Grandstream Networks, Inc.

GXP2130/GXP2140/GXP2160/GXP2170/GXP2135

Enterprise IP Phones

User Guide

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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 guide, could void your manufacturer warranty.

WARNING

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

GNU GPL INFORMATION

GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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/sites/default/files/Resources/gxp_gpl_color.tar.gz

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DOCUMENT PURPOSE

This document describes how to configure GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 features via phone's LCD menu and Web GUI menu. The intended audiences of this document are phone administrators. To learn the basic functions of GXP2130/GXP2140/GXP2160/GXP2170/GXP2135, please visit http://www.grandstream.com/support to download the latest "GXP2130 / GXP2140 / GXP2160 / GXP2170/ GXP2135 End User Guide".

This guide covers following topics:

- Product Overview
- Installation
- Getting Started
- Connecting to Devices
- Restore Factory Default Settings
- Experiencing GXP21xx

GUI INTERFACE EXAMPLES

http://www.grandstream.com/sites/default/files/Resources/gxp21xx_web_gui.zip

1. Screenshot of Login Page
2. Screenshots of Status Pages
3. Screenshots of Accounts Pages
4. Screenshots of Settings Pages
5. Screenshots of Network Pages
6. Screenshots of Maintenance Pages
7. Screenshots of Phonebook Pages

CHANGE LOG

This section documents significant changes from previous versions of user manuals for GXP2130/GXP2140/GXP2160/GXP2170/GXP2135. Only major new features or major document updates are listed here. Minor updates for corrections or editing are not documented here.

Firmware Version 1.0.8.47

- No major changes

Firmware Version 1.0.8.46

- Added support for disabling predictive dial feature [Predictive Dialing]
- Added support for missing call indication popup window [Missed Calls Indication]
- Added the ability to hide picture icon on all screen if not set [Hide Profile Picture]
- Added softkey to show/hide VPK label in call screen [Show/Hide Label Support]
- Improved the layout for smaller LCD phones' call screen [Call Screen Improvement]
- Improved attended transfer feature [Call Transfer]
- Added VPK paging support inside call screen [VPK Paging Support inside Call Screen]
- Added support for Up/Down line switching when call screen is under active/overview state [Line Switching in Call Screen]
- Added transfer destination should display who the call was referred by [Call Transfer]
- Enhance Instant Message List page display to match the rest of the menu pages [Instant Messages]
- Added LINE key mode support, coexisted with legacy mode [Line Key Mode Support]
- Added Attended Transfer softkey (AttTrnf) when Blind Transfer is processed [Call Transfer]
- Added ability to take screenshots from the phone [Screenshots]
- Added DND Authorized Number (Whitelist) & Blacklist and other enhancement [Do Not Disturb]
- Added the Web GUI default password warning message with password change shortcut [WebGUI Default Password Warning Message]
- Improve Bluetooth handsfree device connecting process [Bluetooth]
- Added ability to filter characters from dialed numbers [Filter Characters from Dialed Numbers]
- Added ability to enable/disable local call forwarding rules without erasing configured numbers [Call Forwarding Rules Enhancement]

Firmware Version 1.0.7.97

- Added support for more keys (* and #) as send key. [Completing Calls]
- Added ability to choose the dialing account to dial a contact from local phonebook. [Completing Calls]
- Added ability to use MPK to trigger a conference [Virtual Multi-Purpose Keys].
- Added ability to display mobile and home numbers when searching in local phonebook.
- Added option to enable Plantronics EHS headset ringtone [EHS Headset].

Firmware Version 1.0.7.81

- Added target softkey for dialing status [Call Transfer].

- Added target selection for transfer and conference in call screen [Call Transfer].
- Added Transfer destination should display who the call was referred by.
- Added support to accept P-value in string format for VPK mode configuration xml [P-Value for VPK Mode in String Format].
- Added predictive dialing using call history entries [Predictive Dialing from Call History].
- Added more numbers per contact and “Company”” Title”” Job” Field on the Phonebook [Multiple Numbers and Other Info for One Contact in Phonebook].
- Added Capability to allow DIAL softkey to dial the selected predictive dialing number under dialing state.
- Added pre-Dialing search to include Broadsoft directories [Predictive Dialing Search including Broadsoft Directories].
- Added search feature on Broadsoft directories [Search in Broadsoft Directories].

Firmware Version 1.0.7.25

- Added support to stop Screensaver when VPK is active.
- Improve Auto-provision for Vonage server.
- Change default Dial Plan to { x+ | \+x+ | *x+ | *xx*x+ }.
- Added Conference CEI to support UCM conference change.
- Added support to display status detail on LCD screen when Ethernet not connected, account not register or configured.

Firmware Version 1.0.7.15

- Added support for Virtual Multi-Purpose Keys.
- Changed the default provisioning protocol to HTTPS.
- Added support for iLBC and G723.
- Added support to show programmable keys status on web UI.
- Added Blind and Attended Transfer softkey options.

Firmware Version 1.0.6.9

- For GXP2135 only.

Firmware Version 1.0.6.2

- For GXP2170 only.

Firmware Version 1.0.1.19

- Added GXP2130.

Firmware Version 1.0.0.17

- This is the initial version for GXP2140/GXP2160.

WELCOME

Thank you for purchasing Grandstream GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 Enterprise IP Phone. GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 is a state-of-the-art enterprise grade IP phone. GXP2170 features 12 dual-color line keys (can be digitally programmed as up to 48 provisionable BLF/fast-dial keys). GXP2135 features 8 dual-color line keys (can be programmed as up to 32 provisionable BLF/fast-dial keys). GXP2140/GXP2160/GXP2170 features 4.3 inch TFT Color LCD, 5 programmable context-sensitive softkeys, dual Gigabit network ports, integrated PoE and Bluetooth, 5-way conference, and Electronic Hook Switch (EHS). GXP2135 supports 2.8 inch TFT Color LCD, 4 programmable context-sensitive softkeys, 5-way voice conference and EHS with Plantronics headsets. GXP2130 supports 2.8 inch TFT Color LCD, 4 programmable context-sensitive softkeys, 4-way voice conference and EHS with Plantronics headsets. Also, this series can support up to 3 lines for GXP2130, 4 lines for GXP2140, 6 lines for GXP2160, 12 lines for GXP2170, and 8 lines for GXP2135. The GXP2130 / GXP2140 / GXP2160 / GXP2170 / GXP2135 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/GXP2170/GXP2135 supports presence and Busy Lamp Field (BLF) in the Multi-Purpose Keys as well. The GXP2140/GXP2170 is expandable with one to 4 expansion modules. The GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 is the perfect choice for enterprise users looking for a high quality, feature rich multi-line executive IP phone with advanced functionalities and performance.

PRODUCT OVERVIEW

Feature Highlights

The following tables contain the major features of GXP21xx.

Table 1: GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 Features in A Glance

	GXP2130	• 3 lines • 2.8 inch (320x240) TFT color LCD • 4 programmable softkeys • Bluetooth V2.1 (GXP2130v2 only) • 8 programmable Multi-Purpose Keys • 4-way conference
	GXP2140	• 4 lines • 4.3 inch (480x272) TFT color LCD • 5 programmable softkeys • Bluetooth V2.1 • 5-way conference • Expansion board
	GXP2160	• 6 lines • 4.3 inch (480x272) TFT color LCD • 5 programmable softkeys • Bluetooth V2.1 • 5-way conference • 24 programmable Multi-Purpose Keys
	GXP2170	• 12 dual-color line keys that can be digitally programmed as up to 48 provisionable BLF/fast-dial keys • 4.3 inch (480x272) TFT color LCD • 5 programmable softkeys • Bluetooth V2.1 • 5-way conference • Expansion board

	GXP2135	• 8 dual-color line keys that can be digitally programmed as up to 32 provisionable BLF/fast-dial keys • 2.8 inch (320x240) TFT color LCD • 4 programmable softkeys • Bluetooth V2.1 • 5-way conference

Table 2: GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 Comparison Guide

Features	GXP2130	GXP2140	GXP2160	GXP2170	GXP2135
LCD Display	320x240	480 x 272	480 x 272	480 x 272	320x240
LCD Backlight	Yes	Yes	Yes	Yes	Yes
Number of Lines	3	4	6	12	8
Programmable Hard Keys	8	N/A	24	48	32
Programmable Softkeys	4	5	5	5	4
Extension Module	N/A	Yes, up to 4 EXT Boards	N/A	Yes, up to 4 EXT Boards	N/A

GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 Technical Specifications

The following table resumes all the technical specifications including the protocols / standards supported, voice codecs, telephony features, languages and upgrade/provisioning settings for the GXP21xx series.

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, 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	2.8 inch (320x240) TFT color LCD
Bluetooth	Yes, Bluetooth V2.1 (GXP2130v2 only, GXP2130v1 does not support Bluetooth)
Feature Keys	3 line keys with up to 3 SIP accounts, 8 speed-dial/BLF extension keys with dual-color LED, 4 programmable contexts sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for: MESSAGE (with LED indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOLUME+, VOLUME -
Voice Codec	Support for G.729A/B, G.711μ/a-law, G.726, G.722 (wide-band), and 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:100-240 VAC; Output: +12VDC, 0.5A; Integrated Power-over-Ethernet (802.3af)
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 contexts sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for: MESSAGE (with LED indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOLUME+, VOLUME -
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 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:100-240 VAC; Output: +12VDC, 1.0A; 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 contexts sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for: MESSAGE (with LED

	indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOLUME+, VOLUME -
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, 1.0A. 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

Table 6: GXP2170 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	12 line keys with up to 6 SIP accounts or 48 provisionable BLF/fast-dial keys, 5 programmable contexts sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for: MESSAGE (with LED indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOLUME+, VOLUME -
Voice Codec	Support for G.729A/B, G.711μ/a-law, G.726, G.722 (wide-band), 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, news GMI available for advanced custom application development
HD audio	Yes, both on handset and speakerphone
Extension Module	Yes, can power 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 / Wall Mountable	Yes, allow 2 angle positions
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	Universal power adapter included: Input:100-240V; Output: +12V, 1.0A;

Energy Efficiency	Integrated Power-over-Ethernet (802.3af) Max power consumption: 5.4W (without GXP2200EXT) or 9.2W (with 4 cascaded GXP2200EXTs)
Physical	Dimension : 228mm (W) x 206mm (L) x 46.5mm (H). Unit weight: 0.98kg Package weight: 1.55kg
Temperature and Humidity	0 ~ 40ºC (32 ~ 104ºF), 10 ~ 90% (non-condensing)
Package Content	GXP2170 phone, handset with cord, base stand, universal power supply, network cable, Quick Start Guide
Compliance	FCC Part 15 (CFR 47) Class B; EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, EN 60950-1, EN62479, AS/NZS CISPR 22 Class B, AS/NZS CISPR 24, RoHS; UL 60950 (power adapter)

Table 7: GXP2135 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	2.8 inch (320x240) TFT color LCD
Bluetooth	Yes, Bluetooth V2.1
Feature Keys	8 line keys with up to 4 SIP accounts or 32 provisionable BLF/fast-dial keys, 4 programmable contexts sensitive softkeys, 5 navigation/menu keys, 11 dedicated function keys for: MESSAGE (with LED indicator), PHONEBOOK, TRANSFER, CONFERENCE, HOLD, HEADSET, MUTE, SEND/REDIAL, SPEAKERPHONE, VOLUME+, VOLUME -
Voice Codec	Support for G.729A/B, G.711μ/a-law, G.726, G.722 (wide-band), 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, 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, news GMI available for advanced custom application development
HD audio	Yes, both on handset and speakerphone
Base Stand / Wall Mountable	Yes, allow 2 angle positions

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
Physical	Dimension : 228mm (W) x 206mm (L) x 46.5mm (H). Unit weight: 0.98kg Package weight: 1.55kg
Temperature and Humidity	0 ~ 40ºC (32 ~ 104ºF), 10 ~ 90% (non-condensing)
Package Content	GXP2135 phone, handset with cord, base stand, universal power supply, network cable, Quick Start Guide
Compliance	FCC Part 15 (CFR 47) Class B; EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, EN 60950-1, EN62479, AS/NZS CISPR 22 Class B, AS/NZS CISPR 24, RoHS; UL 60950 (power adapter)

INSTALLATION

Equipment Packaging

Table 8: GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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 9: GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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. (only on GXP2140/GXP2160/GXP2170)
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 (only on GXP2140/GXP2170)
Power Jack	12V DC Power connector port

To set up the GXP2130/GXP2140/GXP2160/GXP2170/GXP2135, 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/GXP2170 is expandable with GXP2200EXT modules. GXP2140/GXP2170 supports up to 4 extension modules, adding 160 fully programmable phone extensions to the phone.

GXP2200EXT board package contains:

Table 10: 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/GXP2170 and is not included in the GXP2140/GXP2170 box.

To set up the GXP2200EXT board with the GXP2140/GXP2170, please follow the steps below:

1. On the back of the GXP2140/GXP2170 and the GXP2200EXT, there are slots for connector plate. Attach the connector plate between the slots for GXP2140/GXP2170 and the GXP2200EXT;
2. Apply the screws provided and securely tighten them in (See **Figure 1: GXP2140/GXP2170 Back View with GXP2200EXT**).
3. Connect the GXP2200EXT board to the GXP2140/GXP2170 via EXT port using the RJ11-RJ11 cable provided;
4. Install the phone stand on the GXP2140/GXP2170 and the GXP2200EXT board;
5. Power up the GXP2140/GXP2170. 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.

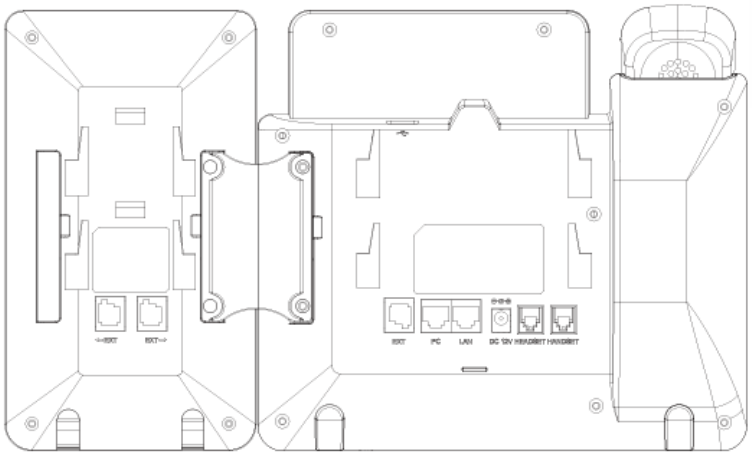

Figure 1: GXP2140/GXP2170 Back View with GXP2200EXT

The GXP2200EXT board can be configured via the web GUI of the GXP2140/GXP2170 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/GXP2170, please refer to the GXP2200EXT board user manual:
http://www.grandstream.com/support

Safety Compliances

The GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 phone complies with FCC/CE and various safety standards. The GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 power adapter is compliant with the UL standard. Use the universal power adapter provided with the GXP2130 / GXP2140 / GXP2160 / GXP2170/GXP2135 package only.

The manufacturer's warranty does not cover damages to the phone caused by unsupported power adapters.

Warranty

If the GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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.

GETTING STARTED

Idle Screen

GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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/GXP2170/GXP2135.

Figure 2: GXP2130 Idle Screen

Figure 3: GXP2140 Idle Screen

Figure 4: GXP2160 Idle Screen

Figure 5: GXP2170 Idle Screen

Figure 6: GXP2135 Idle Screen

The following table describes the items displayed on GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 idle screen.

Table 11: 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 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/GXP2170/GXP2135, pressing most left softkey (switch screen) will toggle among default idle screen, weather information, currency information and Grandstream Upcoming Events; • **History** Shows up all the call history, including “All”, “Answered Calls”, “Dialed Calls”, “Missed Calls”, and “Transferred Calls”.

	• **ForwardAll** Unconditionally forwards the phone line (account 1) to another phone. • **Redial** Redials the last dialed number when there is existed dialed call log. **Note:** If GMI application is used on GXP2130/GXP2140/GXP2160/GXP2170/GXP2135, 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. • **Backspace** Delete the number before dialing out. • **Answer** Answers the incoming call when the phone is ringing. • **Reject** Rejects the incoming call when the phone is ringing. • **Forward** Forward 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 when device integrated with UCM6xxx)	**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.

Features: On UCM: Users need to enable “Keep-alive” option for the registered account.

- **Features**

  When enabled, Do Not Disturb, Call Forwarding and other call features can be used via the local feature codes on the phone. Otherwise, the provisioned feature codes from the server will be used. User configured feature codes will be used only if server provisioned feature codes are not provided. And once feature codes are configured, either via server provisioning or local setting, a softkey named “Features” will show on the LCD screen.

Table 12: GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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. (GXP2130v2/GX2140/GXP2160/GXP2170/GXP2135) OFF - Bluetooth icon disappears ON - Bluetooth icon appears Paired – Bluetooth icon turns bright
	USB Status. (GX2140/GXP2160/GXP2170) 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

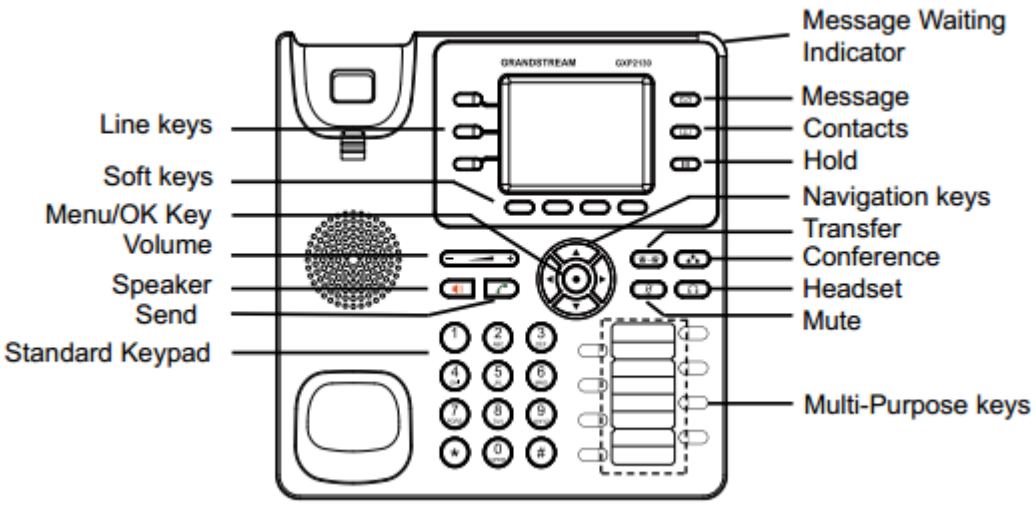

Figure 7: GXP2130 Keyboard

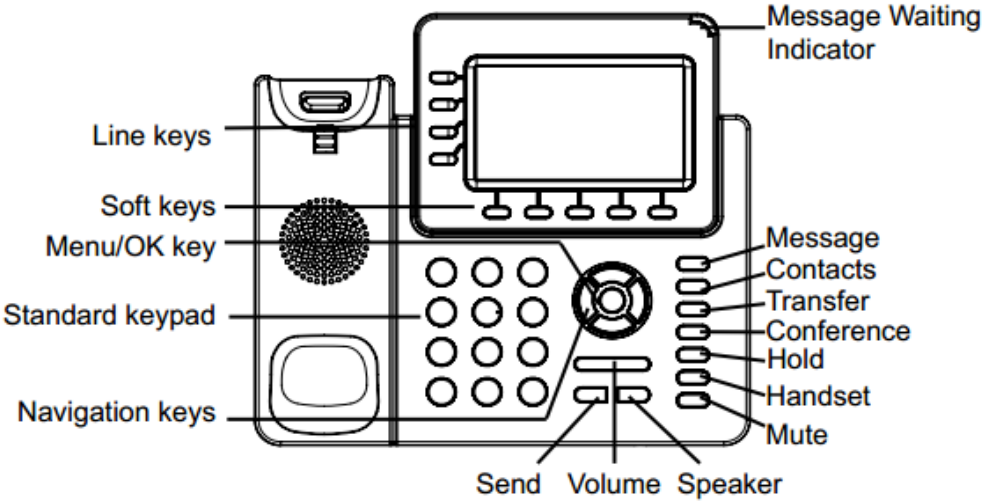

Figure 8: GXP2140 Keyboard

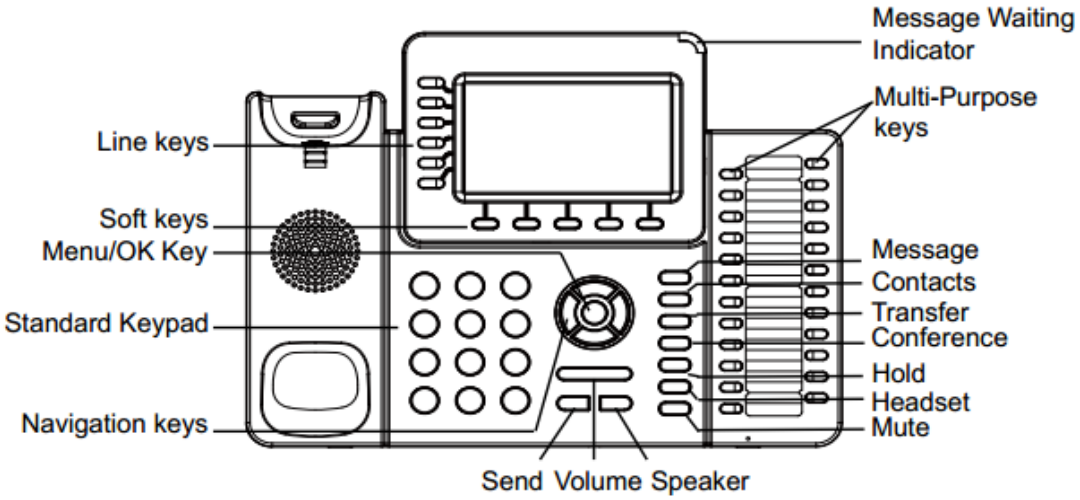

Figure 9: GXP2160 Keyboard

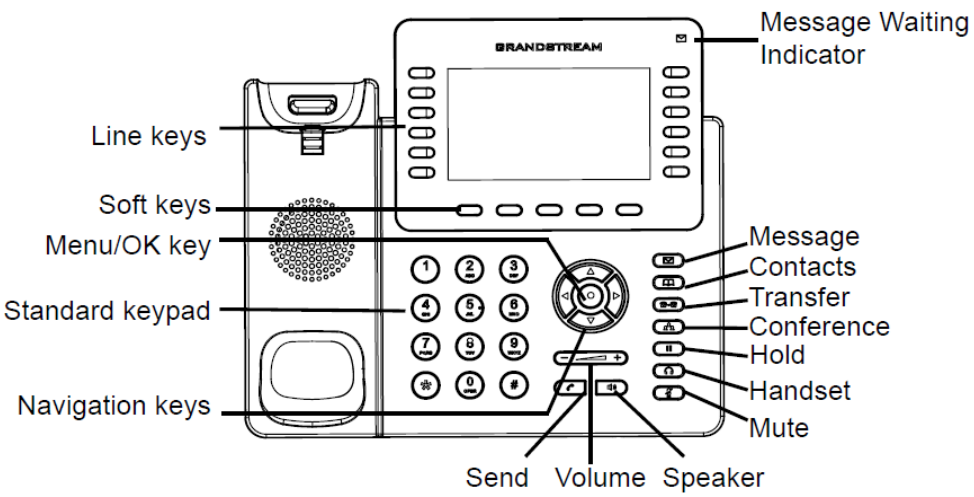

Figure 10: GXP2170 Keyboard

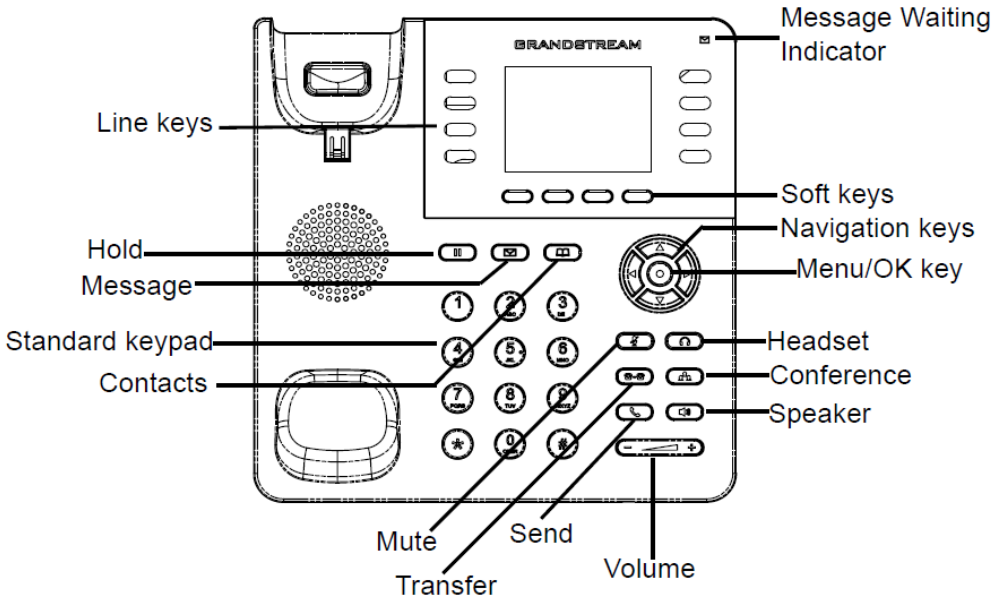

Figure 11: GXP2135 Keyboard

Table 13: GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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/GXP2170/GXP2135 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/GXP2170 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 / GXP2170/GXP2135, 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.

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, * or # keys 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/GXP2170/GXP2135 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 softkey.

- **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;
    Note: Users can press on “Edit / Dial” to edit the phone number and choose one account to dial that number.
  - 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 must 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,* or # keys 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 is already 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" softkey;
- Input the target IP address (Please see example below);
- Press "OK" softkey 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/GXP2170/GXP2135 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.

Virtual Multi-Purpose Keys

Web UI Configuration

Users can find new Virtual Multi-Purpose Keys (VPK) configuration under phone's web UI->Settings->Programmable Keys->Virtual Multi-Purpose Keys tab. It is recommended to select "Reset" on this page before configuring VPK here. By default, all fixed VPKs are listed.

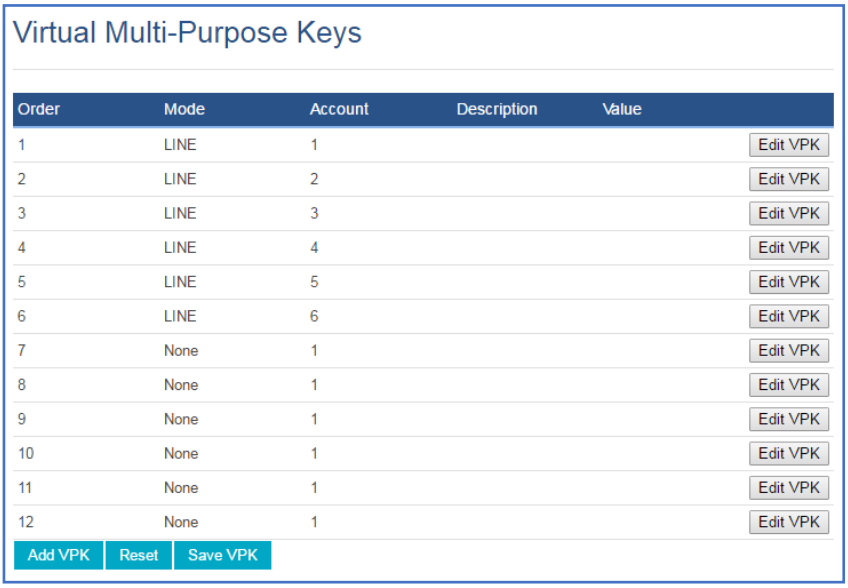

Figure 12: VPK Page

Click on "Edit VPK" for the line (fixed VPK) you would like to configure. A new window will pop up for VPK configuration. Users can configure Mode, Account, Description and Value for the VPK. Up to 20 mode options can be selected for the VPK. Once done, press "Save" on this window and press "Save VPK" on the bottom of the Virtual Multi-Purpose Keys page again to apply the change.

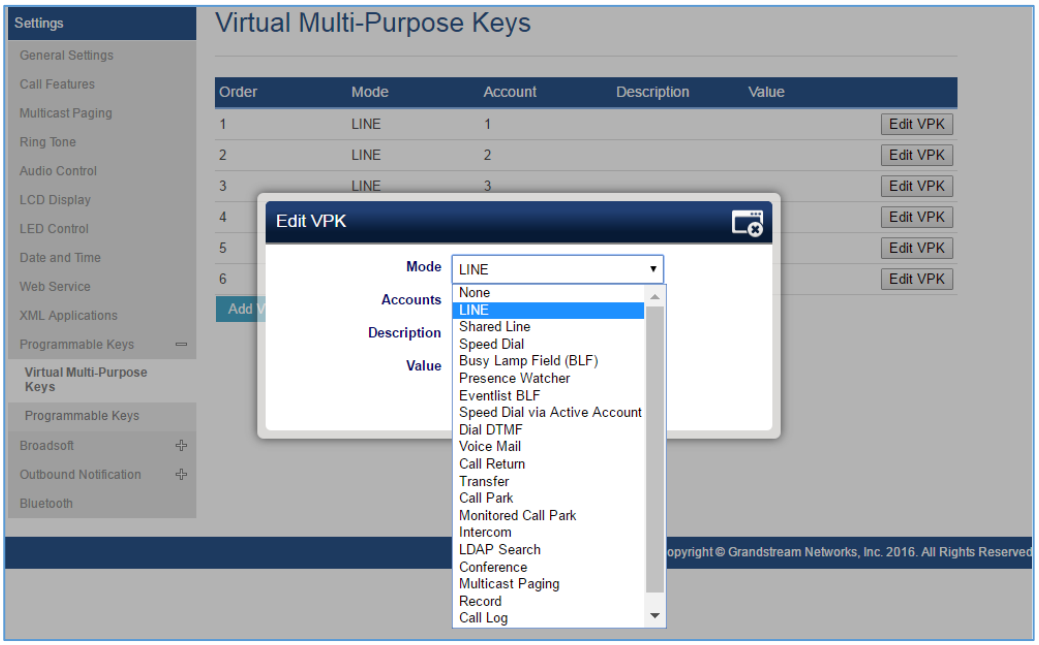

Figure 13: Edit VPK - Fixed VPK

If users would like to configure more VPKs than the ones displayed on the page, the users can click on "Add VPK" to configure dynamic VPK. The dynamic VPK supports up to 17 mode options.

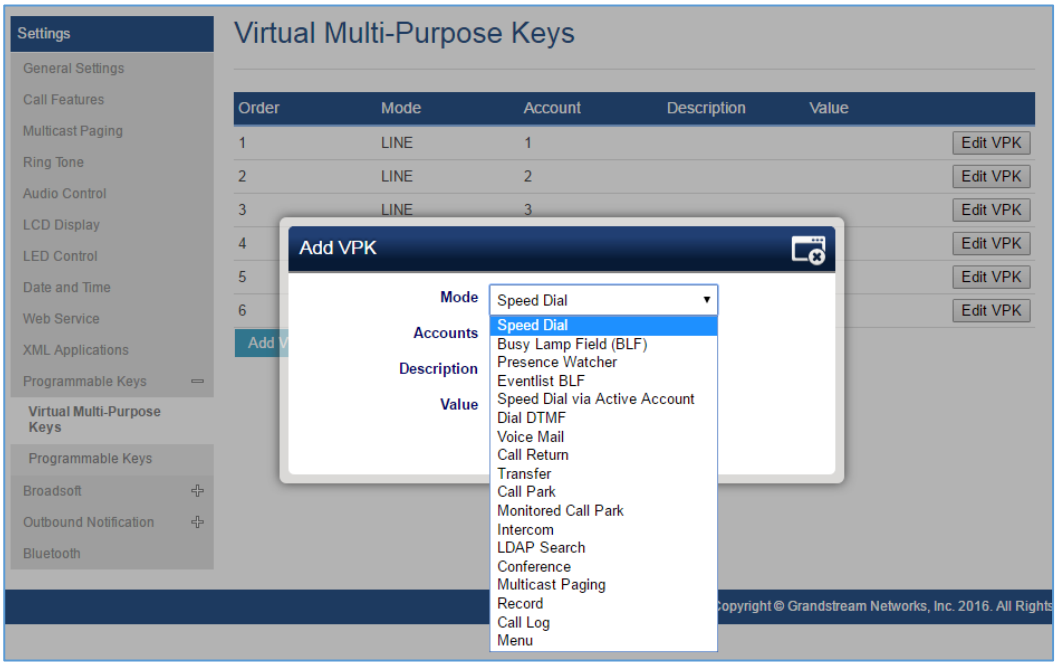

Figure 14: Edit VPK - Dynamic VPK

Please note:

1. Dynamic VPK does not support LINE and Shared LINE mode. These two mode options are only available for fixed VPKs.
2. Dynamic VPK does not support NONE mode. If users do not need this VPK, click on "Edit VPK" for it and select "Delete" to remove this VPK.

3. All settings require user to click on “Save” on the prompted window and “Save VPK” button on the bottom of Virtual Multi-Purpose Keys page to take effect.

P-Value for VPK Mode in String Format

Table 14: VPK Modes in String Format

Mode Name	Mode String	Mode P-Value
None	None	-1
Default	Line	0
Shared Line	Shared line	1
Speed Dial	Speed dial	10
Busy Lamp Field	BLF	11
Presence Watcher	presencewatcher	12
Eventlist BLF	eventlistblf	13
Speed Dial via Active Account	speeddialaa	14
Dial DTMF	dialdtmf	15
Voice Mail	voicemail	16
Call Return	callreturn	17
Transfer	transfer	18
Call Park	callpark	19
Intercom	Intercom	20
LDAP search	Ldap Search	21
Conference	Conference	22
Multicast Paging	Multicast paging	23
Record	Record	24
Call Log	Call log	25
Monitored Call Park	Monitoredcp	26
Menu	Menu	27
XML Application	Xmlapp	28
Information	Information	29
Message	message	30

The string could be capital or lower case letters, but there must be no “space” in between. For example, in the cfg.xml, “Transfer” or “transfer” is the same as “18”, it will configure Virtual Multi-Purpose Key 3 as transfer mode.

```
<?xml version="1.0" encoding="UTF-8" ?>

<gs_provision version="1">
  <config version="1">

    <P1363>transfer</P1363>
    <P1364>2</P1364>
    <P1465>TEST</P1465>
    <P1466>7777</P1466>

    </config>
</gs_provision>
```

Figure 15: Line Key as Transfer Mode

LCD Indication and Configuration

The configured fixed VPKs are displayed next to the corresponding line. If dynamic VPKs are configured, the users can see a page number shown on the upper left corner on the LCD.

The following figures show page 1 and page 2 of the VPKs on LCD. Pressing “RIGHT” arrow key or “Next” softkey will switch to the next page; pressing “LEFT” arrow key will switch back to the previous page.

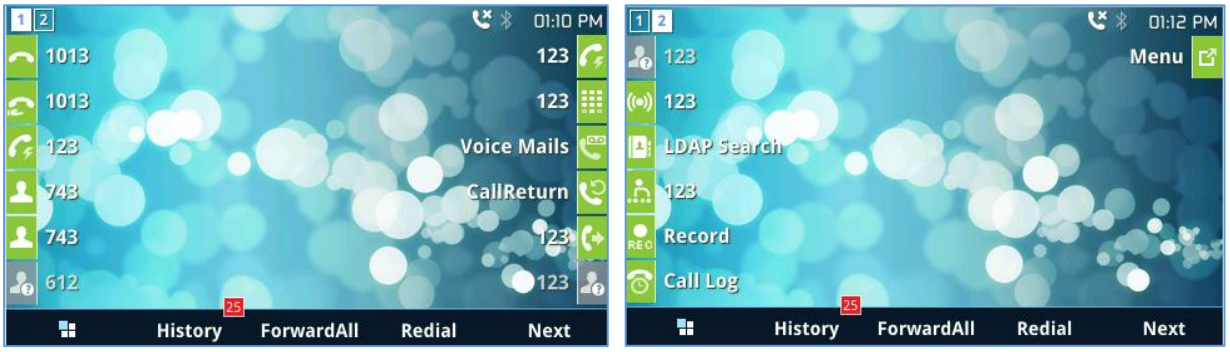

Figure 16: VPK - LCD Indication

The users could also edit and add VPK from LCD.

1. To edit (fixed) VPK, press and hold the line key for about 4 seconds, a configuration window will pop up for the user to configure.
2. To add (dynamic) VPK, press and hold the RIGHT arrow key for about 4 seconds, a configuration window will pop up for the user to configure.

Up to 20 modes can be supported on fixed VPK and up to 17 modes can be supported on dynamic VPK. Each mode is indicated by a different icon on the LCD and the icon will be different when in different status.

Please find the icon indications below for different mode of VPK.

Table 15: VPK Modes Icon Indications

VPK Mode	State	Icon	LED Status
LINE	Unregistered (No IM, Voice mail, No Call Forward)		OFF
	Registered + Idle (No IM, Voice mail, No Call Forward)		OFF
	Unregistered + IM + Voice mail		OFF
	Registered + IM + Voice mail		OFF
	Unregistered + IM (No Voice mail)		OFF
	Registered + IM (No Voice mail)		OFF
	Unregistered + Voice Mail (No IM)		OFF
	Registered + Voice Mail (No IM)		OFF
	Unregistered + Call Forward All (No IM, No Voice Mail)		OFF
	Registered + Call Forward All (No IM, No Voice Mail)		OFF
	Unregistered + Call Forward Delay + Call Forward Busy (No IM, No Voice Mail)		OFF
	Registered + Call Forward Delay + Call Forward Busy (No IM, No Voice Mail)		OFF
	Unregistered + Call Forward Delay (No IM, No Voice Mail, No Call Forward Busy)		OFF
	Registered + Call Forward Delay (No IM, No Voice Mail, No Call Forward Busy)		OFF

	Unregistered + Call Forward Busy (No IM, No Voice Mail, No Call Forward Delay)		OFF
	Registered + Call Forward Busy (No IM, No Voice Mail, No Call Forward Delay)		OFF
	Registered + Ringing		Flashing RED
	Registered + On Hold		Flashing GREEN
	Registered + Connected + Incoming Call		GREEN
	Registered + Connected + Outgoing Call		GREEN
Shared Line	Unregistered		OFF
	Registered + Not support SCA Call-info header		OFF
	Registered + Not support SCA or SCA Failed		OFF
	Registered + Idle		OFF
	Registered + Seized		RED
	Registered + Processing		Flashing GREEN
	Registered + Alert		Flashing RED
	Registered + Hold by user		Flashing GREEN
	Registered + Hold by the other party		Flashing RED
	Registered + Connected		GREEN
BLF/ Eventlist BLF	Offline, Unknown		OFF

	Terminated		GREEN
	Proceeding		RED
	Ringing (Early)		Flashing RED
	Trying		Flashing GREEN
	Confirmed		RED
Presence Watcher	Offline, Unknown		OFF
	Available		GREEN
Handsfree	Unpair		OFF
	Paired, but not connected		OFF
	Connected		OFF
Speed Dial	Account Unregistered		OFF
	Account Registered		OFF
Speed Dial Via Active Account			OFF
Dial DTMF			OFF
Call Return			OFF
Transfer	Account Unregistered		OFF

	Account Registered		OFF
Call Park	Account Unregistered		OFF
	Account Registered		OFF
Intercom	Account Unregistered		OFF
	Account Registered		OFF
LDAP Search			OFF
Multicast Paging			OFF
Record	Idle		OFF
	Recording		Flashing
Call Log			OFF
Menu			OFF
Voice Mail	Account not registered		OFF
	Account Registered (No new voice mail)		OFF
	Account Registered (Have new voice mail)		OFF

Please note that no matter how each line is configured on the idle screen, all the lines in call screen will keep line or shared line displayed for the corresponding accounts. For example, even if the user has configured all lines as VPK (with non-LINE mode), he/she can still use the configured account to dial out by Offhook or pressing SPEAKER, HEADSET or any other unconfigured LINE key to go to call screen.

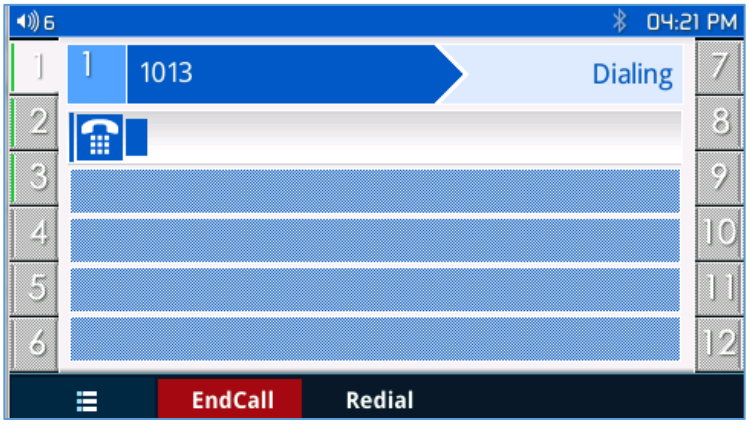

Figure 17: Dial Screen

When user is in call screen (during a call), he/she can press softkey to switch back to VPK screen.

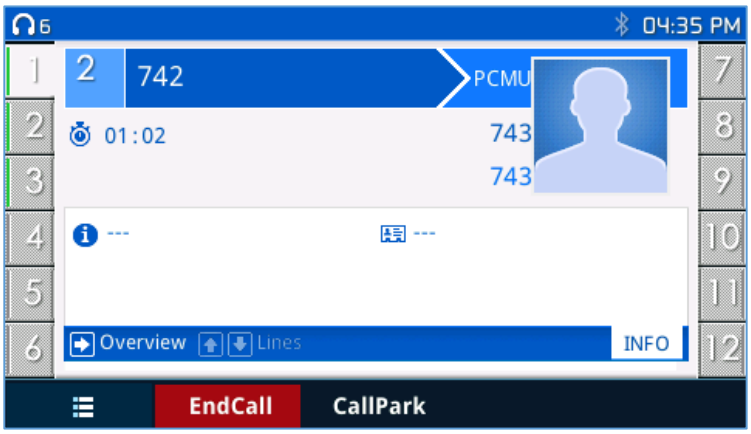

Figure 18: Making Call

When the user is in VPK screen during a call, he/she can press softkey or corresponding line key to switch back to call screen.

Predictive Dialing from Call History

Functionality

Phone search in call history entries, and if the entered digits match some call history entries, list of entries should be displayed with corresponding names.

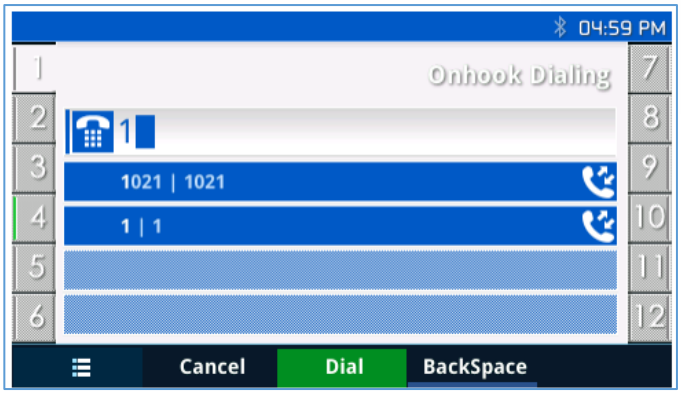

Figure 19: Predictive Dialing

Predictive Dialing Search including Broadsoft Directories

Web configuration

Users can configure Broadsoft XSI directories correctly from Web GUI under Settings –> Broadsoft –> Broadsoft Directories.

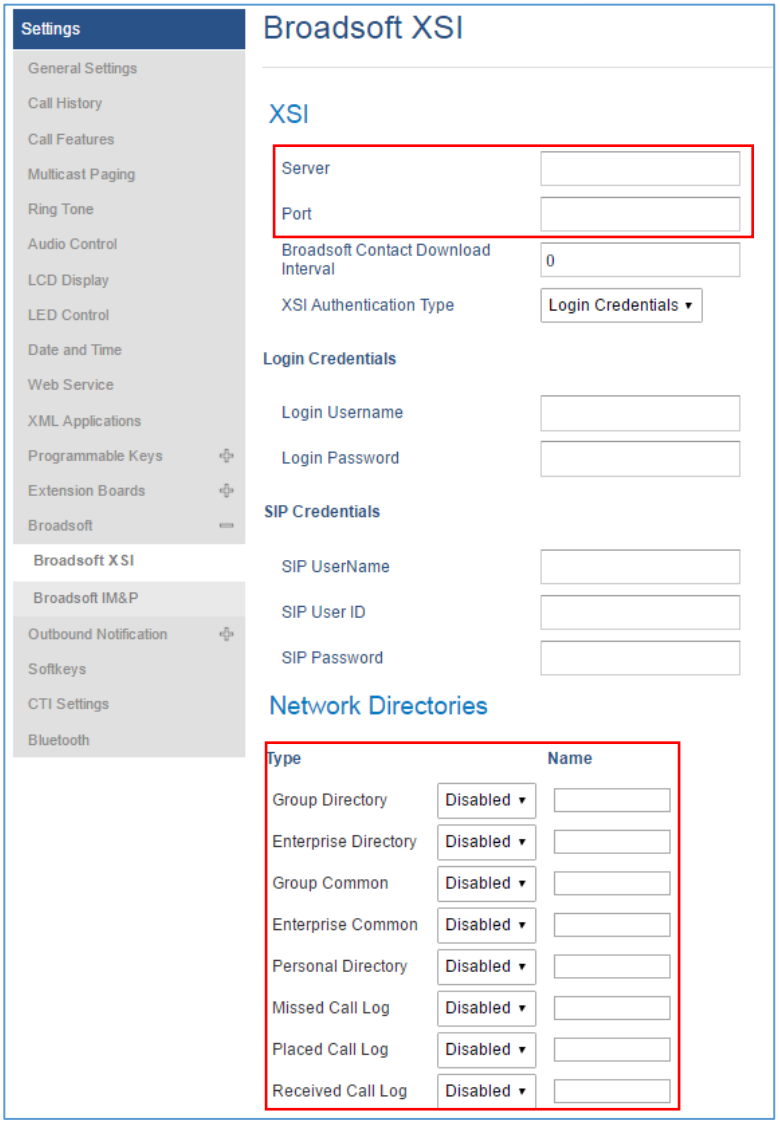

Figure 20: Predictive Dialing - Search

Functionality

Phone can predict possible contacts information from Broadsoft XSI directories when users dials a number. Users can select the predictive dialing number to dial out even complete number is not typed. Predictive numbers will be shown if Broadsoft XSI directory information is loaded after pressing the related number

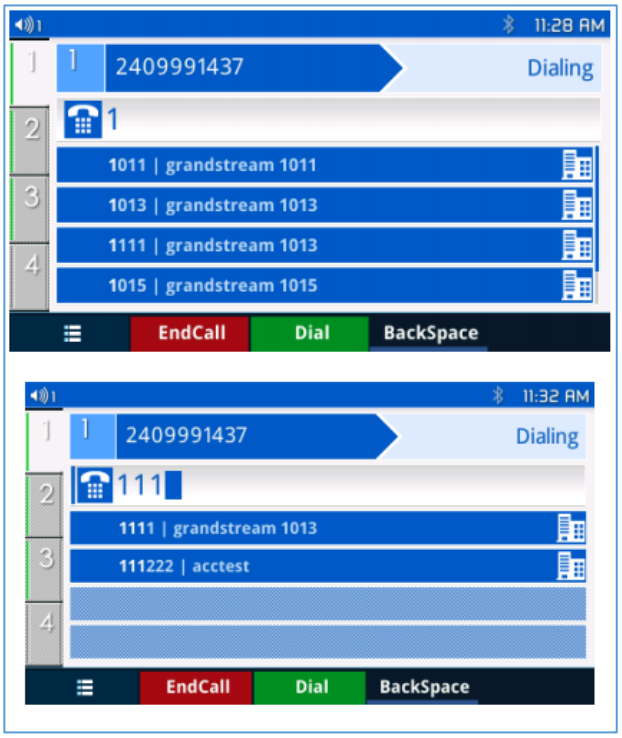

Figure 21: Predictive Dialing from BS XSI Directories

Multiple Numbers and Other Info for One Contact in Phonebook

Functionality

User can add Phone type in phonebook.xml to add other phone type besides existing “Work”,”Home” and “Cell”. Here is an example for the phonebook.xml:

```
<AddressBook>
<Contact>
<id>1</id>
<FirstName>abc</FirstName>
<LastName>def</LastName>
<JobTitle>jobtitle</JobTitle>
<Frequent>0</Frequent>
<Phone type="type">
<phonenumber>4444</phonenumber>
<accountindex>0</accountindex>
</Phone>
<Phone type="type">
<phonenumber>5555</phonenumber>
<accountindex>0</accountindex>
</Phone>
<Phone type="Work">
<phonenumber>1111</phonenumber>
```

```
<accountindex>0</accountindex>
</Phone>
<Phone type="Home">
<phonenumber>2222</phonenumber>
<accountindex>0</accountindex>
</Phone>
<Phone type="Cell">
<phonenumber>3333</phonenumber>
<accountindex>0</accountindex>
</Phone>
<Primary>1</Primary>
<Department>department</Department>
<Job>job</Job>
<Title>title</Title>
<Company>company</Company>
</Contact>
</AddressBook>
```

On the display of the contact on LCD of the phone will shows as follows:

Figure 22: Local Phonebook - Contact Information

User can also input the “Company” “Title” “Job” filed through the phonebook.xml in the previous example or on the LCD of the phone like following example:

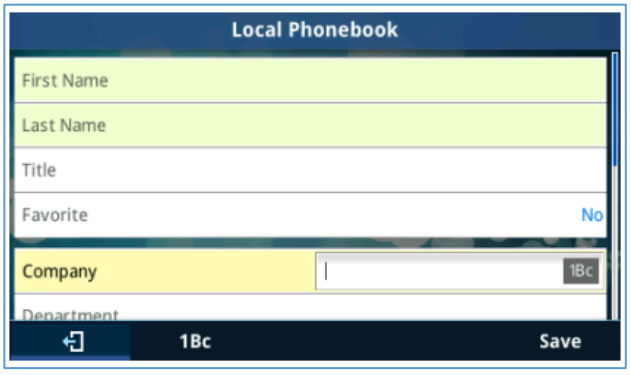

Figure 23: Local Phonebook - Company/Title/Job Fields

Search in Broadsoft Directories

Functionality

User can search from the Broadsoft directories when the user input the search content in the search form.

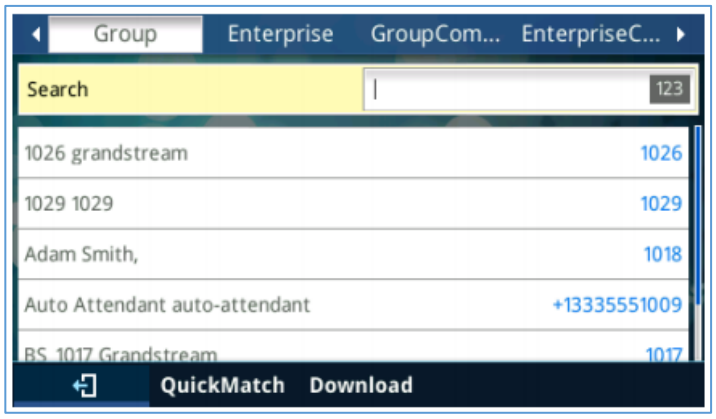

Figure 24: Search in Broadsoft Directories

The matching list will show as follows:

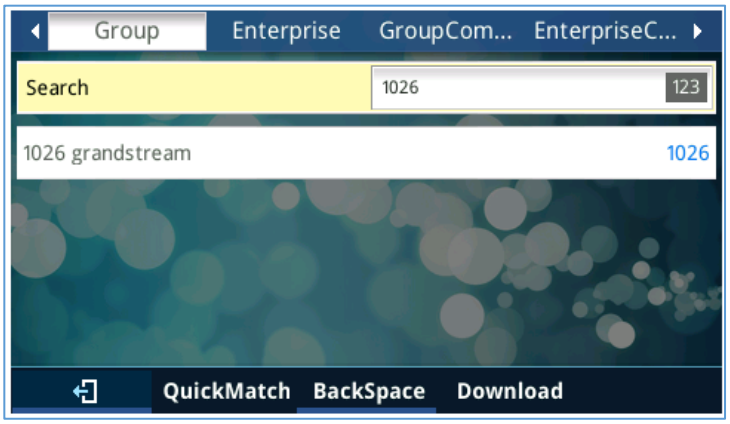

Figure 25: Search in Broadsoft Directories – Matching List

Filter Characters from Dialed Numbers

After downloading phonebook, when dialing a number from the contacts, the number may include special characters such as “,”, “- “, or space in between numbers.

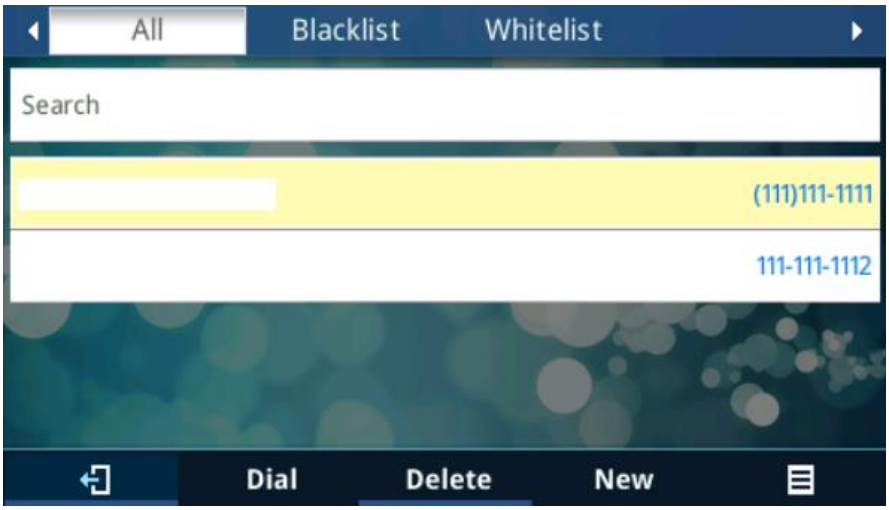

Figure 26: Contact Numbers With Special Characters

When pressing Dial softkey directly, the phone will filter out the special characters and make the calls send out properly.

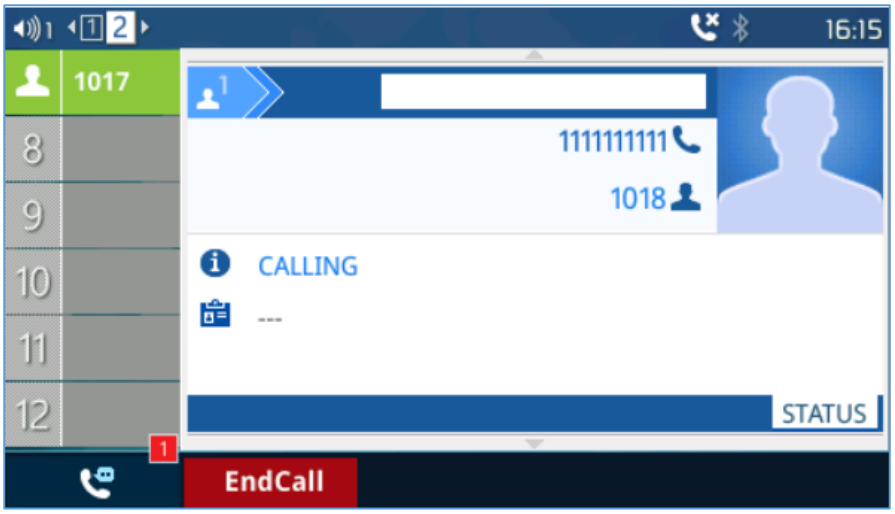

Figure 27: Call with Filtered Characters

Show/Hide Label Support

Labels shown on the side of the LCD screen take space and in some cases narrow information displayed on the screen, using the “Show/Hide Label” users can hide the entire label to free up more space on the screen to see more display of either phone numbers or names.

The result should look like the following:

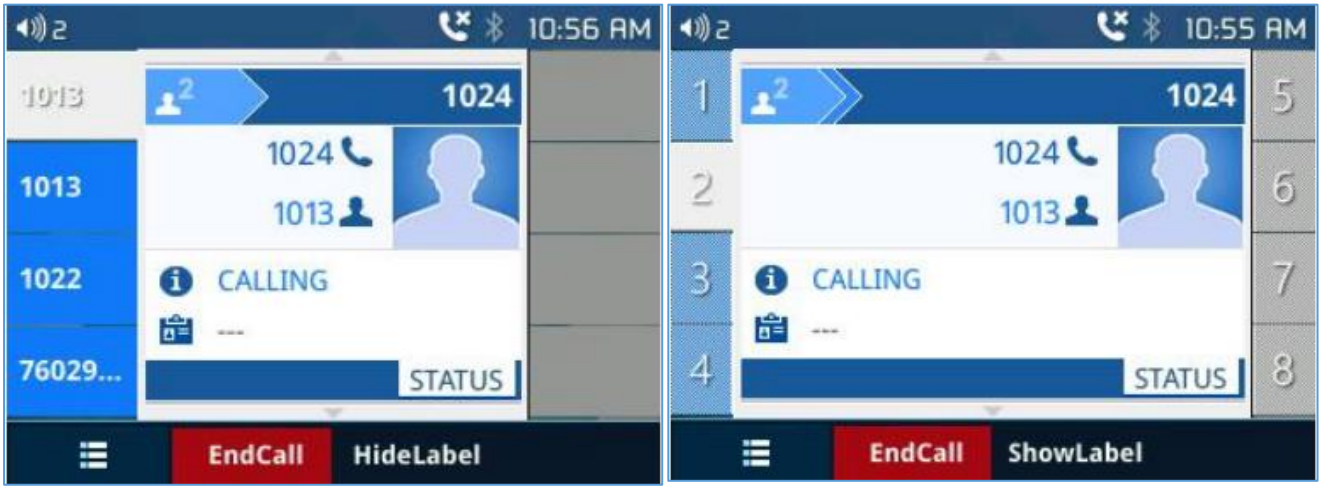

Figure 28: Show/Hidden Labels

Predictive Dialing

This feature allows users to enable/disable predictive dialing, when it is disabled, user will not see and predictive number while dialing as shown in figures below.

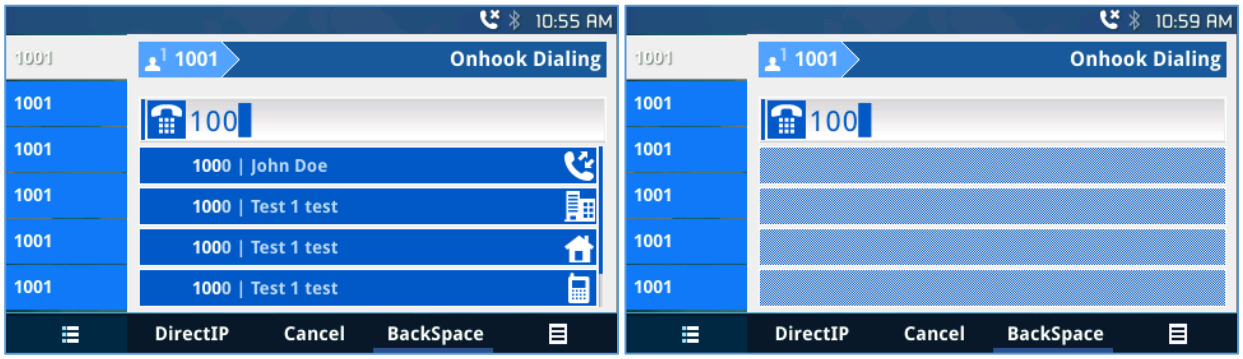

Figure 29: Predictive Dialing

Hide Profile Picture

When the contact picture is not set, the GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 will remove the picture from the LCD screen to leave more space for the number and name displayed.

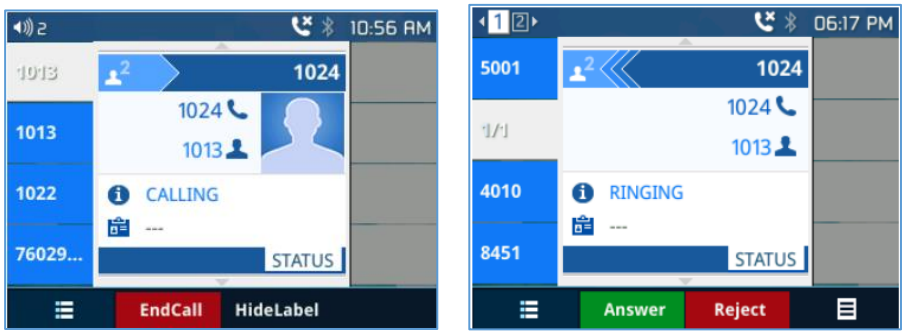

Figure 30: Hide Profile Picture

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 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.
- **Ring Group Call**. If the phone is inside a Ring Group, when the SIP server receives a call to the Ring Group, all phone will start ringing, once a phone answers the call, a missed call notification will pop up on all phones. The GXP21XX Series support reason header, which allows the phones not to log a missed call if it is answered elsewhere. The following message will be included in the CANCEL SIP message received by the phone for notifying it that another user answers the call.

  Reason: SIP;cause=200;text="Call completed elsewhere"

Call Screen Improvement

If a text contains more than one line, it will slide from right to left in order to display the full information without being cut, as shown on the figure below.

Figure 31: Text sliding

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” softkey to save the change.

When Do Not Disturb feature is turned on, it will allow users to ban phone number by adding the number into the blacklist, or on the other hand, allow phone numbers to come in during DND mode by adding the number into the whitelist.

This can be done from the webGUI or under "Phonebook > Contacts" by adding a user into either the "Blacklist" or "whitelist" as shown below.

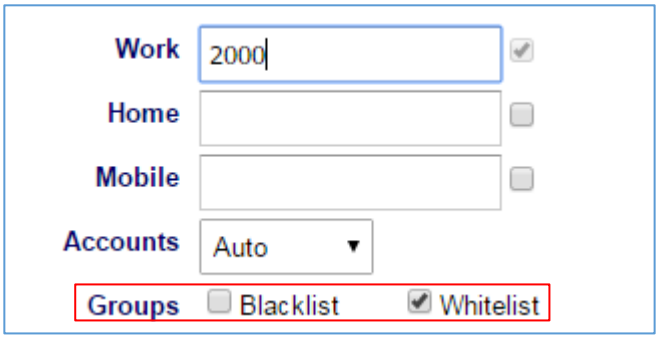

Figure 32: Black/White List

Or users can add a contact to "Blacklist" or "Whitelist" from the phone LCD under "Menu > Contact > Local Phonebook" as shown below.

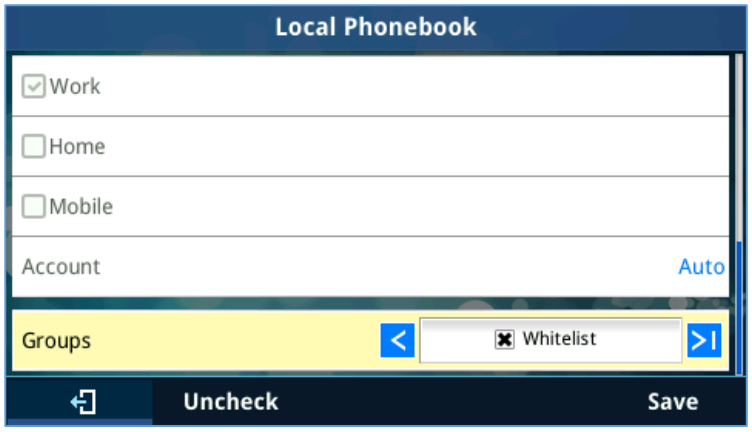

Figure 33: Black/White List

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/GXP2170/GXP2135 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**.

  - **When set to "Static"**

  - ➢ 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.

  - **When set to "Dynamic"**
  - ➢ 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.

When choosing "Dynamic", press Transfer softkey, you will enter this page:

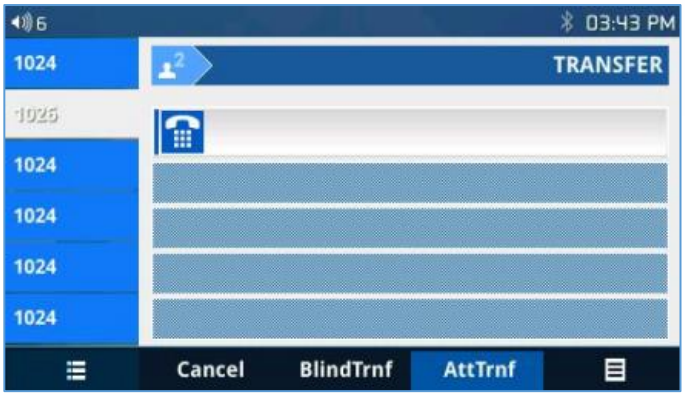

Figure 34: Dynamic Attended Transfer

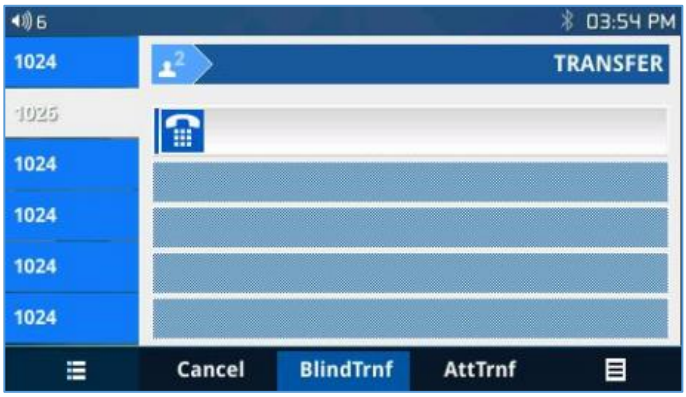

Figure 35: Static Attended Transfer

- **Call Transfer - Target Selection**

Using the target selection feature, users can realize the following function:

1) Add a new softkey "Target" under transfer/conference action page.
2) When click on the softkey, it will take user to a target selection page in which user can choose other possible transfer/conference targets (e.g. Local/BS Phonebook, Local/BS Call History, LDAP, Smart VPK List, or connected lines)
3) When accessing Local/BS Phonebook and Local/BS Call History page, the softkey will show limited options (e.g. Dial) when phone is under busy state to make it easier for user to perform the dialing task.
4) When accessing Smart VPK List, the phone will display the list of the VPK targets which are allowed to be used as the transfer/conference target based on the current account.
5) When accessing Line, the phone will list the lines which are available to be used for transfer/conference.

- **Examples**

a) Under Transfer/Conference screen

A new softkey “Target” is added under transfer/conference action page.

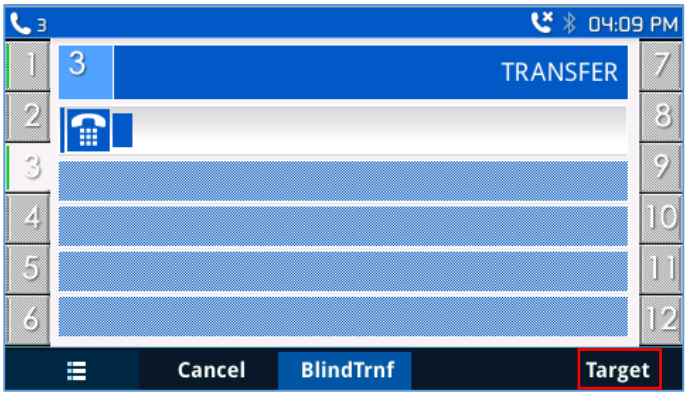

Figure 36: Transfer Action Page

Figure 37: Conference Action Page

When clicking on the softkey, it will take user to a target selection page in which user can choose other possible transfer/conference targets.

b) Under target selection page screen

Target selection page provides a list of possible transfer/conference targets.

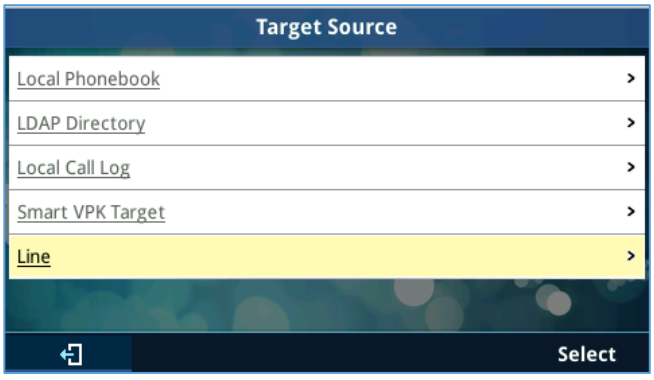

Figure 38: Target Source Page

User can use up/down key to select target from list and use menu key or “Select” softkey to choose the target. By selecting Local/Broadsoft Phonebook, Local/Broadsoft Call Log and LDAP Directory, LCD will display according menu page. Also, in these pages, softkey will show limited options (e.g. Dial) to make it easier for user to perform the dialing task.

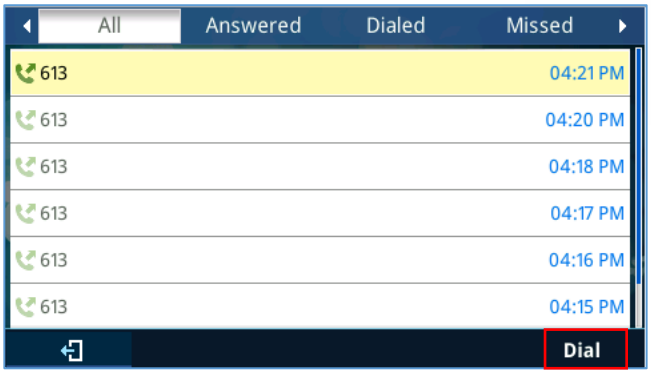

Figure 39: Call History Page

By selecting “Smart VPK Target”, a list of available VPK for transfer/conference will be shown as bellow. User can use up/down key or “select” softkey to choose item to use.

Available VPK contains VPK with mode as below:

- Speed Dial (current account)
- Speed Dial via Active Account (any account)
- BLF or Eventlist BLF (current account)
- Presence (current account)

Specially, for BLF/Eventlist BLF/Presence, an icon with status will be shown on the left side of the item. Icon here contains 3 types based on monitoring state:

- Unknown : Question Mark
- Busy : RED
- Available : GREEN

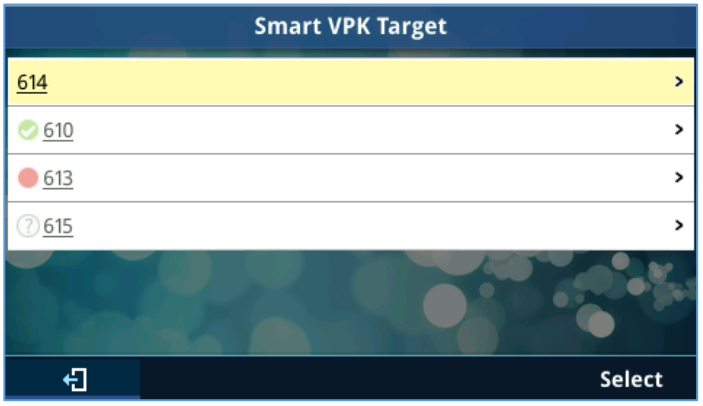

Figure 40: Smart VPK Target Page

By selecting “line”, a list of available line for transfer/conference will be shown as bellow. User can use up/down key or “select” softkey to choose item to use.

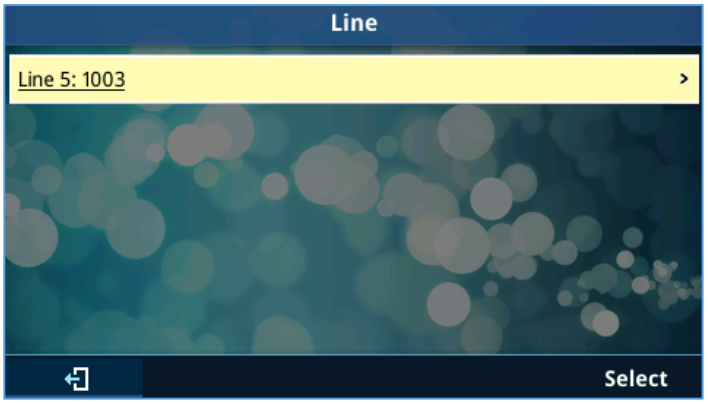

Figure 41: List of Available Lines Page

- **Transfer from Information**

Using the transfer from information, users can see who transferred the call to them. Example shows below:

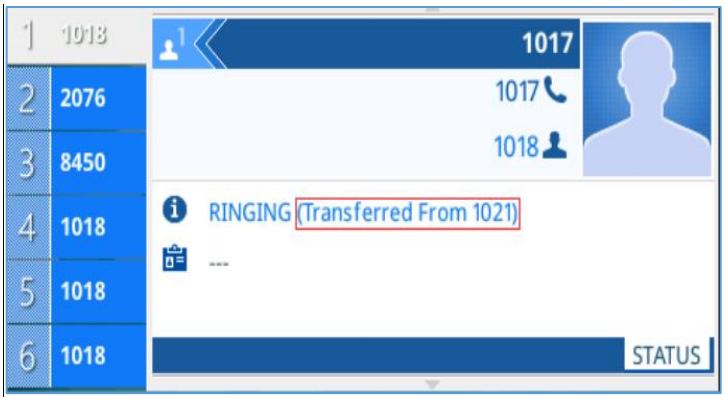

Figure 42: Transfer from Information While Ringing and During Incoming Call

VPK Paging Support inside Call Screen

Users can use their VPK mode preconfigured with while in call screen. Such as Speed Dial, BLF, dial DTMF…, as shown in the figure below.

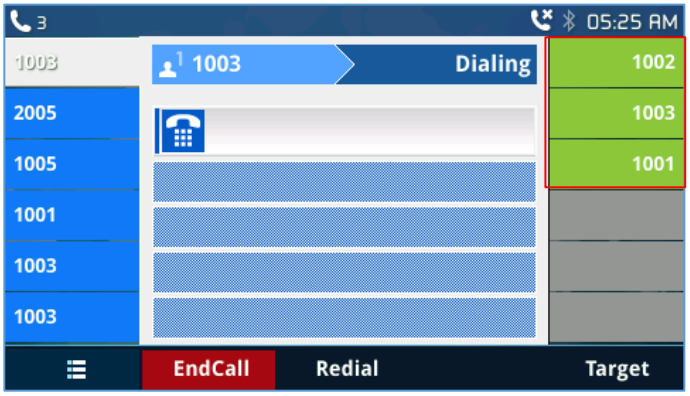

Figure 43: VPK Paging

Outbound Notification

The GXP2130/GXP2140/GXP2160/GXP2135/GXP2170 allows users to align the outbound notification with the call log change if the same account is registered in multiple phones.

Line Switching in Call Screen

When having two lines (or more) active users will be able to switch between the calls by pressing up/down, arrow keys, this will allow users to manipulate calls through the phones arrow keys as shown on the figures below:

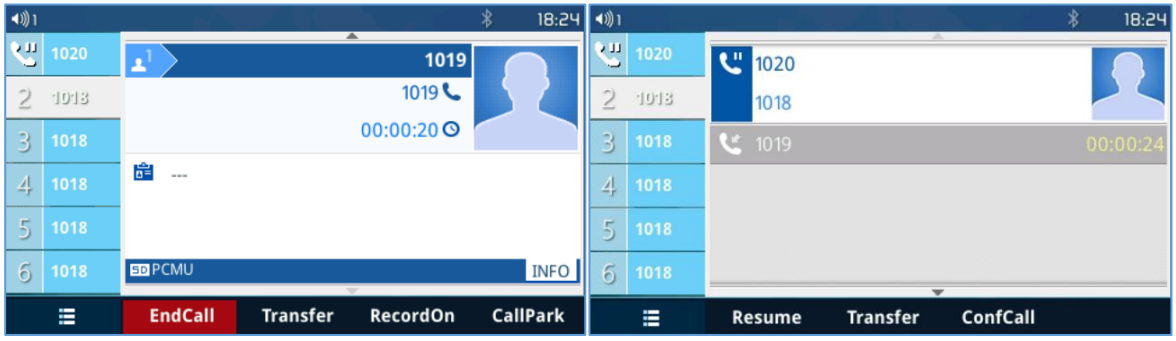

Figure 44: Line Switching

Line Key Mode Support

Allow users to change between Line Mode and Account Mode.
In the “Line Mode”, the amount of VPKs will be the amount of lines you can have, as shown below.

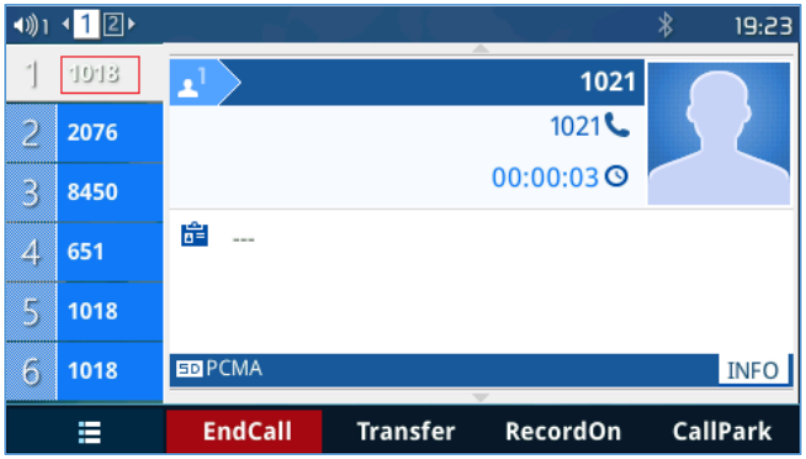

Figure 45: Line Mode

In the “Account Mode” the lines will be grouped by account so the VPKs could hold more lines in one accounts, as shown below.

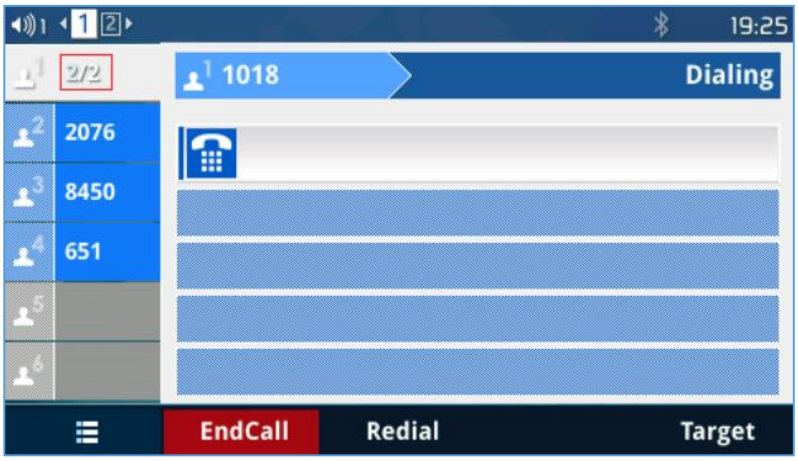

Figure 46: Account Mode

For example, with line mode, when the line is in use, by pressing the VPK, nothing is going to happen. In Account Mode, when the line is in use, by pressing the VPK, a new line will be initiated.

4-Way/ 5-Way Conferencing

GXP2130 can host up to 4-way conference call with other parties (PCMU/PCMA). GXP2140/GXP2160 /GXP2170/GXP2135 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 softkey 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 softkey 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 softkey or simply hang up the call to terminate the conference call.

GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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 user 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 must remain in the conference for its entire duration, you can put the party on mute but it must remain in the conversation. In addition, this is not applicable when the feature "Transfer on Conference Hang-up" is turned on.
- The option "Disable Conference" must 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.

Conference Event Indicator (CEI)

- **Regular Conference Room**
  - If CEI is detected, there will be a new tab called “CEI” next to “INFO”. Pressing the “Menu” hard key will switch between the tabs.
  - In the CEI tab, conference events will be shown chronologically (as shown below).

Figure 47: Conference Event Indicator

- A "ConfRoom" softkey should also appear to access the list of conference room users (as shown below).

Figure 48: List of Conference Room Users

- **Conference Room with User Invite Enabled**
  - If "Enable User Invite" is checked for a conference room, ALL users will have the ability to invite other users or bridge other conference rooms.
  - The "ConfRoom" softkey will have a secondary action called "ConfMenu". Please hold softkey for a few seconds to use. A bottom line under the softkey name will usually indicate if a secondary action is available.

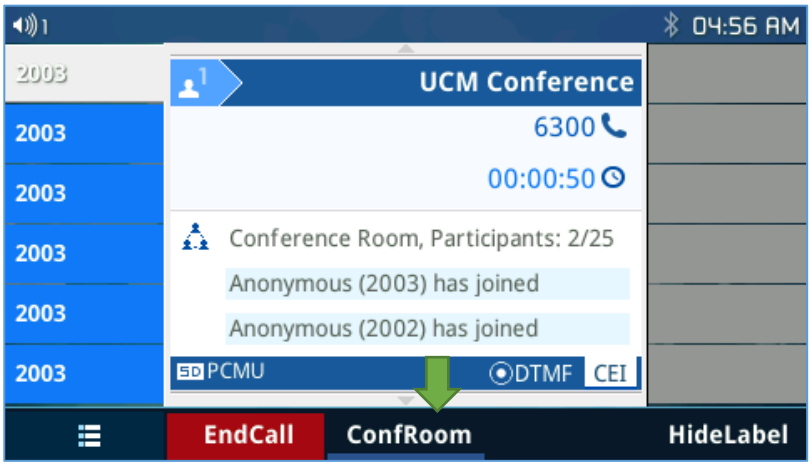

Figure 49: ConfRoom Softkey

- The "ConfMenu" softkey will also be display in the conference room.

Figure 50: ConfMenu Softkey

- An example of the conference menu is shown below:

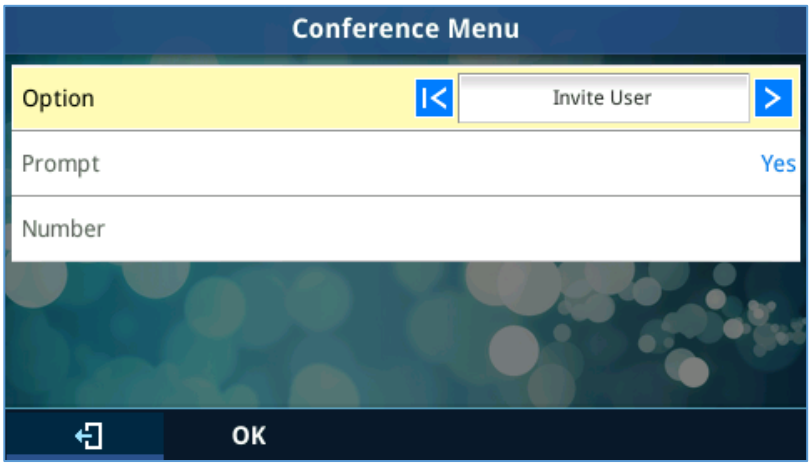

Figure 51: Conference Menu

- **Conference Room as an Admin**
  - As an admin in a conference room, the admin may choose to kick and mute/unmute all users that is not another conference room or him/her-self. An admin will also have more options in the conference menu page such as lock/unlock.

- **New Display Information**

With the UCM version 1.0.13.14 upgrade and beyond, new display information besides a user joining and leaving a conference room can now be displayed.

  - Mute/Unmute

Figure 52: Mute/Unmute Conference

  - Conference Bridge

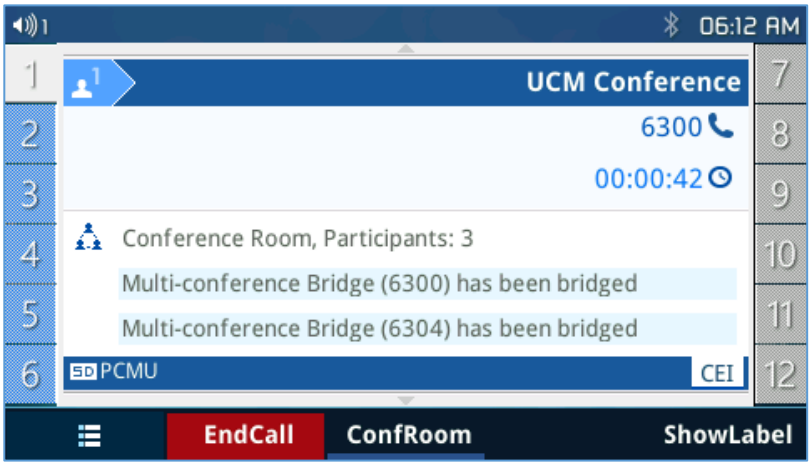

Figure 53: Conference Bridge

  - Conference Unbridge

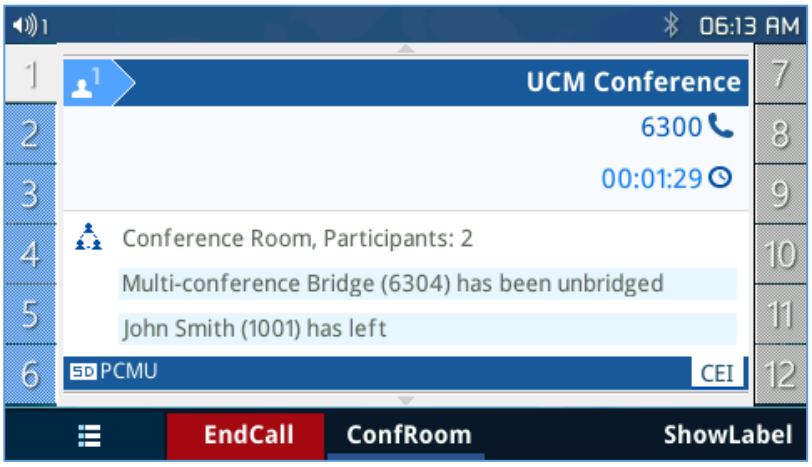

Figure 54: Conference Unbridge

- MCB Identification

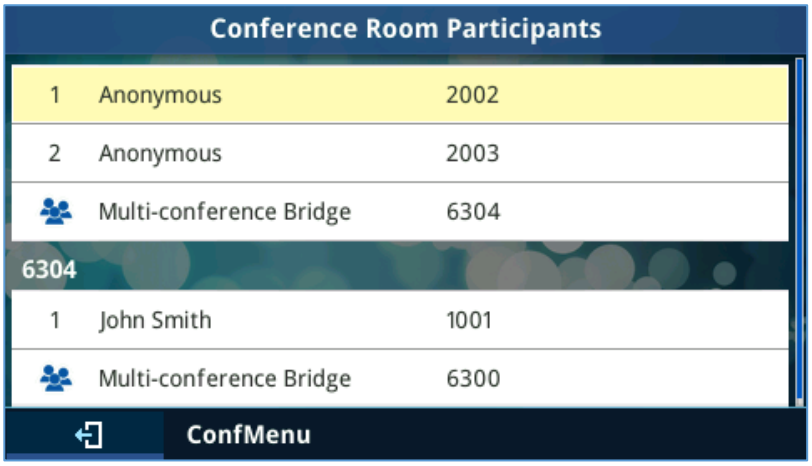

Figure 55: Conference - MCB Identification

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. Meanwhile, a message box symbol will show in the front of the specific account. 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 must 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/GXP2170/GXP2135 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 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 (except for 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 Forwarding Rules Enhancement

Users can access their call forwarding from the phone without erasing the configured numbers. On the phone, you can access through “Menu -> phone -> Call Features -> Account X” When disabled the LCD screen will look like the following figure.

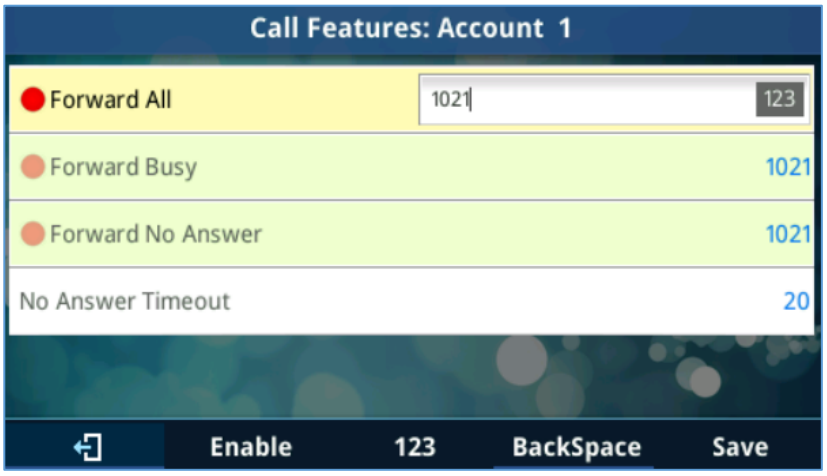

Figure 56: Disabled Call Forward

When the feature is enabled, the phone’s LCD screen will show the following figure.

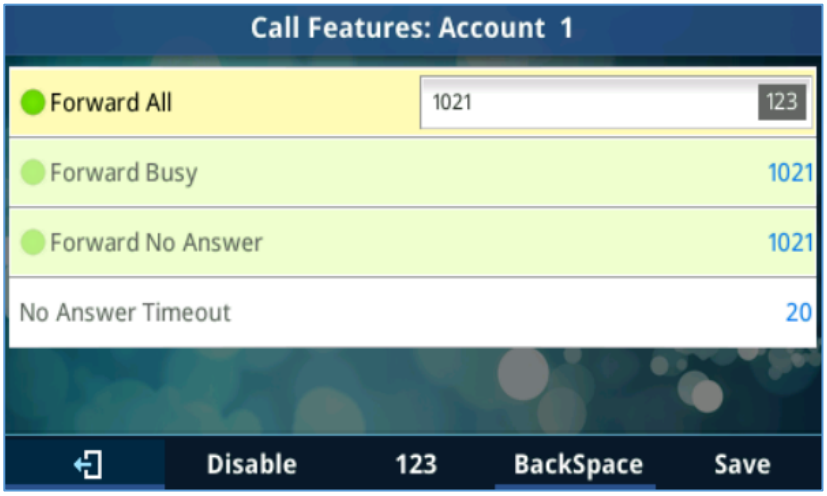

Figure 57: Enable Call Forward

Missed Calls Indication

When users miss a call, the GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 will show the notification on the LCD screen as shown below.

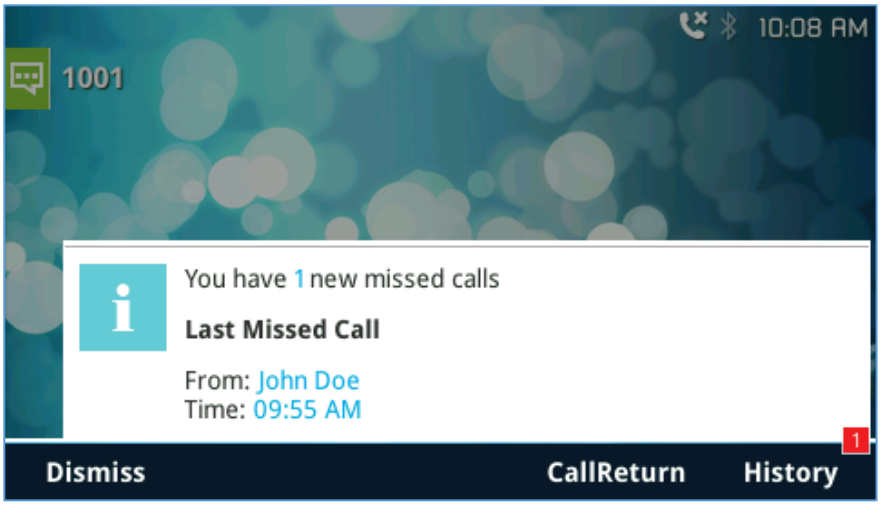

Figure 58: Missed Calls

Dial Plan

The GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 supports alphanumeric characters in dial plan. Two cases can be set to handle alphanumeric characters in the dial plan.

- Capital X can be used to represent digits from 0-9, and letters a-z / A-Z.

For instance, if the following pattern is set on the dial plan {X123}, this mean that any string that start with a letter/digit followed by 123 will pass the dial plan check (F123, a123, 5123,).

- "\" character can be used to indicate a specific letter.

For instance, if users want to allow only one alphanumeric character, the dial plan should be like follow: {\t\e\s\t}, when users dial "test" it will pass the dial plan check.

Screenshots

Users can take screenshots of the GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 phones, by holding key **HOLD** and then pressing **MENU** key, the output will be shown on the phone webGUI under "Status → System Info" as shown in the figure below.

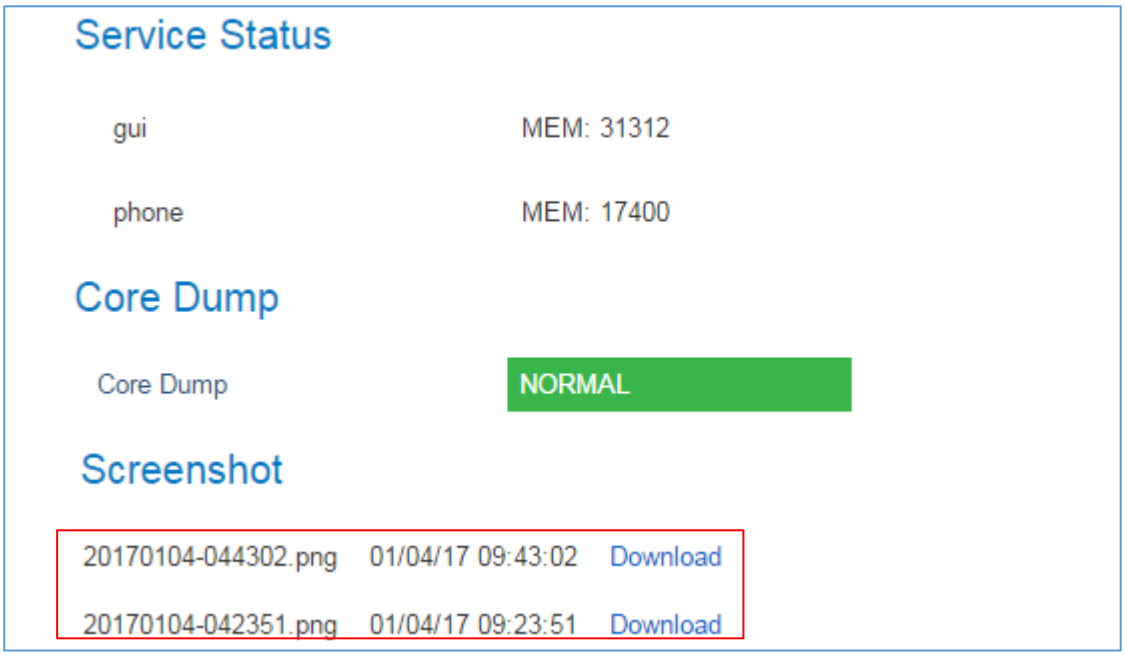

Figure 59: Screenshots

Users need to click on "Download" to view the screenshot.

Call Features

The GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 supports traditional and advanced telephony features including caller ID, caller ID with caller Name, call forward etc.

Table 16: 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.

WebGUI Default Password Warning Message

When accessing the GXP2130/2140/2160/2170/2135 for the first time or after factory reset, it reminds the user to change the password and allow user to modify the password by clicking the modify button.

Figure 60: Warning Password Message

Instant Messages

The GXP2130/2140/2160/2170/2135 allows users to send instant messages not only through the phone but also from the Web GUI, this can be done by clicking on the top left of the webGUI, the following figure will show up to send messages to the specified number.

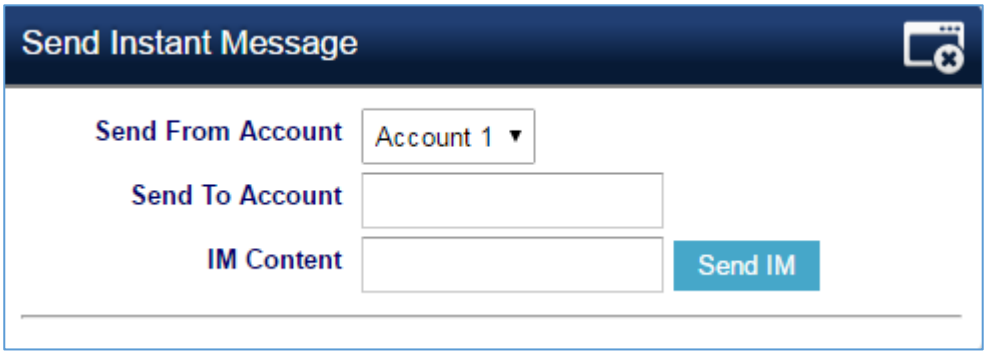

Figure 61: Send Instant Message

Configuring Eventlist BLF

Grandstream GXP2130/2140/2160/2170/2135 Enterprise IP Phones support both Grandstream UCM Busy Lamp Filed and Event List BLF features and allows end users, such as attendant, to monitor the call status of users in the list. GXP2130/2140/2160/2170/2135 supports this feature by sending out the subscription request to the UCM and changing the indicator status of the Line keys, MPKs, or virtual MPKs that associated with the monitored users. Additionally, the phone is also able to pick up the calls to the monitored extensions by using a pre-defined feature code called BLF- Call-pickup Prefix.
For more details on Eventlist BLF configuration guide, please refer to:
http://www.grandstream.com/sites/default/files/Resources/GXP21x0_Eventlist_BLF_Guide.pdf

CONNECTING TO DEVICES

The GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 supports EHS headset (Plantronics). GXP2140/2160 /GXP2170 is also capable to connect to USB and Bluetooth devices.

EHS Headset

The GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 supports normal RJ11 headset and Plantronics EHS headset. To use Plantronics EHS headset, go to the GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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/GXP2170/GXP2135. Insert headset connector into the RJ11 headset port on the back of GXP2130/GXP2140/GXP2160/GXP2170/GXP2135.
2. To use headset mode, press headset button on the GXP2130 / GXP2140 / GXP2160 / GXP2170/GXP2135. A headset icon will show on the GXP2130 / GXP2140 / GXP2160 / GXP2170 / GXP2135 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. GXP2130v2/GXP2140/GXP2160/GXP2170/GXP2135 supports Bluetooth Class 2 of version 2.1. On GXP2130v2/GXP2140/GXP2160/GXP2170/GXP2135, 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 GXP2130v2/GXP2140/GXP2160/GXP2170/GXP2135's Bluetooth radio first. The first time when using a new Bluetooth device with the GXP2130v2/GXP2140/GXP2160/GXP2170/GXP2135, "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 is not used.
Bluetooth related settings are under GXP2130v2/GXP2140/GXP2160/GXP2170/GXP2135's LCD **Menu**->**System**->**Bluetooth.**

Two ways of pairing a device to the GXP2130v2/GXP2140/GXP2160/GXP2170/GXP2135exists.

- If the phone sends out the pairing PIN, the user will need to enter this code using the keypad on the phone.

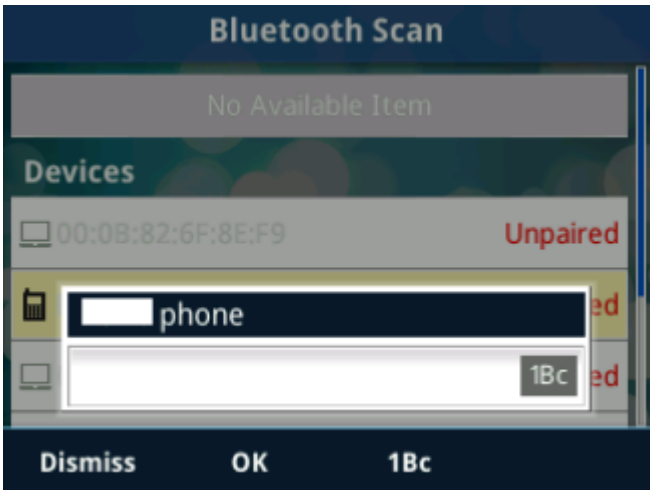

Figure 62: Entering PIN Code

- If the phone generated the pairing PIN, it will be displayed on the LCD, the users need to input this PIN on the Bluetooth device to finish paring.

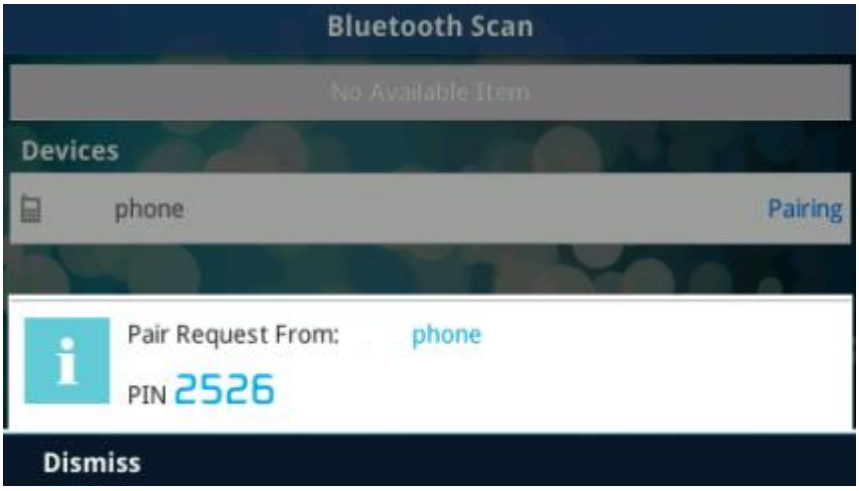

Figure 63: Entering PIN Code 2

GXP2130v1 does not support Bluetooth, only GXP2130v2 supports Bluetooth on the phone, you could differentiate by P/N as well as by FCC ID.

For more details on Bluetooth features, please refer to:

http://www.grandstream.com/sites/default/files/Resources/GXP2130v2_2140_2160_2135_2170_Bluetooth_User_Guide.pdf

USB Connection (GXP2140/GXP2160/GXP2170 Only)

GXP2140/GXP2160/GXP2170 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/GXP2170/GXP2135 Administration Guide". Please visit http://www.grandstream.com/support to download the latest "GXP2130/GXP2140/GXP2160/GXP2170/GXP2135 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" softkey to confirm and the phone will reboot. To cancel the Reset, press “No” softkey instead.

EXPERIENCING

GXP2130/GXP2140/GXP2160/GXP2170/GXP2135

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 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.