



Grandstream Networks, Inc.

GXP21xx/17xx/16xx Enterprise IP

Multicast Paging User Guide



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INTRODUCTION

Multicast paging is an approach to let different SIP users to listen to a page from a common multicast IP address. In multicast page call, one way audio will setup from sender to listeners, but the listeners cannot talk to each other. The sender and listeners must be located within the same LAN.

GXP21xx/17xx/16xx supports multicast page sending and listening on firmware version 1.0.4.10 or greater. Users could configure line keys, Virtual Multi-Purpose keys or multi-purpose keys to send multicast paging. Also GXP21xx/17xx/16xx is capable to listen to at most 10 different multicast addresses by following defined preference.

This document serves as an end user guide on how to configure multicast page on the GXP21xx/17xx/16xx. To learn more about GXP21xx/17xx/16xx's basic and advanced features, please visit <http://www.grandstream.com/support> to download the latest "GXP21xx/17xx/16xx User Guides" and "GXP21xx/17xx/16xx Administration Guides".



SENDING MULTICAST PAGING

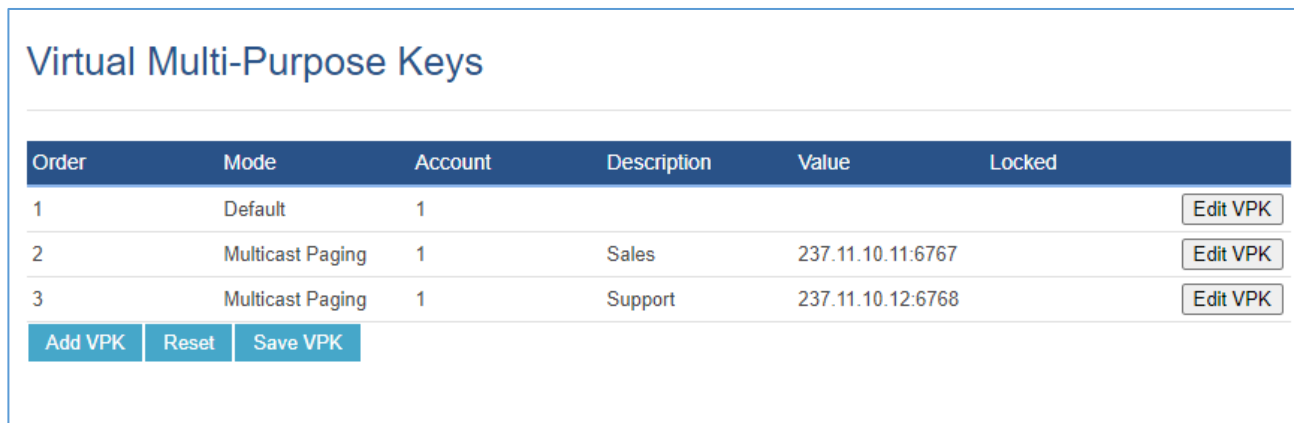
Configuration

Sender multicast page configurations are under GXP21xx/17xx/16xx's Web UI **Settings > Programmable Keys > Virtual Multi-Purpose Keys OR Multi-Purpose Keys.**

1. Set the key **Mode** to **Multicast Paging** in dropdown list.
2. Enter the multicast paging description in **Description** field.
3. Enter multicast paging address and port in **Value** field.

The range of multicast page address is 224.0.0.0 to 239.255.255.255 with a port not in use by phone.

The **Figure 1** and **Figure 2** show the example of setting Line Keys/MPK to multicast page sending key.

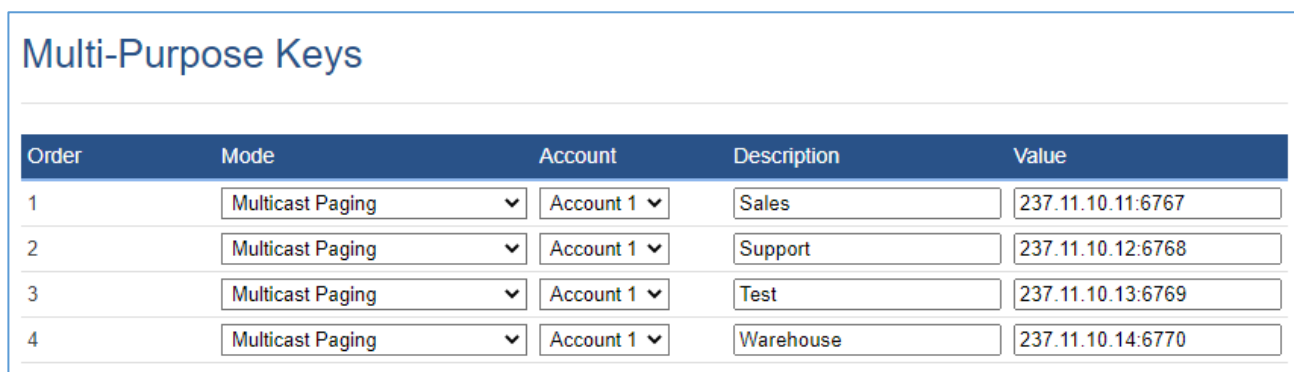


The screenshot shows the 'Virtual Multi-Purpose Keys' configuration page. It features a table with columns: Order, Mode, Account, Description, Value, and Locked. There are three rows of data. Below the table are buttons for 'Add VPK', 'Reset', and 'Save VPK'. Each row has an 'Edit VPK' button.

Order	Mode	Account	Description	Value	Locked
1	Default	1			Edit VPK
2	Multicast Paging	1	Sales	237.11.10.11:6767	Edit VPK
3	Multicast Paging	1	Support	237.11.10.12:6768	Edit VPK

Buttons: [Add VPK](#) [Reset](#) [Save VPK](#)

Figure 1: Sending Multicast Page Configuration by using VPK



The screenshot shows the 'Multi-Purpose Keys' configuration page. It features a table with columns: Order, Mode, Account, Description, and Value. There are four rows of data. Each row has dropdown menus for Mode and Account, and text input fields for Description and Value.

Order	Mode	Account	Description	Value
1	Multicast Paging	Account 1	Sales	237.11.10.11:6767
2	Multicast Paging	Account 1	Support	237.11.10.12:6768
3	Multicast Paging	Account 1	Test	237.11.10.13:6769
4	Multicast Paging	Account 1	Warehouse	237.11.10.14:6770

Figure 2: Sending Multicast Page Configuration by using MPK.

Note: GXP2140 and GXP2170 supports MPK when extended with GXP2200EXT extension boards.

GXP21xx/17xx/16xx supports 5 codecs for Multicast Paging. User can specify the multicast page sending codec under Web GUI Settings > **Multicast Paging** > **Multicast Paging Codec**. The supported codecs are PCMU, G.729A/B, PCMA, G.726-32 and G.722.

Send Multicast Paging Call

After configuring the sender multicast page, users could make a multicast page to remote parties.

1. Press the configured MPK/VPK or Line Key to send a multicast page.
The LED light of the key will turn green, and the phone screen will show the multicast address with defined label. See **Figure 3** Multicast Page screen.
2. Press the “EndCall” soft key to end the multicast paging.

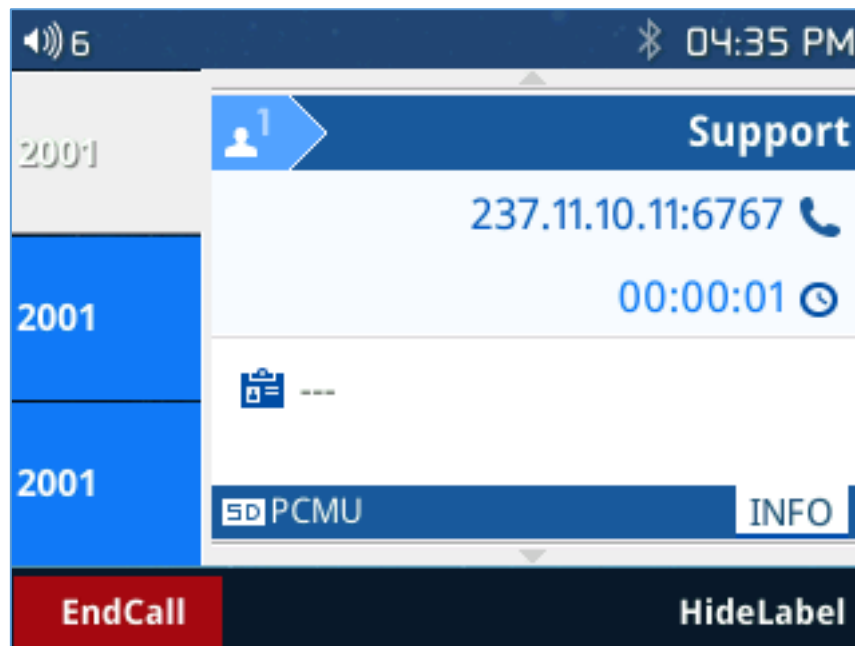


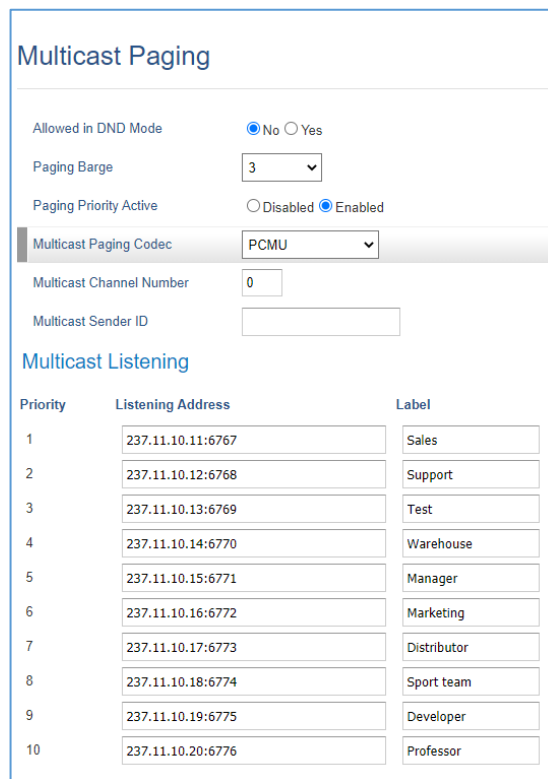
Figure 3: The Multicast Page Screen

RECEIVING MULTICAST PAGING

Configuration

To receive multicast page, GXP21xx/17xx/16xx must be well configured to listen to the right address and port. The configurations are under **Settings > Multicast Paging**. There are 10 listening address supported with priority levels 1 to 10. Optionally, each of these addresses can also have a label that will display on LCD when the page is received.

Note: The multicast page configuration requires rebooting to take effect.



Multicast Paging

Allowed in DND Mode No Yes

Paging Barge

Paging Priority Active Disabled Enabled

Multicast Paging Codec

Multicast Channel Number

Multicast Sender ID

Multicast Listening

Priority	Listening Address	Label
1	237.11.10.11:6767	Sales
2	237.11.10.12:6768	Support
3	237.11.10.13:6769	Test
4	237.11.10.14:6770	Warehouse
5	237.11.10.15:6771	Manager
6	237.11.10.16:6772	Marketing
7	237.11.10.17:6773	Distributor
8	237.11.10.18:6774	Sport team
9	237.11.10.19:6775	Developer
10	237.11.10.20:6776	Professor

Figure 4: Multicast Paging

Table 1: Receiving Multicast Page Configuration

Settings > Multicast Paging	
Paging Barge	Default setting is “Disabled”. Assigns any number from 1 to 10. When enabled, during active call if incoming multicast page is higher than this value, the call will be held, and multicast page will be played.
Paging Priority Active	Default setting is “Disabled”. If enabled, during a multicast page if another multicast is received with higher priority that one will be played instead.
Multicast Paging Codec	The codec for Multicast page sending. The default setting is PCMU. G.729A/B, PCMA, G.726-32 and G.722 (wide band) are supported as well.



Multicast Listening

Support 10 of listening multicast address with priority levels 1-10 with 1 being the highest priority. The lower the level, the higher the priority.

Paging Barge

This option is to control the priorities between multicast page and common SIP call. Available options are Disabled and numbers 1 to 10. If the option is set to disabled then all incoming pages are ignored while in call.

When the option is set to number, Paging Barge is enabled. If the number of Paging Barge is higher than an incoming page's priority value (determined by the position in the list 1-10) then the incoming page is not played. Similarly, if the Paging Barge value is lower than an incoming page's priority value, and then the active SIP call will be held.

As an example, in Figure 3, the Paging Barge is configured as 3. During an active call if incoming multicast page priority is greater or equal to 3, the current active call will be held, and page will be played. However, if the incoming multicast page priority is 1 or 2, the current active call will be kept.

Paging Priority Active

This option is to control the priorities among different multicast pages. If the option is disabled, the phone ignores any incoming pages when a page is already being played. Otherwise, incoming pages with a higher priority will be played instead of the current page. For example, if the phone is playing a page whose priority is 5 and there is an incoming page with priority 3, the priority 5 page will stop and the priority 3 page will play instead.

Receive Multicast Paging Call

After multicast page listening well configured, please reboot the phone to let the settings take effect. When there is a page on the listening address and port, the phone will play the incoming audio automatically. User can press "EndCall" softkey to end the page.

