Grandstream Networks, Inc.

GXP2130/GXP2140/GXP2160

Enterprise IP Phone User Guide

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GXP2130/GXP2140/GXP2160 User Guide

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DOCUMENT PURPOSE

This User Guide describes the basic concept and tasks necessary to use and configure your GXP2130/GXP2140/GXP2160. This document will cover the topic of phone installation, making basic calls and connecting phone to devices. To learn the advanced features and configurations, please visit http://www.grandstream.com/support to download latest "GXP2130/GXP2140/GXP2160 Admin Guide".

GUI INTERFACE EXAMPLES

http://www.grandstream.com/products/gxp_series/general/documents/gxp2130_2140_2160_gui.zip

1. Screenshot of Login Page
2. Screenshots of Status Pages
3. Screenshots of Accounts Pages
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GNU GPL INFORMATION

GXP2130/GXP2140/GXP2160 firmware contains third-party software licensed under the GNU General Public License (GPL). Grandstream uses software under the specific terms of the GPL. Please see the GNU General Public License (GPL) for the exact terms and conditions of the license.

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

WELCOME

Thank you for purchasing Grandstream GXP2130/GXP2140/GXP2160 Enterprise IP Phone. GXP2130/GXP2140/GXP2160 is a state-of-the-art enterprise grade IP phone. GXP2140/GXP2160 features 4.3 inch TFT Color LCD, 5 programmable context-sensitive soft keys, dual Gigabit network ports, integrated PoE and Bluetooth, 5-way conference, and Electronic Hook Switch (EHS). GXP2130 supports 2.8 inch TFT Color LCD, 4 programmable context-sensitive soft keys, 4-way voice conference and EHS with Plantronics headsets. Also, this series can support up to 3 lines for GXP2130, 4 lines for GXP2140 and 6 lines for GXP2160. The GXP2130/GXP2140/GXP2160 delivers superior HD audio quality, rich and leading edge telephony features, personalized information and customizable application service, automated provisioning for easy deployment, advanced security protection for privacy, and broad interoperability with most 3rd party SIP devices and leading SIP/NGN/IMS platforms. The GXP2130/GXP2160 supports presence and Busy Lamp Field (BLF) in the Multi-Purpose Keys as well. The GXP2140 is expandable with one to 4 expansion modules. The GXP2160/GXP2140/GXP2130 is the perfect choice for enterprise users looking for a high quality, feature rich multi-line executive IP phone with advanced functionalities and performance.

⚠ **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 GXP2130/GXP2140/GXP2160 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 HIGHTLIGHTS

Table 1: GXP2130 /GXP2140/GXP2160 FEATURES IN A GLANCE

	GXP2130	• 3 lines • 2.8 inch (320x240) TFT color LCD • 4 programmable soft keys • 8 programmable Multi-Purpose Keys • 4-way conference
	GXP2140	• 4 lines • 4.3 inch (480x272) TFT color LCD • 5 programmable soft keys • Bluetooth V2.1 • 5-way conference • Expansion board
	GXP2160	• 6 lines • 4.3 inch (480x272) TFT color LCD • 5 programmable soft keys • Bluetooth V2.1 • 5-way conference • 24 programmable Multi-Purpose Keys

Features	GXP2130	GXP2140	GXP2160
LCD Display	320x240	480 x 272	480 x 272
LCD Backlight	Yes	Yes	Yes
Number of Lines	3	4	6
Programmable Hard Keys	8	N/A	24
Programmable Soft Keys	4	5	5
Extension Module	N/A	Yes, up to 4 EXT Boards,	N/A

GXP2130/GXP2140/GXP2160 TECHNICAL SPECIFICATIONS

Table 3 GXP2130 TECHNICAL SPECIFICATIONS

Protocols/Standards	SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, ARP, ICMP, DNS (A record, SRV, NAPTR), DHCP, PPPoE, TELNET, TFTP, NTP, STUN, SIMPLE, LLDP, LDAP, TR-069, 802.1x, TLS, SRTP, IPv6
Network Interfaces	Dual switched auto-sensing 10/100/1000 Mbps Gigabit Ethernet ports with integrated PoE
Graphic Display	2.8 inch (320x240) TFT color LCD
Feature Keys	3 line keys with up to 3 SIP accounts, 8 speed-dial/BLF extension keys with dual-color LED, 4 programmable context sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for: MESSAGE (with LED indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOL+, VOL-
Voice Codec	Support for G.729A/B, G.711µ/a-law, G.726, G.722 (wide-band), and iLBC(pending), in-band and out-of-band DTMF (in audio, RFC2833, SIP INFO)
Auxiliary Ports	RJ9 headset jack (allowing EHS with Plantronics headsets)
Telephony Features	Hold, transfer, forward, 4-way conference, call park, call pickup, shared-call-appearance (SCA), bridged-line-appearance (BLA), downloadable phonebook (XML, LDAP, up to 2000 items), call waiting, call log (up to 500 records), customization of screen, off-hook auto dial, auto answer, click-to-dial, flexible dial plan, hot desking, personalized music ringtones and music on hold, server redundancy and fail-over
Sample Applications	Weather, currency, GMI available for advanced custom application development
HD audio	Yes, both on handset and speakerphone
Base Stand	Yes, allow 2 angle positions
Wall Mountable	Yes
QoS	Layer 2 (808.1Q, 802.1p) and Layer 3 (ToS, DiffServ, MPLS) QoS
Security	User and administrator level passwords, MD5 and MD5-sess based authentication, AES based secure configuration file, SRTP, TLS, 802.1x media access control
Multi-language	English, Arabic, Chinese, Croatian, Czech, Dutch, German, French, Hebrew, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Slovenia, Spanish, Turkish
Upgrade/Provisioning	Firmware upgrade via TFTP/HTTP/HTTPS, mass provisioning using TR-069 or encrypted XML configuration file
Power & Green Energy Efficiency	Universal power adapter included: Input:100-240VAC ; Output: +12VDC, 0.5A ; Integrated Power-over-Ethernet (802.3af) Max power consumption 3W (power adapter) or 25.5W (PoE)

Physical	Dimension: 193mm (W) x 211mm (L) x 84.5 mm (H);
	Unit weight: 0.78kg ; Package weight: 1.3kg
Temperature and Humidity	32-104℉ / 0～40℃, 10-90% (non- condensing)
Package Content	GXP2130 phone, handset with cord, base stand, universal power supply, network cable, Quick Start Guide
Compliance	FCC Part15 Class B, EN55022 ClassB, EN61000-3-2, EN61000-3-3, EN55024, EN60950-1, AS/NZS CISPR22 Class B

Table 4: GXP2140 TECHNICAL SPECIFICATIONS

Protocols/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, IPv6
Network Interfaces	Dual switched auto-sensing 10/100/1000 Mbps Gigabit Ethernet ports with integrated PoE
Graphic Display	4.3 inch (480x272) TFT color LCD
Bluetooth	Yes, Bluetooth V2.1
Feature Keys	4 line keys with up to 4 SIP accounts, 5 programmable context sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for : MESSAGE (with LED indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOL+, VOL-
Voice Codec	Support for G.729A/B, G.711µ/a-law, G.726, G.722 (wide-band), iLBC(pending) and in-band and out-of-band DTMF (in audio, RFC2833, SIP INFO)
Auxiliary Ports	RJ9 headset jack (allowing EHS with Plantronics headsets), USB, extension module port
Telephony Features	Hold, transfer, forward, 5-way conference, call park, call pickup, shared-call-appearance (SCA)/bridged-line-appearance (BLA), downloadable phonebook (XML, LDAP, up to 2000 items), call waiting, call log (up to 500 records), customization of screen, off-hook auto dial, auto answer, click-to-dial, flexible dial plan, hot desking, personalized music ringtones and music on hold, server redundancy and fail-over
Sample Applications	Weather, currency, GMI available for advanced custom application development
HD audio	Yes, both on handset and speakerphone
Extension Module	Yes, can power up up to 4 GXP2200EXT modules which features a 128x384 graphic LCD, 20 quick-dial/BLF keys which dual-color LED, 2 navigation keys, and less than 1.2W power consumption per unit.
Base Stand	Yes, allow 2 angle positions
Wall Mountable	Yes
QoS	Layer 2 (808.1Q, 802.1p) and Layer 3 (ToS, DiffServ, MPLS) QoS

Security	User and administrator level passwords, MD5 and MD5-sess based authentication, AES based secure configuration file, SRTP, TLS, 802.1x media access control
Multi-language	English, Arabic, Chinese, Croatian, Czech, Dutch, German, French, Hebrew, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Slovenia, Spanish, Turkish
Upgrade/Provisioning	Firmware upgrade via TFTP/HTTP/HTTPS, mass provisioning using TR-069 or encrypted XML configuration file
Power & Green Energy Efficiency	Universal power adapter included: Input:100-240V ; Output: +12V, 1A ; Integrated Power-over-Ethernet (802.3af) Max power consumption: 6W (without GXP2200EXT), 10W(with 4 cascaded GXP2200EXTs)
Physical	Dimension: 222mm (W) x 210mm (L) x 93mm (H); Unit weight: 0.98kg; Package weight: 1.55kg
Temperature and Humidity	32-104℉ / 0～40℃, 10-90% (non- condensing)
Package Content	GXP2140 phone, handset with cord, base stand, universal power supply, network cable, Quick Start Guide
Compliance	FCC Part15 Class B, EN55022 ClassB, EN61000-3-2, EN61000-3-3, EN55024, EN60950-1, AS/NZS CISPR22 Class B

Table 5: GXP2160 TECHNICAL SPECIFICATIONS

Protocols/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, IPv6
Network Interfaces	Dual switched auto-sensing 10/100/1000 Mbps Gigabit Ethernet ports with integrated PoE
Graphic Display	4.3 inch (480x272) TFT color LCD
Bluetooth	Yes, Bluetooth V2.1
Feature Keys	6 line keys with up to 6 SIP accounts, 24 speed-dial/BLF extension keys with dual-color LED, 5 programmable context sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for : MESSAGE (with LED indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOL+, VOL-
Voice Codec	Support for G.729A/B, G.711µ/a-law, G.726, G.722 (wide-band), iLBC(pending) and in-band and out-of-band DTMF (in audio, RFC2833, SIP INFO)
Auxiliary Ports	RJ9 headset jack (allowing EHS with Plantronics headsets), USB
Telephony Features	Hold, transfer, forward, 5-way conference, call park, call pickup, shared-call-

	appearance (SCA)/bridged-line-appearance (BLA), downloadable phonebook (XML, LDAP, up to 2000 items), call waiting, call log (up to 500 records), customization of screen, off-hook auto dial, auto answer, click-to-dial, flexible dial plan, hot desking, personalized music ringtones and music on hold, server redundancy and fail-over
Sample Applications	Weather, currency, GMI available for advanced custom application development
HD audio	Yes, both on handset and speakerphone
Base Stand	Yes, allow 2 angle positions
Wall Mountable	Yes
QoS	Layer 2 (808.1Q, 802.1p) and Layer 3 (ToS, DiffServ, MPLS) QoS
Security	User and administrator level passwords, MD5 and MD5-sess based authentication, AES based secure configuration file, SRTP, TLS, 802.1x media access control
Multi-language	English, Arabic, Chinese, Croatian, Czech, Dutch, German, French, Hebrew, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Slovenia, Spanish, Turkish
Upgrade/Provisioning	Firmware upgrade via TFTP/HTTP/HTTPS, mass provisioning using TR-069 or encrypted XML configuration file
Power & Green Energy Efficiency	Universal power adapter included: Input:100-240V ; Output: +12V, 1A ; Integrated Power-over-Ethernet (802.3af) Max power consumption:6W
Physical	Dimension: 222mm (W) x 210mm (L) x 93mm (H); Unit weight: 0.98kg; Package weight: 1.62kg
Temperature and Humidity	32-104℉ / 0～40℃, 10-90% (non- condensing)
Package Content	GXP2160 phone, handset with cord, base stand, universal power supply, network cable, Quick Start Guide
Compliance	FCC Part15 Class B, EN55022 ClassB, EN61000-3-2, EN61000-3-3, EN55024, EN60950-1, AS/NZS CISPR22 Class B

INSTALLATION

EQUIPMENT PACKAGING

Table 6: GXP2130/GXP2140/GXP2160 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
Wall Mount	Yes	1
Quick Start Guide	Yes	1

CONNECTING YOUR PHONE

Table 7: GXP2130/GXP2140/GXP2160 CONNECTORS

Handset Port	RJ9 handset connector port
Headset Port	RJ9 headset connector port (supporting EHS with Plantronics headset)
USB Port	USB port connecting a USB flash drive. (not on GXP2130)
LAN Port	10/100/1000Mbps RJ-45 port connecting to Ethernet
PC Port	10/100/1000Mbps RJ-45 port connecting to PC
EXT Port	RJ11 connector port to connect the GXP2200EXT Board(GXP2140)
Power Jack	12V DC Power connector port

To set up the GXP2130/GXP2140/GXP2160, follow the steps below:

1. Attach the phone stand or wall mount to the back of the phone where there are slots;
2. Connect the handset and main phone case with the phone cord;
3. Connect the LAN port of the phone to the RJ45 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 provisioning or firmware upgrade information. Before continuing, please wait for the date/time display to show up;

6. Using the keypad configuration menu or phone's embedded web server (Web GUI) by entering the IP address in web browser, you can further configure the phone.

GXP2200EXT MODULE

The GXP2140 is expandable with GXP2200EXT modules. GXP2140 supports up to 4 extension modules, adding 160 fully programmable phone extensions to the phone.

GXP2200EXT board package contains:

Table 8: 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 board is an additional accessory for the GXP2140 and is not included in the GXP2140 box.

To set up the GXP2200EXT board with the GXP2140, please follow the steps below:

1. On the back of the GXP2140 and the GXP2200EXT, there are slots for connector plate. Attach the connector plate between the slots for GXP2140 and the GXP2200EXT;
2. Apply the screws provided and securely tighten them in (See **Figure 1: GXP2140 Back View with GXP2200EXT**).
3. Connect the GXP2200EXT board to the GXP2140 via EXT port using the RJ11-RJ11 cable provided;
4. Install the phone stand on the GXP2140 and the GXP2200EXT board;
5. Power up the GXP2140. The GXP2200EXT board will show the booting up screen with version information and connecting status;
6. After successfully booting up, the GXP2200EXT board will stay in idle. Press and hold the Left button for 3 to 5 seconds to check the version information and status.
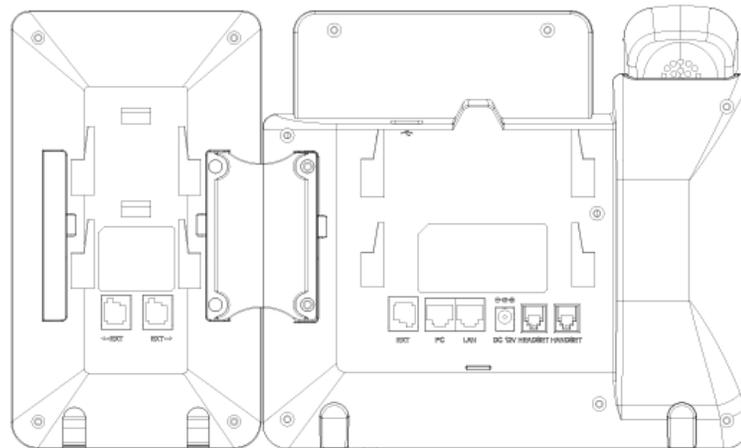
Figure 1: GXP2140 Back View with GXP2200EXT

The GXP2200EXT board can be configured via the web GUI of the GXP2140 connected. After successfully configured, press Left or Right button on the GXP2200EXT board and users could browse all the MPK's status in different pages.

For more information on installing, connecting and configuring the GXP2200EXT board with GXP2140, please refer to the GXP2200EXT board user manual:

http://www.grandstream.com/support

SAFETY COMPLIANCES

The GXP2130/GXP2140/GXP2160 phone complies with FCC/CE and various safety standards. The GXP2130/GXP2140/GXP2160 power adapter is compliant with the UL standard. Use the universal power adapter provided with the GXP2130/GXP2140/GXP2160 package only. The manufacturer's warranty does not cover damages to the phone caused by unsupported power adapters.

WARRANTY

If the GXP2130/GXP2140/GXP2160 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, contact the 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.

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GETTING TO KNOW GXP2130/GXP2140/GXP2160

IDLE SCREEN

GXP2130/GXP2140/GXP2160 screen displays differently depending on whether the phone is idle or in use (active). The following figures show the idle screen of GXP2130/GXP2140/GXP2160.

Figure 2: GXP2130 Idle Screen

Figure 3: GXP2140 Idle Screen

Figure 4: GXP2160 Idle Screen

The following table describes the items displayed on the GXP2130/GXP2140/GXP2160 idle screen.

Table 9: LCD DISPLAY DEFINITIONS

DATE AND TIME	Displays the current date and time. It can be synchronized with Internet time servers.
NETWORK ICON	Shows the status of network. It will indicate whether the network is down or starting.
STATUS ICON	Shows the status of the phone for registration status, call features and etc, using icons as shown in the next table.
LINE STATUS INDICATOR	Displays the name of the account that is in use.
SOFTKEYS in Idle Screen	The softkeys are context sensitive and will change depending on the status of the phone. Typical functions assigned to softkeys are: • **SwitchSCR/NEXTSCR** Toggles between different idle screens. For example, for GXP2130/GXP2140/GXP2160, pressing most left soft key (switch screen) will toggle among default idle screen, weather information, currency information and Grandstream Upcoming Events; • **ForwardAll** Unconditionally forwards the phone line (account 1) to another phone.

	• **MissedCalls** Shows up unanswered calls to this phone. • **Redial** Redials the last dialed number when there is existed dialed call log. **Note:** If GMI application is used for GXP2130/GXP2140/GXP2160, the softkey for GMI application will show up in the default idle screen as configured. (GMI application is pending.)
SOFTKEYS in Call Screen	The softkeys are context sensitive and will change depending on the call status of the phone. Here are the main softkeys in call screen. • **Redial** Redials the last dialed number after off hook when there is existed call log. • **Dial** Dials the call out after off hook and entering the number. • **AnswerCall** Answers the incoming call when the phone is ringing. • **RejectCall** Rejects the incoming call when the phone is ringing. • **EndCall** Ends the active call. • **Transfer** Transfer softkey will show up after pressing TRAN button and entering transfer target number. Press Transfer softkey to do blind transfer. • **Split** In auto-attended transfer mode, after establishing the second call, press Split to quit transfer and go back to normal talking status.

	• **ConfCall** Conferences the active calls. • **ReConf** Re-establish the conference among the calls on hold.
SPECIAL SOFTKEYS **(Only for GXP2130/GXP2140/GXP2160 when integrated with UCM61xx)**	**Call Parking:** Please refer to UCM61xx Online User Manual for more information. • **CallPark** When the phone dials out, the Call Park softkey will display on screen. To park the call, press the "CallPark" softkey and select a green MPK to park the call on available parking lot.

Table 10: GXP2130/GXP2140/GXP2160 LCD ICONS

	Network Status. OFF - Network connection is up ON - Network connection is down
	DND Status. OFF - Do Not Disturb disabled ON - Do Not Disturb enabled
	Call Forward All Status. OFF - Call Forward All feature disabled ON - Call Forward All feature enabled
	Call Forward Busy Status. OFF - Call Forward Busy feature disabled ON - Call Forward Busy feature enabled
	Call Forward No Answer Status. OFF - Call Forward No Answer feature disabled ON - Call Forward No Answer feature enabled
	Call Forward Busy and Call Forward No Answer Status. OFF - Call Forward All and Call Forward No Answer feature disabled

	ON - Call Forward All and Call Forward No Answer feature enabled
	Missed Call Status. OFF - No missed call ON - New missed call
	Handset Status. OFF - Handset is not in use ON - Handset is in use
	Headset Status. OFF - Headset is not in use ON - Headset is in use
	Microphone MUTE Status. OFF - No muted ON - Muted
	Bluetooth Status. (GX2140/GXP2160) OFF - Bluetooth icon disappears ON - Bluetooth icon appears Paired – Bluetooth icon turns bright
	USB Status. (GX2140/GXP2160) OFF - No USB connection ON - USB connected
	Incoming Call. The current call is an incoming call
	Outgoing Call. The current call is an outgoing call
	Call On Hold. OFF - No call on hold ON – Call on hold
	Call Connect. OFF - No call ON - Call connected

	Call Conference.
	OFF - No Conference call
	ON - Conference call is established
	Click Hand
	In call screen, this icon shows on the line available for transfer or conference.
	IP Call Status
	The current call is an IP call.
	SIP Call
	Enter number for initiate call. The current call is a SIP call.
	Call Time
	During an active call, this icon shows the call time.
	LCD Brightness Up
	Brightness is increasing
	LCD Brightness Down
	Brightness is decreasing
	Speaker Volume Up
	Call screen icon. Speaker volume is increasing
	Speaker Volume Down
	Call screen icon. Speaker volume is decreasing
	Handset Volume Up
	Call screen icon. Handset volume is increasing
	Handset Volume Down
	Call screen icon. Handset volume is decreasing
	Ringtone Volume Down
	Call screen icon. The volume of ringtone is decreasing
	Ringtone Volume Up
	Call screen icon. The volume of ringtone is increasing

	Ringtone Volume Up
	Call screen icon. The volume of ringtone is increasing
	Ringtone Volume Down
	Call screen icon. The volume of ringtone is decreasing
	VOC status
	Call screen icon.
	OFF - VOC is off.
	ON - VOC is on.

USING THE KEYPAD
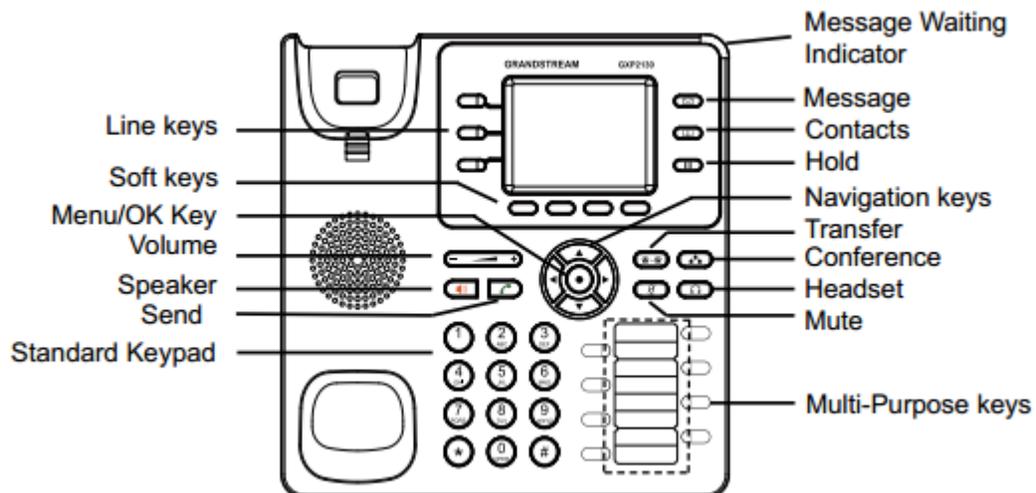
Figure 5: GXP2130 Keyboard
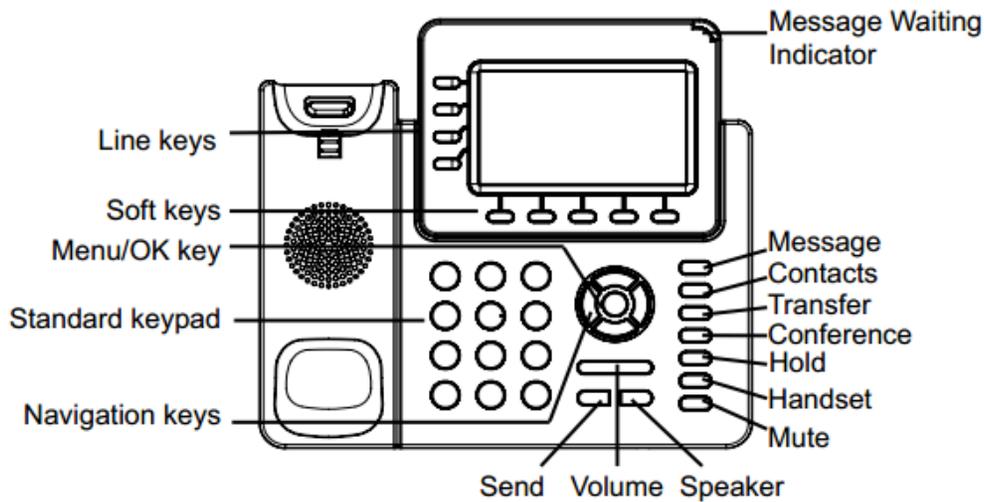
Figure 6: GXP2140 Keyboard
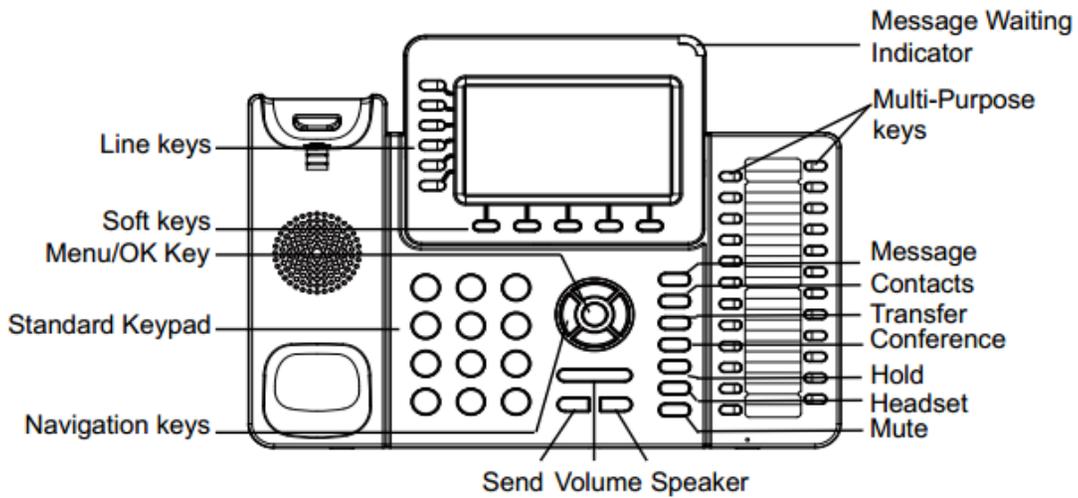
Figure 7: GXP2160 Keyboard

Table 11: GXP2130/GXP2140/GXP2160 Keypad Buttons

	Contacts. Press to view and edit contact information.
	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**.
▲	**Up Navigation key.** In idle screen, press to see the IP.

MAKING PHONE CALLS

HANDSET, SPEAKER AND HEADSET MODE

The GXP2130/GXP2140/GXP2160 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.

MULTIPLE SIP ACCOUNTS AND LINES

GXP2160 can support up to 6 independent SIP accounts; GXP2140 can support up to 4 independent SIP accounts; GXP2130 can support up to 3 independent SIP accounts. Each account is capable of independent SIP server, user and NAT settings. Each of the line buttons is "virtually" mapped to an individual SIP account. In off hook state, select an idle line and the dial tone will be heard.

To make a call, select the line you wish to use. The corresponding LINE LED will light up in green. The user can switch lines before dialing any number by pressing the LINE buttons.

For example: If 2 independent accounts are registered on GXP2130/GXP2140/GXP2160, when LINE 1 is pressed, the LINE 1 LED will light up in green. If LINE 2 is pressed, the LINE 2 LED will light up in green and the subsequent call will be made through SIP account 2.

Incoming calls to a specific account will attempt to use its corresponding LINE if it is not in use. When the "virtually" mapped line is in use, the phone will flash the other available LINE in red. A line is ACTIVE when it is in use and the corresponding LED is red.

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COMPLETING CALLS

There are several ways to complete a call.

- **On hook dialing.** Enter the number when the phone is on hook and then send out.
  - ➢ When the phone is in idle, enter the number to be dialed out;
  - ➢ Take handset off hook; or
    Press Speaker button; or
    Press Headset button with headset plugged in; or
    Select an available LINE key;
  - ➢ The call will be dialed out.
- **Off hook and dial.** Off hook the phone, enter the number and send out.
  - ➢ Take handset off hook; or
    Press Speaker button; or
    Press Headset button with headset plugged in; or
    Press an available LINE key to activate speaker;
  - ➢ You shall hear dial tone after off hook;
  - ➢ Enter the number;
  - ➢ Press SEND key or # to dial out.

- **Predictive dialing.** When dialing numbers, based on the entered digit or digits, the phone will predict and list the candidates of target number. If the target number already saved in phonebook, when enter the first several digits, phone will display a list of the matched numbers. If the target number appears on the list, user could select the number by Up/Down key and dial out. GXP2130/GXP2140/GXP2160 has predefined call feature code (the first digit is *). When user enter * as the first digit of target number, the phone will list all feature codes as candidates.

- **Redial.** Redial the last dialed number.
  - ➢ Take handset off hook; or
    Press Speaker button; or
    Press Headset button with headset plugged in; or
    Press an available LINE key to activate speaker; or
    When the phone is in idle;
  - ➢ Press SEND key, or the REDIAL soft key.

- **Via Call History.** Dial the number logged in phone's call history.
  - ➢ Press MENU button to bring up the main menu;
  - ➢ Enter Call History;
  - ➢ Select the entry you would like to call using the navigation arrow keys;
  - ➢ Press SEND button to dial out.

- **Via Phonebook.** Dial the number from the phonebook.
  - ➢ Press Contacts button;
  - ➢ Under Contacts, enter Local Phonebook/ Broadsoft Phonebook using the navigation arrow key;
  - ➢ Select the contact you would like to call using the navigation arrow key;
  - ➢ Press SEND button to dial the selected contact.

- **Speed Dial from Line Key.** Dial the number configured as Speed Dial on Line Key.
  - ➢ Go to phone's Web GUI->Settings->Programmable Keys, configure the Line Key's Key Mode as Speed Dial. Select the account to dial from, enter the Name and User ID (the number to be dialed out) for the Line Key. Click on "Update" at the bottom of the Web GUI page;
  - ➢ Off hook the phone, or directly press the Speed Dial key to dial out.

- **Call Return.** Dial the last answered call.
  - ➢ Go to phone's Web GUI->Settings->Programmable Keys, configure the Line Key's Key Mode as Call Return. Select the account to dial from, no Name or User ID has to be set on for Call Return;
  - ➢ Off hook the phone, or directly press the Call Return key to dial out.

- **Via Paging/Intercom.**
  - ➢ Take handset off hook; or
    Press Speaker button; or
    Press Headset button with headset plugged in; or
    Press an available LINE key to activate speaker;
  - ➢ You shall hear dial tone after off hook;
  - ➢ Press MENU button to switch the call screen from "Dialing" to "Paging";
  - ➢ Enter the number;
  - ➢ Press SEND key or # to dial out.

Note:

- After entering the number, the phone waits for the No Key Entry Timeout (Default timeout is 4 seconds, configurable via Web GUI) before dialing out. Press SEND or # key to override the No Key Entry Timeout;

- If digits have been entered after handset is off hook, the SEND key will works as SEND instead of REDIAL;

- By default, # can be used as SEND to dial the number out. Users could disable it by setting "User # as Dial Key" to "No" from Web GUI->Account X->Call Settings;

- For Paging/Intercom, if the SIP Server/PBX supports the feature and has Paging/Intercom feature code set up already, users do not necessarily need toggle to paging mode in the call screen. Simply dial the feature code with extension as a normal call.

- When dial out via paging, user can see the "call-info" header contains "answer-after=0" and "the "alert-info" header contains "info=alert-autoanswer;delay=0" in the outgoing INVITE.

- During an active call, user can see call info on LCD: shows the call lasting time; shows contact information if the number already be saved in phonebook. When dialing DTMF, user can press round OK button to switch to call info page.

MAKING CALLS USING IP ADDRESSES

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:

- When phone is at idle state, press any number key or * key to bring up "Onhook Dialing" page;
- Press round menu key or "DirectIP" soft key;
- Input the target IP address (Please see example below) ;
- Press "OK" soft key to dial.

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 (.), the # key represents colon (:). Wait for about 4 seconds and the phone will initiate the call.

Quick IP Call Mode:

The GXP2130/GXP2140/GXP2160 also supports Quick IP Call mode. This enables the phone to make direct IP calls using only the last few digits (last octet) of the target phone's IP address. This is possible only if both phones are under the same LAN/VPN. This simulates a PBX function using the CSMA/CD without a SIP server. Controlled static IP usage is recommended.

To enable Quick IP Call Mode, go to phone's Web GUI->Settings->Call Features, set "Use Quick IP Call Mode" to "Yes". Clicking on "Save and Apply" on the bottom of Web GUI page to take the change. To make Quick IP Call, take the phone off hook first. Then dial #xxx where x is 0-9 and xxx<255. Press # or SEND and a direct IP call to aaa.bbb.ccc.XXX will be completed. "aaa.bbb.ccc" is from the local IP address regardless of subnet mask. The number #xx or #x are also valid. The leading 0 is not required (but it's OK).

For example:

- 192.168.0.2 calling 192.168.0.3 -- dial #3 followed by # or "SEND";
- 192.168.0.2 calling 192.168.0.23 -- dial #23 followed by # "SEND";
- 192.168.0.2 calling 192.168.0.123 -- dial #123 followed by # "SEND";
- 192.168.0.2: dial #3 and #03 and #003 results in the same call -- call 192.168.0.3.

Note:

- The # will represent colon ":" in direct IP call rather than SEND key as in normal phone call;
- If you have a SIP server configured, direct IP call still works. If you are using STUN, direct IP call will also use STUN;
- Configure the "User Random Port" to "No" when completing direct IP calls.

ANSWERING PHONE CALLS

RECEIVING CALLS

- **Single incoming call**. Phone rings with selected ring tone. The corresponding LINE key will flash in red. Answer call by taking handset off hook, or using Speaker/Headset, or pressing the flashing LINE key;

- **Multiple incoming calls**. When another call comes in while having an active call, the phone will produce a Call Waiting tone (stutter tone). The other LINE key will flash in red. Answer the incoming call by pressing the flashing LINE key. The current active call will be put on hold automatically.

DO NOT DISTURB

Do Not Disturb can be enabled/disabled from phone's LCD by following the steps below:

- Press the Menu button and select "Preference" using navigation keys;
- Press Menu button again to get into Preference options;
- When "Do Not Disturb" is highlighted, press Left/Right key to disable/enable DND;
- Press "Save" soft key to save the change.

When Do Not Disturb feature is turned on, the DND icon will appear on the top of the LCD. The incoming call will not be accepted or the call will directly go into voicemail.

DURING A PHONE CALL

CALL WAITING/CALL HOLD

- **Hold**. Place a call on hold by pressing the HOLD button. The active LINE key will blink in green;

- **Resume**. Resume call by pressing the blinking LINE key;

- **Multiple calls**. Automatically place active call on hold or switch between calls by pressing the LINE key. Call waiting tone (stutter tone) will be audible on new incoming call during the active call.

MUTE

During an active call, press the MUTE button to mute/unmute the microphone. The LCD will show the Mute

icon on the top of screen, when the call is muted.

CALL TRANSFER

GXP2130/GXP2140/GXP2160 supports Blind Transfer, Attended Transfer and Auto-Attended Transfer.

- **Blind Transfer**.

  ➢ During the first active call, press TRANSFER and dial the number to transfer to;

  ➢ Press SEND key or # to complete transfer of active call.

- **Attended Transfer**.

  ➢ During the first active call, press LINE key. The first call will be put on hold;

  ➢ Enter the number for the second call in the new line and establish the call;

  ➢ Press TRANSFER;

  ➢ Press the other LINE key which is on hold to transfer the call.

- **Auto-Attended Transfer**.

  ➢ Set "Auto-Attended Transfer" to "Yes" under Web GUI->Settings->Call Features. And then click "Save and Apply" on the bottom of the page;

  ➢ Establish one call first;

  ➢ During the call, press TRANSFER. A new line will be brought up and the first call will be automatically placed on hold;

  ➢ Dial the number and press SEND or # to make a second call. (Once the number is entered, a "Transfer" soft key will show. If "Transfer" soft key is pressed instead of SEND or #, a blind transfer will be performed);

  ➢ Press TRANSFER again. The call will be transferred.

  ➢ For Auto-Attended Transfer, after dialing out the number for the second call, a "Split" soft key will show. If the second call is not established yet (ringing), pressing "Split" will hang up the second call. If the second call is established (answered), pressing "Split" will resume the second call and keep the first call on hold.

Note:

- To transfer calls across SIP domains, SIP service providers must support transfer across SIP domains.

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4-WAY/ 5-WAY CONFERENCING

GXP2130 can host up to 4-way conference call with other parties (PCMU/PCMA). GXP2140/GXP2160 can host up to 5-way conference call.

- **Initiate a conference call**.

  - ➢ Establish calls with 2 or more parties respectively;
  - ➢ While 1 call is active, the other call will be put on hold with its LINE key blinking in green;
  - ➢ Press CONF key;
  - ➢ Press the desired LINE key on hold, the conference will be established;
  - ➢ Repeat the previous 2 steps for all the other parties on hold to join the conference.

- **Cancel Conference**.

  - ➢ If after pressing the CONF key, the user decides not to conference, press Cancel soft key or the current active LINE key (LED in solid green);
  - ➢ This will resume the 2-way conversation with the current line.

- **Split and Re-conference**.

  - ➢ During the conference, press HOLD key. The conference call will be split and the calls will be put on hold separately with the LINE keys blinking in green;
  - ➢ Select 1 LINE key and press to resume the 2-way conversation;
  - ➢ If users would like to re-establish conference call, before 1 separate LINE is selected, press the ReConf soft key right after the conference call is held/split;

- **End Conference**.

  - ➢ Press HOLD key to split the conference call. The conference call will be ended with both calls on hold; Or
  - ➢ Users could press the EndCall soft key or simply hang up the call to terminate the conference call.

GXP2130/GXP2140/GXP2160 supports **Easy Conference Mode**, which can be used combined with the traditional way to establish the conference.

- **Initiate a conference call**.

  - ➢ Establish 1 call;
  - ➢ Press CONF key and a new line will be brought up using the same account;

- Dial the number and press SEND key to establish the second call;
- Press CONF key or press the ConfCall softkey to establish the conference.

- **Join more parties in established conference call**.

  - Establish conference call;
  - Press CONF key and a new line will be brought up using the same account;
  - Dial the number and press SEND key to establish the second call;
  - Press CONF key or press the ConfCall softkey to join the new party in the established conference.

- **Split and Re-conference**.

  - During the conference, press HOLD key. The conference call will be split and both calls will be put on hold separately with 2 LINE keys blinking in green;
  - Select 1 LINE key and press to resume the 2-way conversation;
  - If users would like to re-establish conference call, before 1 separate LINE is selected, press the ReConf softkey right after the conference call is split.

- **Cancel Conference**.

  - If users decides not to conference after establishing the second call, press EndCall softkey instead of the ConfCall softkey/CONF key;
  - This will end the second call and the screen will show the first call on hold.

- **End Conference**.

  - Press HOLD key to split the conference call. The conference call will be ended with both calls on hold; Or
  - Users could press the EndCall softkey or simply hang up the call to terminate the conference call.

Note:
- The party that starts the conference call has to remain in the conference for its entire duration, you can put the party on mute but it must remain in the conversation. Also, this is not applicable when the feature "Transfer on Conference Hang-up" is turned on.
- The option "Disable Conference" has to be set to "No" to establish conference.
- When using **Easy Conference Mode**, use SEND key to dial out the second call instead of using #, even when # could be used as SEND in normal phone calls.

VOICE MESSAGES (MESSAGE WAITING INDICATOR)

A blinking red MWI (Message Waiting Indicator) on the top right corner of the phone indicates a message is waiting. Dial into the voicemail box to retrieve the message by entering the voice mail number of the server or pressing the Voicemail button (Voice Mail User ID has to be properly configured as the voice mail number under Web GUI->Account x->General Settings). An IVR will prompt the user through the process of message retrieval.

SHARED CALL APPEARANCE (SCA)

The GXP2130/GXP2140/GXP2160 phone 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 red-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 navigate to "Settings"->"Programmable Keys" on the web UI and set the line key mode as "Shared Line". If the user requires more shared call appearances, the user can configure multiple line buttons to be "shared line" buttons associated with the account.

CALL FEATURES

The GXP2130/GXP2140/GXP2160 supports traditional and advanced telephony features including caller ID, caller ID with caller Name, call forward and etc.

Table 12: CALL FEATURES

*30	**Block Caller ID** (for all subsequent calls) • Off hook the phone; • Dial *30.
*31	**Send Caller ID** (for all subsequent calls) • Off hook the phone; • Dial *31.
*50	**Disable Call Waiting** • Off hook the phone; • Dial *50.
*51	**Enable Call Waiting** • Off hook the phone; • Dial *51.
*67	**Call with Caller ID Blocked** (per call) • Off hook the phone; • Dial *67 and then enter the number to dial out.
*82	**Call with Caller ID Enabled** (per call) • Off hook the phone; • Dial *82 and then enter the number to dial out.
*70	**Call with Call Waiting Disable** (per Call) • Off hook the phone; • Dial *70 and then enter the number to dial out.
*71	**Call with Call Waiting Enabled** (per Call) • Off hook the phone; • Dial *71 and then enter the number to dial out.
*72	**Unconditional Call Forward**. To set up unconditional call forward: • Off hook the phone; • Dial *72 and then enter the number to forward the call; • Press OK softkey or SEND key.
*73	**Cancel Unconditional Call Forward**. To cancel the unconditional call forward: • Off hook the phone;

	• Dial *73; • Hang up the call.
*90	**Busy Call Forward**. To set up busy call forward: • Off hook the phone; • Dial *90 and then enter the number to forward the call; • Press OK softkey or SEND key.
*91	**Cancel Busy Call Forward**. To cancel the busy call forward: • Off hook the phone; • Dial *91; • Hang up the call.
*92	**Delayed Call Forward**. To set up delayed call forward: • Off hook the phone; • Dial *92 and then enter the number to forward the call; • Press OK softkey or SEND key.
*93	**Cancel Delayed Call Forward**. To cancel the delayed call forward: • Off hook the phone; • Dial *93; • Hang up the call.

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CONNECTING TO DEVICES

The GXP2130/GXP2140/GXP2160 supports EHS headset (Plantronics). GXP2140/2160 is also capable to connect to USB and Bluetooth devices.

EHS HEADSET

The GXP2130/GXP2140/GXP2160 supports normal RJ11 headset and Plantronics EHS headset. To use Plantronics EHS headset, go to the GXP2130/GXP2140/GXP2160 web GUI->**Settings**->**Audio Control**: Headset Type. Select "Plantronics EHS" and reboot the phone to take effect.

1. Connect EHS Headset (Plantronics) to GXP2130/GXP2140/GXP2160. Insert headset connector into the RJ11 headset port on the back of GXP2130/GXP2140/GXP2160;

2. To use headset mode, press headset button 🎧 on the GXP2130/GXP2140/GXP2160. A headset icon 🎧 will show on the GXP2130/GXP2140/GXP2160 status bar.

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. GXP2140/GXP2160 supports Bluetooth Class 2 of version 2.1. On GXP2140/GXP2160, users could connect to cellphones (supporting Bluetooth) via hands free mode or use Bluetooth headset for making calls.

To connect to a Bluetooth device, turn on GXP2140/GXP2160's Bluetooth radio first. The first time when using a new Bluetooth device with the GXP2140/GXP2160, "pair" the device with the phone 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 GXP2140/GXP2160's LCD **Menu**->**System**->**Bluetooth.**

For more details on Bluetooth features, please refer to:
http://www.grandstream.com/gxp2140/bluetooth_white_paper.pdf

USB Connection (GXP2140/GXP2160 only)

GXP2140/GXP2160 is capable to connect to USB drive for importing wallpaper file and saving packets capture files. The basic and advance features about wallpaper application and packets capture are described in "GXP2130/GXP2140/GXP2160 Administration Guide". Please visit http://www.grandstream.com/support to download the latest "GXP2130/GXP2140/GXP2160 Administration Guide".

RESTORE FACTORY DEFAULT SETTINGS

⚠️ **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.

Please follow the instructions below to reset the phone:

- Press MENU button to bring up the keypad configuration menu;
- Select "System" and enter;
- Select "Operations - Factory Reset";
- A warning window will pop out to make sure a reset is requested and confirmed;
- Press the "Yes" soft key to confirm and the phone will reboot. To cancel the Reset, press "No" soft key instead.

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EXPERIENCING THE GXP2130/GXP2140/GXP2160

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 IP phone, it will be sure to bring convenience and color to both your business and personal life.