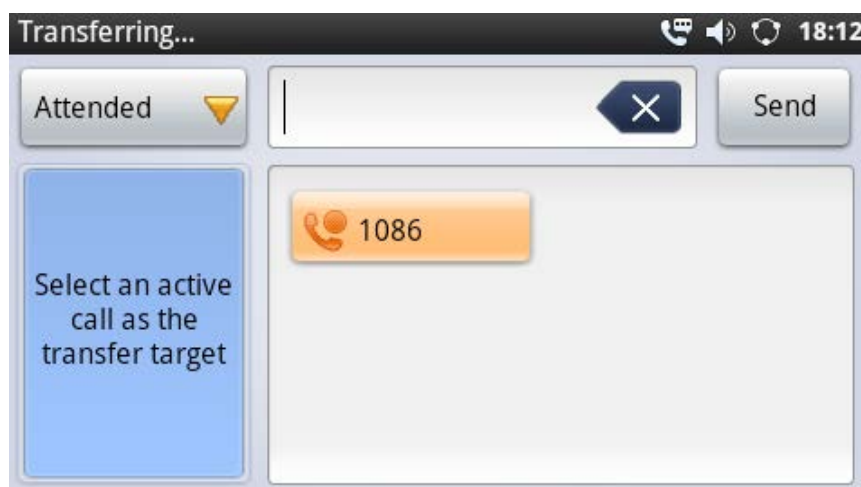



Figure 38: Attended Transfer

 **Note:**

- To transfer calls across SIP domains, SIP service providers must support transfer across SIP domains;
- If users would like to cancel the transfer, press  button to go back to the previous talking screen.

5-WAY CONFERENCE

The GXP2200 supports up to 5-way conferencing.

1. Initiate conference



- When the phone is in idle, call screen, or during an active call, press CONFERENCE button  to bring up conference screen; users could also press CONF button in call screen right after off hook the phone;
- Tap on  to start adding party in conference;



Figure 39: GXP2200 Conference Screen



- Users could manually select account, enter digits and then tap on the **Invite** icon, or select the call (on hold  or active ) to add to the conference;




Figure 40: Invite Party to Conference

- Repeat the above step to add more parties in. The following figure shows a 3-way conference established.




Figure 41: 3-way Conference Call Established


2. Remove party from conference

To remove a party from the conference, tap on the  on the right top corner for the corresponding party. Then it will be disconnected.

3. End conference

To end the conference, tap on  to disconnect all the parties from the conference. GXP2200 will hang up the call. If the remote party hangs up the call itself, it will be disconnected from the conference but other parties on GXP2200 will stay in the existed conference.

4. Hold/Resume conference

During the conference, users could press the HOLD button  to hold or resume the conference at any time.

5. Auto Conference Mode

The GXP2200 also supports "Auto Conference" which allows users to establish conference call in a quick and easy way, instead of adding the other parties one by one. To enable Auto Conference feature, go to web GUI->**Advanced Settings**->**Call Features** and set "**Auto Conference**" to "Yes". To establish call with auto conference when there are 1 or more calls on the GXP2200, simply press the conference button




and all the calls on GXP2200 will be brought into the conference.




Note:

- For 4-way conference and 5-way conference, PCMA and PCMU are the supported codec in current firmware version.
 - During the 3-way conference, if the initiator of the conference hangs up , the conference will end. If users wish to allow the remaining 2 parties to stay in conversation after the initiator hangs up, the conference initiator should set "Transfer on 3-way Conference Hang up" to "Yes" in web GUI->**Account** page->**Call Settings**. This would allow the remaining parties to stay in the conference after the initiator exits the conference.
-

VOICEMAIL (MESSAGE WAITING INDICATION)

When there is new voicemail, the Message Waiting Indication (MWI) LED icon will blink in red on the upper right corner of the GXP2200. Also in the status bar, Voice Mail icon will shows up  as a notification. To

retrieve the voicemail, press the Message button  and tap on the account to dial into the voicemail box. Then follow the Interactive Voice Response (IVR) for the message retrieval process.

For each account, the Voicemail User ID can be set up under web GUI->**Account X**->**General Settings**: "Voice Mail UserID". When dialing out, this Voicemail User ID will be used to access the voicemail message.



Figure 42: New Voicemail Notification

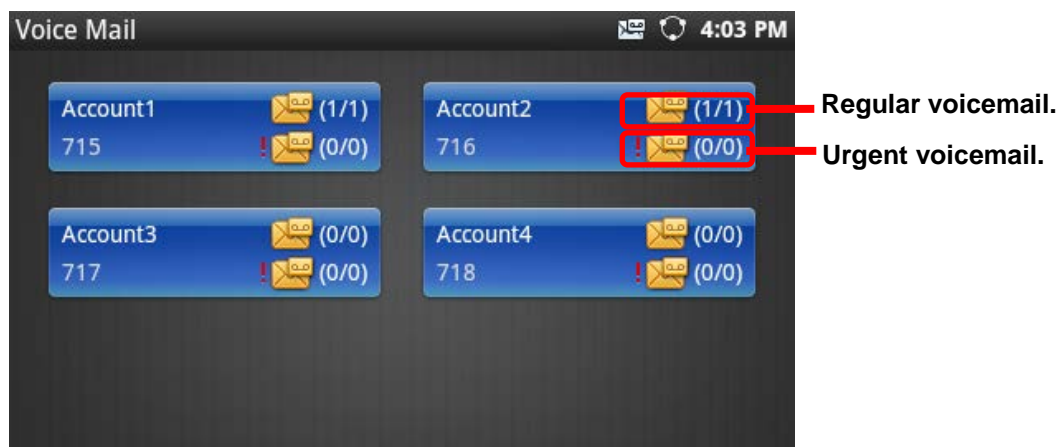


Figure 43: Press Message Button to Retrieve Voicemail

CALL RECORDING

During the call, users could select to record the call and the recording file will be automatically saved to SD card storage or USB storage.

To record the call, insert SD card or USB flash drive to the GXP2200 first. During the established call, tap on "Options"->"Start Recording" and the recorded file will be automatically saved in "Record" folder under SD card storage or USB flash drive. Tap on "Options"->"Stop Recording" or simply hang up the call to stop recording.

If both SD card and USB flash drive are inserted to the GXP2200, the recording file will be save in the SD card first.



Figure 44: Start Voice Record



Figure 45: Stop Voice Record

MUTE

During an active call, press the Mute button  to mute the call. The mute icon  will be displayed

in the status bar. Press the Mute button  again to unmute the call.

DND

To turn on DND, tap on the status bar->**System Settings** on the GXP2200 LCD. Then touch the DND icon to turn it on/off. When DND is on, the incoming calls to the GXP2200 will be blocked for all registered accounts with a reminder ring produced. To disable the reminder ring, configure the option under GXP2200 web GUI->**Advanced Settings**->**Call Features**: "Disable DND Reminder Ring".

CALL FORWARD

Call forward feature can be set up from GXP2200 LCD or web GUI.

- **From LCD**

Go to onscreen Menu->**Settings**->**Personalized Account**->Select account name and tap on **Call Forwarding** to activate the feature. Then a list of options will show. Select the option to configure the call forward type (None, Unconditional, Time Based, Others) and then enter necessary number in the fields.



Figure 46: Call Forwarding on GXP2200 LCD

- **From Web GUI**

Log in GXP2200 web GUI and go to **Account** page->**Call Settings**. By default, Call Forward feature is set to "None". The Call Forward feature options are:

- **Unconditional Forward:** All the incoming calls will be forwarded to the number set up in "All To" field.

Call Forward Type :	Unconditional
All To :	23455432

Figure 47: Call Forward - Unconditional

- **Time Based Forward:** All the incoming calls will be forwarded to the number as schedule in the time period. During the setup time, the call will be forwarded to the number in "In Time Forward To:" field. Other period the call will be forwarded to the number in "Out Time Forward To:" field.

Call Forward Type :	Time Based
Time Period :	9:00 ~ 17:00
In Time Forward To :	1234567
Out Time Forward To :	1122331

Figure 48: Call Forward - Time Based

- **Call Forward on Busy / Call Forward No Answer:** The incoming call will be forwarded when the GXP2200 is busy or no answer after certain interval "Delayed Call Forward Wait Time (s)".

Call Forward Type :	Others
Busy To :	1123456
No Answer To :	3333452
No Answer Timeout (s) :	20

Figure 49: Call Forward - Busy/No Answer

MULTI-PURPOSE KEYS

The GXP2200 supports multi-purpose keys (MPK) without extension board (GXP2200EXT) by downloading MPK app from GS Market. After downloading the MPK app, users could configure the MPK from MPK settings via LCD Menu->MPK app, or via web GUI->**Advanced Settings->MPK LCD Settings**. Users could then use Speed Dial, Busy Lamp Field (BLF), Call Transfer, Call Intercom, Speed Dial via active account, Dial DTMF, Call Park by tapping on the configured virtual MPK.



Figure 50: GXP2200 MPK APP

SHARED CALL APPEARANCE (SCA)

The GXP2200 supports shared call appearance by Broadsoft standard. This feature allows members of the SCA group to shared SIP lines and provides status monitoring (idle, active, progressing, hold) of the shared line. When there is an incoming call designated for the SCA group, all of the members of the group will be notified of an incoming call and will be able to answer the call from the phone with the SCA extension registered.

All the users that belong to the same SCA group will be notified by visual indicator when a user seizes the line and places an outgoing call, and all the users of this group will not be able to seize the line until the line goes back to an idle state or when the call is placed on hold (with the exception of when multiple call appearances are enabled on the server side).

In the middle of the conversation, there are two types of hold: Public Hold and Private Hold. When a member of the group places the call on public hold, the other users of the SCA group will be notified of this by the yellow-flashing button and they will be able to resume the call from their phone by pressing the line button. However, if this call is placed on private-hold, no other member of the SCA group will be able to resume that call.

To enable shared call appearance, the user would need to register the shared line account on the phone. In addition, they would need to enable SCA and configure SCA options via LCD or web GUI.

To configure SCA via LCD, go to **Settings->Personalized Account** and select one account first. The tap on "Shared Call Appearance (SCA)". To configure SCA via web GUI, go to **Account** page->**SIP Settings** to fill out the options in the following figure.

Enable SCA (Shared Call Appearance) :	<input type="checkbox"/> Yes
Enable Bargain :	<input type="checkbox"/> Yes
Auto-filling Pickup Feature Code :	<input checked="" type="checkbox"/> Yes
Pickup Feature Code :	<input type="text"/>
Line-seize Timeout :	<input type="text" value="15"/>

Figure 51: GXP2200 Shared Call Appearance Web GUI Settings

CALL FEATURES

The GXP2200 supports traditional and advanced telephony features including caller ID, caller ID with caller Name, call waiting, call forward and etc. Before using the following feature code, please make sure "Enable Call Features" option is set to "Yes" under web GUI->**Account** page->**Call Settings**.

Table 8: GXP2200 Feature Code

*30	Block Caller ID (for all subsequent calls) <ul style="list-style-type: none"> Dial *30.
*31	Send Caller ID (for all subsequent calls) <ul style="list-style-type: none"> Dial *31.
*50	Enable Call Waiting <ul style="list-style-type: none"> Dial *50.
*51	Disable Call Waiting <ul style="list-style-type: none"> Dial *51.

*67	<p>Block Caller ID (per call)</p> <ul style="list-style-type: none"> • Enter *67 and the number to call; • Dial out.
*82	<p>Send Caller ID (per call)</p> <ul style="list-style-type: none"> • Enter *82 and the number to call; • Dial out.
*70	<p>Disable Call Waiting (per Call)</p> <ul style="list-style-type: none"> • Enter *70 and the number to call; • Dial out.
*71	<p>Enable Call Waiting (per Call)</p> <ul style="list-style-type: none"> • Enter *71 and the number to call; • Dial out.
*72	<p>Unconditional Call Forward. To set up unconditional call forward:</p> <ul style="list-style-type: none"> • Enter *72 and the number to forward the call; • Dial out.
*73	<p>Cancel Unconditional Call Forward. To cancel the unconditional call forward:</p> <ul style="list-style-type: none"> • Dial *73.
*90	<p>Busy Call Forward. To set up busy call forward:</p> <ul style="list-style-type: none"> • Enter *90 and the number to forward the call; • Dial out.
*91	<p>Cancel Busy Call Forward. To cancel the busy call forward:</p> <ul style="list-style-type: none"> • Dial *91.
*92	<p>Delayed Call Forward. To set up delayed call forward:</p> <ul style="list-style-type: none"> • Enter *92 and the number to forward the call; • Dial out.
*93	<p>Cancel Delayed Call Forward. To cancel the delayed call forward:</p> <ul style="list-style-type: none"> • Dial *93.

GXP2200 APPLICATIONS

CUSTOMIZING IDLE SCREENS

On the GXP2200 idle screens, users could add app icons, shortcuts, widgets, and other items when there is free space on the desktop.

ADDING AN ITEM TO IDLE SCREEN


1. Select and open up the screen where you would like to add the item;
2. Touch and hold the empty area on the screen, or press Menu button  -> **Add**. A list of options for **Add to Home screen** will show up;



Figure 52: Add Item to Home Screen

3. Tap on the category **Shortcuts**, **Widgets**, **Folders** or **Wallpapers** to select the item you would like to add;
 - **Shortcuts** for Bookmark, Contact, Direct Dial, Direct Message and Settings;
 - **Widgets** are tools and apps like Account (for up to 6 accounts), Account 2x1 (for up to 2 accounts), Account 4x1 (for up to 4 accounts), Analog clock, Calendar, Music, Picture frame, Process State, RSS News, Search, System Setting (for 3 options), System Setting 5x1 (for 5 options), Weather Forecast, and etc. Slide up or down on the screen to select the item and place on the screen for easy access;
 - **Folders** for New folder, All contacts, Bluetooth received, Contacts with phone numbers and Starred contacts. Select the folder so shortcut can be created and placed on the screen;

- **Wallpapers** are images from Gallery, Live wallpapers and system embedded wall paper files. Once selected and set up, it will display as the background of the screen;
4. Once the item is selected, it will be placed on the first available spot on the current screen. Please make sure there is enough space on the idle screen for the selected item. Otherwise, the item won't be placed.




Note:

Some items might require the users to select specific entry before added to the Home screen. For example, pick up the Browser bookmark for **Bookmarks**, select the contact person for **Contacts**.

MOVING AN ITEM ON IDLE SCREEN

1. Touch and hold the item you would like to move, for example, Media Player. Do not lift your fingers until the background grid is activated in grey;
2. Drag the item to a new location on the same idle screen, or all the way to left/right so another idle screen will appear for you to place the item;
3. Lift your finger to release when the item is on the desired spot.

REMOVING AN ITEM FROM IDLE SCREEN

1. Touch and hold the item you would like to remove, for example, Media Player. Do not lift your fingers until the background grid is activated in grey with the Recycle Bin  icon displayed on the bottom;
2. Drag the item to the Recycle Bin;
3. When the item gets close to the Recycle Bin, it will turn red. Now lift your finger to release.



Note:

When the item is removed from the idle screen, it still exists on GXP2200. Users could always add it back to display on the idle screen.

CHANGING IDLE SCREEN WALLPAPER

1. Follow the steps in **Add an item to idle screen** and select **Wallpapers**;
2. Tap on **Gallery**, **Live wallpapers**, or **Wallpapers** for image source.
Gallery: to use a picture from local or external folders. Users could crop the picture before setting it as wallpaper;
Live wallpapers: to open a list of animated wallpapers embedded in the GXP2200;
Wallpapers: to open a list of sample wallpapers embedded in the GXP2200. Slide to left/right to view the samples;
3. Tap on **Set wallpaper**.

Users could also open a picture file from **Gallery**, tap on **Gallery** "Menu"->"More", select "Set as" and then crop the picture to set it as the idle screen wallpaper.



Figure 53: Set Wallpaper From Live Wallpapers

MANAGING APPS AND WIDGETS


All the GXP2200 apps (including any apps downloaded and installed from GS Market or other sources) can be accessed by tapping on the onscreen MENU . Touch and hold the app's icon until the **Move to Desktop** bar is displayed on the bottom. Then drag the app's icon there without lifting your finger up.



Figure 54: Move Clock App to Desktop


Press Menu  button, then users could sort the apps by Time, Name or create New Folder to categorize the apps in the menu.



Figure 55: Sort And Categorize Apps

 **Note:**

The widgets are miniature apps that can be placed on the idle screens. It could be an application itself or it provide quick access and control for the related applications.

OPENING APPS

When the GXP2200 is in idle screen, tap on the onscreen MENU icon to access the list for all the apps. Touch an app's icon to open it. Or touch an app's widget icon on the idle screen (if already added) to quickly launch it.


SWITCHING TO RECENTLY USED APP

1. In idle screen, tap on the top status bar and slowly drag it down;
2. Tap on **Notification** or **Process** tab to have a list of apps shown up;
3. Touch the name or thumbnail of the item in the list to open the corresponding app.

Users could also press and hold on the HOME button  to show recently used apps.

MANAGING APPS

1. Open Manage Applications

When the GXP2200 is in idle, press MENU button  and select **Settings**. Tap on **Applications->Manage applications**.

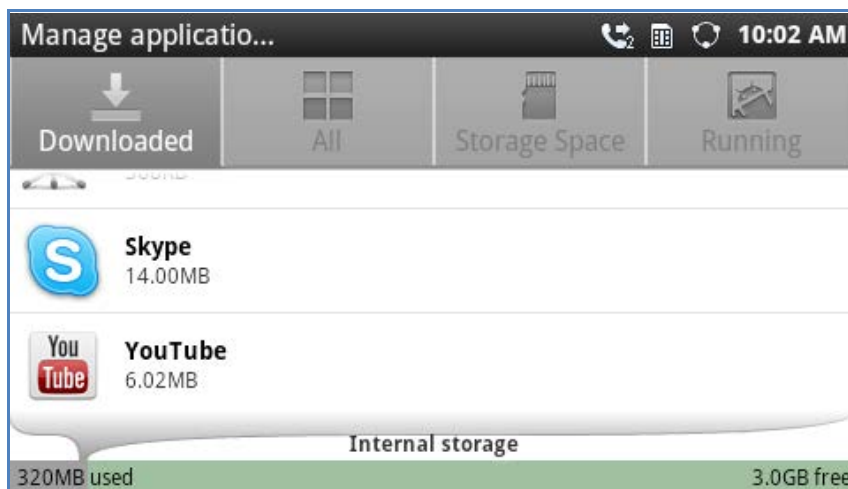


Figure 56: Manage Application Screen

The **Manage applications** screen has four tabs, with lists of apps and their components in each. At the bottom of each tab is the memory usage information for the selected tab. The four tabs are:

- **Downloaded:** to view the apps you've downloaded from GS Market or other sources;
- **All:** to view all the apps installed on the GXP2200;

- **Storage Space:** to view the apps stored on the phone and external storage device, e.g., SD card;
- **Running:** to view the running or cached apps.

2. View apps' details

In the **Manage applications** screen, touch an app, process or service to open it. The **Application Info** screen for each app lists its name, version, size and etc. Depending on the app, it may also include options for managing the app's data, forcing the app to stop, and uninstalling the app. Usually the options are:

- Use the **Force stop** button to stop an app that is misbehaving;
- Use the **Uninstall** button to remove the app (along with all its data and settings) if the app is installed via GS Market;
- **Storage** provides storage information that an app uses on the GXP2200;
- Delete an app's settings and other data by touching the **Clear data**;
- If the app stores data in a temporary space of the GXP2200's memory, **Cache** lists how much information is stored. Tap on **Clear cache** to clear the cache;
- **Launch by default.** If the app is configured to launch certain file type by default, tap on **Clear defaults** could reset this;
- **Permissions** lists information of the data that the app has access to. For example, the application might access the location information, storage, phone calls and etc.

3. Stop a misbehaving app

The running applications could be monitored and stopped if necessary. Open the **Manage applications** screen the touch the **Running** tab. It will show the apps, processes and services that are currently running or cached. The bottom bar will show the total RAM in use and the free amount.

Tap on the misbehaving app, process or service in the list to open it. In the following figure, touch the **Stop** button to stop it. Or touch the **Report** button (if available) to send the developer information for the misbehaving app.

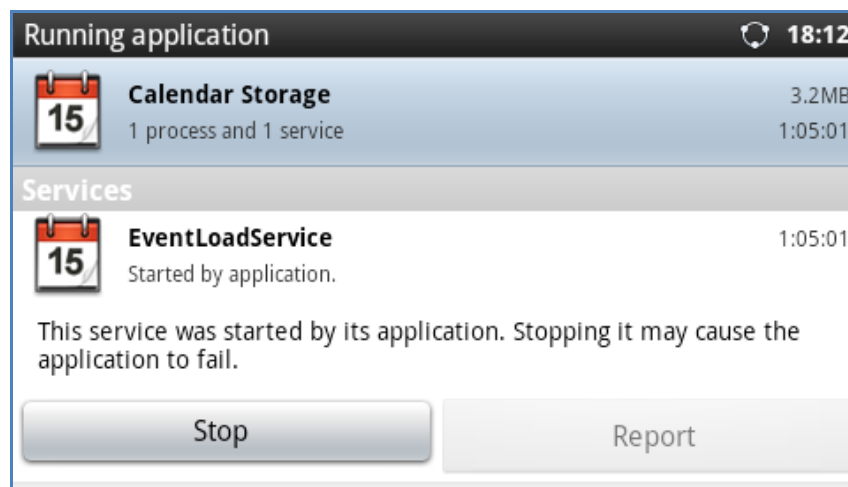


Figure 57: Running Application Screen

 **Note:**


Stopping an app, operating system processes or services might disable one or more dependent functions on GXP2200. Users may need restart the GXP2200 to restore full functionality.

4. Uninstall an app

Apps can be uninstalled from GS Market or other sources where they are downloaded/installed. Or users could open the **Manage applications** screen, select the **Downloaded** tab and tap on the **Uninstall** button. Touch **OK** in the screen when asked to confirm if you would like to uninstall the app.

MANAGING DOWNLOADS

The files (such as PDF documents, pictures) downloaded from GXP2200 browser will be stored on GXP2200's internal storage. Users could use the **Downloads** app under the onscreen MENU->**Downloads** to view, open or delete the downloaded files.

- Tap on the file to open it;
- Check to select the file, and tap on **Delete** to delete it;
- Press  button and tap on **Sort by size** or **Sort by time** to sort the downloaded files.

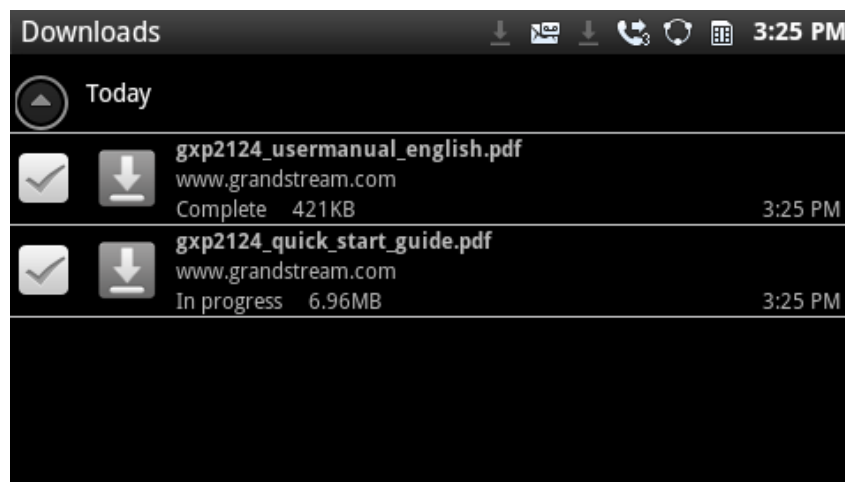



Figure 58: GXP2200 Downloads App

PLAYING WITH APPS

In this section, the apps that come with GXP2200 are described in details.

BLACKLIST

GXP2200 Blacklist app helps users to manage the blacklist and block settings. There are three options on the left panel when you open the Blacklist app.

-  : Block History
 Block History shows the detailed information for the blocked calls: caller number, caller name and calling time. To clear all the logs in Block History, tap on the **Delete All** button.

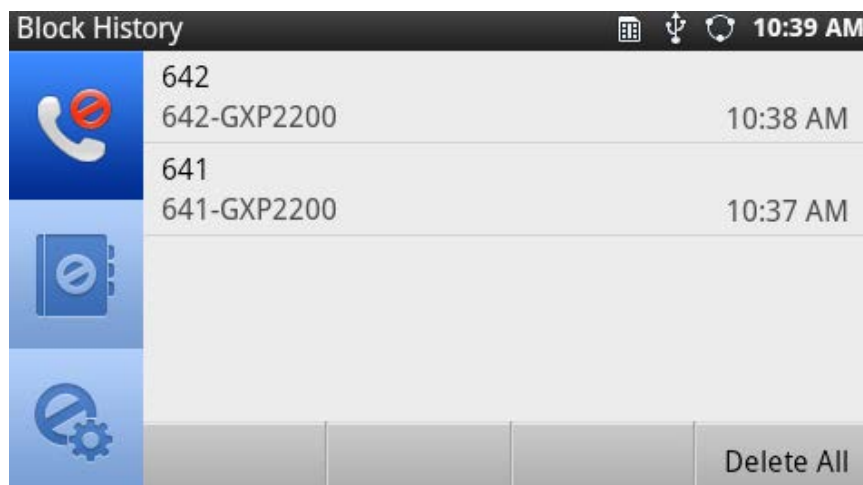


Figure 59: GXP2200 Blacklist - Block History

-  : Blacklist


To display blacklist information, tap on the  to enter the Blacklist screen. Each entry contains the caller name and caller number of the blocked contact. The number of blocked calls for the contact is displayed on the right hand side too.



Figure 60: GXP2200 Blacklist

To add number in Blacklist, Tap the **Add** button. Once **Add** is touched, there are three ways to add number to GXP2200 Blacklist: **Add Manually**, **Add from contacts** and **Add from call history**.

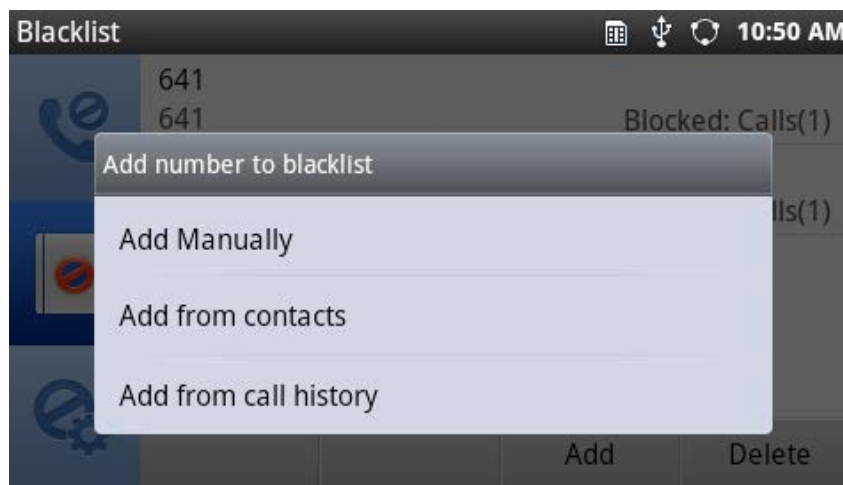


Figure 61: Add Number to Blacklist

The following figure shows manually adding number to blacklist. Once **Add Manually** option is selected, a window will be prompted for users to enter the phone number in the first field and name/other note information in the second field (optional). Tap on **Save** to finish the adding operation.

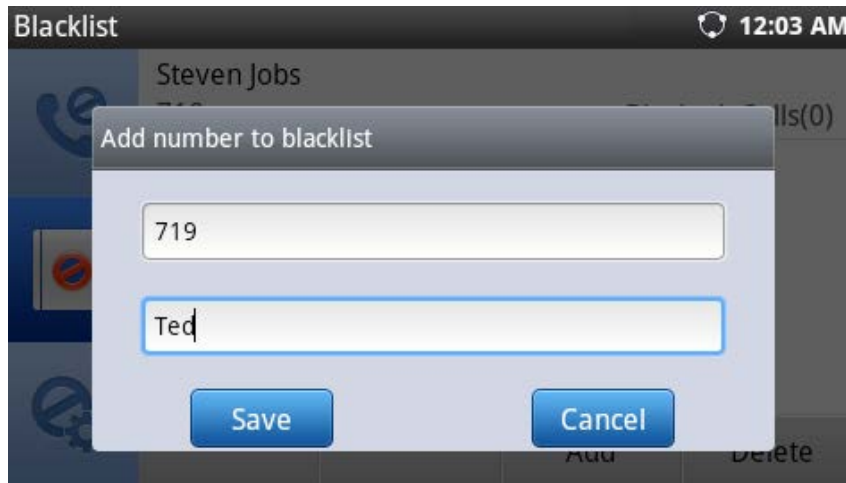


Figure 62: Manually Add Number to Blacklist

The following figure shows **Add from contacts** to blacklist. Once **Add from contacts** option is touched, the contacts information will show. Check/uncheck on the contacts entry to make selections. Then tap on **Select** to add it/them into the blacklist. You can also **Check All** entries, **Uncheck All** entries and **Invert All** the selection by tapping on the corresponding buttons on the bottom.



Figure 63: Add Number From Contacts

The following figure shows **Add from Call history** to blacklist. Once **Add from Call history** option is touched, the Call history information will show. Check/uncheck on the call history entry to make selections. Then tap on **Select** to add it/them into the blacklist. You can also **Check All** entries, **Uncheck All** entries and **Invert All** the selection by tapping on the corresponding buttons on the bottom.

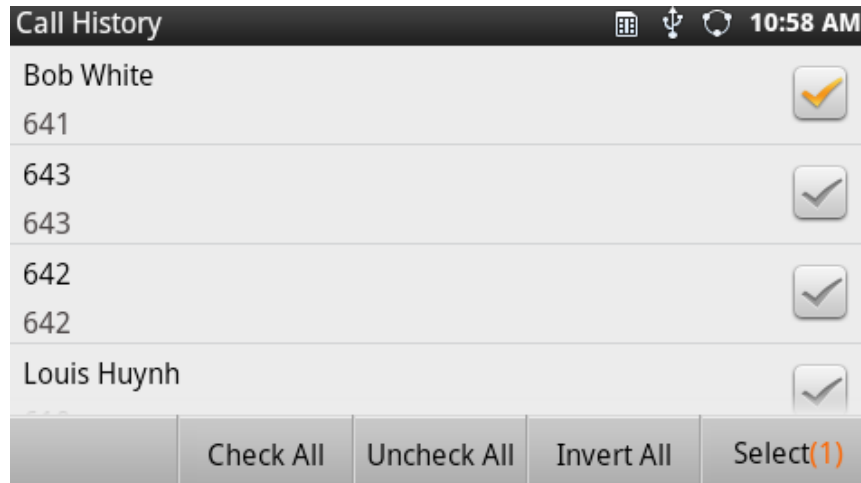



Figure 64: Add Number From Call History

To delete blacklist entry, tap on **Delete** button in *Figure 60: GXP2200 Blacklist*. The following screen with all the blacklist entries will show. Select the number you would like to remove from by tapping on the checkbox on the right hand side. Then touch the **Delete** button on the bottom. You can also **Check All** entries, **Uncheck All** entries and **Invert All** the selection by tapping on the corresponding buttons on the bottom.



Figure 65: Delete Entry From Blacklist

-  : Blacklist Settings.
 - **DND Mode:** Turn on/off DND mode;
 - **Block Mode:** Turn on/off Block Mode. Once it's turned on, the **Block Options** will be activated;
 - **Block Options:** Tap on it and the options will show. Users could select **Block All**, **Block Blacklist**

- Only, **Block Anonymous** or **Block Anonymous And Blacklist**. Then tap on **OK**;
- **Block Notification:** Turn on/off Block Notification;
 - **Time Settings:** Set up the block schedule. Select **Block 24 Hours** or **Modify Time** by specifying the **Starting Time** and **Ending Time**.

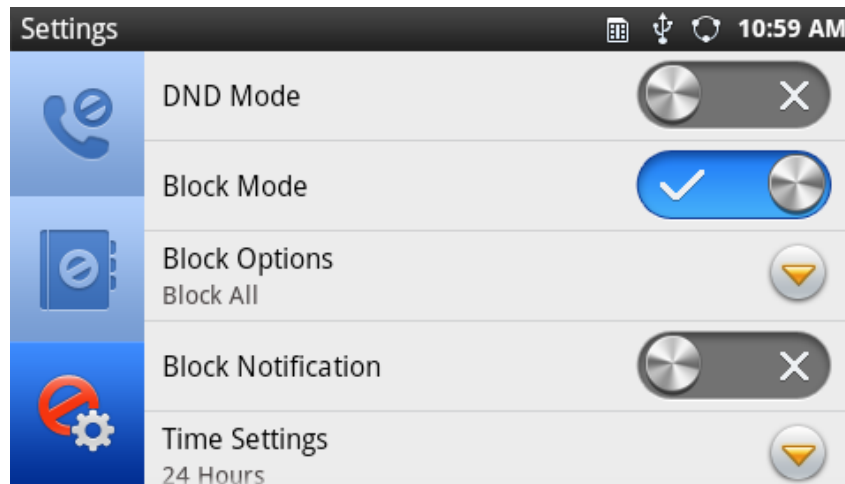


Figure 66: Delete Entry From Blacklist

BROWSER



GXP2200 browser could be used in a similar way as a PC-based web browser, i.e., open web pages, bookmarks, view history, select the most visited pages, search and etc. In the Browser app, press on the MENU button , then users could open new windows, manage the windows, refresh the page, forward, exit or select text from the web page.



Figure 67: GXP2200 Web Browser

To open **Bookmarks**, **Most visited pages**, **History**, tap the icon  on the top right in the figure above. To zoom in/zoom out, place two fingers on the blank area of the web page, then pinch together or spread out.

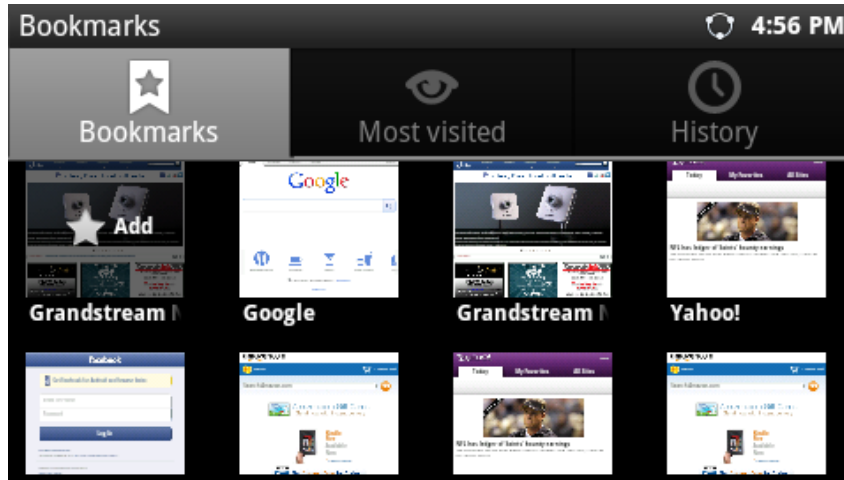


Figure 68: GXP2200 Web Browser-Bookmarks

CALCULATOR

Calculator app could be used to solve simple arithmetic problems as well as more complex equations. Tap on the MENU button then users could switch the operation between "**Basic panel**" and "**Advanced panel**". Or users could simply slide to the left and right to switch between Basic panel and Advanced panel.

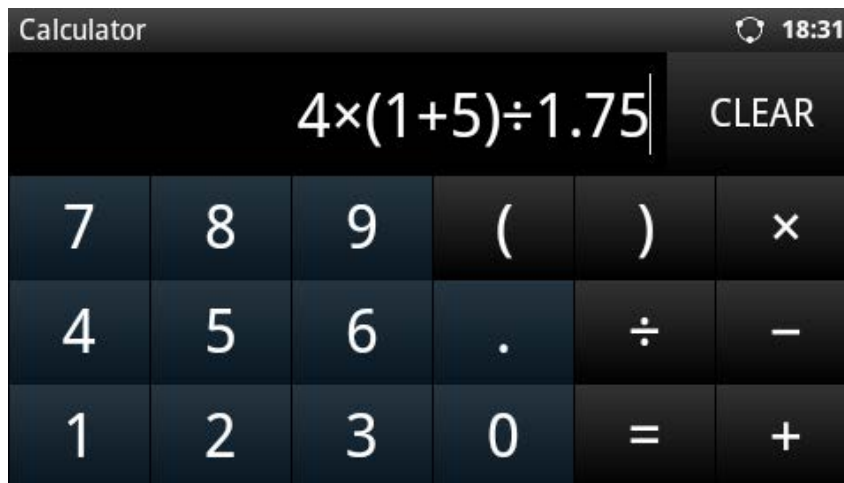


Figure 69: GXP2200 Calculator - Basic Panel



Figure 70: GXP2200 Calculator - Advanced Panel

CALENDAR

In Calendar app, users could create, modify and view the events as well as configure the Calendar to provide notification for the upcoming events.


- In Calendar app, press the MENU button . Users could add **New event**, view events by **Month**, view events by **Day**, view events by **Agenda**, specify a particular date via **GoToDay**, and sync up with Google Calendar by tapping on **Settings**;



Figure 71: View Calendar Events by Month

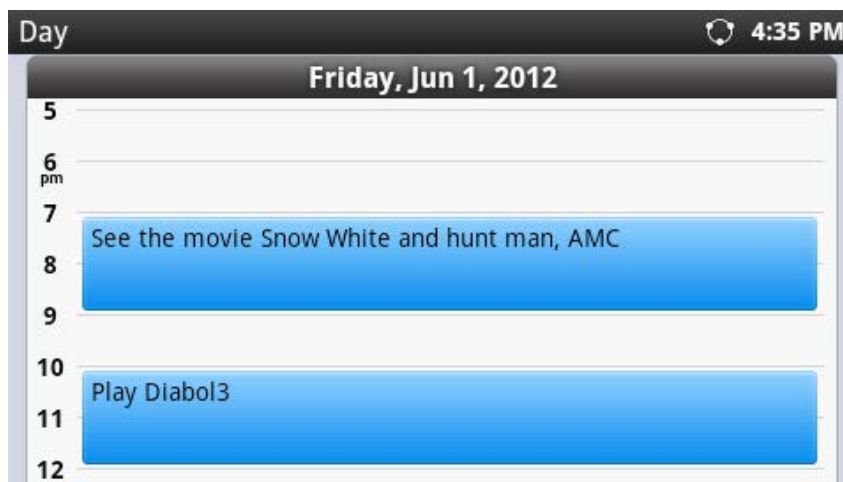


Figure 72: View Calendar Events by Day

- When viewing Calendar by Month or by Day, slide left/right to view different month or date.
- When viewing the Calendar, tap on the date (view by Month) or time (view by Day) could bring up option to create event. Tap on **New event** and event details window will show.

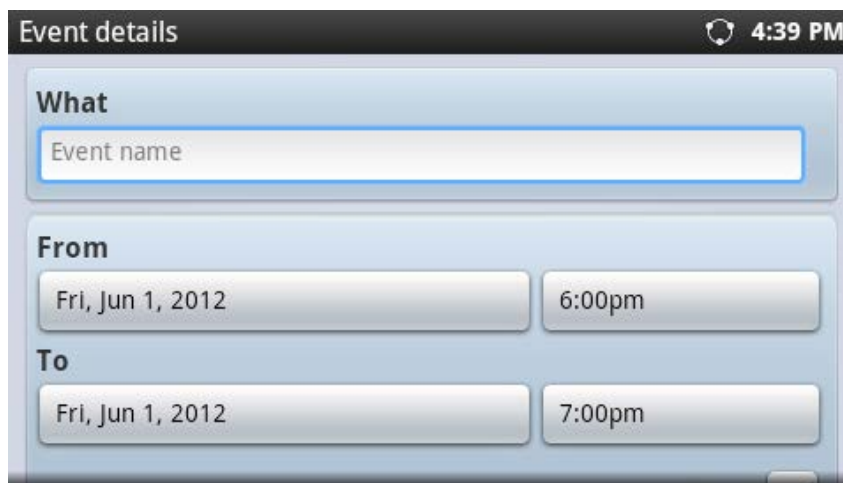


Figure 73: GXP2200 Calendar Screen - Edit Event

CALL HISTORY

Call History App provides users access to phone's call records with different categories on the left panel.

-  All calls





- Incoming calls, indicated by  per call;
- Outgoing calls, indicated by  per call;
- Missed calls, indicated by  per call.



Figure 74: GXP2200 Call History - All Calls

In Call History app, the following operations could be done:

- To delete call log. Tap on **Delete all** to delete all call logs displayed on the current screen. Or Tap on one entry and touch icon  to delete a single log;
- To view more details. Tap on one entry displayed in the call history list to view the details;

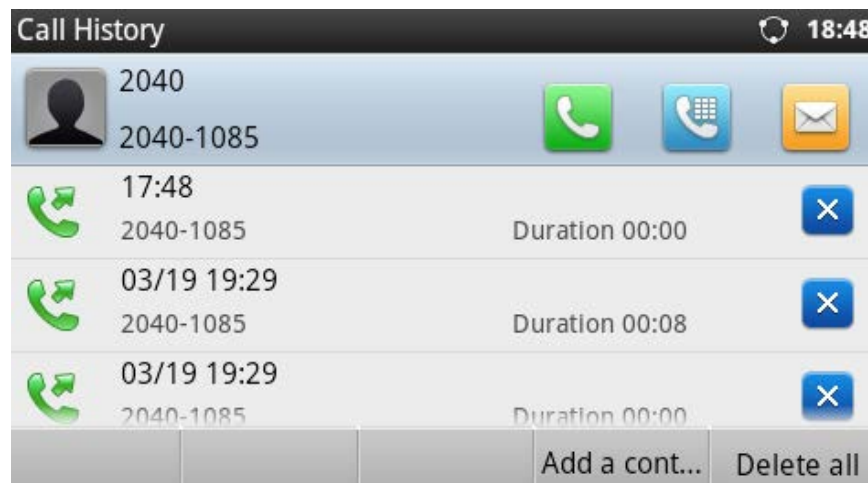





Figure 75: GXP2200 Call History - Entry Details

- To add contact. Tap on one entry and touch **Add a contact**;
- To dial out the number from Call History. Tap on one entry and touch  to dial out;
- To edit number based on the selected entry in Call History. Tap on one entry and touch  to bring up call screen and edit the number;
- To send SMS to the number from Call History. Tap on one entry and touch  to bring up the SMS screen and create message there.

All of the above operations as well as **Add to BlackList** could also be done by touching and holding on one entry. The operation list will show options **View Details**, **Edit number before calling**, **Add to Contacts**, **Add to Blacklist**, **Send text message**, **Delete call history**.

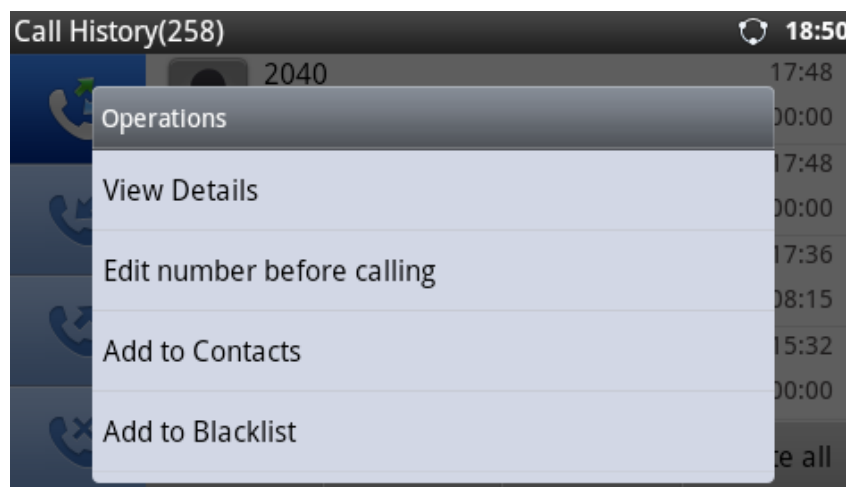




Figure 76: GXP2200 Call History - Entry Operations

CLOCK

- Use Clock to display the date and time on your screen;



Figure 77: GXP2200 Clock Screen

- Turn on night mode by tapping on ;
- Set up alarm by tapping on the icon .

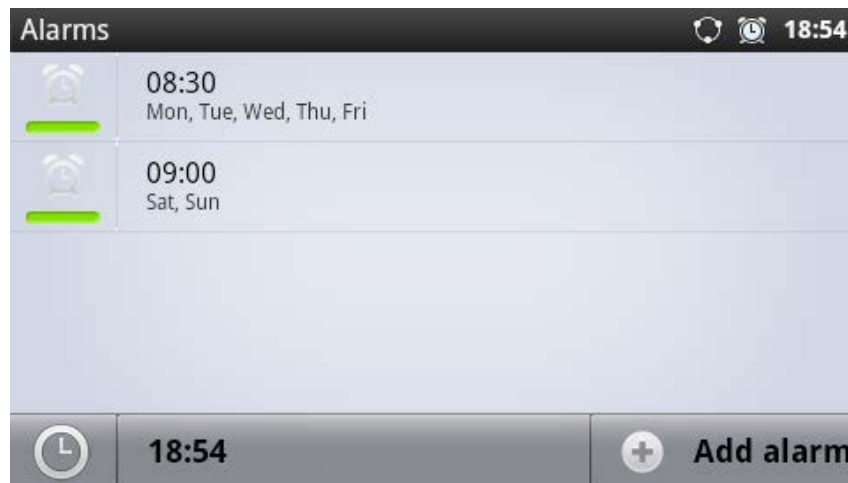


Figure 78: GXP2200 Alarm Screen

CONTACTS

GXP2200 supports up to 1000 entries in contacts. Users can manage their contacts by adding, deleting, modifying, downloading from the TFTP/HTTP server, importing and exporting the contact to external storage.

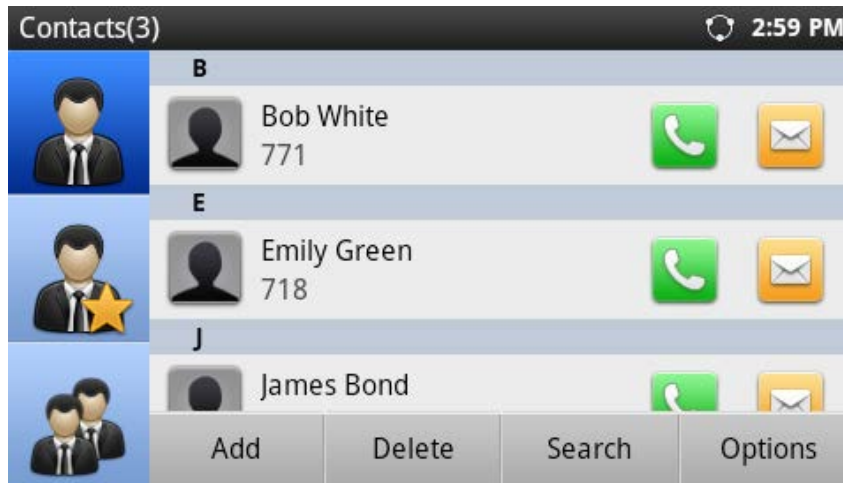


Figure 79: GXP2200 Contacts Screen

- **Add contact.** Tap on **Add** to bring up screen to edit **New contact**. Enter contact information (e.g., First name, Last name, Phone number, Email address and etc). When there are more than one Phone number added for the contact, the first one will be used and displayed by default.

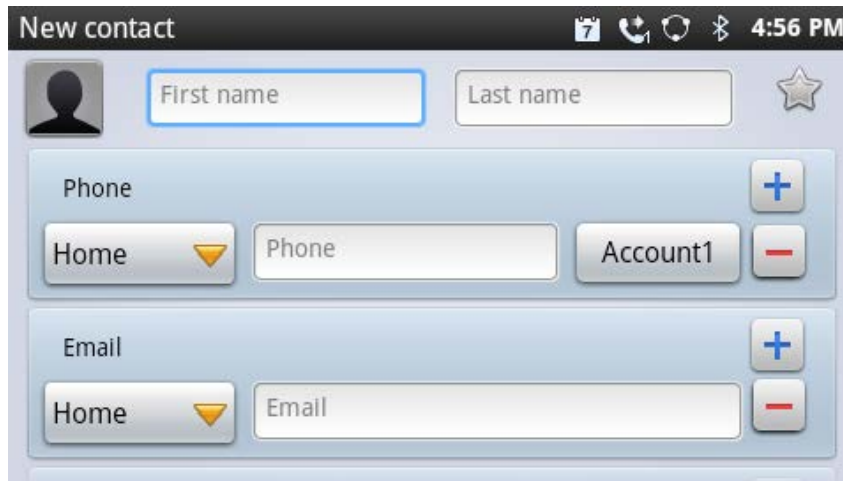


Figure 80: GXP2200 Contacts - New Contact

- **Edit Contact.** Touch the contact you would like to edit, and tap on **Edit**. Add or modify the contact information. Tap on **Done** to save the change;

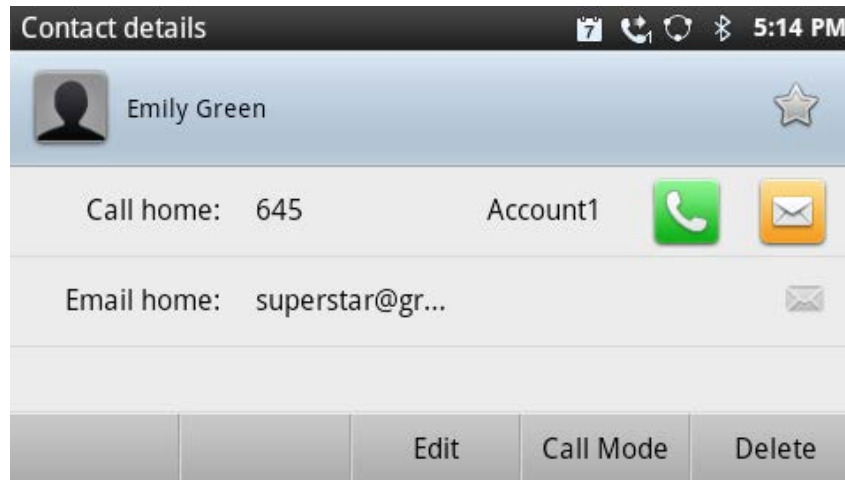


Figure 81: GXP2200 Contacts - Edit Contact







- **Delete Contact.** Tap the contact you would like to delete and tap on **Delete**;
- **Make calls via Contacts.** Tap  on the contact you would like to call; or select "Call Mode" and tap on  to edit number before dialing out;
- **Send SMS via Contacts.** Tap  on the contact you would like to send message to;
- **Add to Favorite category.** Tap on  so the selected contact will be added to the Favorite category;
- **Edit contacts in Favorite category.** Touching  on the left panel, to view, add, delete or search the contacts;
- **Edit contacts in Group category.** Touching  on the left panel, to view, add or delete groups;
- **Check Storage Status.** Tap on **Options->Storage status**;



Figure 82: GXP2200 Contacts - Storage Status

- **Import contacts.** XML/Vcard/CSV format phonebook could be imported to GXP2200. Tap on **Options->Import**. And you would see the screen in the following figure for you to import your file;

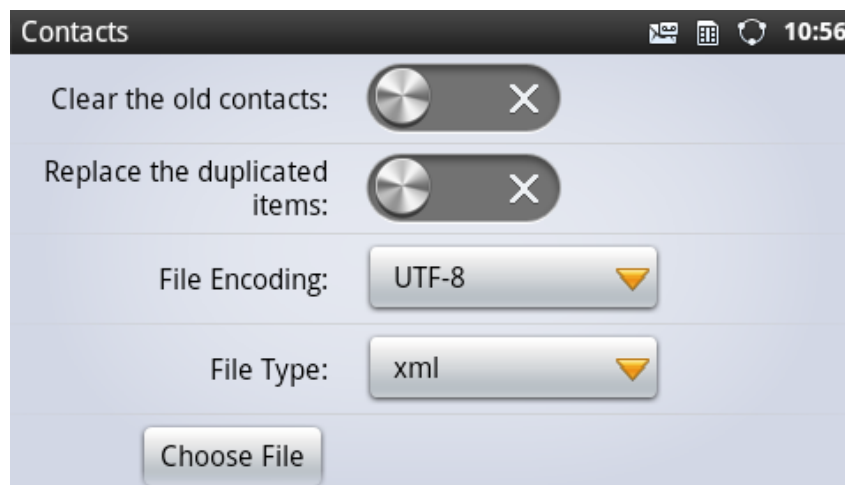


Figure 83: GXP2200 Contacts - Import File

- **Export contacts.** Contacts information in GXP2200 could be converted to Vcard/XML/CSV files and exported to external device such as PC. Tap **Options->Export**, select the format and choose the directory you would like to save the file. Then tap on **OK**.



Figure 84: GXP2200 Contacts - Export File

- **Download phonebook.** The GXP2200 supports remote downloading phonebook from HTTP/TFTP server. Tap **Options->Download**, and the following figure will show. Specify the **Download Mode** and **Download Server** where the phonebook is located.

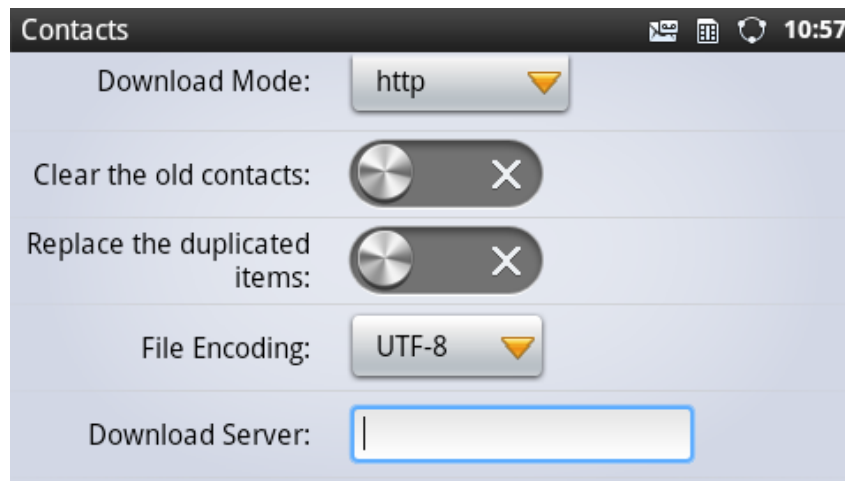


Figure 85: GXP2200 Contacts - Download File

- **Change display options.** The GXP2200 contacts can be configured to display entries with different settings. Tap **Options->Display options**, and the following figure will show. Configure the display options based on users' preference.



Figure 86: GXP2200 Contacts Options - Display Options

- **Add account to sync up contacts.** The GXP2200 can use synced up accounts from Google, Skype, Corporate and etc to synchronize contact information into the local contacts. To add account, tap on **Options->Accounts**, and the following figure will show for users to start adding account. Users could also access this from **Menu->Settings->Account & Sync**.

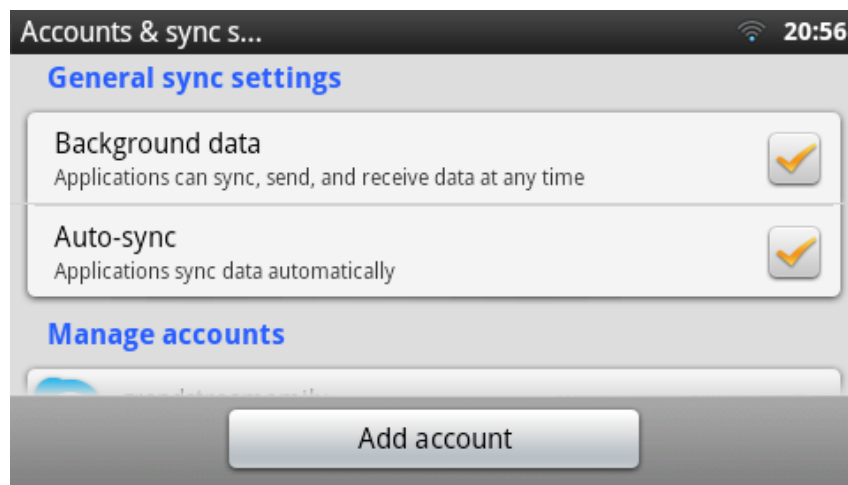
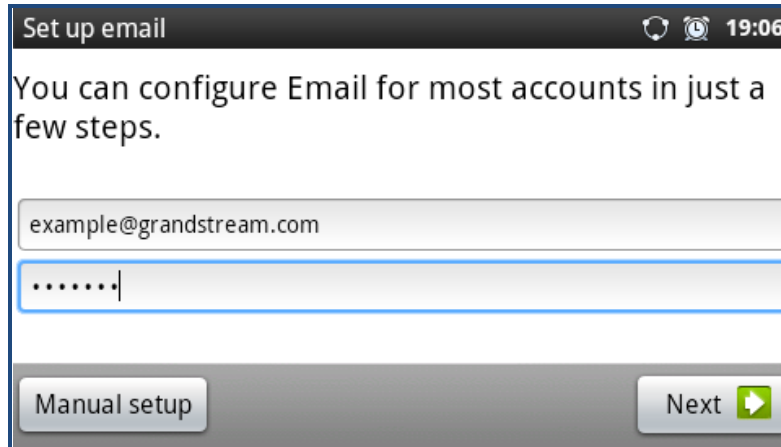


Figure 87: GXP2200 Contacts Options- Accounts

EMAIL

The GXP2200 Email app provides users easy access to business or personal email account. When opening it for the first time, a wizard will be provided for users to configure the email account on GXP2200.



Set up email 19:06

You can configure Email for most accounts in just a few steps.

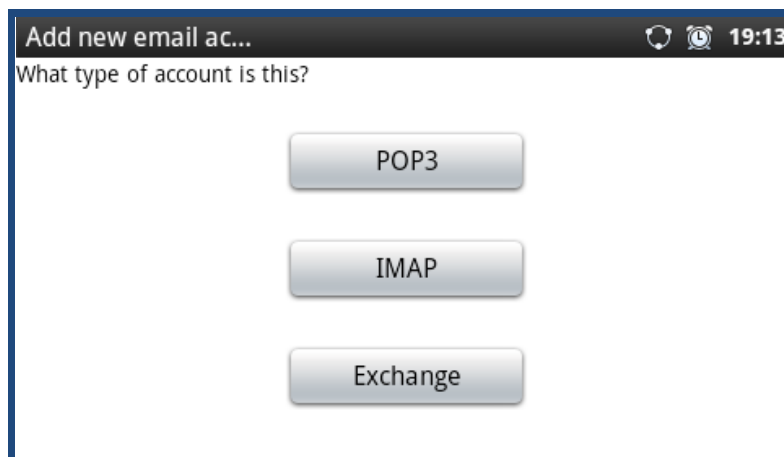
example@grandstream.com

.....

Manual setup Next

Figure 88: GXP2200 Email Setup Wizard - Set Up Email

Press "Next" for quick setup. Or press "Manual setup" to configure more options manually.



Add new email account 19:13

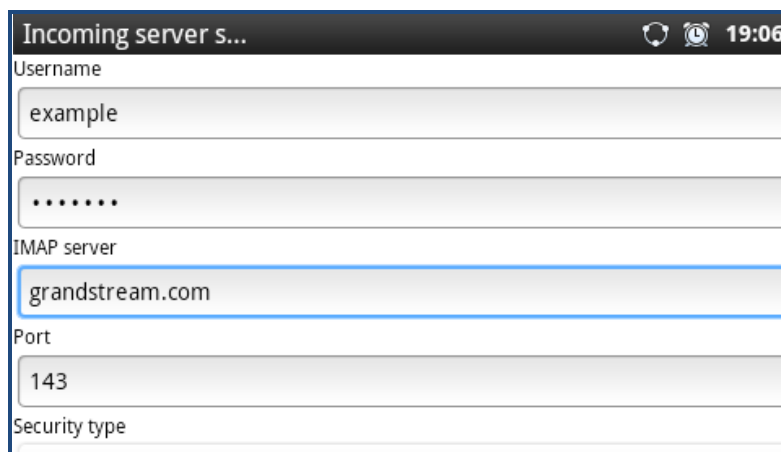
What type of account is this?

POP3

IMAP

Exchange

Figure 89: GXP2200 Email Setup Wizard - Press Next or Manual For Quick Setup



Incoming server settings 19:06

Username
example


Password
.....

IMAP server
grandstream.com

Port
143








Security type

Figure 90: GXP2200 Email Setup Wizard - Select IMAP

Once the Email account is successfully set up, users could press MENU button  and bring up the **Refresh, Compose, Folders, Accounts** and **Account settings** options.

FILE MANAGER

File Manager is a tool that helps manage folders and files such as pictures, music, video and other files on GXP2200.

- The root directory for File Manager app shows **screensaver, user_data** folders by default. If USB flash drive or SD card is inserted into the GXP2200, the folder  for **USB** or  for **SD** card will also be displayed here. Under root directory, users could sort the folders by **Name, Last Modified, Size** or **Type**. Search option is also available by tapping on **Search** or pressing Search  button on GXP2200;
- Under each sub folder, users could access files, create new folder, search file/folder, sort the files/folders, copy and paste to manage the files.
 - Create New Folder. Tap on **New Folder**, input new folder's name and touch OK;
 - Copy files/folders. Tap on **Options** and the files/folders will show check option  on each icon. Check on the files/folders you would like to copy. Then tap on **Copy**;
 - Paste files/folders. After copying the files/folders, **Paste** option will show. Without pressing **Back** button, tap on the folder to select the destination directory you would like to paste to. Then tap on **Paste**;
 - Move files/folders. Tap on **Options** and the files/folders will show check option  on each icon. Check on the files/folders you would like to move. Then tap on **Move**. **Paste** option will show. Without pressing **Back** button, tap on the folder to select the destination directory you would like to move to. Then tap on **Paste**. The files/folders will be moved;
 - Send files/folders via Bluetooth. Tap on **Options** and the files/folders will show check option  on each icon. Check on the files/folders you would like to send. Then tap on **Send**;
 - Delete files/folders. Tap on **Options** and the files/folders will show check option  on each icon. Check on the files/folders you would like to delete. Then tap on **Delete**.
- Users could also tap and hold a file/folder icon until **Options** list is activated. Then the following

operations could be done:

- **Open.** Tap on **Open** to open the file/folder;
- **Copy.** Tap on **Copy** to copy the file/folder. **Paste** option will show. Without pressing **Back** button, tap on the folder to select the destination directory you would like to paste to. Then tap on **Paste**;
- **Move.** Tap on **Move**. **Paste** option will show. Without pressing **Back** button, tap on the folder to select the destination directory you would like to move to. Then tap on **Paste**. The files/folders will be moved;
- **Rename.** Tap on **Rename** and enter the new name. Once done, tap on **OK**;
- **Delete.** Tap on **Delete** to delete the file/folder;
- **Properties.** Tap on **Properties** to view the detailed information, i.e., size, last modified time, permission, location and etc.

 **Note:**

Under the File Manager root directory, screensaver is a system folder that users could not create or delete files/folders there.

GALLERY

Gallery app could be used to view pictures and play videos from GXP2200 internal storage or USB/SD card storage. Users could also perform basic editing tasks on pictures and set them as wallpaper or picture for contacts. The pictures can be easily shared with friends in Gallery app by sending via Bluetooth, and Email too.



Figure 91: GXP2200 Gallery

GS MARKET

GXP2200 provides direct access to apps via built-in GS Market app. Users could browse, search, download and install the apps from there for tools and games.

- **Browse apps.** Select the tabs on the top menu to view apps in different categories: **Hot**, **Apps**, **Games**, **Tools**. For example, selecting **Games** category will have all the game apps show up.

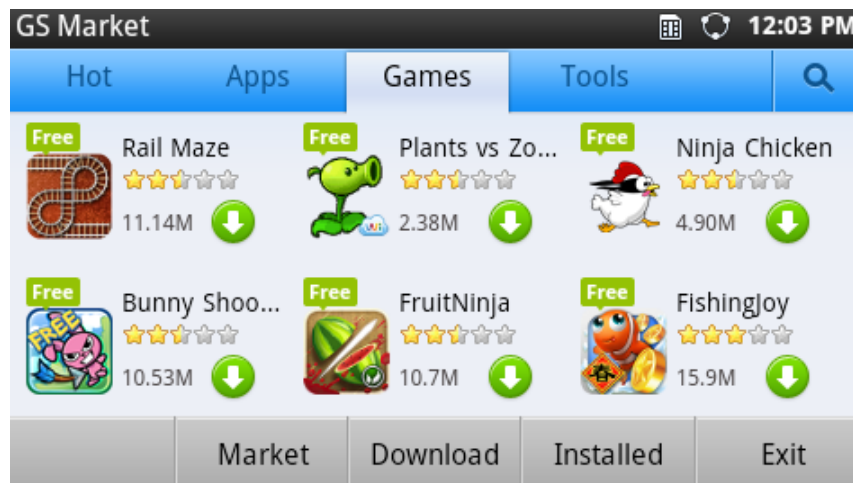





Figure 92: GXP2200 GS Market - Game

- **Search an app.** To search an app in GS Market, tap on  at the upper right or press the Search  button. Then touch the input field to activate the onscreen keyboard. Enter the keyword of the app and touch **Go** on the onscreen keyboard. Or press  again to start the search.

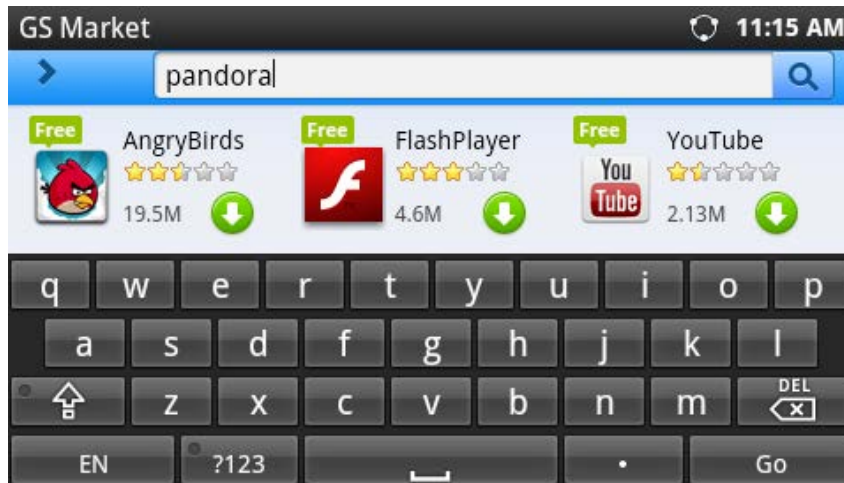



Figure 93: GXP2200 GS Market - Search App

- Download an app.** To download an app, tap the icon  right next to the app. The downloading process will be automatically started. In GS Market, tap on **Download** option to view the downloaded apps and downloading process. For example, in the following figure, YouTube app and FlashPlayer have been downloaded and installed already, while FruitNinja app is still in downloading process. Progress bar will show in downloading process and you could cancel the downloading by tapping on the **Cancel** icon.

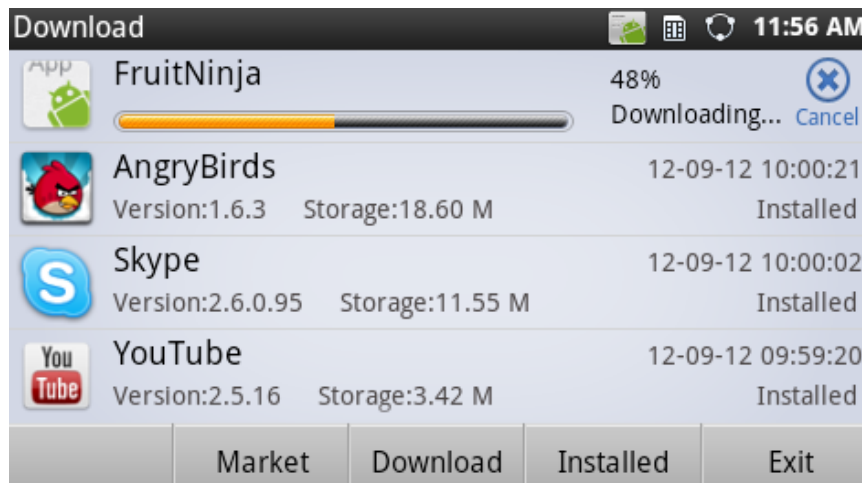


Figure 94: GXP2200 GS Market - Download

- Uninstall an app.** Tap on the **Installed** option in GS Market, a list of installed apps will show. Touch Uninstall icon on the right hand side of the installed app, then confirm to uninstall.

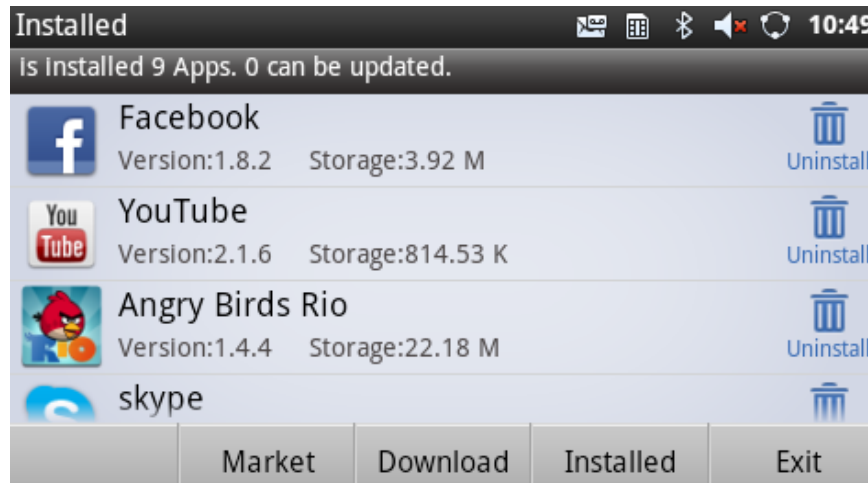


Figure 95: GXP2200 GS Market - Installed

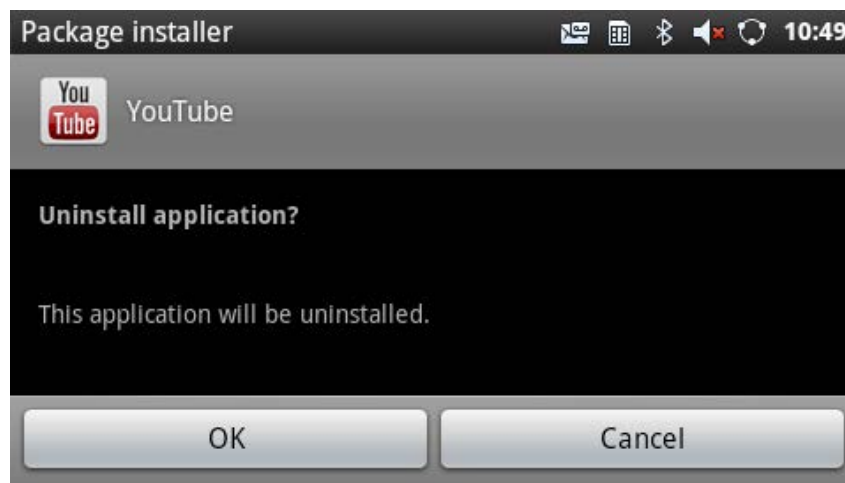


Figure 96: GXP2200 GS Market - Confirm Uninstall

IP LOCATION

The IP Location app provides users with a tool to resolve the IP address to the location. Users could simply enter the IP address and then tap on **Search** to view the result. Based on the IP address provided, the following information will be given: **Country, Region, City, Latitude, Longitude, Time Zone** and **Weather Code**. This information is useful when configuring the phone to provide personalized settings based on user's location.

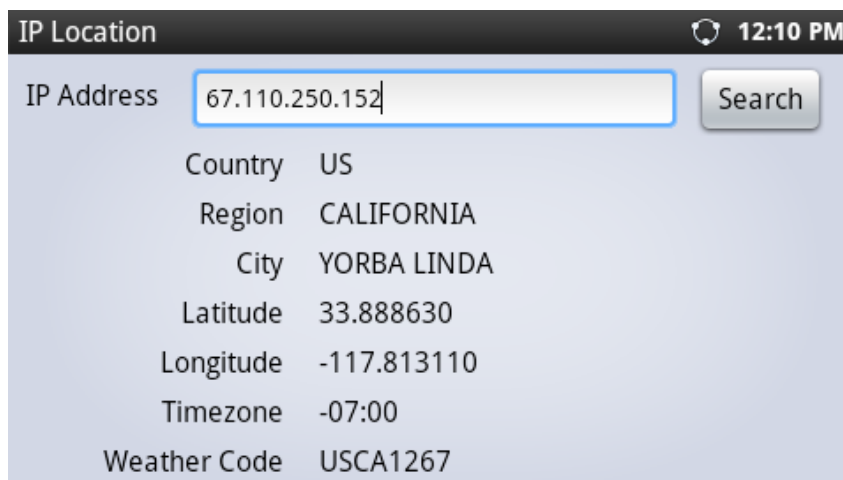


Figure 97: GXP2200 Location

For example, in the above figure, the IP address 67.110.250.152 is mapped to Yorba Linda in California, USA. The time zone is UTC-07:00 and the weather code is USA1267.

LDAP BOOK

GXP2200 supports LDAP (Lightweight Directory Access Protocol).

- **LDAP Setting**

Users could configure the LDAP settings via LCD Menu->**LDAP Book**->**Setting**, or from web GUI->**Maintenance**->**LDAP Book**. Save the settings after the configuration.

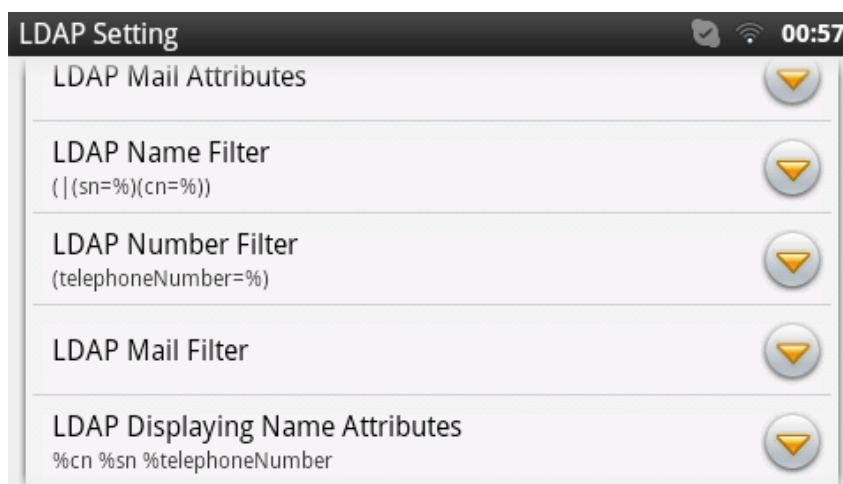



Figure 98: GXP2200 LDAP Setting

- **Search**

Tap on "Search" or  button and enter the keyword to start searching contact information from the LDAP server as configured. The result will be returned and displayed in a real-time manner.

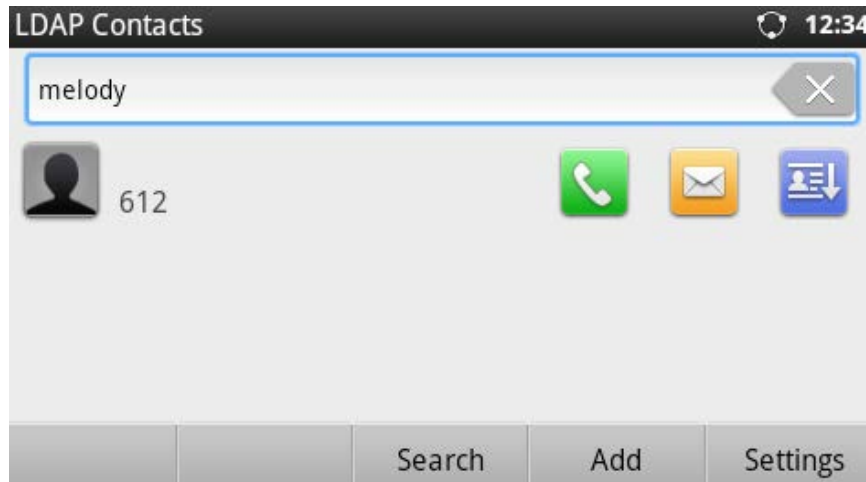


Figure 99: GXP2200 LDAP Search Result

- **Add LDAP Contact to Local Phonebook**

After the LDAP contact result is displayed, users could tap on "Add" to add the contact to local phonebook (see figure below).

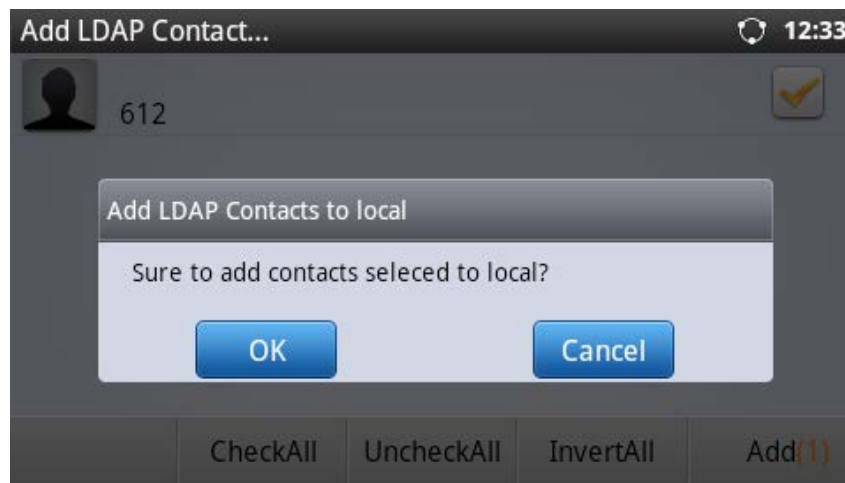


Figure 100: Add LDAP Result To Local Phonebook

MEDIA PLAYER

GXP2200 Media Player supports video format in MP4 and 3GP, audio format in AAC, MP3, AMR, WAVE, MIDI and Vorbis to be displayed. Users could scan the media files by tapping on **Scan** and files detected from internal storage and USB/SD card storage will be displayed.

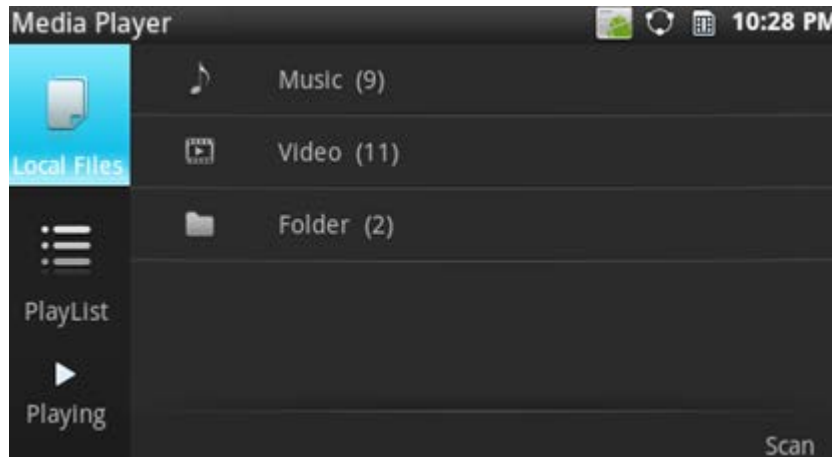


Figure 101: GXP2200 Media Player

Tap on **Scan** then users could define the scan methods: **Scan All Media Files**, **Scan The Specified File** and **Scan The Specified Folder**. Select the targeting folder if **Scan The Specified File** or **Scan The Specified Folder** is selected.

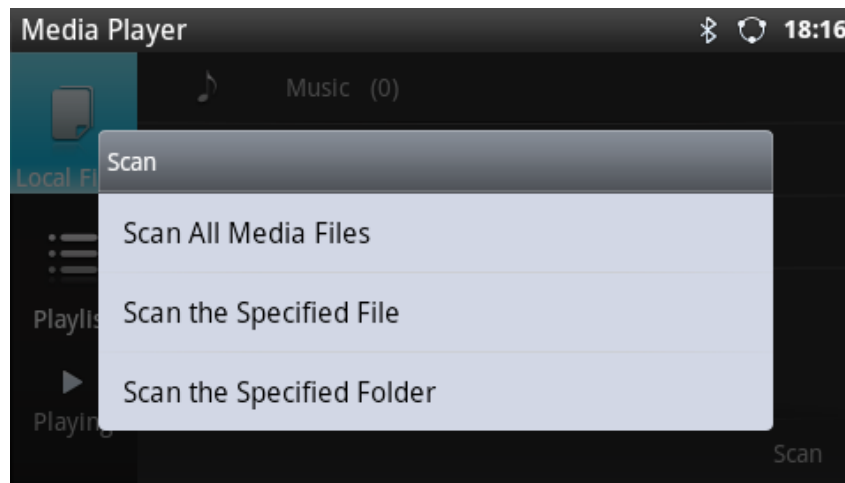


Figure 102: GXP2200 Media Player - Scan

- **Music.** On **Local Files** tab, Select **Music** to bring up the screen for the detected audio files. User could select to sort music files by **Song**, **Artist**, **Album**, **File** when tapping on **Sort** button.

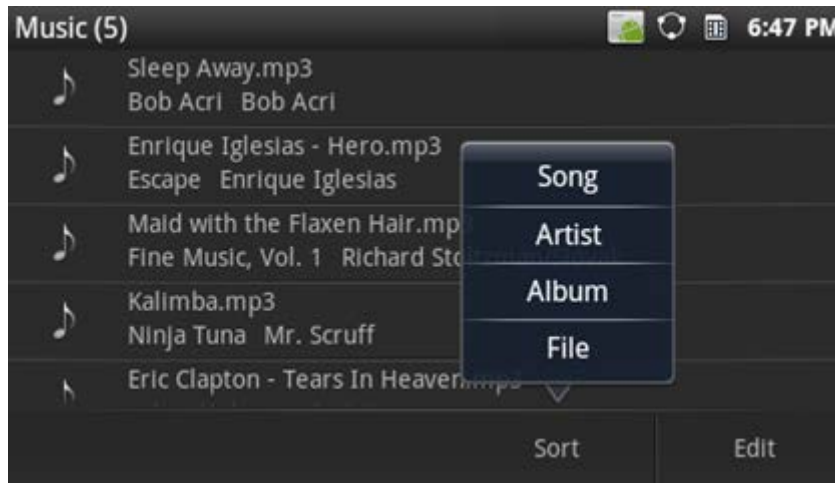


Figure 103: GXP2200 Media Player - Sort Music Files

To edit music files, tap on **Edit** option. Then users could click on the checkbox for each file and perform operations to **Send** the file, **Add to Playlist**, and **Delete**. The **Members (number)** indicates the selected music files.

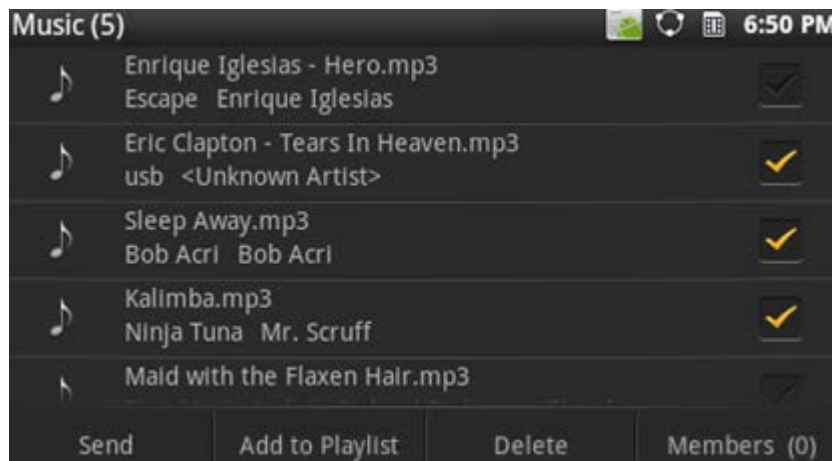


Figure 104: GXP2200 Media Player - Edit Music Files

Also, users could simply tap and hold onto the music file to bring up options list to edit the file. Besides **Add to Playlist**, **Delete** and **Send**, users could also set the music as local ringtone by selecting **Set as Ringtone**.



Figure 105: GXP2200 Media Player - Music File Options

To play the music, simply touch the music file you would like to play.

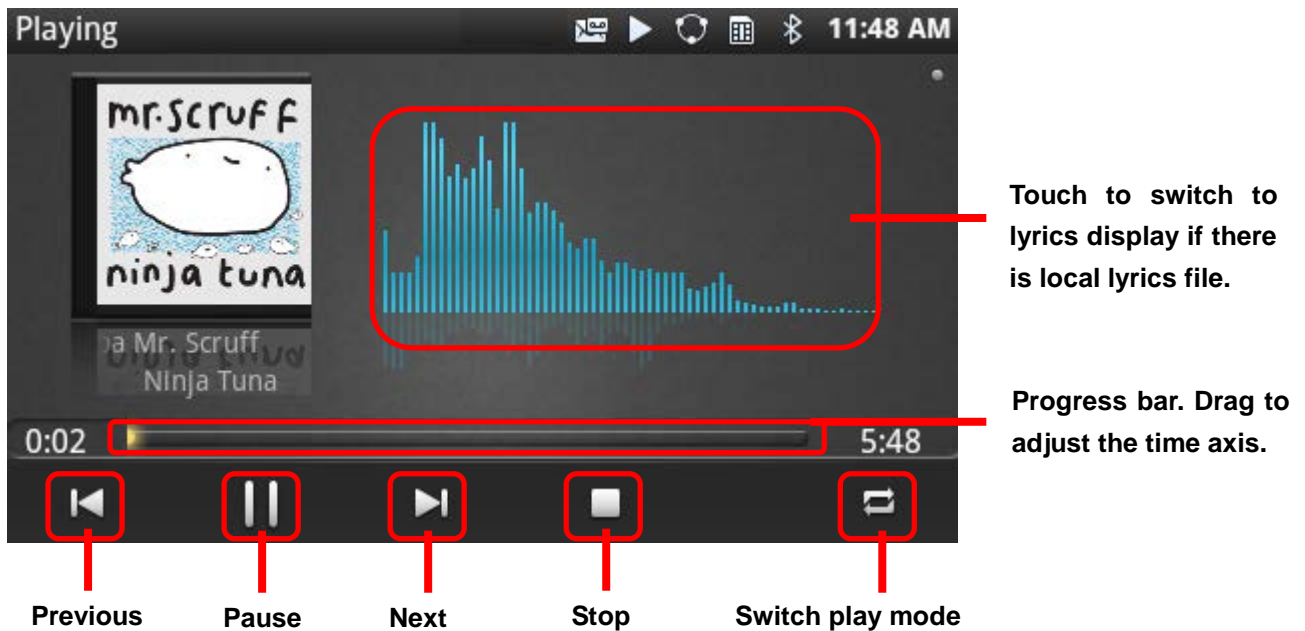


Figure 106: GXP2200 Media Player - Playing

To view the lyrics, touch the frequency bar on the above figure. Local lyrics file is required to display the lyrics.

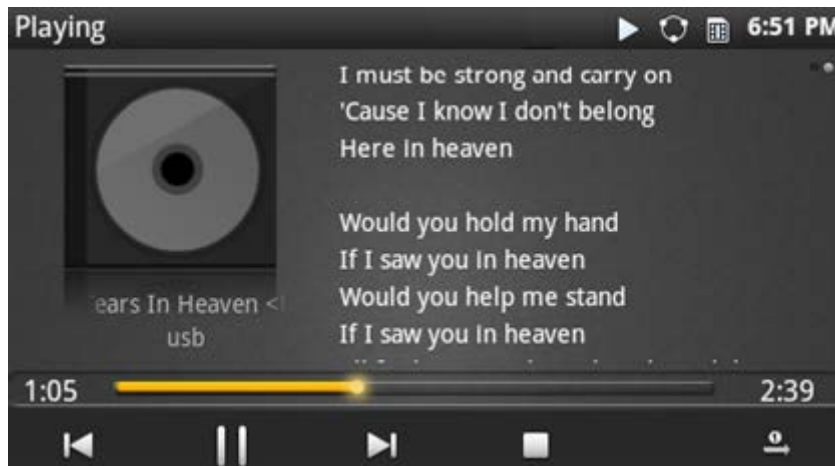


Figure 107: GXP2200 Media Player - Lyrics

- **Video.** On **Local Files** tab, Select **Video** to bring up the screen for the detected video files. User could **Sort** or **Edit** the video files, similar to the operations for Music files as described above.
- **Folder.** On **Local Files** tab, Select **Folder** to display the folders where all the media files are located. The directory path and number of media files in each folder will show in the list so users could easily locate the files.

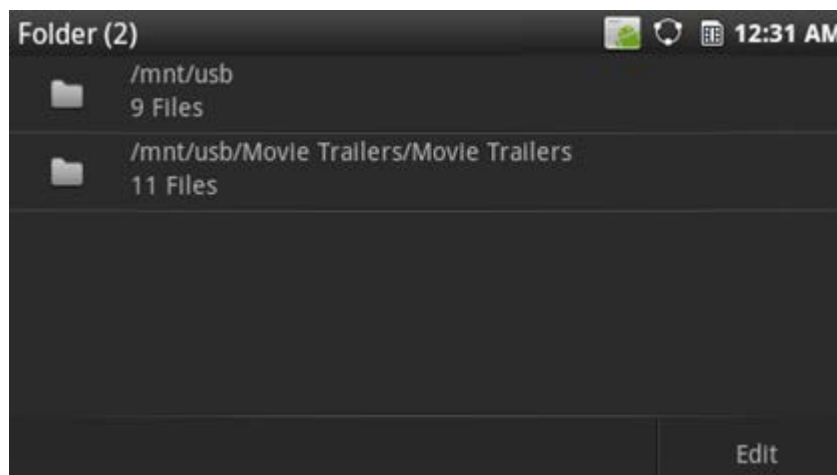


Figure 108: GXP2200 Media Player - Folder

Users could add the media files in a folder to Playlist here. Tap on **Edit** button and following screen will show. Click on the checkbox on the right hand side of the folder to select. Then touch **Add to Playlist**. An option list will show for users to select a Playlist to add the files to. The **Member (number)** indicates the number of selected folders in the list.

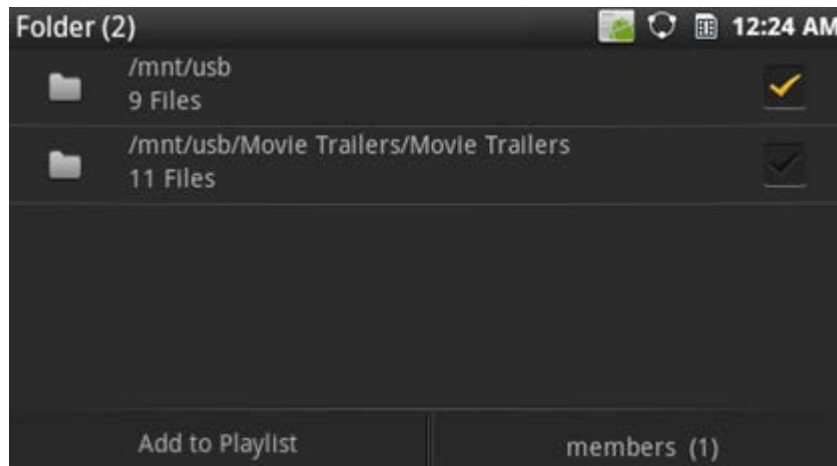


Figure 109: GXP2200 Media Player - Folder

- **Playlist.** Tap on the **Playlist** tab on the left panel to bring up Playlist screen.

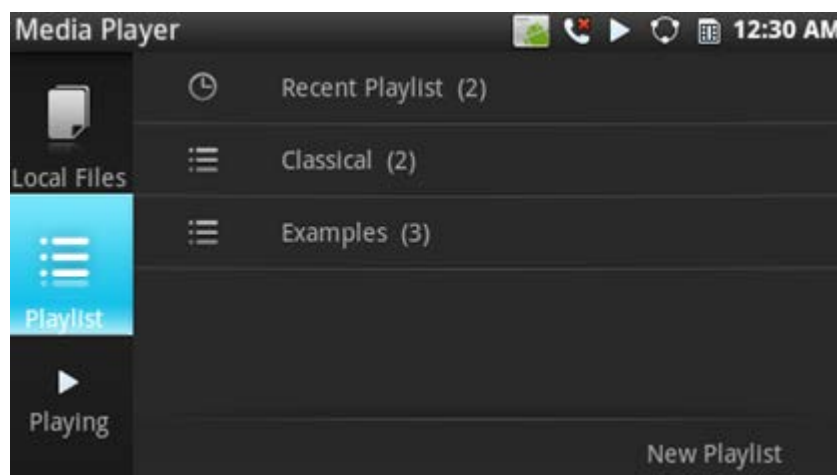


Figure 110: GXP2200 Media Player - Playlist

To create **New Playlist**, tap on the **New Playlist** button. Type the name of new Playlist and **Save** it.

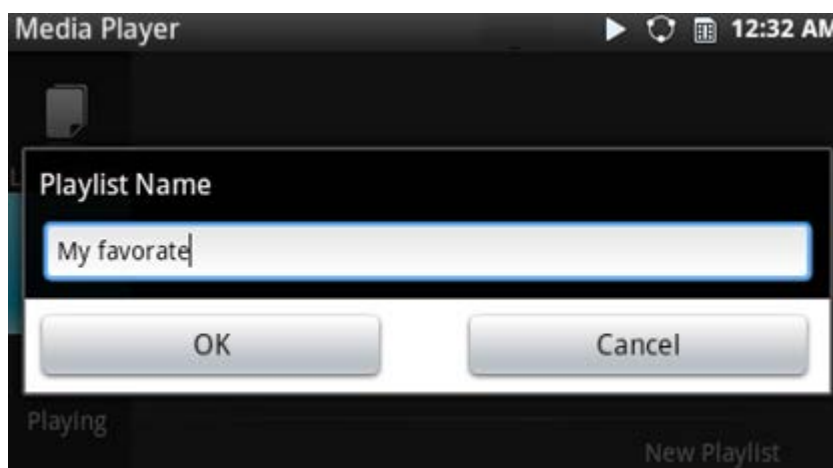


Figure 111: GXP2200 Media Player - Create New Playlist

To edit or play a Playlist, touch and hold onto one of the Playlist. Then options **Play**, **Clear All**, **Delete**, **Rename** will show.

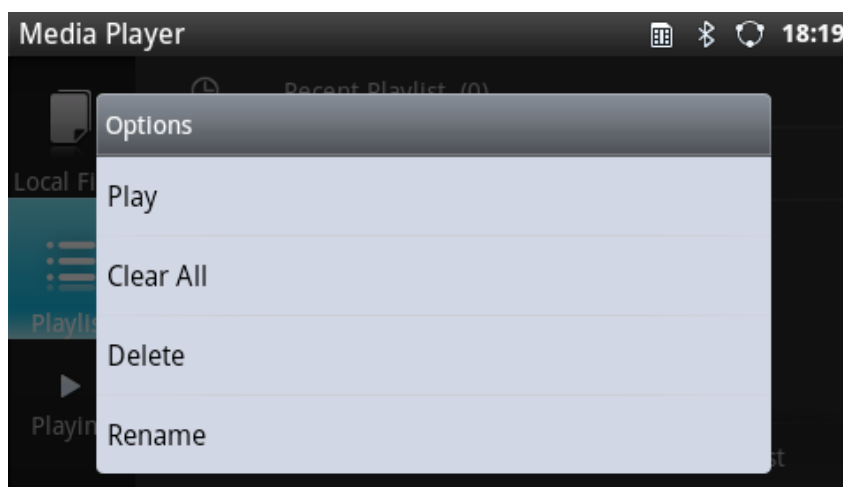


Figure 112: GXP2200 Media Player - Playlist Options

MESSAGE

GXP2200 has built-in Message app, which could be used with SIP server's support. If two parties (1 of them is GXP2200, or both are GXP2200) are registered on the same SIP server, text messages can be sent/received between them. Users can create, edit draft, delete and check the storage status of SMS. The Message app supports up to 1000 messages.

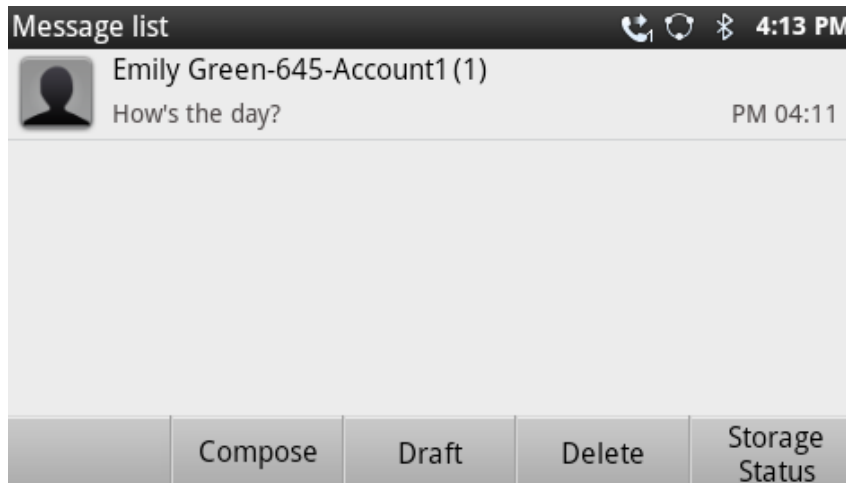


Figure 113: GXP2200 Message

- **View Dialog**

Tap on the contact you have pervious chatted with to view the message dialog.

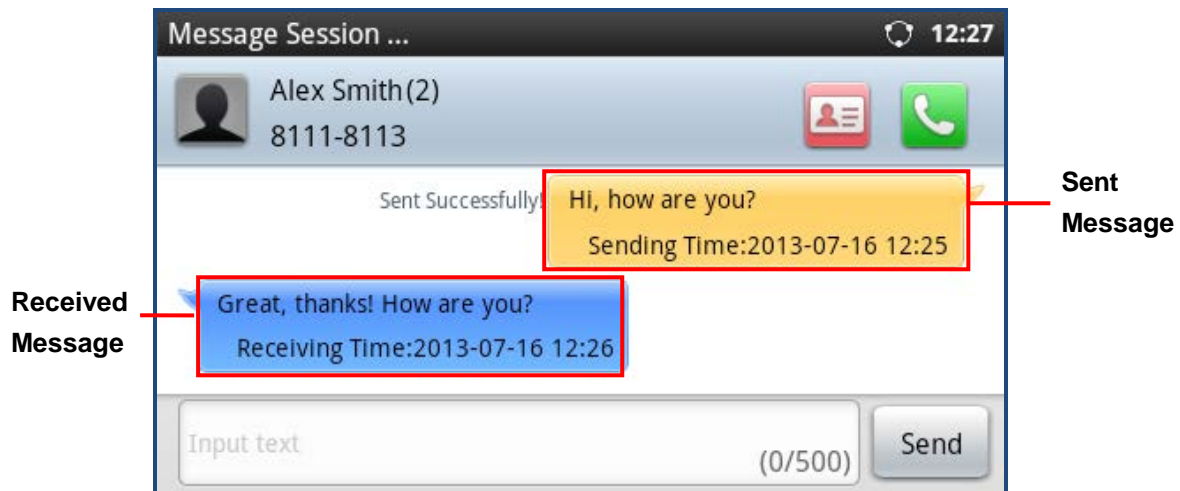


Figure 114: View Dialog

Touch and hold at the "Sent Message" dialog to bring up the operation options including **Lock/Unlock**, **Forward**, **Copy**, **Delete** and **Resend**.

Touch and hold at the "Received Message" to bring up the operation options including **Lock/Unlock**, **Forward**, **Copy** and **Delete**.



Figure 115: Message Options

If users select Lock/Unlock for the message, by default this message will still remain on the phone when users delete the dialog with the contact. To delete a locked message, users could select on the checkbox for this message and then press the delete option.

- **Send SMS**

Tap on **Create**, select the contact, input the message, and then touch **Send**;

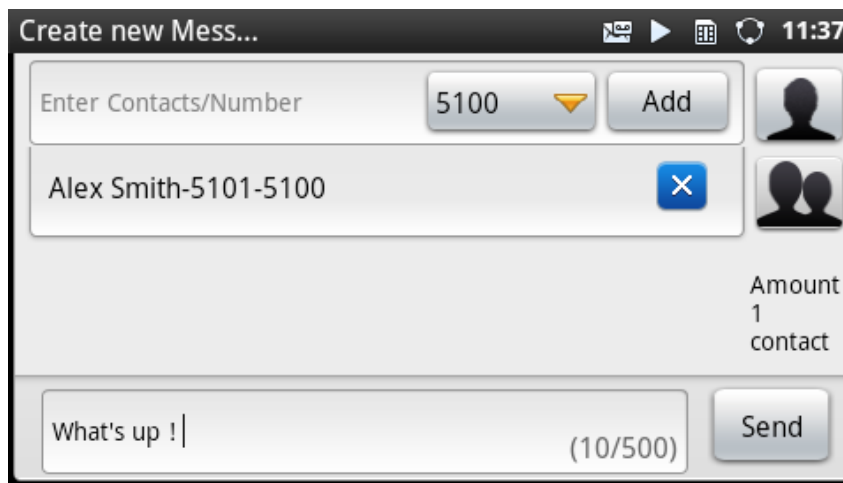


Figure 116: GXP2200 Message - Send SMS

- **View Draft**

Tapping on **Draft** in *Figure 113: GXP2200 Message* will show you the SMS Draft List, which saves the messages edited but not sent yet. Tap to select the draft, then you could edit and send it.

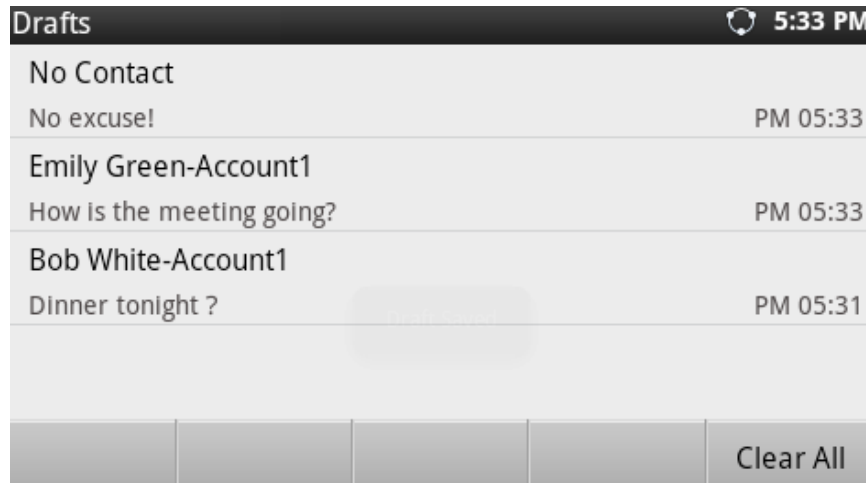


Figure 117: GXP2200 Message – SMS Draft List

- **Delete SMS**

Tap on **Delete** in *Figure 113: GXP2200 Message* and select the message you would like to delete. Then Tap on **Delete** again.

- **Check Storage Status**

In *Figure 113: GXP2200 Message*, tap on **Storage Status** to display storage information. The maximum storage capacity for GXP2200 message is 1000 messages.

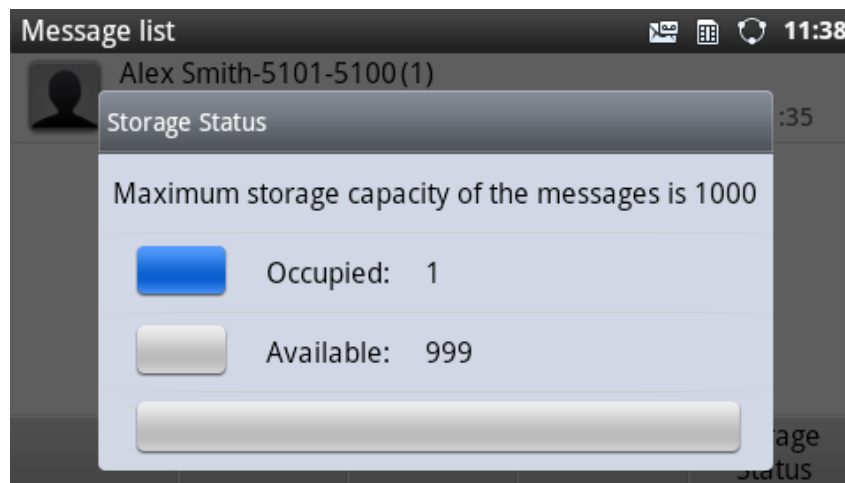


Figure 118: GXP2200 Message - Storage Status









MUSIC

Use Music app on GXP2200 to listen to music and other audio files. When Music app is launched, it will scan and detect the files in internal storage and USB/SD storage. The files could be displayed by Artist, Albums, or per song. Tap on **Playlists**, users could check the recently added files. To play the file, touch the file in the list.

Tap on **Now playing**, users could perform the following operations:



Figure 119: GXP2200 Music - Now Playing

- **Pause.** Tap on  to pause. When paused, tap on  to resume playing;
- **Play previous.** Tap on ;
- **Play next.** Tap on ;
- **Go to Playlist.** Tap on ;
- **Shuffle.** Tap on ;
- **Repeat the current music.** Tap on ;
- **More options.** Press the MENU button , options such as **Add to Playlist**, **Use as ringtone**, **Delete** will show;
- **Play music in background.** When the music is playing, tap on HOME button to go back to main screen. The music will still be played in the MUSIC app running in background.

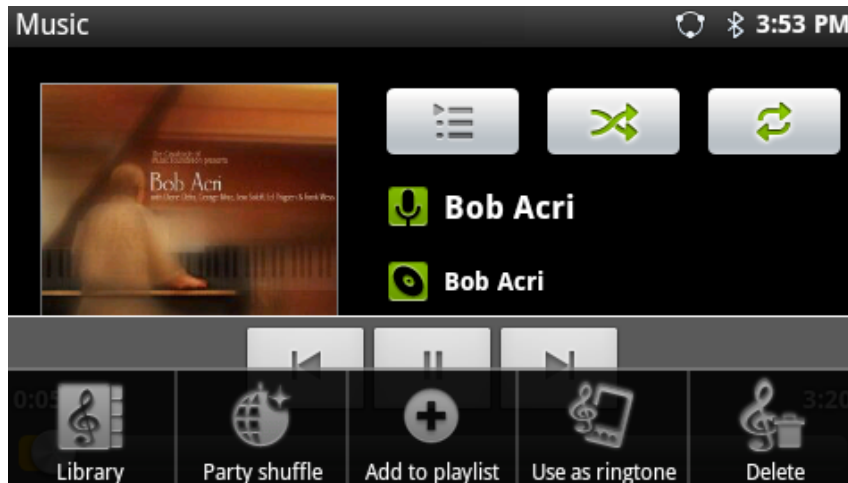




Figure 120: GXP2200 Music - Now Playing: MENU Options

SEARCH

GXP2200 Search app could be used to search information in web or in GXP2200.

- **Launch Search app.** Return to HOME  first and press the search button . Or directly open the Search app from onscreen MENU.
- **Type to Search.**
 - **Search on Web.** Type in the content you would like to search from the onscreen keyboard and then press Go. A new web page will be opened listing the searching result.

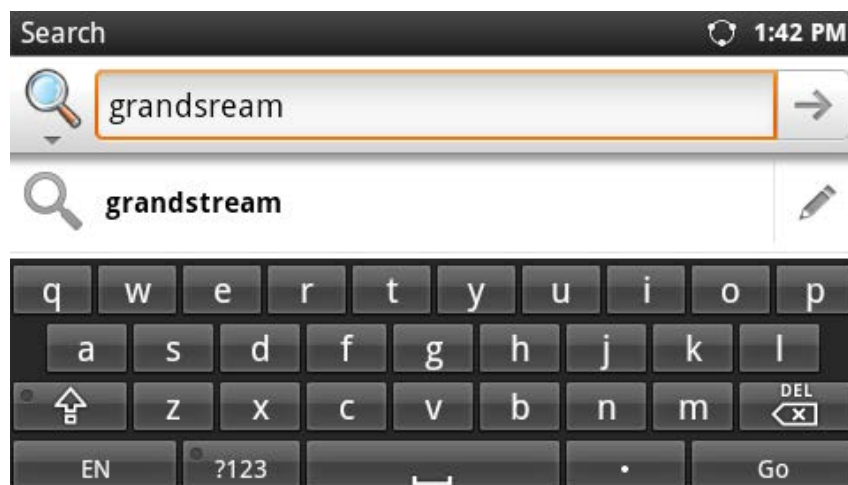


Figure 121: GXP2200 Search - Search on Web

- **Search in GXP2200.** Type in the content you would like to search. If it's an app in GXP2200,

suggestions will display, tap on the suggestion to launch the app. If it's number, "Dial number" using the entered digits will display, tap on it the call will be made via the first registered account.

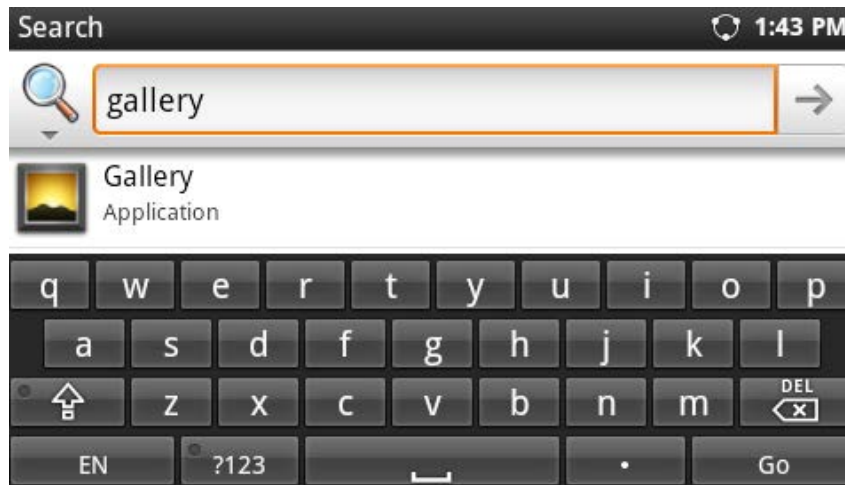


Figure 122: GXP2200 Search - Search on GXP2200

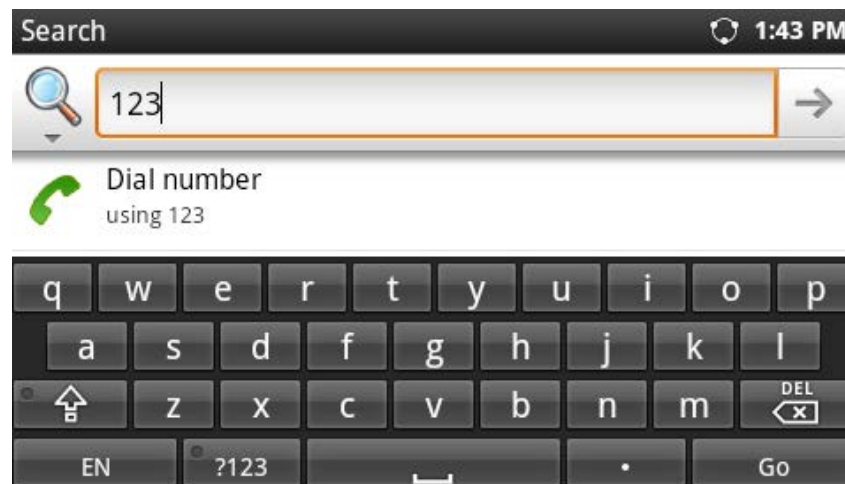





Figure 123: GXP2200 Search - Dial Number

- **Turn on/off Web search suggestions.** In Search app, tap on MENU button  and touch **Search Settings**. Under **Web**, tap on **Google search**. And then check or uncheck to enable/disable **Show web suggestions** when typing in the content.
- **Set searchable items in GXP2200.** In Search app, tap on MENU button  and touch **Search Settings**. Under **Phone**, tap on **Searchable items**. And then check or uncheck to select the searchable items on the phone.
- **Manage search privacy.** In Search app, tap on MENU button  and touch **Search Settings**.

Under **Phone**, tap on **Clear shortcuts**. The suggestions that have been recently selected in Search app will be cleared.

VOICE ASSIST

GXP2200 Voice Assist allows users to dial number, send text message or access Google search in seconds. To use it, open the app and simply speak to the microphone icon with the following format:

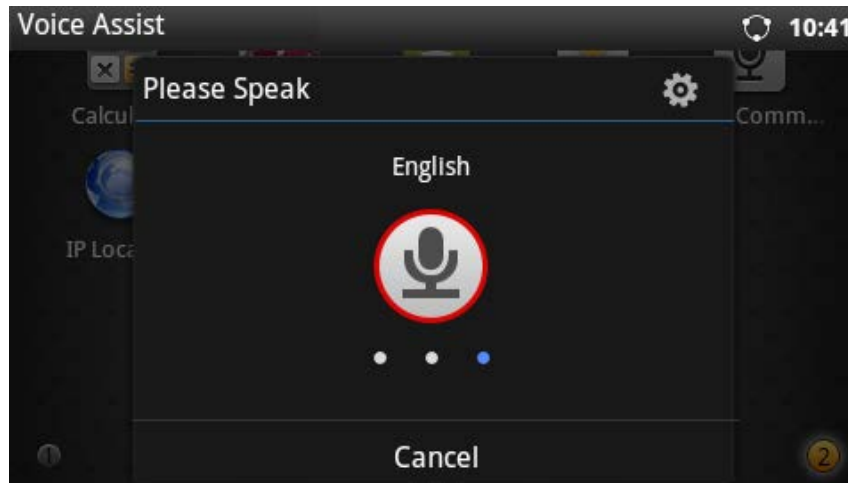


Figure 124: GXP2200 Voice Assist

- **Call number/contact.**

For example, speak "call 1234" or "call John". The detected result will show. Users could select "Quit" or tap on the result in the following picture. If no selection is made, after 3 seconds timeout, the command will be sent out with the first matching result and call screen will show with an outgoing call to John.

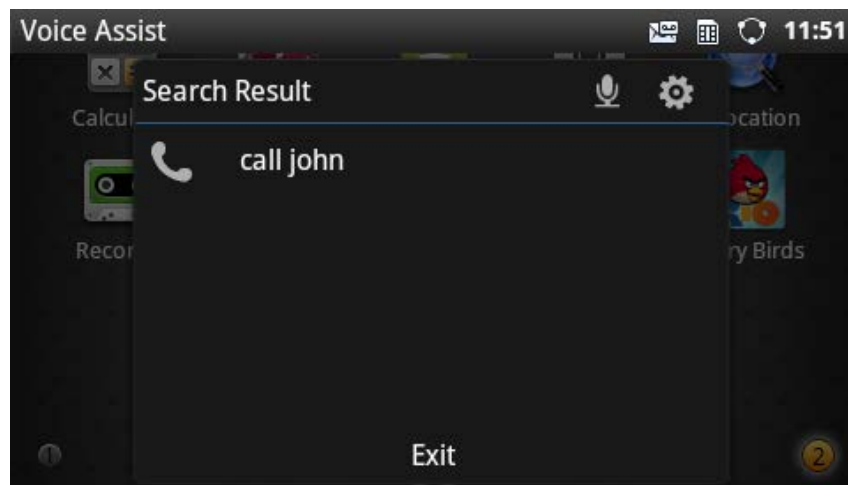


Figure 125: GXP2200 Voice Assist - Call Number/Contact



Figure 126: GXP2200 Voice Assist - Call Number/Contact Result

- **Search text.**

For example, speak "search Boston". The detected result will show. Users could select "Exit" or tap on the result in the following picture. If no selection is made, after 3 seconds timeout, the command will be sent out with the first matching result and "Boston" will be searched in browser.

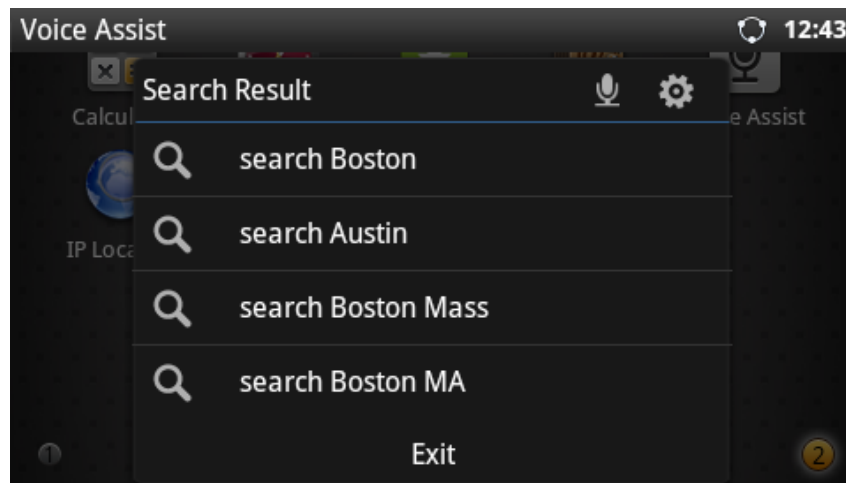


Figure 127: GXP2200 Voice Assist - Search

Here is the result after speaking "search Boston".

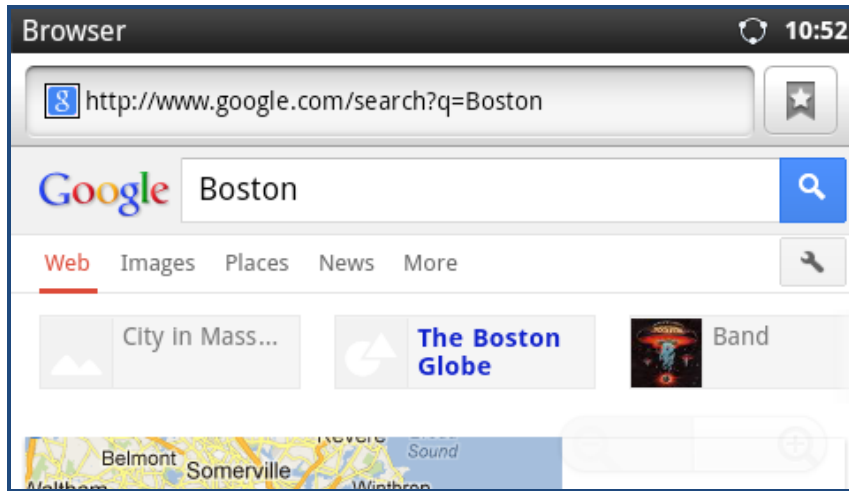


Figure 128: GXP2200 Voice Assist - Search Result

- **Send name/number Text content.**

For example, speak "send John text hello". The detected result will show. Users could select "Exit" or tap on the result in the following picture. If no selection is made, after 3 seconds timeout, the command will be sent out with the first matching result and SMS will be opened with the name/number and the message content.

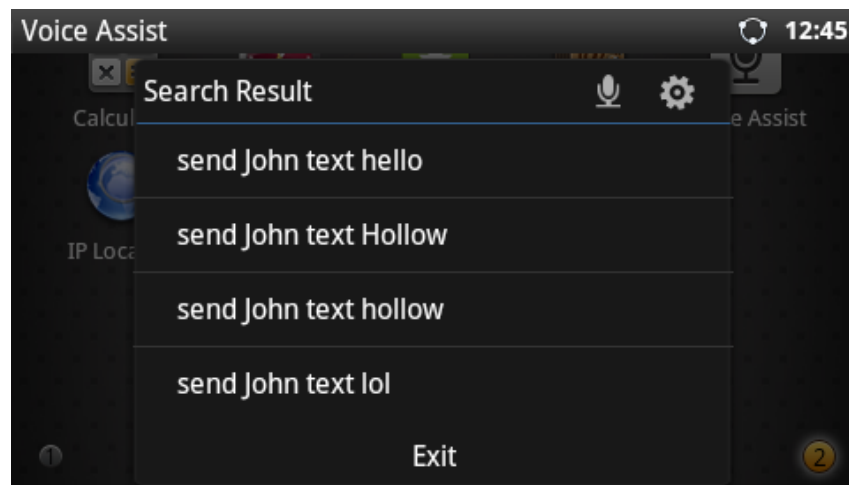



Figure 129: GXP2200 Voice Assist - Send Text



Figure 130: GXP2200 Voice Assist - Send Text Result

VOICE DIALER

GXP2200 Voice Dialer allows users to make calls by directly speaking the number or contact name. To use it, open the app and simply speak to the microphone icon with number or contact name. Multiple languages are supported in GXP2200 Voice Dialer. Users could tap on  to change language settings. The default language is English.

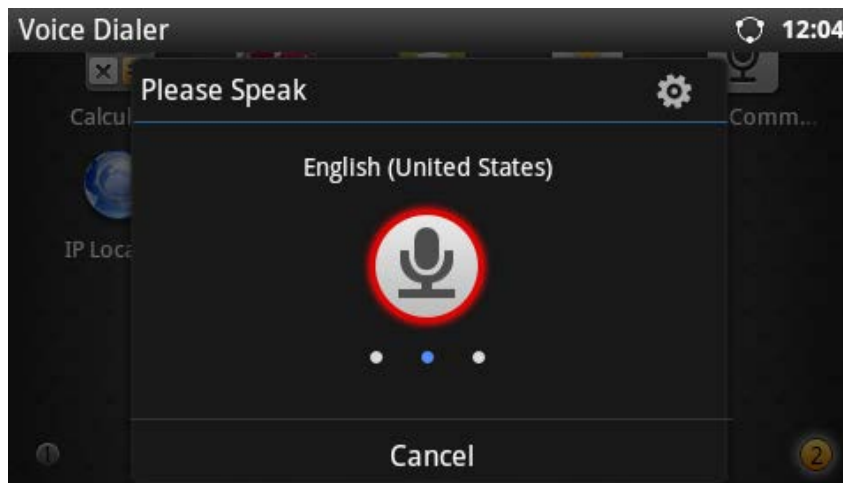


Figure 131: GXP2200 Voice Dialer

For example, speak "1234" and the detected result will show. Users could select "Quit" or tap on the desired result. If no selection is made, after 3 seconds timeout, the call will be made with the first matching number/contact.



Figure 132: GXP2200 Voice Dialer Result

For example, speak "1234" and the detected result will show. Users could select "Quit" or tap on the desired result. If no selection is made, after 3 seconds timeout, the call will be made with the first matching number/contact.

VOICE RECORDER

GXP2200 Voice Recorder is a simple and easy app for users to record audio and voice. It can be used to record meeting, lectures, personal notes. There is no time limits on the voice recorder as long as there is enough space to save the recording file.


To start/stop recording, press the  button.



Figure 133: GXP2200 Voice Recorder


After the recording is done, press the  button to save the file. The recording file will be saved to **File Manager->user_data->recording**.



Figure 134: GXP2200 Voice Recorder - Save File

CONNECTING TO NETWORK AND DEVICES

The GXP2200 supports a variety of network connections (Ethernet, Wi-Fi) and device connections, including EHS headset (Plantronics), USB, SD card and Bluetooth device. Users can connect the GXP2200 to transfer files from/to the GXP2200 using a USB connection, SD card or Bluetooth.

ETHERNET

Ethernet connection is turned on as DHCP by default. To configure Ethernet settings on GXP2200 LCD, go to GXP2200's Settings application->**Network**. Or users could configure Ethernet settings from GXP2200 web GUI->**Maintenance->Network Settings**.

TURNING ETHERNET ON OR OFF

1. Go to GXP2200's **Settings**;
2. Touch **Network**;
3. Check or uncheck the option for **Ethernet**.

CONFIGURING DHCP OR STATIC IP

1. Go to GXP2200's **Settings**;
2. Touch **Network**;
3. Touch **Ethernet Settings**;
4. Select Address Type. If Static IP is used, enter IP Address, Subnet Mask, Default Gateway, DNS Server and Alternative DNS server for the GXP2200 to correctly connect to network.

WI-FI

WI-FI is supported on GXP2200 with WI-FI adaptor plugged in. Insert the USB WI-FI adaptor to the USB port on the back of GXP2200 first and then go to GXP2200's Settings application->**Network**.

TURNING WI-FI ON OR OFF

1. Go to GXP2200's **Settings**;

2. Touch **Network**;
3. Check or uncheck the option for **Wi-Fi**.


Or, users could open the top status bar->System Settings and tap on WI-FI icon  to turn it on/off.

ADDING WI-FI NETWORKS

1. Once Wi-Fi is turned on, GXP2200 will automatically start the scanning within the range;
2. Go to GXP2200's **Settings**;
3. Touch **Network**;
4. Touch **Wi-Fi Settings**;
5. A list of Wi-Fi networks will be displayed as scanning result. Tap on the SSID and enter the correct password information to connect to the selected Wi-Fi network;
6. The phone will start connecting to the Wi-Fi. The status bar will show Wi-Fi signal strength;
7. Once it's added and the password is remembered, the GXP2200 will connect to it again when the SSID is within the range.

USING STATIC IP WITH WI-FI

Static IP could be used for Wi-Fi connection. To configure static IP settings with Wi-Fi, following the steps below.


1. Go to GXP2200's **Settings**;
2. Touch **Network**;
3. Touch **Wi-Fi Settings**;
4. Press Menu button  and tap on "Advanced" to bring up advanced options;
5. Under "IP settings" section, select "Use static IP" to enable static IP first. Then configure IP address, Gateway, Netmask, DNS 1 and DNS 2 address;
6. Once completed, the Static IP settings will be saved and used for Wi-Fi connection.

BLUETOOTH

Bluetooth is a proprietary, open wireless technology standard for exchanging data over short distances from fixed and mobile devices, creating personal area networks with high levels of security. On GXP2200, users could use Bluetooth to transfer files, share contact information with other Bluetooth portable devices, or use Bluetooth headset for making calls as well as listening to media (music or other audio output) from the GXP2200.

To connect to a Bluetooth device, turn on GXP2200's Bluetooth radio first. The first time when using a new Bluetooth device with the GXP2200, "pair" the device with GXP2200 so that both devices know how to connect securely to each other. After that, users could simply connect to a paired device. Turn off Bluetooth if it's not used.

Bluetooth related settings are under GXP2200's Settings application->**Network**. Users could access it via the following two ways:

- On Home screen, press button  ->**Settings->Network**;
- or
- Press onscreen MENU icon and tap on Settings App->**Network**.

TURNING BLUETOOTH ON OR OFF

1. Go to GXP2200's **Settings**;
2. Touch **Network**;
3. Check or uncheck the option for **Bluetooth**.

Or, users could open the top status bar->System Settings and tap on Bluetooth icon  to turn it on/off.

CHANGING BLUETOOTH DEVICE NAME

The GXP2200 uses "GXP2200" as Bluetooth device name by default. The device name will be visible to other devices when connecting them. Follow the steps below to change the name:

1. Go to GXP2200's **Settings**;
2. Select **Network->Bluetooth settings**;
3. Check **Bluetooth** to turn it on;
4. Tap on **Device name** and enter a name. Once done, tap on **OK**.

PAIRING GXP2200 WITH A BLUETOOTH DEVICE

Before connecting GXP2200 with other Bluetooth device, users must pair them first. They will stay paired afterwards unless they are unpaired.

1. Go to GXP2200's **Settings**;
2. Select **Network->Bluetooth settings**;

3. Check **Bluetooth** to turn it on;
4. The GXP2200 scans and displays the IDs of all available Bluetooth devices in range. If the device you would like to pair with does not show up in the list, ensure that the other device is turned on and set to be discoverable;
5. If the GXP2200 stops scanning before the other device is ready, touch **Scan for devices**;
6. The discovered device will show in the scan result list with device ID. If it's unpaired, it will show "Pair with this device" under the device ID. Make sure the Bluetooth device is active in pairing mode. Then tap on the device ID on GXP2200 to pair them. Confirm the passkey in the prompted message (if any). Or If passcode is required, please refer to the device's documentation or other procedures to obtain the passcode.

CONNECTING TO A BLUETOOTH DEVICE

After successfully paired, the GXP2200 will show "Paired but not connected" under the Bluetooth device ID in the scan list. Tap on it to connect. For example, after successfully connecting a Bluetooth headset, the GXP2200 will show "Connected to phone and media audio".

Once it's connected, users could also press and hold on to the Bluetooth device ID, then options **Disconnect**, **Disconnect & unpair**, and **Options** will show. Tap on **Options**, users could select different profiles for the connected devices (e.g., for Bluetooth headset, users could check or uncheck **connect to phone audio**, **connect to media audio**).

SENDING AND RECEIVING FILES VIA BLUETOOTH

After pairing successful, users could use GXP2200 to share pictures, contact information and other data between Bluetooth devices. When there is a file coming from other Bluetooth devices, GXP2200 will display notification "Bluetooth share: File transfer". Tap on "Accept" to receive the file. Once the file transferring is done, users could slide the top status bar down and tap on the received file to open it. Or users could access all the received files via Bluetooth from **File Manager->user_data->bluetooth**.

DISCONNECTING A BLUETOOTH DEVICE

1. In the Bluetooth settings, tap and hold on the Bluetooth device ID you want to disconnect for 2-4 seconds;
2. In the prompted message, touch **Disconnect**.

Users could also press and hold on to the Bluetooth device ID, then options **Disconnect**, **Disconnect & unpair**, and **Options** will show.



UNPAIRING A BLUETOOTH DEVICE

1. In the Bluetooth settings, tap and hold on the Bluetooth device ID you want to unpair for 2-4 seconds;
2. In the prompted message, touch **Unpair**.

Or, once the device is disconnected, users could press and hold on to the Bluetooth device ID, then options **connect**, **unpair** will show.

EHS HEADSET

The GXP2200 supports normal RJ11 headset and Plantronics EHS headset. To use Plantronics EHS headset, go to the GXP2200 web GUI->**Maintenance->Device Manager**: Headset Type. Select "Plantronics EHS" and reboot the phone to take effect.

1. Connect EHS Headset (Plantronics) to GXP2200. Insert headset connector into the RJ11 headset port on the back of GXP2200;
2. To use headset mode, press headset button  on the GXP2200. A headset icon  will show on the GXP2200 status bar. There are two different headset mode for users to select from web GUI-> **Maintenance->Device Manager**: Headset Key Mode. After selecting the desired mode, save the change and reboot the phone to take effect. Please refer to section **GXP2200 Web GUI Settings** for the key mode details.

USB

The GXP2200 supports USB connection for mouse, keyboard, USB storage devices and USB camera. To use USB mouse or keyboard, simply plug it into the USB port on the back of the GXP2200 and it will be ready to use.

To connect and access USB storage device:

1. Insert USB storage device into USB port at the back of the GXP2200;
2. It will take a few seconds for the GXP2200 to prepare the connection. Then the USB storage icon will show on the status bar;
3. To access USB storage, go to GXP2200 MENU->**File Manager->usb**. Tap on it to access and manage your data.

To connect and use USB camera:

1. Insert USB camera into USB port at the back of the GXP2200;
2. It will take a few seconds for the GXP2200 to prepare the connection.
3. To check the connection and compatibility of the USB camera with the GXP2200, go to **GS Market** and download **Camera.apk**. Run Camera.apk with the USB camera plugged in to check the image from the camera.
4. If the USB camera is compatible after step 3, users could then start using it for SIP video call.




Note:

The GXP2200 doesn't support video call using 3rd party apps. Please check the FAQ information in the following link for a list of compatible cameras on GXP2200.

<http://www.grandstream.com/support/faq/gxp2200>

SD CARD

1. Insert your SD card into SD Card slot at the back of GXP2200. Please make sure the SD Card is inserted with right direction on GXP2200;
2. It will take a few seconds for the GXP2200 to prepare the connection. Then the SD Card icon  will show on the status bar;
3. To access SD Card, go to GXP2200 MENU->**File Manager**->**sdcard**. Tap on it to access and manage your data.

GXP2200 WEB GUI SETTINGS

The GXP2200 embedded Web server responds to HTTP/HTTPS GET/POST requests. Embedded HTML pages allow users to configure the application phone through a Web browser such as Microsoft's IE, Mozilla Firefox, Google Chrome and etc.

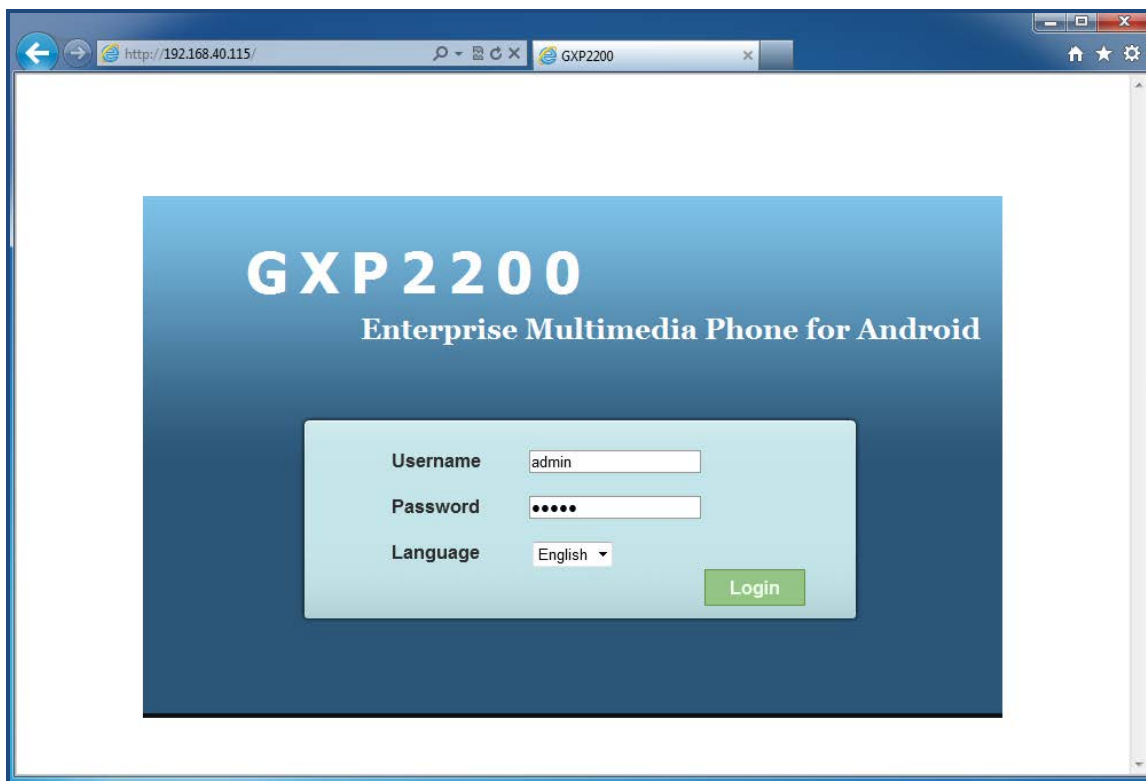


Figure 135: GXP2200 Web GUI - Login

ACCESSING GXP2200 WEB GUI

The GXP2200 Web GUI URL is ***http://Phone-IP-Address***, where the ***Phone-IP Address*** is the IP address displayed on the GXP2200 desktop account widget.

To access the GXP2200 Web GUI:

1. Connect the computer to the same network as the phone;
2. Make sure the phone is turned on and shows its IP address on the desktop;

3. Open a Web browser on your computer;
4. Enter the phone's IP address in the address bar of the browser;
5. Enter the administrator's login and password to access the Web Configuration Menu.

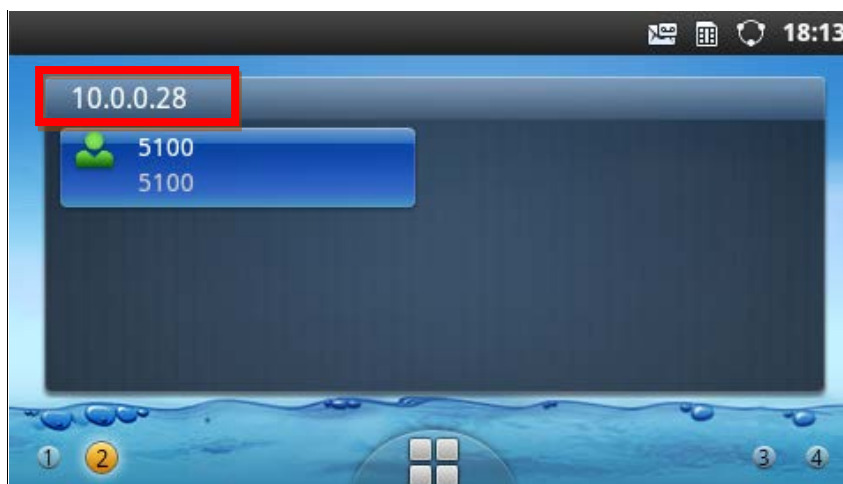



Figure 136: GXP2200 Main Screen - IP Address

 **Note:**

- The computer has to be connected to the same sub-network as the phone. This can be easily done by connecting the computer to the same hub or switch as the phone connected to. In absence of a hub/switch (or free ports on the hub/switch), please connect the computer directly to the PC port on the back of the phone;
- If the phone is properly connected to a working Internet connection, the phone will display its IP address. This address has the format: xxx.xxx.xxx.xxx, where xxx stands for a number from 0-255. Users will need this number to access the Web GUI. For example, if the phone shows 192.168.40.154, please enter "http://192.168.40.154" in the address bar of the browser;
- The default login name for the administrator is "admin". The default administrator password is set to "admin". The default login name for end-users is "user" while the default user password is set to "123";
- When changing any settings, always SUBMIT them by pressing the **Save** button on the bottom of the page, and then clicking the **Apply** button on the top of the page to apply the configuration changes.

For those options with  next to it in the Web page, users must reboot the phone for the changes to take effect.

DEFINITIONS

This section describes the options in the GXP2200 Web GUI. As mentioned, you can log in as an administrator or an end user.

- **Status:** Displays the Account Status, Network Status, and System Info of the phone;
- **Account (1-6):** To configure each of the SIP accounts;
- **Advanced Settings:** To configure General Settings, Call Features, Video Settings, Tone Generator and MPK Settings for MPK App as well as GXP2200EXT;
- **Maintenance:** To configure Network Settings, Time Settings, Web/SSH Access, Upgrade, Syslog, Logcat, Debug, Language, TR-069, Contacts, LDAP Book and Device Manager.

STATUS PAGE DEFINITIONS

STATUS/ACCOUNT STATUS

Account	All the SIP accounts on the phone. Each account will show it's status in this page.
Number	SIP User ID for the account.
SIP Server	URL or IP address, and port of the SIP server.
Status	Registration status for the SIP account.

STATUS/NETWORK STATUS

MAC Address	Global unique ID of device, in HEX format. The MAC address will be used for provisioning and can be found on the label coming with original box and on the label located on the back of the device.
Address Type	The configured address type: DHCP, Static IP or PPPoE.
IP Address	IP address of the phone.
Subnet Mask	Subnet mask of the phone.
Default Gateway	Default gateway of the phone.
DNS Server 1	DNS Server 1 of the phone.
DNS Server 2	DNS Server 2 of the phone.
NAT Type	The type of NAT connection used by the phone.

STATUS/SYSTEM INFO

Product Model	Product model of the phone.
Hardware Revision	Hardware version number.
Part Number	Product part number.
System Version	Firmware version. This is the main software release version.
Recovery Version	Recovery image version.
Boot Version	Boot code version.
Kernel Version	Kernel version.
Android™ Version	Android™ OS version: 2.3.5.
System Up Time	System up time since the last reboot.

ACCOUNT PAGE DEFINITIONS

The GXP2200 has six lines that can be configured to accommodate independent SIP accounts. Every SIP account has an individual configuration page.

ACCOUNT/GENERAL SETTINGS

Account Active	This field indicates whether the account is active. The default value for the primary account (Account 1) is "Yes" and the default value for the other five accounts is "No".
Account Name	The name associated with each account to be displayed on the LCD.
SIP Server	The URL or IP address, and port of the SIP server. This is provided by your VoIP service provider (ITSP).
SIP User ID	User account information, provided by your VoIP service provider (ITSP). It's usually in the form of digits similar to phone number or actually a phone number.
SIP Authentication ID	SIP service subscriber's Authenticate ID used for authentication. It can be identical to or different from the SIP User ID.
SIP Authentication Password	The account password required for the phone to authenticate with the ITSP (SIP) server before the account can be registered. After it is saved, this will appear as hidden for security purpose.
Voice Mail UserID	This parameter allows you to access voice messages by pressing the MESSAGE button on the phone. This ID is usually the VM portal access number. For example, in Asterisk server, 8500 could be used.
Name	The SIP server subscriber's name (optional) that will be used for Caller ID display.

Tel URI	If the phone has an assigned PSTN telephone number, this field should be set to "User=Phone". Then a "User=Phone" parameter will be attached to the Request-Line and "TO" header in the SIP request to indicate the E.164 number. If set to "Enable", "Tel:" will be used instead of "SIP:" in the SIP request. The default setting is "Disable".
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ACCOUNT/NETWORK SETTINGS

Outbound Proxy	IP address or Domain name of the Primary Outbound Proxy, Media Gateway, or Session Border Controller. It's used by the phone for Firewall or NAT penetration in different network environments. If a symmetric NAT is detected, STUN will not work and ONLY an Outbound Proxy can provide a solution.
Secondary Outbound Proxy	IP address or Domain name of the Secondary Outbound Proxy, Media Gateway, or Session Border Controller. Secondary outbound proxy will be used when the primary outbound proxy fails.
DNS Mode	This parameter controls how the Search Appliance looks up IP addresses for hostnames. There are three modes: A Record, SRV, NATPTR/SRV. The default setting is "A Record". If the user wishes to locate the server by DNS SRV, the user may select "SRV" or "NATPTR/SRV".
NAT Traversal	<p>This parameter configures whether the NAT traversal mechanism is activated. Users could select the mechanism from NAT NO, STUN, Keep-alive, UPnP, Auto or VPN.</p> <p>If set to "STUN" and STUN server is configured, the phone will route according to the STUN server. If NAT type is Full Cone, Restricted Cone or Port-Restricted Cone, the phone will try to use public IP addresses and port number in all the SIP&SDP messages. The phone will send empty SDP packet to the SIP server periodically to keep the NAT port open if it is configured to be "Keep-alive". Configure this to be "NAT NO" if an outbound proxy is used. "STUN" cannot be used if the detected NAT is symmetric NAT. Set this to "VPN" if OpenVPN is used.</p> <p>The default setting is "Keep-alive".</p>
Proxy-Require	A SIP Extension to notify the SIP server that the phone is behind a NAT/Firewall. Do not configure this parameter unless this feature is supported on the SIP server.

ACCOUNT/SIP SETTINGS

SIP Registration	Selects whether or not the phone will send SIP Register messages to the proxy/server. The default setting is "Yes".
Unregister On Reboot	If set to "Yes", the SIP user's registration information will be cleared when the phone reboots. The SIP Contact header will contain "*" to notify the server to unbind the connection. The default setting is "No".
Register Expiration (m)	Specifies the frequency (in minutes) in which the phone refreshes its registration with the specified registrar. The default setting is 60. The maximum value is 64800 minutes (about 45 days).
Wait Time Retry Registration (s)	The amount of time (in seconds) in which the phone will retry the registration process in the event that is failed. The default setting is 20.
Local SIP Port	Defines the local SIP port used to listen and transmit. The default setting is 5060 for Account 1, 5062 for Account 2, 5064 for Account 3, 5066 for Account 4, 5068 for Account 5, and 5070 for Account 6.
SUBSCRIBE for MWI	When set to "Yes", a SUBSCRIBE for Message Waiting Indication will be sent periodically. The phone supports synchronized and non-synchronized MWI. The default setting is "No".
Session Expiration (s)	The SIP Session Timer extension (in seconds) that enables SIP sessions to be periodically "refreshed" via a SIP request (UPDATE, or re-INVITE). If there is no refresh via an UPDATE or re-INVITE message, the session will be terminated once the session interval expires. Session Expiration is the time (in seconds) where the session is considered timed out, provided no successful session refresh transaction occurs beforehand. The default setting is 180.
Min-SE (s)	The minimum session expiration (in seconds). The default setting is 90.
UAC Specify Refresher	As a Caller, select UAC to use the phone as the refresher; or select UAS to use the Callee or proxy server as the refresher. The default setting is "Omit".
UAS Specify Refresher	As a Callee, select UAC to use caller or proxy server as the refresher; or select UAS to use the phone as the refresher. The default setting is "UAC".
Force INVITE	The Session Timer can be refreshed using the INVITE method or the UPDATE method. Select "Yes" to use the INVITE method to refresh the session timer. The default setting is "No".
Caller Request Timer	If set to "Yes" and the remote party supports session timers, the phone will use a session timer when it makes outbound calls. The default setting is "No".

Callee Request Timer	If set to "Yes" and the remote party supports session timers, the phone will use a session timer when it receives inbound calls. The default setting is "No".
Force Timer	If Force Timer is set to "Yes", the phone will use the session timer even if the remote party does not support this feature. If Force Timer is set to "No", the phone will enable the session timer only when the remote party supports this feature. To turn off the session timer, select "No". The default setting is "No".
Enable 100rel	The use of the PRACK (Provisional Acknowledgment) method enables reliability to SIP provisional responses (1xx series). This is very important in order to support PSTN interconnecting. To invoke a reliable provisional response, the 100rel tag is appended to the value of the required header of the initial signaling messages. The default setting is "No".
Use Privacy Header	Controls whether the Privacy Header will present in the SIP INVITE message or not. The default setting is "default", which is when "Huawei IMS" special feature is on, the Privacy Header will not show in INVITE. If set to "Yes", the Privacy Header will always show in INVITE. If set to "No", the Privacy Header will not show in INVITE. The default setting is "Default".
Use P-Preferred-Identity Header	Controls whether the P-Preferred-Identity Header will present in the SIP INVITE message or not. The default setting is "default", which is when "Huawei IMS" special feature is on, the P-Preferred-Identity Header will not show in INVITE. If set to "Yes", the P-Preferred-Identity Header will always show in INVITE. If set to "No", the P-Preferred-Identity Header will not show in INVITE. The default setting is "Default".
SIP Transport	Determines the network protocol used for the SIP transport. Users can choose from TCP/UDP/TLS.
Symmetric RTP	Defines whether symmetric RTP is supported or not. The default setting is "No".
Support SIP Instance ID	Defines whether SIP Instance ID is supported or not. The default setting is "Yes".
Validate Incoming SIP Messages	Defines whether the incoming messages will be validated or not. The default setting is "No".
Authenticate Incoming INVITE	If set to "Yes", the phone will challenge the incoming INVITE for authentication with SIP 401 Unauthorized response. The default setting is "No".
SIP T1 Timeout	SIP T1 Timeout (in seconds). The default setting is 0.5 sec.

SIP T2 interval	SIP T2 Interval (in seconds). The default setting is 4 sec.
Remove OBP from route	Configures to remove outbound proxy from route. This is used for the SIP Extension to notify the SIP server that the device is behind a NAT/Firewall. The default setting is "No".
Enable SCA (Shared Call Appearance)	If set to "Yes", the Shared Call Appearance (Broadsoft Standard) will be used for the registered account. The default setting is "No".
Enable Bargeln	If set to "Yes", the user could barge onto an active call on a shared line. The default setting is "No".
Auto-filling Pickup Feature Code	If set to "Yes", the call park feature code will be automatically filled in. The default setting is "Yes".
Pickup Feature Code	Configures the pickup feature code for call park.
Line-seize Timeout	Configures the timeout before the line can be seized (in seconds). The default setting is 15.

ACCOUNT/CODEC SETTINGS

DTMF	This parameter specifies the mechanism to transmit DTMF digits. There are 3 supported modes: in audio which means DTMF is combined in the audio signal (not very reliable with low-bit-rate codecs), via RTP (RFC2833), or via SIP INFO. The default setting is "RFC2833".
DTMF Payload Type	This parameter sets the payload type for DTMF using RFC2833. Default is 101.
Preferred Vocoder	4 different vocoder types are supported on the phone, including G.711 A-law (PCMA), G.711 U-law (PCMU), G.722 and G.729A/B. Users can configure vocoders in a preference list that is included with the same preference order in SDP message. Arrange your preferred vocoder orders using the Up and Down button.
Enable RFC5168 Support	If set to "Yes", RFC5168 support will be enabled for video call. The default setting is "No".
Video Bit Rate	Configures bit rate for video call. The default setting is 500 kbps.
H.264 Payload Type	Configures H.264 codec payload type (ranging from 96 - 127). The default setting is 99.
SRTP Mode	Enables the SRTP mode based on your selection from the drop-down menu. The default setting is "Disable".
Silence Suppression	Controls the silence suppression/VAD feature of the audio codec G.723 and G.729. If set to "Yes", when silence is detected, a small quantity of VAD packets (instead of audio packets) will be sent during the period of

	no talking. If set to "No", this feature is disabled. The default setting is "No".
Voice Frames Per TX	Configures the number of voice frames transmitted per packet. When configuring this, it should be noted that the "ptime" value for the SDP will change with different configurations here. This value is related to the codec used and the actual frames transmitted during the in payload call. For end users, it is recommended to use the default setting, as incorrect settings may influence the audio quality. The default setting is 2.
Jitter Buffer Type	Selects either Fixed or Adaptive based on network conditions. The default setting is "Adaptive".
Jitter Buffer Length	Selects Low, Medium, or High based on network conditions. The default setting is "Medium".

ACCOUNT/CALL SETTINGS

Start Video Automatically	If set to "Yes", the video will be started automatically when answering SIP video call. The default setting is "Yes".
Remote Video Request	Configures the preference of video request handling during an audio call. Users could select "prompt", "accept" automatically or "deny" automatically. The default setting is "prompt".
Dial Plan Prefix	Configures the prefix to be added to each dialed number.
Dial Plan	<p>A dial plan establishes the expected number and pattern of digits for a telephone number. This parameter configures the allowed dial-plan for the phone.</p> <p>Dial Plan Rules:</p> <ol style="list-style-type: none"> 1. Accepted Digits: 1,2,3,4,5,6,7,8,9,0 , * , #, A,a,B,b,C,c,D,d; 2. Grammar: x - any digit from 0-9; <ol style="list-style-type: none"> a) xx+ - at least 2 digit numbers b) xx. - only 2 digit numbers c) ^ - exclude d) [3-5] - any digit of 3, 4, or 5 e) [147] - any digit of 1, 4, or 7 f) <2=011> - replace digit 2 with 011 when dialing g) - the OR operand h) \+ - the + at the beginning of the number to be dialed, e.g., +861234567890 <ul style="list-style-type: none"> • Example 1: {[369]11 1617xxxxxx}

Allow 311, 611, and 911 or any 10 digit numbers with leading digits 1617;

- Example 2: {^1900x+ | <=1617>xxxxxxx}

Block any number of leading digits 1900 or add prefix 1617 for any dialed 7 digit numbers;

- Example 3: {1xxx[2-9]xxxxxx | <2=011>x+}

Allows any number with leading digit 1 followed by a 3 digit number, followed by any number between 2 and 9, followed by any 7 digit number OR Allows any length of numbers with leading digit 2, replacing the 2 with 011 when dialed.

Example of a simple dial plan used in a Home/Office in the US:

```
{ ^1900x. | <=1617>[2-9]xxxxxx | 1[2-9]xx[2-9]xxxxxx | 011[2-9]x. | [3469]11 }
```

Explanation of example rule (reading from left to right):

- ^1900x. - prevents dialing any number started with 1900;
- <=1617>[2-9]xxxxxx - allows dialing to local area code (617) numbers by dialing 7 numbers and 1617 area code will be added automatically;
- 1[2-9]xx[2-9]xxxxxx |- allows dialing to any US/Canada Number with 11 digits length;
- 011[2-9]x - allows international calls starting with 011;
- [3469]11 - allow dialing special and emergency numbers 311, 411, 611 and 911.

The default dial plan on the GXP2200 is { x+ | \+x+ | *x+ | *xx*x+ }.

- x+ - at least 1 digit;
- \+x+ - at least 1 digit number with + at the beginning, e.g., +861234567890;
- *x+ - at least 1 digit number with * at the beginning, e.g., *73;
- *xx*x+ - two-digit star * feature code and then * followed by at least 1 digit number.

Note:

In some cases where the user wishes to dial strings such as *123 to activate voice mail or other applications provided by their service provider, the * should be predefined inside the dial plan feature. An example dial plan will be: { *x+ } which allows the user to dial * followed by any length of numbers.

Refer-To Use Target Contact

If set to "Yes", the "Refer-To" header uses the transferred target's Contact header information for attended transfer. The default setting is

	"No".
Auto Answer	If set to "Yes", the phone will automatically turn on the speaker phone to answer incoming calls after a short reminding beep. If set to "Enable Intercom/Paging", it will answer the call based on the SIP info header sent from the server/proxy. The default setting is "No".
Send Anonymous	If set to "Yes", the "From" header in outgoing INVITE messages will be set to anonymous, essentially blocking the Caller ID to be displayed. The default setting is "No".
Anonymous Call Rejection	If set to "Yes", anonymous calls will be rejected. The default setting is "No".
Call Log	Configures Call Log setting on the phone. You can log all calls, only log incoming/outgoing calls or disable call log. The default setting is logging all calls. The default setting is "Log All".
Special Feature	Different soft switch vendors have special requirements. Therefore users may need select special features to meet these requirements. Users can choose from Standard, Broadsoft, CBCOM, RNK, China Mobile, ZTE IMS, Mobotix, ZTE NGN, or Huawei IMS depending on the server type. The default setting is "Standard".
Feature Key Synchronization	This feature is used for Broadsoft call feature synchronization. When it's set to Broadsoft, DND and Call Forward features can be synchronized with Broadsoft server.
Enable Call Features	If set to "Yes", the local call feature code on the phone can be used. Otherwise, the feature code will need to be provided from the server side. The default setting is "No".
No Key Entry Timeout (s)	Defines the timeout (in seconds) for no key entry. If no key is pressed after the timeout, the digits will be sent out. The default value is 4 seconds.
Ring Timeout (s)	Defines the timeout (in seconds) for the rings on no answer. The default setting is 60.
Transfer on 3-way Conference Hang up	If set to "Yes", when the phone hangs up as the conference initiator, the conference call will be transferred to the other parties so that other parties will remain in the conference call.
Use # as Dial Key	Allows users to configure the "#" key as the "Send" key. If set to "Yes", the "#" key will immediately dial out the input digits. In this case, this key is essentially equivalent to the "Send" key. If set to "No", the "#" key is included as part of the dialing string.
Conference URI	Configures Conference URI for N-way conference (Broadsoft standard).
Broadsoft Call Center	Enables Broadsoft Call Center feature. The default setting is "No".

Hoteling Event	Enables Broadsoft Hoteling Event feature. The default setting is "No". The "Broadsoft Call Center" option needs to be enabled first.
Call Center Status	Enables Broadsoft Call Center Status. The default setting is "No". The "Broadsoft Call Center" option needs to be enabled first.
Account Ring Tone	Allows users to configure the ringtone for the account. Users can choose from different ringtones from the dropdown menu. If there is custom ring tone imported from GXP2200 LCD menu, the ring tone file name will be displayed in this dropdown menu as well for users to select.
Call Forward Type	Specifies the Call Forward Type: <ol style="list-style-type: none"> 1. None: Disable Call Forward 2. Unconditional: Forward all calls to particular number 3. Time based: Set a time range. In the time range, calls are forwarded to the number specified in In Time Forward To; out the time range, calls are forwarded to the number specified in Out Time Forward To. 4. Others: when phone is busy, calls are forwarded to the number specified in Busy To; when incoming calls are not answered, those calls are forwarded to the number specified in No Answer To; the waiting time for answering calls is specified in Delayed Call Forward Wait Time (s).
All To	Specifies the number to be forwarded to when "Unconditional" Call Forward Type is used.
Time Period	Configures the period of time to forward the call when "Time based" Call Forward Type is used.
In Time Forward To	When "Time based" Call Forward Type is used, specifies the number to be forwarded to within the configured Time Period above.
Out Time Forward To	When "Time based" Call Forward Type is used, specifies the number to be forwarded to when it's not within the configured Time Period.
Busy To	Specifies the number to be forwarded to for Call Forward On Busy.
No Answer To	Specifies the number to be forwarded to for Call Forward On No Answer.
No Answer Timeout (s)	Defines the timeout (in seconds) before the call is forwarded on no answer. The default value is 20 seconds.
Matching Incoming Caller ID	Specifies matching rules with number, pattern or Alert Info text. When the incoming caller ID or Alert Info matches the rule, the phone will ring with selected distinctive ringtone. Matching rules: <ul style="list-style-type: none"> • Specific caller ID number. For example, 8321123; • A defined pattern with certain length using x and + to specify, where x could be any digit from 0 to 9. Samples:

	<p>xx+ : at least 2-digit number;</p> <p>xx : only 2-digit number;</p> <p>[345]xx: 3-digit number with the leading digit of 3, 4 or 5;</p> <p>[6-9]xx: 3-digit number with the leading digit from 6 to 9.</p> <ul style="list-style-type: none"> Alert Info text Users could configure the matching rule as certain text (e.g., priority) and select the custom ring tone mapped to it. The custom ring tone will be used if the phone receives SIP INVITE with Alert-Info header in the following format: Alert-Info: <http://127.0.0.1>; info=priority
Distinctive Ring Tone	Selects the distinctive ring tone for the matching rule. When the incoming caller ID or Alert Info matches the rule, the phone will ring with the selected ring.
Upload Local MOH Audio File	<p>Click on "Browse" button to upload the music file from local PC. The MOH audio file has to be in .wav or .mp3 format.</p> <p>Note: Please be patient while the audio file is being uploaded. It could take more than 3 minutes to finish the uploading especially the file size is large. The button will show as "Processing" during the uploading. Once done, it will show as "Browse" again. Click on "Save" on the bottom of the web page and "Apply" on the top of the web page to save the change.</p>
Enable Local MOH	If set to "Yes", local MOH will be turned on. Users will need upload a local MOH audio file so it can be played on the other party when the user puts the other party on hold. The default setting is "No".

ADVANCED SETTINGS PAGE DEFINITIONS

ADVANCED SETTINGS/GENERAL SETTINGS

Local RTP Port	Defines the local RTP-RTCP port pair used to listen and transmit. It is the base RTP port for channel 0. When configured, for audio, channel 0 will use this port_value for RTP and the port_value+1 for its RTCP; channel 1 will use port_value+4 for RTP and port_value+5 for its RTCP. For video, channel 0 will use port_value+2 for RTP and port_value+3 for its RTCP; channel 1 will use port_value+6 for RTP and port_value+7 for RTCP. The default value is 5004.
Use Random Port	When set to "Yes", this parameter will force random generation of both

	the local SIP and RTP ports. This is usually necessary when multiple phones are behind the same full cone NAT. The default setting is "Yes" (This parameter must be set to "No" for Direct IP Calling to work).
Disable in-call DTMF display	When it's set to "Yes", the DTMF digits entered during the call will not display. The default setting is "No".
Keep-alive Interval (s)	Specifies how often the phone sends a blank UDP packet to the SIP server in order to keep the "ping hole" on the NAT router to open. The default setting is 20 seconds.
STUN Server	The IP address or Domain name of the STUN server. STUN resolution results are displayed in the STATUS page of the Web GUI. Only non-symmetric NAT routers work with STUN.
Use NAT IP	The NAT IP address used in SIP/SDP messages. This field is blank at the default settings. It should ONLY be used if it's required by your ITSP.
SIP TLS Certificate	Defines the SSL certificate used for SIP over TLS.
SIP TLS Private Key	Defines the SSL Private key used for SIP over TLS.
SIP TLS Private Key Password	Defines the SSL Private key password used for SIP over TLS.

ADVANCED SETTINGS/CALL FEATURES

Always Ring Speaker	If set to "Yes", the phone will always ring speaker when headset is used at the same time. The default setting is "No".
Auto Conference	If set to "Yes", users could press CONFERENCE button to establish conference call when there are 2 or more calls on the phone, instead of adding each party one by one. The default setting is "No".
Disable Call-Waiting	Disables the call waiting feature. The default setting is "No".
Disable DialPlan	Disables dial plan check on the GXP2200 when dialing out. This can be used when dialing out phone number which contains alphabet characters from imported contacts. The default setting is "No".
Disable Call-Waiting Tone	Disables the call waiting tone when call waiting is on. The default setting is "No".
Disable DND Reminder Ring	Disables the DND reminder ring. If set to "Yes", the ring splash that indicates an incoming call when DND is enabled will not be played. The default setting is "No".
Disable Direct IP Call	Disables Direct IP Call. The default setting is "No".
Use Quick IP-Call mode	When set to "Yes", users can dial an IP address under the same LAN/VPN segment by entering the last octet in the IP address. To dial quick IP call, offhook the phone and dial #XXX (X is 0-9 and XXX

	<=255), phone will make direct IP call to aaa.bbb.ccc.XXX where aaa.bbb.ccc comes from the local IP address REGARDLESS of subnet mask. #XX or #X are also valid so leading 0 is not required (but OK). No SIP server is required to make quick IP call. The default setting is "No".
Disable Conference	Disables the Conference function. The default setting is "No".
Disable Transfer	Disables the Transfer function. The default setting is "No".
Default Transfer Mode	Selects default transfer mode. The default setting is "Blind Transfer".
Escape # as %23 in SIP URI	Replaces “#” by “%23” for some special situations. The default setting is "Yes".
Offhook Auto Dial	Configures a User ID/extension to dial automatically when the phone is offhook. The phone will use the first account to dial out. The default setting is "No".
Offhook Timeout (s)	If configured, when the phone is on hook, it will go off hook after the timeout (in seconds). The default setting is 30.

ADVANCED SETTINGS/VIDEO SETTINGS

Video Frame Rate	Configures video frame rate for SIP video call. The default setting is 15 frames/second.
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ADVANCED SETTINGS/TONE GENERATOR

<p>Call Progress Tones:</p> <p>Dial Tone</p> <p>Ring Back Tone</p> <p>Busy Tone</p> <p>Reorder Tone</p> <p>Confirmation Tone</p> <p>Call-Waiting Tone</p> <p>PSTN Disconnect Tone</p>	<p>Using these settings, users can configure ring or tone frequencies based on parameters from the local telecom provider. By default, they are set to the North American standard.</p> <p>Frequencies should be configured with known values to avoid uncomfortable high pitch sounds.</p> <p>Syntax: f1=val,f2=val [,c=on1/off1[-on2/off2[-on3/off3]]]; (Frequencies are in Hz and cadence on and off are in 10ms) ON is the period of ringing (“On time” in ‘ms’) while OFF is the period of silence. In order to set a continuous ring, OFF should be zero. Otherwise it will ring ON ms and a pause of OFF ms and then repeat the pattern. Up to three cadences are supported.</p>
Call-Waiting Tone Gain	This adjusts the call waiting tone volume. The default setting is "Low".

Default Ring Cadence	This defines the ring cadence for the phone. The default setting is: c=2000/4000.
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ADVANCED SETTING/MPK GENERAL SETTINGS (FOR MPK APP)

BLF Call-pick Prefix	Configures the prefix prepended to the BLF extension when the phone picks up a call with BLF key. The default setting is ** for each account.
Event List URI	Configures the eventlist BLF URI on the phone to monitor the extensions in the list with multi-purpose keys. The server side has to support this feature. Users need configure an eventlist BLF URI on the service side first (i.e., BLF1006@myserver.com) with a list of extension included. On the phone, in this "eventlist BLF URI" field, fill in the URI without the domain (i.e., BLF1006).

ADVANCED SETTING/MPK LCD SETTINGS (FOR MPK APP)

Key Mode	<p>Assigns a function to the Multi Purpose Key from the MPK App installed on the GXP2200. The MPK App can be downloaded from GS Market. The key mode options are:</p> <ul style="list-style-type: none"> • Speed Dial Press to dial the extension configured in UserID field. • Busy Lamp Field (BLF) Monitor the extension status as configured in UserID field. • Call Transfer Transfer the current active call to the extension configured in UserID field. • Call Intercom Intercom/paging to the extension configured in UserID field. • Speed Dial via Active Account Similar to Speed Dial but it will dial based on the current active account. For example, if the phone is offhook and account 2 is active, it will call the configured extension using account 2. • Dial DTMF Dial the DTMF digits filled in UserID field during the call. • Call Park Configure the call park feature code to park or pick up the call.
MPK List	The configured MPK will show in the MPK List. Users could select "Up" "Down" and "More" to select, edit and delete the MPK.

Account	Selects the SIP Account used for the multi-purpose keys.
Name	Configures the display name for the multi-purpose key.
UserID	Configures the UserID for the corresponding multi-purpose key mode.
Display Format	Configures the display format for the multi-purpose keys. Users could select display "Phonebook Name", "UserID", or "UserID(Phonebook Name)". The "Phonebook Name" is the name saved in GXP2200 Contacts. The default setting is "Phonebook Name".

ADVANCED SETTING/MPK EXT SETTINGS (FOR GXP2200EXT BOARD 1/2/3/4)

Key Mode	<p>Assigns a function to the Multi Purpose Key on the GXP2200EXT. The key mode options are:</p> <ul style="list-style-type: none"> • Speed Dial Press to dial the extension configured in UserID field. • Busy Lamp Field (BLF) Monitor the extension status as configured in UserID field. • Call Transfer Transfer the current active call to the extension configured in UserID field. • Call Intercom Intercom/paging to the extension configured in UserID field. • Speed Dial via Active Account Similar to Speed Dial but it will dial based on the current active account. For example, if the phone is offhook and account 2 is active, it will call the configured extension using account 2. • Dial DTMF Dial the DTMF digits filled in UserID field during the call. • Eventlist BLF Similar to the BLF option but in this mode the PBX collects the information from the phones and sends it out in one single SIP NOTIFY message. The PBX server has to support this feature. When selected, eventlist URI needs to be filled out under web GUI->Advanced Settings->MPK General Settings. • Call Park Enter the UserID as the call park/pickup extension provided from the PBX server to park or pick up the call. The PBX server has to support this feature.
Account	Selects the SIP Account used for the multi-purpose keys.

Name	Configures the display name for the multi-purpose key.
UserID	Configures the UserID for the corresponding multi-purpose key mode.
MPK ID	<p>This identifies the "MPK ID x" for "MPK x". The default number is from 1-160 for 160 MPKs in 4 GXP2200EXT boards.</p> <p>For example, if MPK 1 's MPK ID is changed from 1 to 5, users will see the configuration saved on MPK 5.</p>
Display Format	Configures the display format for the multi-purpose keys. Users could select display "Phonebook Name", "UserID", or "UserID(Phonebook Name)". The "Phonebook Name" is the name saved in GXP2200 Contacts. The default setting is "Phonebook Name".



Note:

For more details on GXP2200EXT and GXP2200EXT Multi-Purpose Key configurations, please refer to the GXP2200EXT user manual in the website:

<http://www.grandstream.com/support>

MAINTENANCE PAGE DEFINATION

MAINTENANCE/NETWORK SETTINGS

Address Type	Allows users to configure the appropriate network settings on the phone. Users could select "DHCP", "Static IP" or "PPPoE". By default, it is set to "DHCP".
DHCP Host name (Option 12)	Specifies the name of the client. This field is optional but may be required by some Internet Service Providers.
DHCP Vendor Class ID (Option 60)	Used by clients and servers to exchange vendor class ID. The default setting is GXP.
IP Address	Enter the IP address when static IP is used.
Subnet Mask	Enter the Subnet Mask when static IP is used.
Default Gateway	Enter the Default Gateway when static IP is used.

DNS Server 1	Enter the DNS Server 1 address when static IP is used.
DNS Server 2	Enter the DNS Server 2 address when static IP is used.
Enable PPPoE	Select "Yes" to enable PPPoE.
PPPoE Account ID	Enter the PPPoE account ID.
PPPoE Password	Enter the PPPoE Password.
Layer 3 QoS for SIP	Defines the Layer 3 QoS parameter for SIP packets. This value is used for IP Precedence, Diff-Serv or MPLS.
Layer 3 QoS for Audio	Defines the Layer 3 QoS parameter for Audio packets. This value is used for IP Precedence, Diff-Serv or MPLS.
Layer 2 QoS 802.1Q/VLAN Tag	Assigns the VLAN Tag of the Layer 2 QoS packets for LAN port. The default value is 0.
Layer 2 QoS 802.1p Priority Value	Assigns the priority value of the Layer2 QoS packets for LAN port. The Default value is 0.
Disable PC Port	If set to "Yes", the PC port function on the GXP2200 will be disabled. The default setting is "No".
PC Port VLAN Tag	Assigns the VLAN Tag of the Layer 2 QoS packets for PC port.
PC Port Priority Value	Assigns the priority value of the Layer2 QoS packets for PC port.
802.1x mode	Allows the user to enable/disable 802.1x mode on the phone. The default setting is "Disable".
Identity	Enter the Identity information for the 802.1x mode.
MD5 Password	Enter the MD5 Password for the 802.1x mode.
CA Certificate	Enter the CA Certificate for the 802.1x mode.
Client Certificate	Enter the Client Certificate for the 802.1x mode.

MAINTENANCE/TIME SETTINGS

Assign NTP Server Address	Defines the URL or IP address of the NTP server. The phone may obtain the date and time from the server. The default setting is us.pool.ntp.org.
DHCP Option 42 override NTP server	Defines whether DHCP Option 42 should override NTP server or not. When enabled, DHCP Option 42 will override the NTP server if it's set up on the LAN. The default setting is "Yes".
DHCP Option 2 to override Time Zone setting	Allows device to get provisioned for Time Zone from DHCP Option 2 in the local server automatically. The default setting is "No".
Time Zone	Controls the date/time display according to the specified time zone.
Time Display Format	12-hour or 24-hour time display format
Date Display Format	Configures the date display format on the LCD. The following formats

	<p>are supported:</p> <ul style="list-style-type: none"> • Normal (M/DD/YYYY): 1/31/2012 • YYYY/MM/DD: 2012/01/31 • MM/DD/YYYY: 01/31/2012 • DD/MM/YYYY: 31/01/2012 <p>The default setting is DD/MM/YYYY.</p>
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MAINTENANCE/WEB/SSH ACCESS

Disable SSH	If set to "Yes", the phone will not allow any SSH access to the phone. The default setting is "No".
Access Method	Allows users to select HTTP or HTTPS for Web Access. The default setting is HTTP.
Port	By default, HTTP uses port 80 and HTTPS uses port 443. This field is for customizing the web port.
Admin Password	Allows users to change the admin password. The password field is purposely hidden after clicking the Save button for security purpose. This field is case sensitive with a maximum length of 32 characters. The default admin password is "admin".
Confirm Admin Password	Type the new Admin Password again to confirm.
User Password	Allows the administrator to set the password for user-level web GUI access. This field is case sensitive with a maximum length of 32 characters. The default user password is "123".
Confirm User Password	Type the new User Password again to confirm.

MAINTENANCE/UPGRADE

Lock Keypad for Update	<p>If set to "Yes", the configuration changes via keypad will not be allowed. The default setting is "No".</p> <p>Caution:</p> <p>When it's set to "Yes", the phone could get LOCKED if the administrator password is lost or forgotten.</p>
XML Config File Password	The password for encrypting the XML configuration file using OpenSSL. This is required for the phone to decrypt the encrypted XML configuration file.
HTTP/HTTPS User Name	The user name for the HTTP/HTTPS server.
HTTP/HTTPS Password	The password for the HTTP/HTTPS server.
Upgrade Via	Allows users to choose the firmware upgrade method: TFTP, HTTP or

	HTTPS.
Firmware Server Path	Defines the server path for the firmware server. It could be different from the configuration server for provisioning.
Config Server Path	Defines the server path for provisioning. It could be different from the firmware server for upgrading.
Firmware File Prefix	Enables your ITSP to lock firmware updates. If configured, only the firmware with the matching encrypted prefix will be downloaded and flashed into the phone.
Firmware File Postfix	Enables your ITSP to lock firmware updates. If configured, only the firmware with the matching encrypted postfix will be downloaded and flashed into the phone.
Config File Prefix	Enables your ITSP to lock configuration updates. If configured, only the configuration file with the matching encrypted prefix will be downloaded and flashed into the phone.
Config File Postfix	Enables your ITSP to lock configuration updates. If configured, only the configuration file with the matching encrypted postfix will be downloaded and flashed into the phone.
mDNS Override Server	Allows mDNS override config/firmware server setting on the phone if present. The default setting is "Yes".
DHCP Option 66 Override Server	If DHCP option 66 is enabled on the LAN side, the TFTP server can be redirected. The default setting is "Yes".
DHCP Option 120 Override SIP Server	Enables DHCP Option 120 from local server to override the SIP Server on the phone. The default setting is "Yes".
3CX Auto Provision	Enables automatic provision feature on the phone when 3CX is used as the SIP server. The default setting is "Yes".
Automatic Upgrade	Enables automatic upgrade and provisioning. The default setting is "No".
Automatic Upgrade Check Interval (m)	Specifies the time period to check for firmware upgrade (in minutes). The default setting is 10080 minutes (7 days).
Hour of the Day (0-23)	Defines the hour of the day to check the HTTP/TFTP server for firmware upgrades or configuration files changes.
Day of the Week (0-6)	Defines the day of the week to check the HTTP/TFTP server for firmware upgrades or configuration files changes.
Automatic Upgrade Rule	Defines the rules for automatic upgrade: Always Check at bootup, when F/W pre/suffix changes, Skip the Firmware Check.
Auto Reboot to Upgrade Without Prompt	If set to "Yes", the phone will automatically start upgrading after downloading the firmware files. Otherwise, users would need confirm in the prompted message in LCD to start upgrading process. The default

	value is "Yes".
Authenticate Conf File	Authenticates configuration file before acceptance. The default setting is "No".
Factory Reset	Restore to factory default settings.

MAINTENANCE/SYSLOG

Syslog Server	The URL/IP address for the syslog server.
Syslog Level	<p>Selects the level of logging for syslog. The default setting is "None". There are 4 levels: DEBUG, INFO, WARNING AND ERROR. Syslog messages are sent based on the following events:</p> <ul style="list-style-type: none"> • product model/version on boot up (INFO level); • NAT related info (INFO level); • sent or received SIP message (DEBUG level); • SIP message summary (INFO level); • inbound and outbound calls (INFO level); • registration status change (INFO level); • negotiated codec (INFO level); • ethernet link up (INFO level); • SLIC chip exception (WARNING and ERROR levels); • memory exception (ERROR level).

MAINTENANCE/LOGCAT

Clear Log	Press the clear log button to clear log.
Log Tag	Specifies the log tag to filter the log.
Log Priority	Selects the log priority. The log priority options are: Verbose, Debug, Info, Warn, Error, Fatal, Silent (suppress all output).

MAINTENANCE/DEBUG

Capture Trace	Press START to start capturing a trace, and press STOP to stop the capture process.
View Trace	Press LIST to view the list of captured traces. It will show the time when the trace was captured. Click on the name of the file to download and view the trace.

MAINTENANCE/LANGUAGE

Language	Select the language displayed on the phone.
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MAINTENANCE/TR-069

Enable TR-069	Enables TR-069. The default setting is "No".
ACS URL	URL for TR-069 Auto Configuration Servers (ACS).
ACS Username	ACS username for TR-069.
ACS Password	ACS password for TR-069.
Periodic Inform Enable	Enables periodic inform. If set to "Yes", device will send inform packets to the ACS. The default setting is "No".
Periodic Inform Interval (s)	Sets up the periodic inform interval to send the inform packets to the ACS.
Connection Request Username	The user name for the ACS to connect to the phone.
Connection Request Password	The password for the ACS to connect to the phone.
Connection Request Port	The port for the ACS to connect to the phone.
CPE Cert File	The Cert File for the phone to connect to the ACS via SSL.
CPE Cert Key	The Cert Key for the phone to connect to the ACS via SSL.

MAINTENANCE/CONTACTS

Import/Export	
File Encoding	Selects the file encoding format for phonebook file import/export. The default setting is UTF-8.
File Type	Selects the file format for phonebook file import/export. The default setting is "XML".
Save Phonebook to PC	Press "Save" to open the XML file and save it to PC.
Clear The Old List	If set to "Yes", when the phonebook file is imported to the phone, the old phonebook entries will be removed. The default setting is "No".
Replace Duplicate Items	If set to "Yes", when the phonebook file is imported to the phone, the duplicate entries will be removed. The default setting is "No".
Local File	Press "Browse" to select phonebook file from local PC and upload to the phone.
Download (XML Phonebook)	
Clear The Old List	If set to "Yes", when the phonebook XML file is downloaded to the

	phone, the old phonebook entries will be removed. The default setting is "No".
Replace Duplicate Items	If set to "Yes", when the XML phonebook file is downloaded to the phone, the duplicate entries will be removed. The default setting is "No".
Download Mode	Selects "OFF" to disable XML phonebook download, or "TFTP"/"HTTP" to download the phonebook from a remote server. The default setting is "OFF".
File Encoding	Selects the file encoding format for XML phonebook download. The default setting is UTF-8.
Download Server	Specifies server address to download the XML phonebook file.
Download Now	Press "Download" button to start downloading the XML phonebook to the phone.
Download Interval	Specifies download interval (in minutes). The phone will automatically send download request to the download server based on the download interval.



Note:

For more information on XML Based Downloadable Phonebook on GXP2200, please refer to the GXP2200 XML Phonebook Guide in the following link:

http://www.grandstream.com/products/gxp_series/gxp2200/documents/gxp2200_xml_phonebook_guide.pdf

MAINTENANCE/LDAP BOOK

Server Address	Configures the IP address or domain name of the LDAP server.
Port	Configures the LDAP server port. The default port number is 389.
Base DN	Configures the LDAP search base. This is the location in the directory where the search is requested to begin. Example: dc=grandstream, dc=com ou=Boston, dc=grandstream, dc=com

User Name	Configures the bind "Username" for querying LDAP servers. Some LDAP servers allow anonymous binds in which case the setting can be left blank.
Password	Configures the bind "Password" for querying LDAP servers. The field can be left blank if the LDAP server allows anonymous binds.
LDAP Name Attributes	Specifies the "name" attributes of each record which are returned in the LDAP search result. This field allows the users to configure multiple space separated name attributes. Example: gn cn sn description
LDAP Number Attributes	Specifies the "number" attributes of each record which are returned in the LDAP search result. This field allows the users to configure multiple space separated number attributes. Example: telephoneNumber telephoneNumber Mobile
LDAP Mail Attributes	Specifies the "mail" attributes of the each record which are returned in the LDAP search result. Example: mail
LDAP Name Filter	Configures the filter used for name lookups. Examples: ((cn=%)(sn=%)) returns all records which has the "cn" or "sn" field starting with the entered prefix; (!(sn=%)) returns all the records which do not have the "sn" field starting with the entered prefix; (&(cn=%) (telephoneNumber=*)) returns all the records with the "cn" field starting with the entered prefix and "telephoneNumber" field set.
LDAP Number Filter	Configures the filter used for number lookups. Examples: ((telephoneNumber=%)(Mobile=%)) returns all records which has the "telephoneNumber" or "Mobile" field starting with the entered prefix; (&(telephoneNumber=%) (cn=*)) returns all the records with the "telephoneNumber" field starting with the entered prefix and "cn" field set.


LDAP Mail Filter	Configures the filter used for mail lookups. Example: (mail=%)
LDAP Displaying Name Attributes	Configures the entry information to be shown on phone's LCD. Up to 3 fields can be displayed. Example: %cn %sn %telephoneNumber
Max Hits	Specifies the maximum number of results to be returned by the LDAP server. If set to 0, server will return all search results. The default setting is 50.
Search Timeout	Specifies the interval (in seconds) for the server to process the request and client waits for server to return. The default setting is 30 seconds.
LDAP Lookup For Dial	Configures to enable LDAP number searching when making outgoing calls. The default setting is "No".
LDAP Lookup For Incoming Call	Configures to enable LDAP number searching when receiving incoming calls. The default setting is "No".

MAINTENANCE/DEVICE MANAGER

Disable Missed Call Backlight	If set to "Yes", the screen won't turn off on screen timeout when there is unchecked missed call on the phone. The default setting is "No".
Disable Missed Call Indicator	If set to "Yes", the LED indicator on the upper right corner of the GXP2200 will not light up when there is missed call on the phone. The default setting is "No".
Disable MWI Indicator	If set to "Yes", the LED indicator on the upper right corner of the GXP2200 will not light up when there is new voicemail on the phone. The default setting is "No".
Disable New Message Indicator	If set to "Yes", the LED indicator on the upper right corner of the GXP2200 will not light up when there is new message on the phone. The default setting is "No".
Disable Contact or Message Full Indicator	If set to "Yes", the LED indicator on the upper right corner of the GXP2200 will not light up when the contact storage or message storage is full. The default setting is "No".
Disable Indicator When LCD is Off	If set to "Yes", the LED indicator on the upper right corner of the GXP2200 will not light up when the LCD screen is off. The default setting is "No".
Headset TX Gain (dB)	The transmission gain of the headset. The default value is 0dB.
Headset RX Gain (dB)	The receive gain of the headset. The default value is 0dB.

Headset Type	Selects whether the connected headset is normal RJ11 headset or Plantronics EHS headset.
Headset Key Mode	<p>When headset is connected to the phone, users could use the HEADSET button in two different modes:</p> <ol style="list-style-type: none"> 1. Default Mode <ul style="list-style-type: none"> • When the phone is in idle, press HEADSET button to offhook the phone and make calls by using headset. Headset icon will display on the top of the call screen in dialing/talking status; • When there is an incoming call, press HEADSET button to pick the call by using headset; • When there is an active call using headset, press HEADSET button to hang up the call; • When Speaker/Handset is used in dialing/talking status, press HEADSET button to switch to headset. Press it again to hang up the call, or press Speaker/Handset to switch back to previous mode. 2. Toggle Headset/Speaker <ul style="list-style-type: none"> • When the phone is in idle, press HEADSET button to switch to Headset mode. The idle screen will display a Headset icon. In this mode, if pressing Speaker button or entering digits, headset will be used by default; • When there is an incoming call, press Answer icon on the screen or Speaker button, headset will be used; • When there is an active call, press HEADSET button to toggle between Headset and Speaker.

SAVING THE CONFIGURATION CHANGES

After users makes changes to the configuration, press the **Save** button on the bottom of the Web GUI page and then apply the change by pressing the **Apply** button on the top of the page. If the option you have changed has the icon  next to it, please reboot the phone after pressing **Save** for the new settings to take effect.


REBOOTING FROM REMOTE LOCATIONS

Press the **Reboot** button at the top right-hand corner of the Web GUI to reboot the phone remotely. The web browser will then display a message window to confirm with the user if they wish to reboot the phone or not. Click on **OK** and the phone will reboot. Wait for approximately 1 minute to log in again.

GXP2200 LCD SETTINGS

The GXP2200 LCD MENU provides easy access to the settings on the phone. Most of the settings from Web GUI could be configured on the LCD settings as well.

OPENING SETTINGS

- Go to LCD onscreen MENU and then tap on **Settings**;
Or
- On GXP2200 idle screen, press MENU button  and then tap on **Settings**.

PERSONALIZED ACCOUNT

In Personalized Account menu, all the six accounts will show up with registration status on the right side. Tap on one of the account to enter the settings.

- **Ringtone.** Select ring tone for the incoming call. If "Custom Ringtone" is selected, File Manager will be opened for users to choose their own music files to be configured as the incoming call ring tone. Users will see the music file name as the ring tone name in account ring tone settings in LCD as well as in web GUI.
- **Auto-Answer.** If it's set to Yes, the phone will automatically turn on the speaker phone to answer incoming calls. If it's set to Enable Intercom/Paging mode, it will answer the call based on the SIP info header sent from the server/proxy;
- **Shared Call Appearance (SCA).**
 - **Shared Call Appearance (SCA).** Enable or disable SCA on the account;
 - **Enable Barge-in.** If set to "Yes", the user could barge onto an active call on a shared line.
 - **Auto Fill Call Park Code.** If set to "Yes", the call park feature code will be automatically filled in.
 - **Call Park Service Code.** Configures the pickup feature code for call park.
 - **Seize Line Timeout (s).** Configures the timeout before the line can be seized (in seconds). The default setting is 15 seconds.
- **Call Forwarding.**

- **None.** Call forwarding feature is disabled. This is the default setting;
- **Unconditional.** Forward all calls to particular number;
- **Time based.** Set a time range. In the time range, calls are forwarded to the number specified in **In Time Forward To**; out the time range, calls are forwarded to the number specified in **Out Time Forward To**;
- **Others.** When phone is busy, calls are forwarded to the number specified in **Busy To**; when incoming calls are not answered, those calls are forwarded to the number specified in **No Answer To**; the waiting time for answering calls is specified in **No Answer Timeout (s)**.

NETWORK

Users can configure Ethernet, Wi-Fi Bluetooth, VPN, PPPoE and other advanced settings under **Network**.

- **Ethernet.** Check/uncheck to turn on/off Ethernet so that users can connect to LAN networks;
- **Ethernet Settings.** Configure Ethernet Devices, Address Type (DHCP or Static IP). If Static IP is used, enter the information for IP Address, Subnet Mask, Default Gateway, DNS Server and Alternative DNS server;
- **Wi-Fi.** Check/uncheck to turn on/off Wi-Fi so that users can connect to Wi-Fi networks;
- **Wi-Fi Settings.** Check/uncheck to turn on/off Wi-Fi, Network notification. Select the scanned SSID in the detected list or Add Wi-Fi network. Then enter the correct password to connect using Wi-Fi;
- **Bluetooth.** Check/uncheck to turn on/off Bluetooth so that you can connect with other Bluetooth devices;
- **Bluetooth settings.** Check/uncheck to turn on/off BlueTooth. Set up Device name, Discoverable, Discoverable timeout, Scan for devices;
- **VPN settings.** Add VPN using different protocols (PPTP, L2TP, L2TP/IPSec PSK, L2TP/IPSec CRT). Once selected, set up the VPN name, VPN server, Encryption information and DNS search domains;
- **PPPoE.** Check/uncheck to turn on/off PPPoE. Enter PPPoE Account ID and PPPoE Password to connect;
- **Additional Networks Settings.**
 - **Layer 3 QoS for SIP.** This field defines the layer 3 QoS parameter for SIP packets. It is the value used for IP Precedence, Diff-Serv or MPLS. The Default value is 48;
 - **Layer 3 QoS for Audio.** This field defines the layer 3 QoS parameter for audio packets. It is the value used for IP Precedence, Diff-Serv or MPLS. The Default value is 48;
 - **Layer 2 QoS 802.1Q/VLAN Tag.** This field contains the value used for layer 2 VLAN tagging. The Default value is 0;
 - **Layer 2 QoS 802.1P/Priority Value.** This assigns the priority value of the Layer2 QoS packets. The Default value is 0;
 - **802.1x mode.** This option allows the user to enable/disable 802.1x mode on the phone. The default setting is disabled. To enable 802.1x mode, this field should be set to EAP-MD5. Once enabled, the user would be required to enter the Identity and MD5 Password to be authenticated

on the network.

SOUND

Use the Sound settings to configure how the GXP2200 rings, plays music or other media with audio, notification ringtones and alarms.


- **Silent mode.** Check/uncheck to turn on/off the ring from speaker when there is incoming call;
- **Volume.** Tap on **Volume** and scroll left/right to adjust the volume for Ringtone, Media, Alarm and Notification;
- **Phone ringtone.** Select phone's ringtone for incoming call;
- **Notification ringtone.** Select notification ringtone;

DISPLAY

- **Brightness.** Tap on **Brightness** and scroll left/right to adjust the brightness on the GXP2200 LCD;
- **Screen timeout.** Tap to open the dialog where you can set the screen timeout interval before the LCD turns dark;
- **Screensaver settings;**
 - **Use Network Images.** The picture will be downloaded from Internet if the option is checked;
 - **Network Image Path.** If **Use Network Images** is checked, set the download URL for the pictures from Internet;
 - **Use Local Images.** If **Use Network Images** is unchecked, set the path of local pictures to be displayed;
 - **Preview.** Tap to preview the setup screen saver;
 - **Screensaver Timeout.** Tap and select the screen saver timeout;
 - **Animation Intervals.** Tap to set display interval between every two pictures.
- **Landscape Screen.** Tap on the checkbox to enable/disable landscape display on all the screens.

SECURITY SETTINGS

- **Networks Location.** Tap on the checkbox to enable/disable location determined by Network on the device;
- **Set up screen lock.** Set up pattern or password for screen lock. Wizard will be provided to set up the pattern. The screen will be locked after booting up or the screen is off (i.e., screen saver screen

activated, or manually slide down **Status Bar->System Settings->Screen Off**  to turn off LCD). Users will then be required to enter password or pattern to login. When the screen is locked, users can still be able to answer or reject incoming call.

- **Visible passwords.** Check/uncheck to show/hide password as you type;
- **Select device administrators.** Add or remove device administrators;
- **Use secure credentials.** Check/uncheck to allow/disallow applications to access secure certificates and other credentials;
- **Install from SD card.** Install encrypted certificates from SD card;
- **Set password.** Set or Change the credential storage password;
- **Clear storage.** Clear credential storage of all contents and reset its password.

APPLICATIONS

Use the Applications settings to view details about the applications installed on the GXP2200, to manage their data, to force them to stop if they misbehave, and to set permission for the installations.

- **Unknown sources.** Check/uncheck to enable/disable permission to install applications that you obtain from web sites, email, or other locations other than GS Market and Google Play;



Warning:

To protect the GXP2200 and personal data, it is recommended to download applications only from GS Market.

- **Manage applications.** Tap to open a list of all the applications and other software installed on the GXP2200, along with their sizes and tools to manage them;
- **Running services.** Tap to open a list of applications, processes, and services that are currently running or cached;
- **Storage use.** Tap to open a list of all applications on the GXP2200 with information about the storage they use.

ACCOUNT & SYNC

Account & Sync allows users to add account from Google, Corporate, Skype (installed by users first) and etc. Users could also configure the sync settings for the GXP2200 to use those account for Google Play and Contacts.

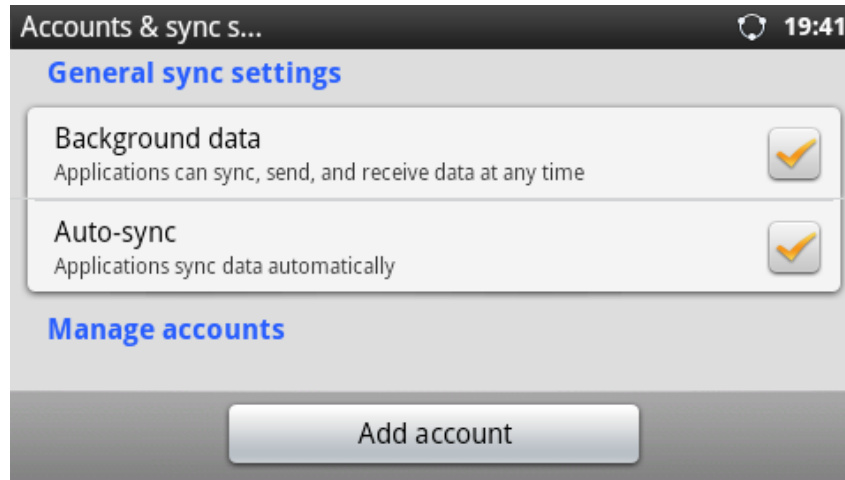


Figure 137: GXP2200 Account & Sync

Tap "Add account" on the above figure and follow the setup wizard to add account. The following example shows adding a Google account.

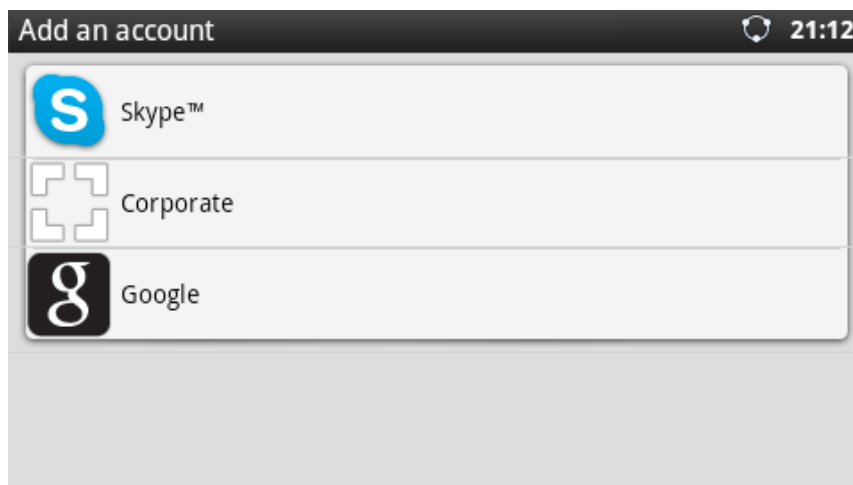


Figure 138: GXP2200 Account & Sync - Add An Account

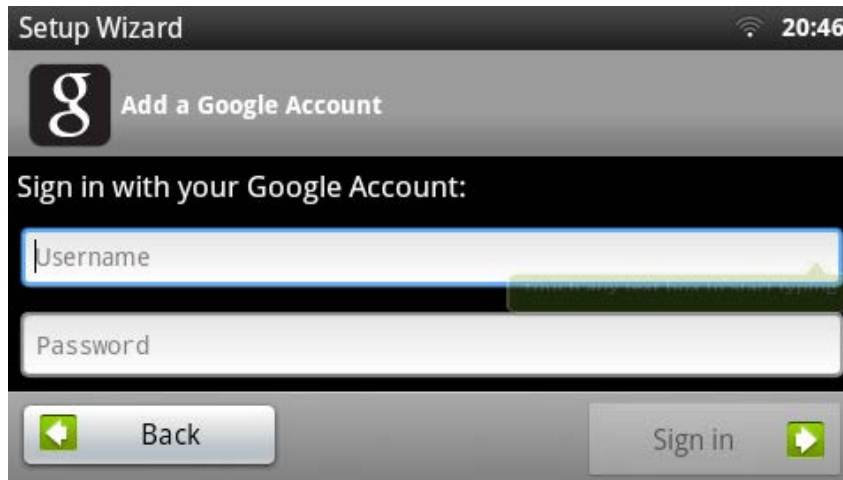


Figure 139: GXP2200 Account & Sync - Sign In With Google Account

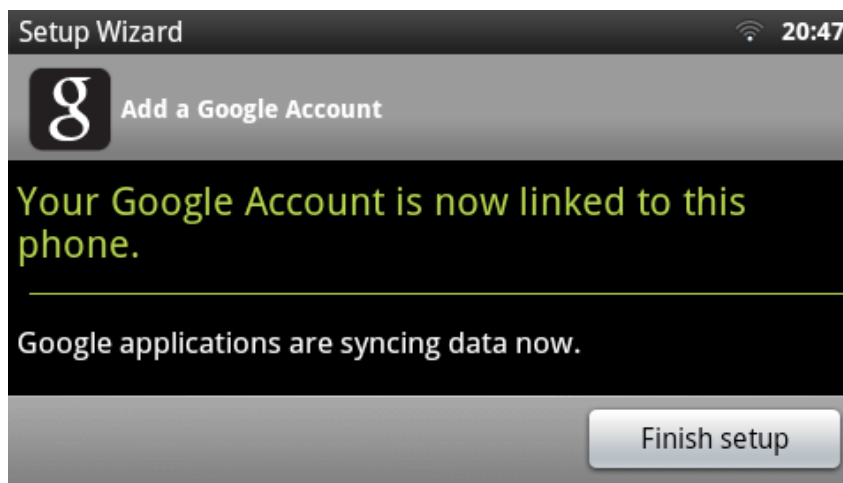


Figure 140: GXP2200 Account & Sync - Linked With Google Account

Once the account is set up, users will be able to sync up with the following:

- **Google Play.** Download Google Play Store from GS Market and tap to open it. The linked Google account will be used to sign in Play Store automatically.

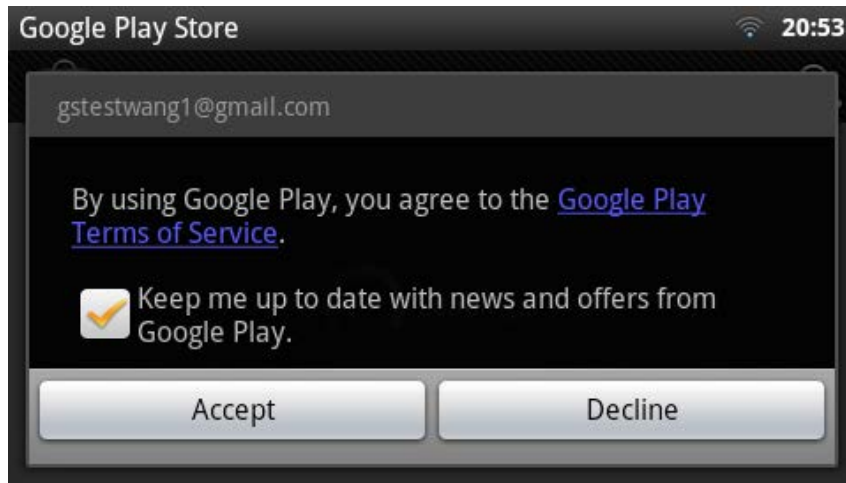


Figure 141: Google Play Store Sign In With Linked Account

- **Contacts.** Users will see contacts sync up from the linked account in **Menu->Contacts**. Users could also "Choose contacts to display" and change the display settings for contacts under **Menu->Contacts->Options->Display options**.



Figure 142: Contacts Display Options - Choose Contacts To Display

STORAGE

Storage shows the internal storage status on the GXP2200.

- **Total Space.** Total internal storage space on GXP2200.



Figure 143: GXP2200 Storage

- **Apps.** Storage status for Apps installed on the GXP2200.
- **User_data.** Storage status on User_data directory. Tap on **User_data** to access the files in File Manager.
- **System space.** Storage status of system space on the GXP2200.
- **Available.** Available storage space on the GXP2200.

LANGUAGE & KEYBOARD

- **Select language.** Tap to open the a list of language options for GXP2200 to display with.
- **Select Input Method.** Tap and users could select English keyboard or Chinese Keyboard.
- **English Input Method.** Tap to configure English keyboard settings (Sound on keypress, Popup on keypress, touch to correct works, Auto-capitalization, Show settings key, Input languages and Word suggestion settings).
- **Chinese Input Method.** Tap to configure Chinese keyboard settings (Audible Touch Tone and Language Switch Button).

DATE & TIME

- **Specify NTP Server Address.** Assign the URL or IP Address of NTP Server.
- **Set date.** Set the current date for the GXP2200.
- **Select time zone.** Select time zone for the GXP2200.
- **Set time.** Set the current time for the GXP2200.
- **Use 24-hour format.** Check/uncheck to display the time using 24-hour time format or not. For

example, in 24-hour format, 13:00 will be displayed instead of 1:00 pm.

- **Select date format.** Select the format of year, month and day for the date to be displayed.

ABOUT PHONE

About Phone lists the GXP2200's account information, network status and system information.

- **Account Status.** Displays the account name and registration status on the GXP2200.
- **Network Status.** MAC Address, Address Type, IP Address, Subnet Mask, Default Gateway, DNS Server, Alternative DNS server, NAT Type, VPN IP information will be displayed.
- **System Information.** Displays the system version of the GXP2200.

ADVANCED SETTINGS

Users could open Advanced Settings to set up advanced features for Account, configure Upgrade settings, Syslog and perform Factory Reset.

- **Account.** Tap on one account and fill in the necessary information to register the account, which includes Account Active, Account Name, SIP Server, SIP User ID, SIP Auth ID, SIP Auth Password, Voice Mail User ID and Display Name.
- **Upgrade.**
 - **Upgrade Mode.**
This field allows the user to choose the firmware upgrade method: TFTP, HTTP or HTTPS.
 - **Firmware Upgrade and Provisioning.**
Defines the rules for automatic upgrade: Always Check at bootup, when F/W pre/suffix changes, Skip the Firmware Check.
 - **HTTP/HTTPS User Name.** The user name for the HTTP/HTTPS server.
 - **HTTP/HTTPS Password.** The password for the HTTP/HTTPS server.
 - **Firmware Server Path.** This defines the server path for the firmware server. It can be different from the configuration server for provisioning.
 - **Config Server Path.** This defines the server path for provisioning. It can be different from the firmware server for upgrading.
- **Syslog.**
 - **Syslog Level.** Select the level of logging for syslog. The default setting is None. There are 4 levels: DEBUG, INFO, WARNING AND ERROR.
 - **Syslog Server Address.** The URL/IP address for the syslog server.

- **Factory Reset.** Open and tap on **Factory Reset** to restore the GXP2200 to factory default settings.

REBOOT

Tap on "Reboot" to reboot the device.

UPGRADING AND PROVISIONING

The GXP2200 can be upgraded via TFTP/HTTP/HTTPS by configuring the URL/IP Address for the TFTP/HTTP/HTTPS server and selecting a download method. Configure a valid URL for TFTP, HTTP or HTTPS; the server name can be FQDN or IP address.

Examples of valid URLs:

firmware.grandstream.com

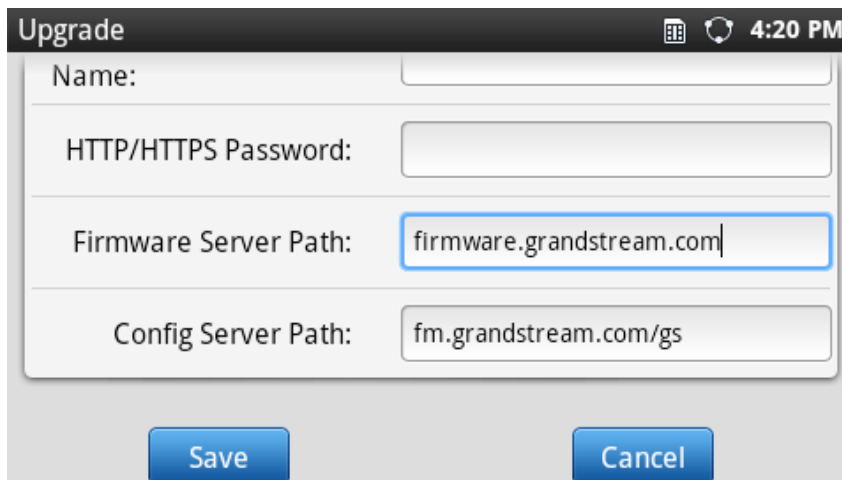
fw.ipvideotalk.com/gs

UPGRADE AND PROVISIONING CONFIGURATION

There are two ways to setup upgrade and provisioning on GXP2200. They are Keypad Menu and Web GUI.

- **Configure via keypad Menu**

In GXP2200 Settings, select **Advanced Settings->Upgrade**. Users may then select the upgrade mode and enter the IP address or FQDN for the Firmware server and the Config server. After making the changes, tap **Save** button to save the change. Then reboot the phone.



The screenshot shows the 'Upgrade' configuration screen on the GXP2200 LCD. The screen has a black header with the title 'Upgrade' and a status bar on the right showing a calendar icon, a refresh icon, and the time '4:20 PM'. Below the header, there are four input fields: 'Name:' (empty), 'HTTP/HTTPS Password:' (empty), 'Firmware Server Path:' (containing 'firmware.grandstream.com'), and 'Config Server Path:' (containing 'fm.grandstream.com/gs'). At the bottom of the screen, there are two blue buttons: 'Save' and 'Cancel'.

Figure 144: GXP2200 Upgrade Configuration via LCD

- **Configure via Web GUI**

Open a web browser on PC and enter the IP address for the GXP2200. Then login with the

administrator username and password. Go to **Maintenance** section, select **Upgrade** tab. In the Upgrade web page, enter the IP address or the FQDN for the upgrade server and choose to upgrade via TFTP, HTTP or HTTPS. Save and apply the changes, then reboot the phone.

CONFIRM UPGRADE TO START

After configuring correct upgrading and provisioning information on the GXP2200, reboot the phone. The phone will boot up and start downloading the new files. This might take 1-5 minutes depending on the network environment. Once downloading is done, the phone will start upgrading. If the option "Auto Reboot to Upgrade Without Prompt" under web GUI->**Maintenance**->**Upgrade** is set to "No", an upgrading message will show on the LCD (see Figure below). Confirm the message by tapping on "Yes" to start the upgrading process.



Figure 145: Start GXP2200 Upgrade

 **Note:**

Please do not interrupt or power cycle the GXP2200 when the upgrading process is on.

UPLOAD FIRMWARE LOCALLY

If there is no HTTP/TFTP server, users could also upload the firmware to the GXP2200 directly via Web GUI. Please follow the steps below to upload firmware to GXP2200 locally.

- Download the latest GXP2200 firmware file from the following link and save it in your PC;
<http://www.grandstream.com/support/firmware>
- Log in the Web GUI as administrator in the PC;
- Go to Web GUI->**Maintenance**->**Upgrade**, configure **Upgrade Via** as "Manually Upload";
- Press the "Upload" button, a window will be prompted to select firmware file to upload;
- Select the firmware file from your PC. Then uploading progress will show at the button where it was "Upload" in the above step;
- When uploading is done, users can see the upgrading process starts on the GXP2200 LCD.

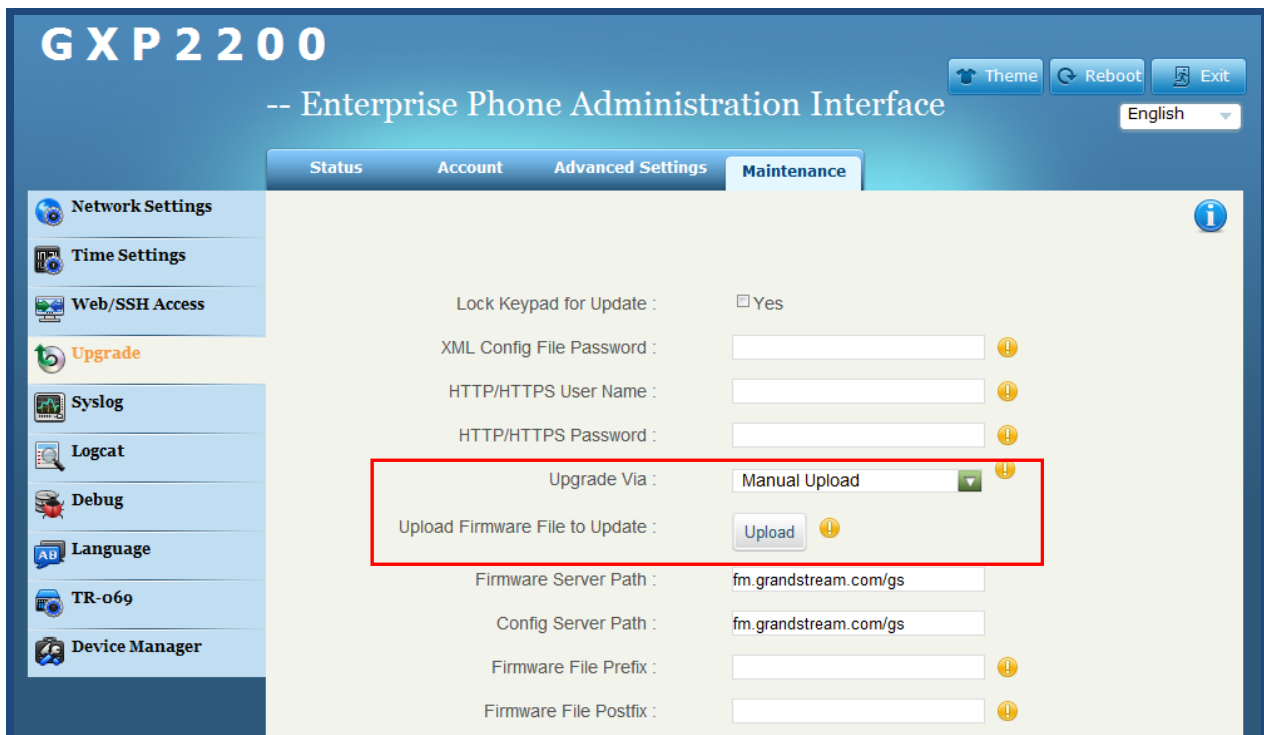


Figure 146: Upload GXP2200 Firmware via Web GUI

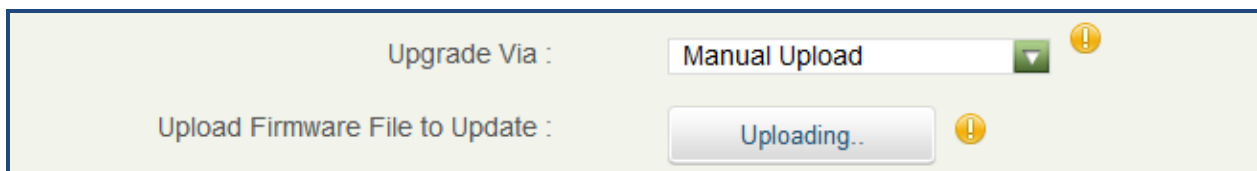


Figure 147: GXP2200 Firmware Uploading

UPGRADE VIA SD CARD

For users that could not use remote upgrade or could not access the phone's Web GUI to upload firmware, upgrading via SD card is an alternative. Follow the steps below to upgrade GXP2200 via SD card.

- Download the firmware file to PC and save it in SD card;
- Insert the SD card to GXP2200;
- Power cycle the GXP2200;
- When the phone starts booting up, press and hold both * and # keys at the same time for about 5 seconds;
- The GXP2200 will display the upgrading process in the screen;
- Wait until the upgrading is done;
- The GXP2200 will reboot itself;
- Check the firmware status and remove the SD card.

NO LOCAL FIRMWARE SERVERS

For users that would like to use remote upgrading without a local TFTP server, Grandstream offers a NAT-friendly HTTP server. This enables users to download the latest software upgrades for their phone via this server. Please refer to the webpage:

<http://www.grandstream.com/support/firmware>.

Alternatively, users can download a free TFTP or HTTP server and conduct a local firmware upgrade. A free windows version TFTP server is available for download from:

http://www.solarwinds.com/products/freetools/free_tftp_server.aspx

<http://tftpd32.jounin.net/>

Instructions for local firmware upgrade via TFTP:

1. Unzip the firmware files and put all of them in the root directory of the TFTP server;
2. Connect the PC running the TFTP server and the GXP2200 device to the same LAN segment;
3. Launch the TFTP server and go to the File menu->Configure->Security to change the TFTP server's default setting from "Receive Only" to "Transmit Only" for the firmware upgrade;
4. Start the TFTP server and configure the TFTP server in the phone's web configuration interface;
5. Configure the Firmware Server Path to the IP address of the PC;
6. Update the changes and reboot the GXP2200.

End users can also choose to download a free HTTP server from <http://httpd.apache.org/> or use Microsoft IIS web server.

 **Note:**

When the GXP2200 boots up, it will issue TFTP or HTTP request to download a configuration XML file named "cfgxxxxxxxxxxx" followed by "cfgxxxxxxxxxxx.xml", where "xxxxxxxxxxx" is the MAC address of the phone, i.e., "cfg000b820102ab" and "cfg000b820102ab.xml". If the download of "cfgxxxxxxxxxxx.xml" file is not successful, the provision program will download a generic cfg.xml file. The configuration file name should be in lower case letters.

CONFIGURATION FILE DOWNLOAD

Grandstream SIP Devices can be configured via the Web Interface as well as via a Configuration File (binary or XML) through TFTP or HTTP/HTTPS. The "Config Server Path" is the TFTP, HTTP or HTTPS server path for the configuration file. It needs to be set to a valid URL, either in FQDN or IP address format. The "Config Server Path" can be the same or different from the "Firmware Server Path".

A configuration parameter is associated with each particular field in the web configuration page. A parameter consists of a Capital letter P and 2 to 3 (Could be extended to 4 in the future) digit numeric numbers. i.e., P2 is associated with the "Admin Password" in the Web GUI->**Maintenance**->**Web/SSH Access** page. For a detailed parameter list, please refer to the corresponding firmware release configuration template.

When a Grandstream Devices boots up or reboots, it will issue a request for a configuration XML file named "cfgxxxxxxxxxxx.xml" followed by a file named "cfgxxxxxxxxxxx", where "xxxxxxxxxxx" is the MAC address of the device, i.e., "cfg000b820102ab". The configuration file name should be in lower case letters.

For more details on XML provisioning, please refer to the following document:

http://www.grandstream.com/general/gs_provisioning_guide_public.pdf

FACTORY FUNCTIONS AND FACTORY RESET

FACTORY FUNCTIONS

To check the functions of GXP2200 LED, LCD, Keyboard and Audio, open the GXP2200 onscreen MENU->**Diagnosis** to perform the diagnosis when troubleshooting the device. Tap on the option and follow the instructions on each to perform:

- LCD Diagnosis
- LCD Off
- Keypad Diagnosis
- Touch Screen Diagnosis
- LED Diagnosis
- BLF Expansion Board Diagnosis
- Audio Loopback

RESTORE TO FACTORY DEFAULT VIA LCD MENU

 **Warning:**

Restoring the Factory Default Settings will delete all configuration information on the phone. Please backup or print all the settings before you restore to the factory default settings. Grandstream is not responsible for restoring lost parameters and cannot connect your device to your VoIP service provider.

There are two methods to restore the GXP2200 to the factory default settings.


1. On GXP2200 idle screen, press MENU button  and tap on **Settings**. Or go to onscreen MENU->**Settings**;
2. Tap on **Advanced Settings->Factory Reset**, the following figure will show;



Figure 148: GXP2200 LCD - Factory Reset

3. Tap on **Factory Reset**, a confirmation message will show. Tap on **OK** to confirm.

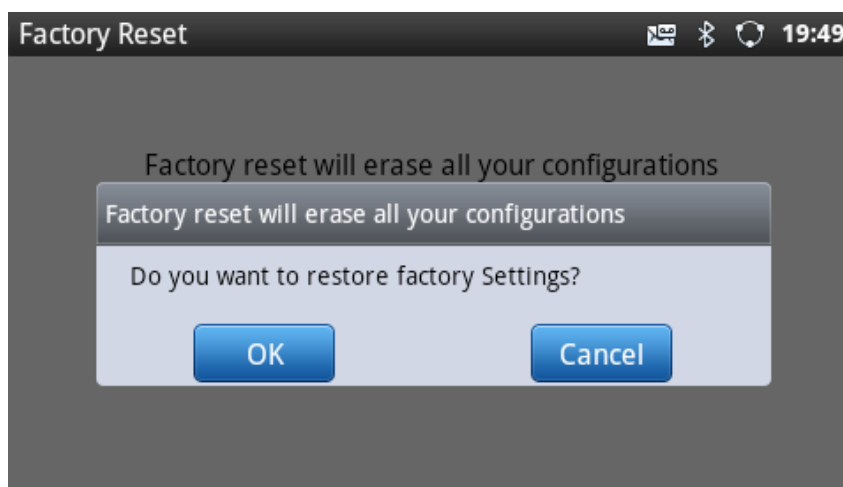


Figure 149: GXP2200 LCD - Confirm Factory Reset

RESTORE TO FACTORY DEFAULT VIA THE WEB GUI

1. Login GXP2200 Web GUI and go to **Maintenance->Upgrade page**;
2. At the bottom of the page, click on the **Reset** button for Factory reset. A dialog box will pop up;
3. Click OK to restore the phone to factory settings.

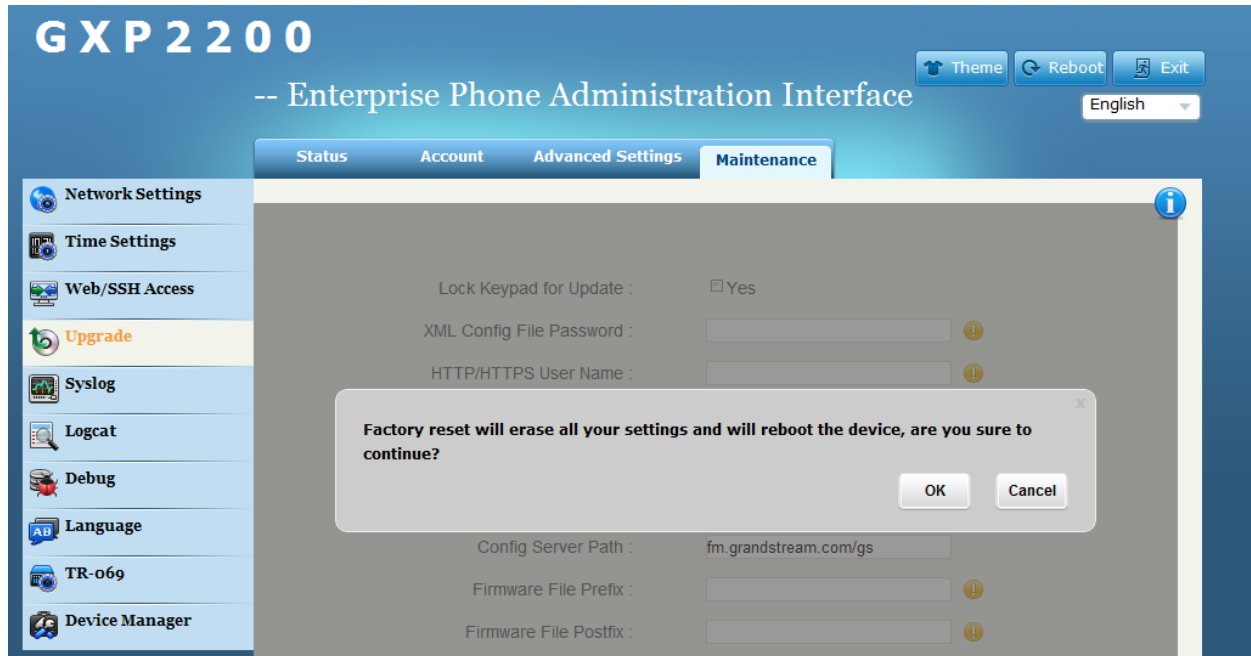


Figure 150: GXP2200 Web GUI - Confirm Factory Reset

RESTORE TO FACTORY DEFAULT VIA HARD KEYS

If users could not access web GUI for factory reset, or when the GXP2200 cannot bootup, pressing and holding 1 and 9 at the same time for about 5 seconds could reset the GXP2200 before it boots up. Follow the steps below to reset the GXP2200 via hard keys.

- Power cycle the GXP2200;
- When the phone starts booting up, press and hold both 1 and 9 keys at the same time for about 5 seconds;
- The GXP2200 will stay in the booting up screen with the Grandstream logo displayed;
- Wait for about 1 minute till the GXP2200 boots up again;
- The GXP2200 will boot up with factory default settings.

EXPERIENCING THE GXP2200 APPLICATION PHONE

Please visit our website: <http://www.grandstream.com> to receive the most up- to-date updates on firmware releases, additional features, FAQs, documentation and news on new products.

We encourage you to browse our [product related documentation](#), [FAQs](#) and [User and Developer Forum](#) for answers to your general questions. If you have purchased our products through a Grandstream Certified Partner or Reseller, please contact them directly for immediate support.

Our technical support staff is trained and ready to answer all of your questions. Contact a technical support member or [submit a trouble ticket online](#) to receive in-depth support.

Thank you again for purchasing Grandstream Enterprise Application phone, it will be sure to bring convenience and color to both your business and personal life.

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