Grandstream Networks, Inc.

GVC3210 / GVC3210 RMT

Video Conferencing Endpoint for Android™

User Guide

COPYRIGHT

©2021 Grandstream Networks, Inc. https://www.grandstream.com
All rights reserved. Information in this document is subject to change without notice. Reproduction or transmittal of the entire or any part, in any form or by any means, electronic or print, for any purpose without the express written permission of Grandstream Networks, Inc. is not permitted.
The latest electronic version of this guide is available for download here:
https://www.grandstream.com/support
Grandstream is a registered trademark and Grandstream logo is trademark of Grandstream Networks, Inc. in the United States, Europe and other countries.

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.

FCC Authentication

For Video Conference Endpoint, model: GVC3210
FCC ID: YZZGVC3210

For Bluetooth Remote Control, model: GVC3210 RMT
FCC ID: YZZGVC3210RMT

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

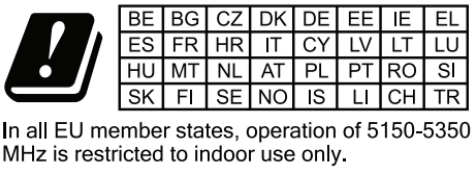
For GVC3210

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For GVC3210 RMT

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

CE Authentication



Hereby, Grandstream Networks, Inc. declares that the radio equipment GVC3210 and GVC3210 RMT are in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

https://www.grandstream.com/support/resources/

GNU GPL INFORMATION

GVC3210 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: https://www.grandstream.com/sites/default/files/Resources/gvc32xx-gpl.tar.gz

Table of Contents

DOCUMENT PURPOSE **15**

CHANGE LOG **16**

Firmware Version 1.0.1.74 16

Firmware Version 1.0.1.73 16

Firmware Version 1.0.1.59 16

Firmware Version 1.0.1.57 16

Firmware Version 1.0.1.56 16

Firmware Version 1.0.1.49 16

Firmware Version 1.0.1.21 16

Firmware Version 1.0.1.20 17

Firmware Version 1.0.1.18 17

Firmware Version 1.0.1.16 17

Firmware Version 1.0.1.13 17

Firmware Version 1.0.1.6 17

WELCOME **18**

PRODUCT OVERVIEW **19**

Safety Compliances 20

Warranty 21

INSTALLING GVC3210 ..... **22**

Equipment Package Content 22

Connecting GVC3210 23

GETTING TO KNOW GVC3210 ..... **27**

Remote Control 27

Remote Control Keys and Touchpad 27

Using the Remote Control 30

Capturing Screenshot using the Remote Control 30

Using Mouse & Keyboard 31

Using the LED Indicator 31

Status Icons 32

Using the Onscreen Keyboard 33

English Keyboard 33

Numbers and Symbols 34

Home Screen 34
Screen Lock 35
CONNECTING TO NETWORK AND DEVICES 36
Ethernet 36
Using IPv4 36
Using IPv6 37
Wi-Fi 37
Connecting to Wi-Fi Network 37
Wi-Fi Protected Setup (WPS) 38
Add Network 39
Wi-Fi Direct 40
Advanced Settings 41
Wi-Fi Display 42
Bluetooth 43
Pairing GVC3210 with a Bluetooth Device 43
Connecting to a Bluetooth Device 43
Using Bluetooth Remote Control 44
Transfer Files with Bluetooth 45
Using Bluetooth Headset 45
VPN Settings 45
VLAN Settings 47
LLDP Settings 47
802.1X Mode 48
CAMERA 49
Preset 50
Add Preset 50
Edit Preset 50
Delete Preset 50
Apply Preset 51
Initial Position 51
Camera Parameters Configurations 51
PERIPHERAL 53
External USB Device 53
Using USB Mouse/Keyboard 53
Using USB Storage Device 53
Micro SD Card 53
Microphone and Speaker 54

MAKING PHONE CALLS 55
Account 55
Dial Screen 55
Dialing a Number Directly 56
Redial 56
Dialing a Number via Contact 56
Dialing a Number via Call History 57
Direct IP Call 57
Paging/Intercom 57
Answering a Call 58
Call Hold 59
Mute Local Audio 59
Call Recording 59
DND (Do Not Disturb) 59
Missed Call 60
Call Forward 60
Remote Camera Control in Call (FECC) 60
UCM Conference Control 62
IPVIDEOTALK CONFERENCE 64
Device Layout 64
Initiating Conference 64
Answering an Incoming Call in Conference 64
Conference Management 65
Invite Members to Conference 68
Conference Control 68
Pause Conference 69
Custom PIP 69
Presentation Sharing 70
Conference Recording 71
Call Details 72
Participants List 73
Open Dial Keyboard 74
End Conference 74
Power Off During a Conference Call 74
IPVideoTalk Application 75
Contacts 75

Notices 77
Settings 79
Join an IPVideoTalk Meeting 80
Busy Tone Responses 81
Manually Start IPVideoTalk Tip 81
Hand Down/Up in IPVideoTalk Meeting 82
Stop Sharing Local Camera 83
Stop Video Upload Icon 84
Start Cloud Recording 84
Schedule 85
View Conference Details 86
Add Scheduled Conference 87
Edit Scheduled Conference 88
Reschedule Conference 89
Delete Scheduled Conference 89
Voicemail 89
Call Features 90
ADDITIONAL FUNCTIONS 93
GVC Remote Client Application 93
BlueJeans 94
APPLICATIONS 95
Contacts 95
Add Contact 96
Search Contacts 99
Manage Contacts 99
Groups 100
LDAP contacts 102
LDAP Settings 102
Search LDAP Contacts 105
Add Search Result into Local Contacts 105
Call History 106
Add Contact from Call History 107
Delete Call History 108
Conference Schedule via Call History 108
File Manager 108
Copy File 109
Send File 109
Delete File 109

Rename File *110*
Recording 110
Recording Settings *111*
Setup Wizard 112
Configuring GVC3210 using QR Code *113*
Backup 114
Backup Data *114*
Restore Backup Data *116*
Set Backup Path *116*
Diagnosis 116
Browser 117
Sync Local Schedule with Google Calendar 117
Custom App on Home Screen 121
Uninstall Application 123
GS MARKET 124
Search Apps 124
Download and Install Apps 124
Update Apps 124
GVC3210 WEB UI FEATURES 125
Accessing GVC3210 Web GUI 125
Saving Changes 126
Definitions 126
Toolbar 127
Call Page 127
Making a Call *128*
Conference Control *129*
Contacts Page 130
Contacts *130*
Groups *131*
Schedule *132*
Call History *133*
LDAP *133*
Device Control Page 134
Video Control *134*
Audio Control *135*
FACTORY RESET 137

Reset via LCD 137
Reset via Web UI 138
Reset via Reset Hole 138
EXPERIENCING GVC3210 139

Table of Tables

Table 1: GVC3210 Technical Specifications 19
Table 2: GVC3210 Package List 22
Table 3: GVC3210 Front Panel 23
Table 4: GVC3210 Back Panel 24
Table 5: GVC3210 Remote Control Keys 27
Table 6: GVC3210 LED Indicator Status Descriptions 31
Table 7: GVC3210 Status Icons Descriptions 32
Table 8: GVC3210 VPN File Parameters 46
Table 9: GVC3210 VLAN Configuration Parameters 47
Table 10: GVC3210 LLDP Configuration Parameters 47
Table 11: 802.1x Mode Parameters on GVC3210 48
Table 12: GVC3210 Camera Parameters 52
Table 13: GVC3210 IPVT Call Screen Bottom Menu Icons 65
Table 14: GVC3210 Conference Member Status Descriptions 67
Table 15: GVC3210 Add Conference Parameters 88
Table 16: GVC3210 Feature Code for SIP Account 90
Table 17: GVC3210 Import Contacts Parameters 97
Table 18: GVC3210 Download Contacts Parameters 98
Table 19: GVC3210 Export Contacts Parameters 100
Table 20: GVC3210 LDAP Settings Parameters 102
Table 21: GVC3210 Web Access 126
Table 22: GVC3210 Web UI - Call Settings 128
Table 23: GVC3210 Web UI - Audio Control Parameters 135

Table of Figures

Figure 1:GVC3210 Package Content 22
Figure 2:GVC3210 Front/Top/Bottom Panel 23
Figure 3: GVC3210 Right/Left Panel 24

Figure 4: GVC3210 Right/Left Panel Connection Diagram 26
Figure 5: Deploy GVC3210 with other Devices 26
Figure 6: GVC3210 Remote Control 27
Figure 7: GVC3210 Top Status Bar Dropdown Menu 32
Figure 8: Soft Keyboard - English Input Method 33
Figure 9: English Input Method – Capslock 34
Figure 10: Soft Keyboard - Symbols and Numbers 34
Figure 11: Soft Keyboard - More Symbols and Numbers 34
Figure 12: GVC3210 Home Screen 35
Figure 13: Ethernet Settings 36
Figure 14: GVC3210 Add Wi-Fi Screen 38
Figure 15: GVC3210 Push button WPS feature 39
Figure 16: GVC3210 PIN Entry WPS feature 39
Figure 17: GVC3210 Add network feature 40
Figure 18: GVC3210 Wi-Fi Direct feature 41
Figure 19: GVC3210 Wi-Fi Advanced Settings page 41
Figure 20: Wi-Fi Display feature 42
Figure 21: Select display screen 42
Figure 22: GVC3210 Bluetooth - Paired Device 44
Figure 23: GVC3210 Add VPN Files Screen 45
Figure 24: GVC3210 VPN Validation Screen 46
Figure 25: GVC3210 Camera Screen 49
Figure 26: GVC3210 Add Preset Screen 50
Figure 27: Initial Position 51
Figure 28: GVC3210 Camera Parameters Setting Screen 52
Figure 29: GVC3210 SIP Account 55
Figure 30: GVC3210 Call Screen 55
Figure 31: GVC3210 Single Incoming Call Screen 58
Figure 32: GVC3210 Single Incoming H.323 Call Screen 58
Figure 33: FECC – Remote Camera Control 61
Figure 34:Create a Conference room in the UCM 62
Figure 35: View Conference information 62
Figure 36: Conference details 63
Figure 37: Host Conference Control 63
Figure 38: GVC3210 3-Way IPVT Conference 65
Figure 39: GVC3210 Conference Control Screen 68
Figure 40: Select Video Feed 69
Figure 41: Layout Customization for multiple HDMI Outputs 70
Figure 42: Choose HDMI Output 70
Figure 43: GVC3210 3-Way Conference with Presentation 71
Figure 44: Web UI Conference Recording 72
Figure 45: GVC3210 Call Details Screen 73

Figure 46: GVC3210 Participants List 73
Figure 47: End Conference 74
Figure 48: Power Off During a Call 75
Figure 49: GVC3210 IPVideoTalk Application 75
Figure 50: IPVideoTalk Application → Enterprise Directory 76
Figure 51: IPVideoTalk Application → Enterprise Directory: Batch Call 77
Figure 52: IPVideoTalk Application→Notices 77
Figure 53: IPVideoTalk Application → Notices: Message Prompt 78
Figure 54: Message Indicator for IPVideoTalk Application 79
Figure 55: IPVideoTalk Account Settings 79
Figure 56: Current Plan and its expiration time 80
Figure 57: Busy Tone when the Callee is the Host of another Meeting 81
Figure 58: Busy Tone when the Callee is already a Meeting's Member 81
Figure 59: Manually Start Scheduled Meeting 82
Figure 60: Hand up - IPVideoTalk 82
Figure 61: Participants list 83
Figure 62: Hand down - IPVideoTalk 83
Figure 63: Hand down by Host - IPVideoTalk 83
Figure 64: Stop Camera Sharing 84
Figure 65: Stop Video Uploading 84
Figure 66 : Start Cloud Recording 85
Figure 67 : IPVideoTalk Recordings 85
Figure 68: GVC3210 Schedule Screen 86
Figure 69: GVC3210 Conference Details Screen 87
Figure 70: GVC3210 Add Conference Screen 87
Figure 71: GVC3210 Voice Mail Application 90
Figure 72: “GVC Remote” apk in GVC3210 LCD Menu → Settings → Status → Remote Control 93
Figure 73: GVC3210 Remote Control Application on Android Device 94
Figure 74: GVC3210 Contacts Screen 95
Figure 75: GVC3210 Add New Contact Screen 96
Figure 76: GVC3210 Import Contacts Screen 97
Figure 77: GVC3210 Download Contacts Screen 98
Figure 78: GVC3210 Export Contacts Screen 99
Figure 79: GVC3210 Groups Screen 100
Figure 80: GVC3210 Add Group Screen 101
Figure 81: LDAP Contacts Interface 102
Figure 82: LDAP Settings Example in Web UI 104
Figure 83: Search LDAP Contacts 105
Figure 84: Add LDAP Search Result to Local Contacts 105
Figure 85: Batch Add LDAP Search Results to Local Contacts 106
Figure 86: GVC3210 Call History Screen 106
Figure 87: GVC3210 Call History Details 107

Figure 88: GVC3210 Add Contact Screen 108
Figure 89: GVC3210 Recording Screen 110
Figure 90: GVC3210 Recording Settings 111
Figure 91: Applications→Setup Wizard 112
Figure 92: Interface Detection 112
Figure 93: Connect to GVC3210 Wi-Fi 113
Figure 94 : QR Code Scan 113
Figure 95: GVC3210 Backup App 114
Figure 96: GVC3210 Automatic Backup Screen 115
Figure 97: Backup Commonly Used Apps 115
Figure 98: GVC3210 Restore Backup Data Screen 116
Figure 99: GVC3210 Diagnosis Screen 117
Figure 100: LCD Menu → Settings → System → Accounts 118
Figure 101: Enable Calendar Sync for the Google Account 118
Figure 102: GVC3210 Schedule → Settings 119
Figure 103: Enable Google Account for Schedule and Set Sync Interval 119
Figure 104: Creating New Event in Google Calendar 120
Figure 105: Google Calendar Event Synced in Schedule 120
Figure 106: Set “Related Account” to Google Account 121
Figure 107: System → Apps 122
Figure 108: Move App to SD card 122
Figure 109: Move App to Device Storage 123
Figure 110: GVC3210 GS Market 124
Figure 111: GVC3210 Web GUI - Login 125
Figure 112: GVC3210 Web UI Tool Bar 127
Figure 113: GVC3210 Web UI – Call 128
Figure 114: GVC3210 Web UI - Conference Status 129
Figure 115: GVC3210 Web UI - Conference Control 129
Figure 116: GVC3210 Web UI - Contacts 130
Figure 117: GVC3210 Web UI - Groups 131
Figure 118: GVC3210 Web Page - Schedule 132
Figure 119: GVC3210 Web UI - Call History 133
Figure 120: GVC3210 Web UI - Video Control 134
Figure 121: Factory Reset via LCD 137
Figure 122: GVC3210 Web UI - Factory Reset 138
Figure 123: GVC3210 Web UI - Factory Reset Confirmation 138

DOCUMENT PURPOSE

This User Guide describes the basic concept and tasks necessary to use and configure your GVC3210. This document covers the topics of device installation, making basic conference calls and using basic call features.

To learn the advanced features and configurations, please visit https://www.grandstream.com/support to download the latest "GVC3210 Administration Guide".

This guide covers following topics:

- Product Overview
- Installing GVC3210
- Getting to know GVC3210
- Connecting to Network and Devices
- Camera
- Peripheral
- Making Phone Calls
- IPVideoTalk Conference
- Additional Functions
- Applications
- GS Market
- GVC3210 Web UI Features
- Factory Reset
- Experiencing GVC3210

CHANGE LOG

This section documents significant changes from previous versions of the GVC3210 user manuals. Only major new features or major document updates are listed here. Minor updates for corrections or editing are not documented here.

Firmware Version 1.0.1.74

- No major changes.

Firmware Version 1.0.1.73

- No major changes.

Firmware Version 1.0.1.59

- No major changes.

Firmware Version 1.0.1.57

- No major changes.

Firmware Version 1.0.1.56

- Added to support Camera Mirror feature. [Camera Parameters Configurations]
- Added to support to upgrade GVC3210 through USB drive in the Setup Wizard after factory reset the GVC3210 device. [Setup Wizard]

Firmware Version 1.0.1.49

- Supported 4K Video Call Recording on GVC3210. [Recording]
- Added Quick Configuration Function Scanning QR code in GVC3210. [Configuring GVC3210 using QR Code]
- Added support to record video files to one connected USB drive which has multiple partitions. [Recording Settings]
- Added pop up window when pressing the power button on the remote control. The popup menu includes functions: Power off, Sleep, and Reboot. [Remote Control Keys and Touchpad]
- Added support for UCM's conference control. [UCM Conference Control].
- Added new options to control IPVideoTalk meeting layouts. [Conference Management]

Firmware Version 1.0.1.21

- No major changes.

Firmware Version 1.0.1.20

- No major changes.

Firmware Version 1.0.1.18

- No major changes.

Firmware Version 1.0.1.16

- Supported to make the calls to Polycom MCU with the number format “IP##ID”.

Firmware Version 1.0.1.13

- Added the option to check the Participants List on GVC3210 during an IPVideoTalk meeting. Users could check all participants in the current IPVideoTalk meeting. [Participants List]

Firmware Version 1.0.1.6

- This is the initial version.

WELCOME

Thank you for purchasing Grandstream GVC3210 Android™ Video Conferencing Endpoint. This document introduces the LCD settings, web UI settings and advanced configurations of GVC3210. To learn the basic configuration and how to use GVC3210, please visit https://www.grandstream.com/support to download the latest "GVC3210 User Guide".

GVC3210 is a ground-breaking solution that offers small-to-medium businesses a revolutionary video conferencing Endpoint with unprecedented flexibility and the power of support for multiple popular video conferencing protocols and platforms right out of the box. The SIP-based GVC3210 supports Grandstream's robust IPVideoTalk cloud platform for plug and play video conferencing. Additionally, since it is based on Android™ 6.0.1, the GVC3210 offers full access to all video conferencing applications.

The GVC3210 eliminates the traditional barriers to video conferencing and sets a new bar for business-class video conferencing solutions by offering industry-leading flexibility, interoperability, system compatibility, application richness and ease of use.

PRODUCT OVERVIEW

Table 1: GVC3210 Technical Specifications

Specification	Description
Protocols / Standards	SIP RFC3261, BFCP, TIP, RTP/RTCP, HTTP/HTTPS, ARP, ICMP, DNS (A record, SRV, NAPTR), DHCP, PPPoE, SSH, TFTP, NTP, STUN, LLDP-MED, LDAP, TR-069, 802.1x, TLS, SRTP, TCP/IP/UDP, IPv6, H.323
Camera	1/2.3“, 16 Megapixel CMOS, 4K (2160p) Output
Lens	90°field of view, ePTZ (3x digital zoom)
Network Interface	1× RJ45 10/100/1000 Mbps
Wi-Fi	Integrated dual-band 802.11 a/b/g/n/ac (2.4GHz & 5GHz)
Bluetooth	Integrated Bluetooth 4.0 + EDR
Video Outputs	2x HDMI 1.4 up to 4K (2160p) with CEC
Video Input	1x HDMI 1.4 with resolution up to 1080p
MIC/Speaker	Built-in 4x MIC array
Remote Control	Bluetooth and infrared remote control with multi-touch touchpad
Auxiliary Ports	2x USB 2.0, micro-SD, Reset
Voice Codecs	Support for G.711μ/a, G.722 (wide-band), iLBC, OPUS, G.722.1, G.722.1c, G729A/B, in-band and out-of-band DTMF (In audio, RFC2833, SIP INFO)
Video Codecs	HEVC (H.265) and H.264 BP/MP/HP, video resolution up to 4K (2160p), frame rate up to 30 fps, bitrate up to 16Mbps
Video Resolutions	4K (2160p@30fps) from 4096Kbps, 1080p@30fps from 1024Kbps, 720p@30fps from 512 Kbps, 4SIF/4CIF from 128 Kbps, SIF/CIF from 64 Kbps
Content Resolutions (Screen Sharing)	Input: VGA, SVGA, XGA, 1280×600, WXGA, WXGA, SXGA, 1440×900, XGA+, 720p, 1600×1200, 1080p (HDMI), up to 60fps Encoding: 800×600, 1024×768, 1280×1024, 1280×720, 1920×1080 Output: 720p, 1080p
Dual-Stream	BFCP, video resolution (up to 4K 2160p@30fps) + content resolution (up to 1080p@15fps)
Audio Features	AEC, ANS, AGC, Noise Shield, PLC, CNG/VAD
Video Features	FEC, dynamic display layout, picture-in-picture, picture-outside-picture, digital caption
Telephony Features	Hold, forward (unconditional/no-answer/busy), downloadable phone book (XML, LDAP), call waiting, call history, flexible dial plan, personalized music ringtones, server redundancy & fail-over
Sample Applications	Skype, Google Hangouts, Microsoft Lync, Web browser, Adobe Flash, Facebook, Twitter, YouTube, Google calendar, mobile phone data import/export via Bluetooth, etc. API/SDK available for advanced custom application development

Applications Deployment	Allow various Android operation system 6.0 compliant applications to be developed, downloaded and run in the embedded device with provisioning control
QoS	Layer 2 QoS (802.1Q, 802.1p) and Layer 3 (ToS, DiffServ, MPLS) QoS
Security	User and administrator level passwords, MD5 and MD5-sess based authentication, 256-bit AES encrypted configuration file, TLS, 128/256-bit SRTP, HTTPS, 802.1x media access control
Multi-language	English, German, Italian, French, Spanish, Portuguese, Russian, Turkish, Polish, Chinese, Korean, Japanese, and more
Upgrade/Provisioning	Firmware upgrade via TFTP / HTTP / HTTPS / Local HTTP upload/ Via USB or Via SD-Card, mass provisioning using TR-069 or AES encrypted XML configuration file
Power & Green Energy Efficiency	Input: 100~240VAC 50/60hz; output: 12V/2A 24W
Package Content	GVC3210 video conferencing endpoint, remote control, 4 AAA batteries, universal power supply, network cable (1.5 meters), 2 HDMI cables (1.5-meter and 5-meter), lens cleaning cloth, mounting kit, quick installation guide, GPL license
Temperature and Humidity	Operation: 0°C to 40°C, Storage: -10°C to 60°C, Humidity: 10% to 90% Non-condensing
Compliance	FCC: FCC Part 15B; FCC Part 15C; FCC Part 15E; UL 60950 (power adapter) CE: EN 55032; EN 55024; EN 61000-3-2; EN 61000-3-3; EN 60950-1; EN 301 489-1/17;EN 300 328; EN 301 893; EN 62311; EN 62479; RoHS RCM: AS/NZS CISPR 32/24; AS/NZS 60950.1; AS/NZS 4268; ANATEL
CE approval	Output power : **GVC3210:** BT: 2.80dBm (BT 3.0), 6.05dBm (BT 4.0) 2.4G Wi-Fi: 16.58dBm (802.11 b), 17.23dBm (802.11 g), 16.84dBm (802.11 n20) 5G Wi-Fi: 17.66dBm (802.11 a), 17.19dBm (802.11 n20), 16.76dBm (802.11 n40), 17.13dBm (802.11 ac 20) 16.68dBm (802.11 ac 40), 16.86dBm (802.11 ac 80) **GVC3210 RMT:** 2.13dBm (BT)

Safety Compliances

GVC3210 complies with FCC/CE and various safety standards. GVC3210 power adapter is compliant with the UL standard. Use the universal power adapter provided with GVC3210 package only. The manufacturer's warranty does not cover damages to the device caused by unsupported power adapters

Warranty

If GVC3210 is purchased from a reseller, please contact the company where the device is purchased for replacement, repair or refund. If the device is purchased directly from Grandstream, please contact Grandstream Support for a RMA (Return Materials Authorization) number before the product is returned. Grandstream reserves the right to remedy warranty policy without prior notification.

INSTALLING GVC3210

Equipment Package Content

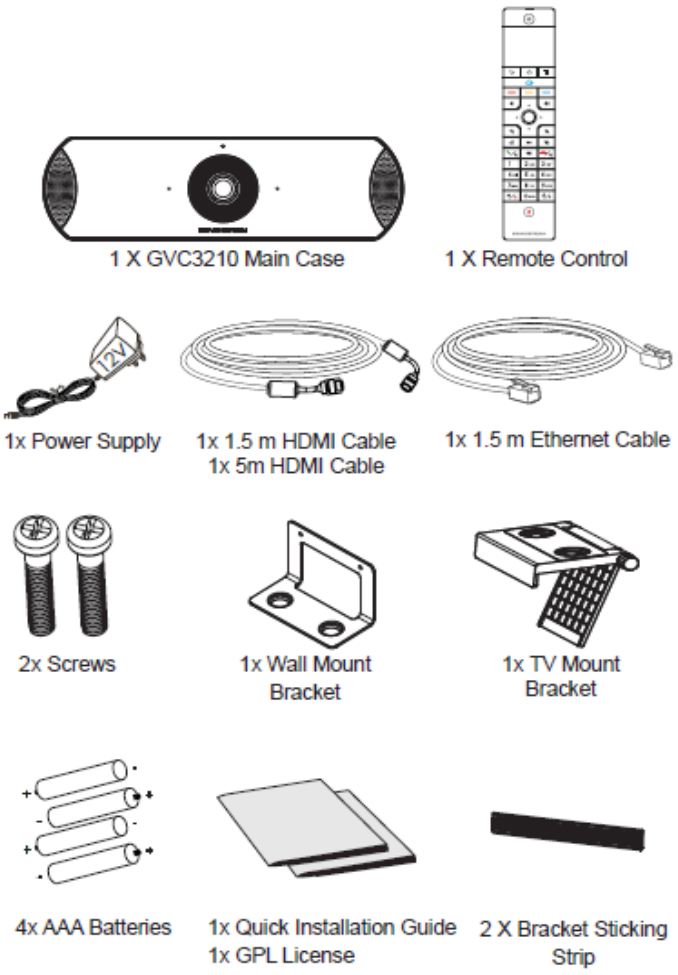


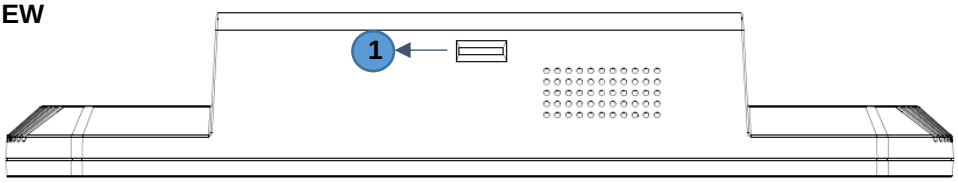
Figure 1:GVC3210 Package Content

Table 2: GVC3210 Package List

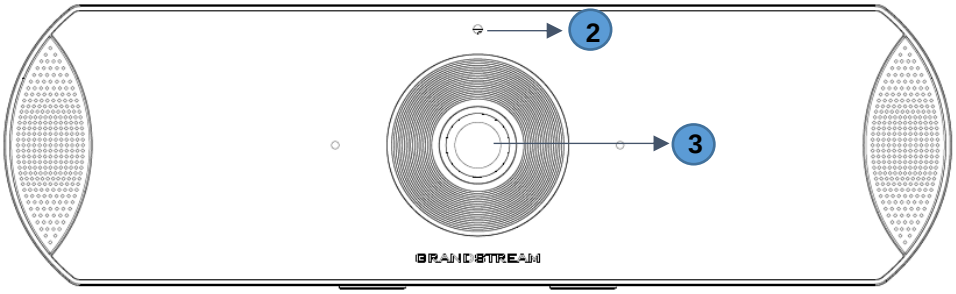
GVC3210	
1x GVC3210 Main Case	1x TV mount bracket (Plastic bracket)
1x Remote Control	2x screws
1x 12V Universal Power Supply	1x Lens Cleaning Cloth
1x 1.5m Ethernet Cable	1x Quick Installation Guide
1x 1.5m HDMI Cable	1x GPL license
1x 5m HDMI Cable	2x Bracket Sticking Strip
1x Wall mount bracket (Metal bracket)	4x AAA batteries

Connecting GVC3210

TOP VIEW



FRONT VIEW



BOTTOM VIEW

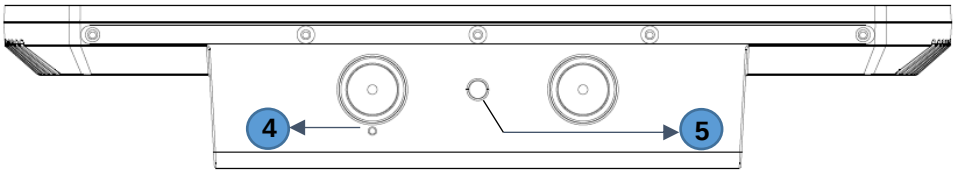


Figure 2:GVC3210 Front/Top/Bottom Panel

Table 3: GVC3210 Front Panel

NO.	Name	Description
1	**Micro SD Card Slot**	Insert micro SD card to store call recordings and other necessary files.
2	**LED Indicator**	Power on / Normal Running: Green Standby: Flash red Shutdown: Red Pressing any key on the remote control - Green light flashes once.
3	**Camera**	1/2.3“, 16 Megapixel CMOS, 4K (2160p) Output
4	**Factory Reset Button**	When GVC3210 is powered up, use a small pin to press the button one time to reboot or for more than 10 seconds to restore to factory settings.
5	**Standard Tripod Hole**	The GVC3210 can be screwed directly onto a Tripod. Users need to twist the GVC3210 and Tripod together until they are adequately joined using the standard Tripod Hole.

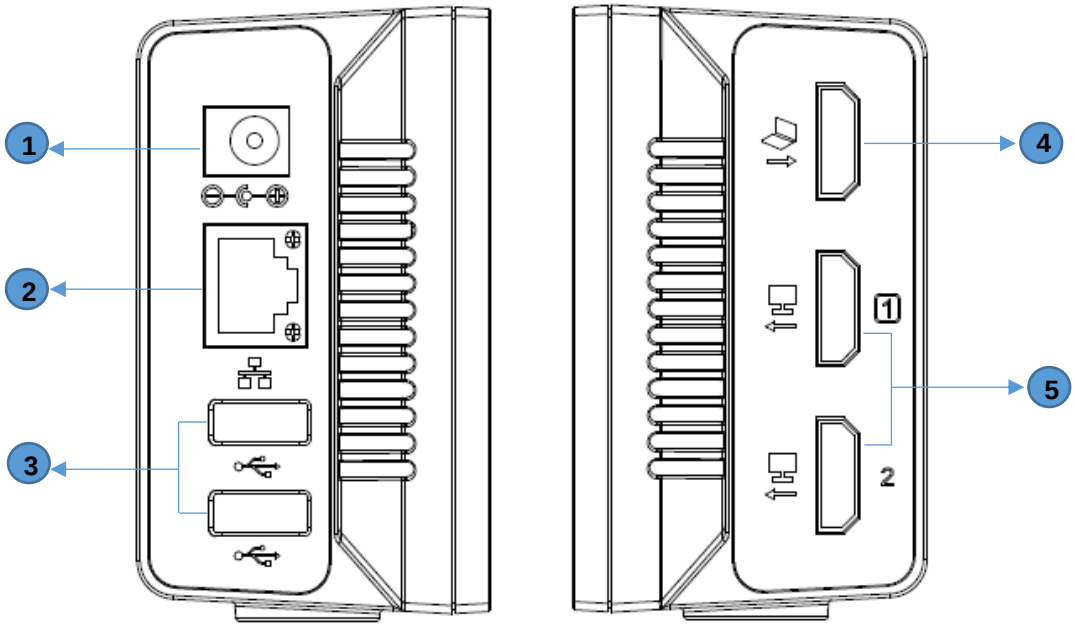


Figure 3: GVC3210 Right/Left Panel

Table 4: GVC3210 Back Panel

NO.	Name	Description
1	**Power Interface**	Connect to power adapter. The arrow indicator on the power adapter should face upwards when the power adapter is plugged in.
2	**Network Interface**	Connect to LAN port.
3	**USB Interfaces**	Connect to USB cable or external speakerphone.
4	**HDMI Input Interface**	Connect to HDMI input devices.
5	**HDMI Output Interface**	Connect to HDMI display devices. **Notes:** • There are 2 HDMI output ports. The interface marked with number "1" is the primary interface to output primary video. Please make sure to follow the port order when connecting HDMI port 1 and 2. When there is only 1 HDMI output, it has to use HDMI output 1 and then HDMI port 2 if you have additional display devices. GVC3210 will not work correctly if connecting HDMI port 2 without HDMI port 1 connected. • The HDMI Out Port 2 in not supported when the GVC3210 is using 4K resolution and only HDMI Out Port 1 can be used.

Please connect GVC3210 according to the following procedures:

1. Connect the LAN port of the GVC3210 to the RJ-45 socket of a hub/switch or a router (LAN side of the router) using the Ethernet cable.

   Note: The GVC3210 supports Wi-Fi as well. It can be used to connect the GVC3210 to the network.

2. Connect the HDMI [1] port of the GVC3210 to the HDMI port of the main display device (e.g., TV) using the HDMI cable. Connect HDMI port 2 if you have additional display devices.

   Note: Please make sure to follow the port order when connecting HDMI port 1 and 2. The GVC3210 will not work correctly if connecting HDMI port 2 without HDMI port 1 connected.

3. Connect the 12V DC output plug to the power jack on the GVC3210 and then plug the power adapter into an electrical outlet.

4. The LED Indicator in the front of the GVC3210 will show if the device is ready to be used by changing the color from red to green.

   Note: The display device (e.g., TV) will show the idle HOME screen with IP address on the top status bar as well.

5. Insert your micro SD card into the micro SD card slot. The recording files will be saved in Micro SD card.

6. (Optional) Connect presentation device (e.g., a laptop) to the GVC3210 HDMI IN port for presentation purpose during conference call.

7. (Optional) Connect USB accessory (e.g., mouse, keyboard, USB flash drive, ... etc) to the USB port.

Note:

For detailed instructions about installing GVC3210 on wall mount and TV/Monitor mount etc., please refer to the GVC3210 quick installation guide on www.grandstream.com.

A sample of GVC3210 Right/Left panel connection is shown below:

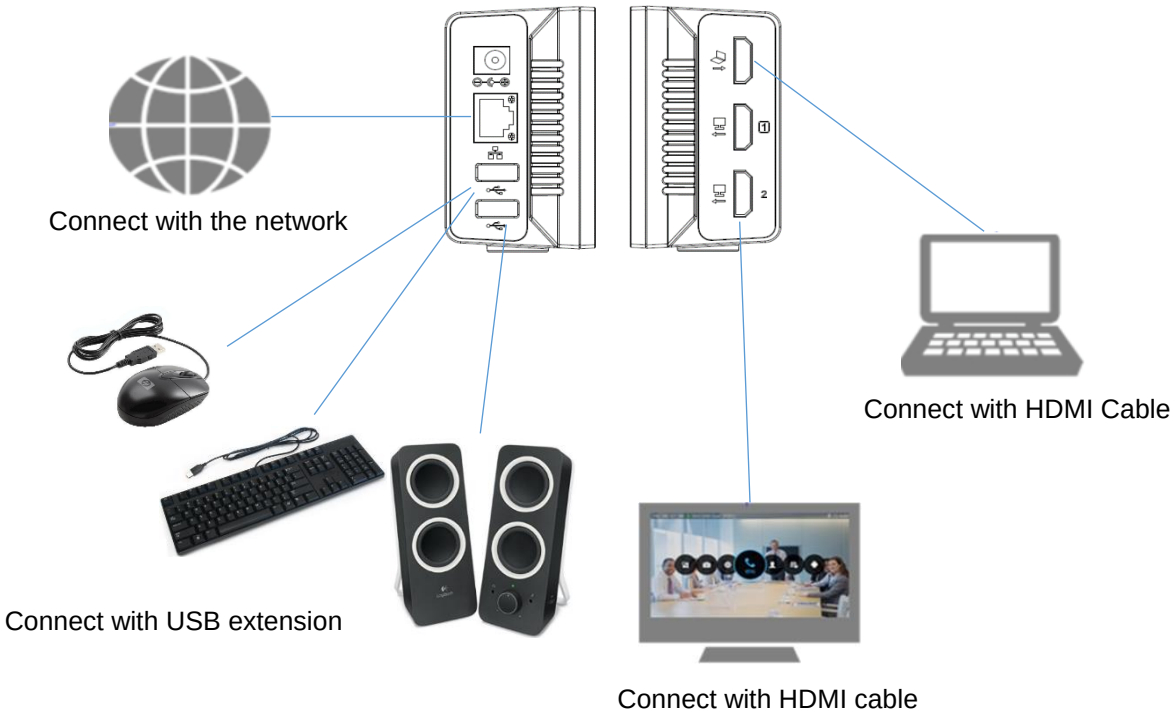


Figure 4: GVC3210 Right/Left Panel Connection Diagram

The following figure shows multiple GVC3210 devices deployed with other VoIP/network devices for video conference and collaboration.

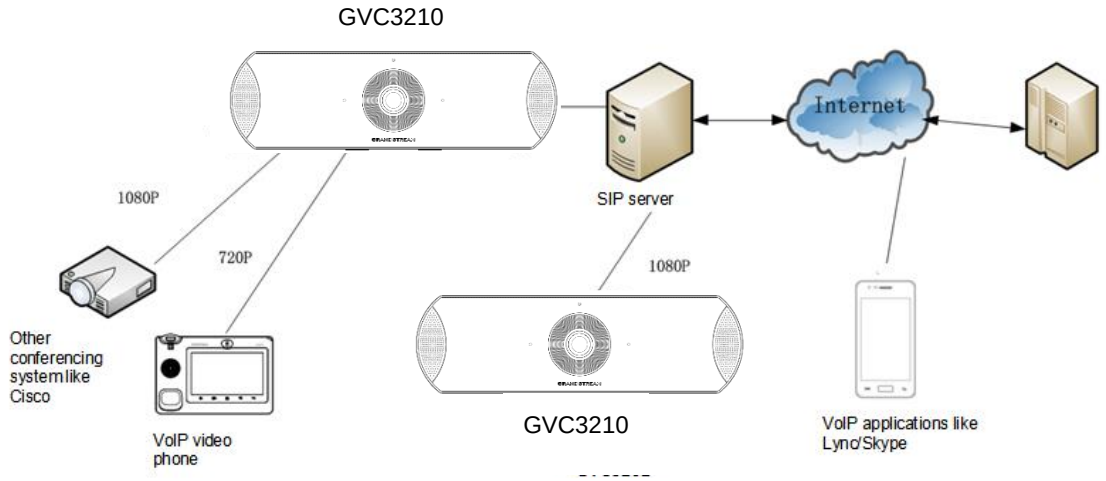


Figure 5: Deploy GVC3210 with other Devices

GETTING TO KNOW GVC3210

Remote Control

Remote Control Keys and Touchpad

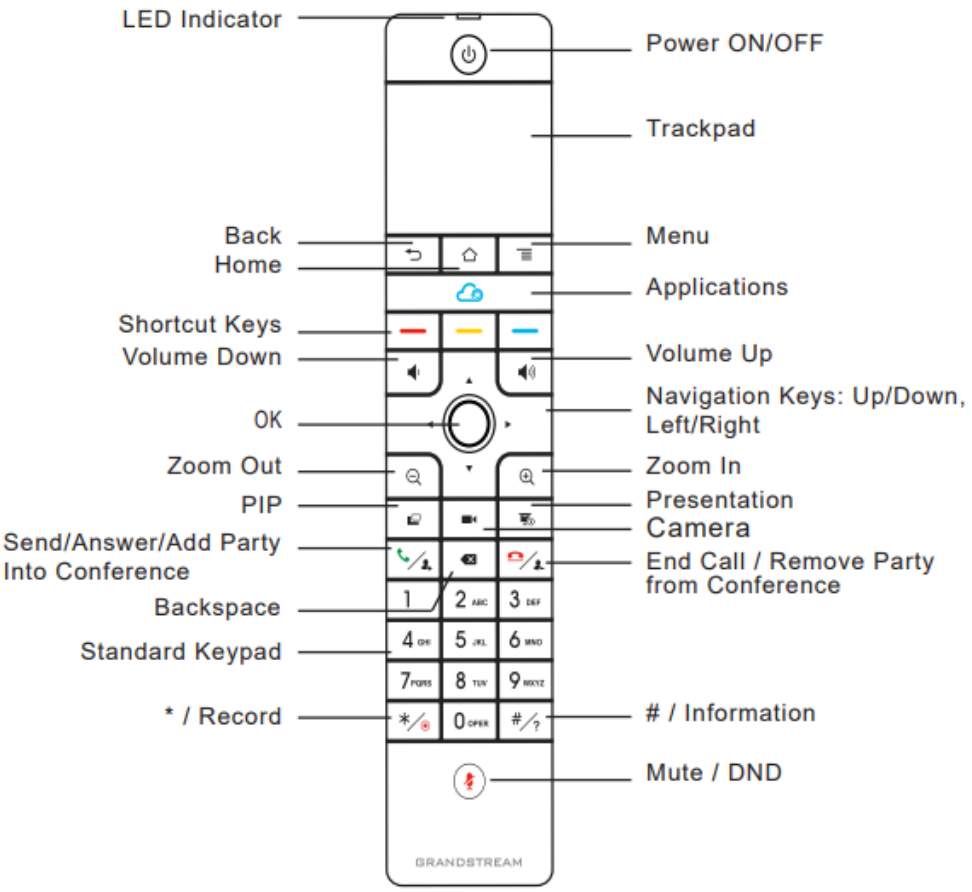
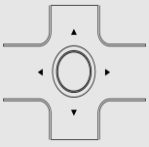


Figure 6: GVC3210 Remote Control

Table 5: GVC3210 Remote Control Keys

Key	Name	Description
1, 2, 3, 4…9	**Digital Keys**	Input number 1-9 and letters. The letter input using digital keys will not be displayed as letter, but it can be used to search for contacts in Call interface. For example, typing 5 (JKL), 6 (MNO), 4 (GHI), 6 (MNO) can look for John if it exists in GVC3210 contacts list.

	Camera	Switch to EPTZ control mode during a call or in idle status.
	PIP	Switch screen layout in conference.
	Mute/DND	• Mute GVC3210 in conference. • Press the MUTE key to enable/disable DND mode when GVC3210 is in idle.
	Presentation	• Enable/Disable presentation function to send presentation to all members in the conference. • Enable/Disable presentation function to show presentation on displayed device which is connected to HDMI output 1 as projection when GVC3210 is in standby mode.
	Send/Answer/Add Party into Conference	• Access the dial screen by default when GVC3210 is in idle mode. • Enter phone number and press the key to dial out. • Access the invite screen to add members in a conference. • Press the key to bring out the backstage conference. • Press the key to redial the last outgoing call.
	End Call/Remove Party from Conference	• Delete members in conference. • Hang up the conference.
	Backspace	Press the key to delete input characters.
	**Navigation Keys: Up/Down/Left/Right**	• Press to adjust cursor movement. • Control EPTZ movement in camera mode.
	OK	• Press to confirm operations. • Bring up the soft keypad when the cursor is in an input box.
	Power On/Off	LCD prompt shows following three options after pressing this key: • Switch GVC3210 into sleep mode. • Power Off • Reboot

	***/Record**	• Input * in input field. • Used as "." when dialing direct IP call. For example, 192.168.40.5. • Start/stop recording in camera control mode. • Start/stop recording in a call.
	#/Details	• Input "#" in input field. • Used as ":" when dialing direct IP Call e.g., 192.168.40.5:5060. • Input "#" on dialing screen to use it as REDIAL key. • Display call details on call screen during a call.
	Shortcut Key: Red	Press each shortcut key for designated functions on different screen context.
	Shortcut Key: Yellow	
	Shortcut Key: Blue	
	Home	Press the key to go back to home screen.
	Menu	Press the key to view more options.
	Back	Press the key to go back to the previous screen or exit the current screen.
	Volume Down	Turn down the device volume.
	Volume Up	Turn up the device volume.
	Zoom In	Zoom in screen or adjust close focus.
	Zoom Out	Zoom out screen or adjust distant focus.
Trackpad		• Slide on the trackpad to move the mouse cursor. • Press the trackpad to confirm operations. • Using two fingers to press on the trackpad and slide up/down for page up/down.

Using the Remote Control

GVC3210 remote control is connected to GVC3210 via Bluetooth or infrared connection, and it automatically uses infrared connection when the user receives GVC3210 package, then he may connect it to GVC3210 via Bluetooth.

Before using the remote control, please make sure that 4x AAA batteries are correctly installed on the back of the remote control.

1. **Infrared connection:**

   Infrared signals are automatically used to connect the remote control to GVC3210. Users need to keep the two devices in front of each other without any substantial obstruction in between. The LED on the remote control is green when using infrared connection mode.

2. **Bluetooth Connection**

   If the remote control is not paired with the GVC3210 anymore (e.g., a factory reset is made), press OK button and number 5 button at the same time for about 4 seconds. This will initiate pairing process on the remote control.

   Note: The remote control needs to be placed within the Bluetooth effective range, i.e., 10m from GVC3210.

If the remote control fails to connect to GVC3210, please follow the steps below to troubleshoot:

- Check the battery polarity when placed into the battery case. Make sure the batteries are placed in the correct direction in the remote control.
- Check the battery power.
- Long pressing “OK” button and number “5” button at the same time for about 4 seconds.

If GVC3210 remote control still does not work with the diagnosis above, please try another remote control or contact the device provider.

Capturing Screenshot using the Remote Control

To capture a screenshot on GVC3210, the users can press the red shortcut key and blue shortcut key at the same time for about 3 seconds. The screenshot picture will be saved in the internal storage of GVC3210. The users can access the screenshot in GVC3210 LCD menu → **Applications** → **File Manager** → **Internal Storage** → **Pictures** → **Screenshot**.

Please note that the screenshot captured here does not have the image captured from the camera in the background. If you would like the image captured from camera, you can press the CAMERA button on the remote control and then press the blue shortcut key.

Using Mouse & Keyboard

When the USB mouse is plugged into GVC3210, users could make the following operations with the mouse.

- Single click the left key of the USB mouse to perform the following operations:
  - Access menu.
  - Check in the checkbox or enable/disable an option.
  - Bring up the drop-down list when clicking on a combo box.
  - Switch input methods in the input box, tap on the corresponding buttons on the soft keyboard to input characters.
- Double left clicks on the soft keyboard can switch to "Always use upper case" in English input method.
- Single click the right key of the USB mouse to exit the current displayed menu. It will go back to the previous menu without saving the configurations.

Using the LED Indicator

GVC3210 LED indicator is located right above the camera lens. It can be used to notify the users with current status of the device. Please refer to the status description below.

Table 6: GVC3210 LED Indicator Status Descriptions

LED Indicator Status	Descriptions
Solid Green	Booting or the device is already booted up
Flash Green (per 0.5s)	Pressing any button on the remote control
Flash Red (per 1s)	● Rebooting ● Upgrading ● Factory Reset
Flash Red (per 0.2s)	● Temperature > 80 degree ● Camera connection failed
Flash Red (per 2s)	Sleep mode
Solid Blue	● Recording ● The device is in a call
Flash Blue (per 0.5s)	Pairing the remote control
Blue/Red Alternately	Aging test
OFF	Power off

Status Icons

GVC3210 status icons are displayed on the right side of top status bar on GVC3210 LCD display device. The users can view the top status bar notification details in drop-down panel by long-pressing the MENU key on the GVC remote control or pressing DOWN button when the GVC3210 is in home screen.

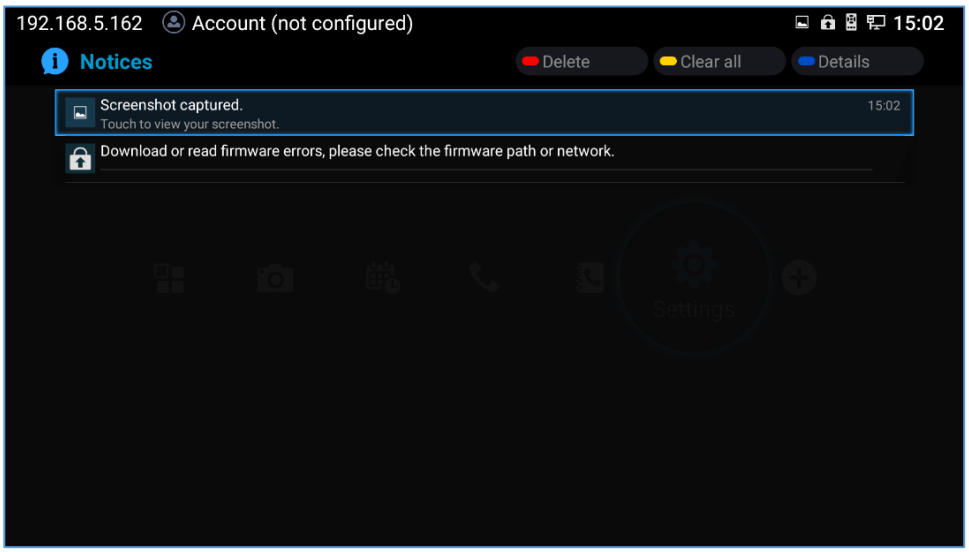


Figure 7: GVC3210 Top Status Bar Dropdown Menu

For some notifications such as Voice Mail, the users can use the GVC remote control trackpad to select it. It will navigate the users to the corresponding app.

The following table lists the main status icons used on GVC3210.

Table 7: GVC3210 Status Icons Descriptions

Icon	Descriptions	Icon	Descriptions	Icon	Descriptions
	Missed Call		Ongoing call		Auto answer is enabled
	Ethernet is connected		Ethernet is disconnected		Trying to connect to the Ethernet
	PPPoE is connected		PPPoE connection is failed		PPPoE is disconnected
VLAN	VLAN is successfully configured	VLAN	VLAN is being configured		Unread voicemail
VPN	VPN is connected	VPN	VPN connection is failed	MIX	Using third party applications for mixing calls

	Bluetooth is connected		DND mode is enabled		Download or read firmware errors
	Remote control Low battery		Remote control is connected and paired		Remote control is not connected and paired
	Micro SD Card is inserted		USB flash drive is inserted		Speaker is being used
	Call recording storage is full		Contacts storage is full		Micro SD card storage is full
	Wi-Fi is connected.		Wi-Fi is disconnected		Volume is turned to silent
	Call forward is set up		Wi-Fi signal strength		Unknown Wi-Fi
	Wi-Fi-Display is opened				

Using the Onscreen Keyboard

English Keyboard

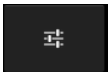
This is the default keyboard on GVC3210. The English keyboard supports multiple languages input methods. Users could tap on  to switch among different languages. See figure below.

Figure 8: Soft Keyboard - English Input Method

Tap on to switch Caps Lock:

Figure 9: English Input Method – Capslock

Numbers and Symbols

To input numbers and symbols, tap on button ?123 on the default keyboard to switch to numbers/symbols. Tap on ~\{ for more numbers/symbols.

Figure 10: Soft Keyboard - Symbols and Numbers

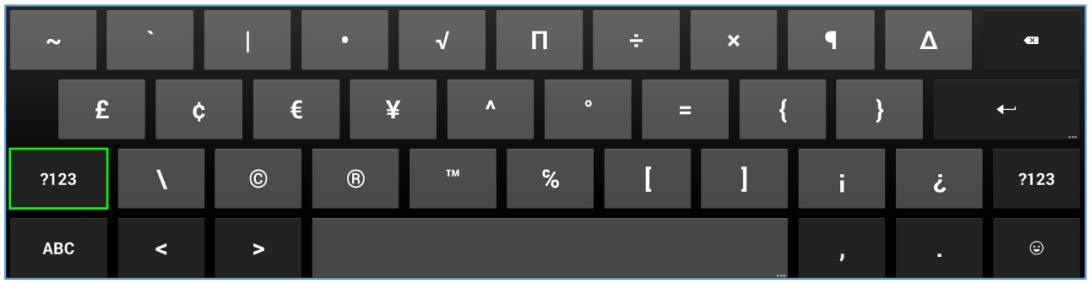


Figure 11: Soft Keyboard - More Symbols and Numbers

Home Screen

GVC3210 Home screen displays the icons for users to easily access applications, camera, schedule, call, contacts, settings and custom applications. Press the Left/Right keys on the GVC3210 remote control to navigate.

If there is no activity on main screen, the icons will be hidden and the video local loopback is displayed. Press OK button on the GVC3210 remote control to bring up the icons to display again.

Figure 12: GVC3210 Home Screen

Screen Lock

The GVC3210 supports screen lock. When it's enabled and configured, the user will be required to enter the lock code to unlock on the home screen.

To use this feature:

1. On GVC3210 LCD menu → **Settings** → **System** → **Security**, select Screen Lock and set Screen Lock code.
2. Reboot, enter sleep mode or power off the GVC3210.
3. When the GVC3210 boots up again, a screen lock code will be required. The user can unlock the screen by entering the code using the GVC remote control.

CONNECTING TO NETWORK AND DEVICES

GVC3210 supports a variety of network connections (Ethernet, Wi-Fi) and device connections, including USB, Micro SD card and Bluetooth devices. When the GVC3210 boots up for the first time, a setup wizard will guide the users to pair and connect the remote control to GVC3210 and get started with the basic configurations.

Ethernet

If the user would like to use Ethernet connection for network access, please plug the Ethernet cable into the LAN port on the back of GVC3210. Ethernet connection is turned on as DHCP by default on both IPv4 and IPv6 protocols.

To configure Ethernet settings on GVC3210, go to LCD menu → **Settings** → **Network** → **Ethernet**.

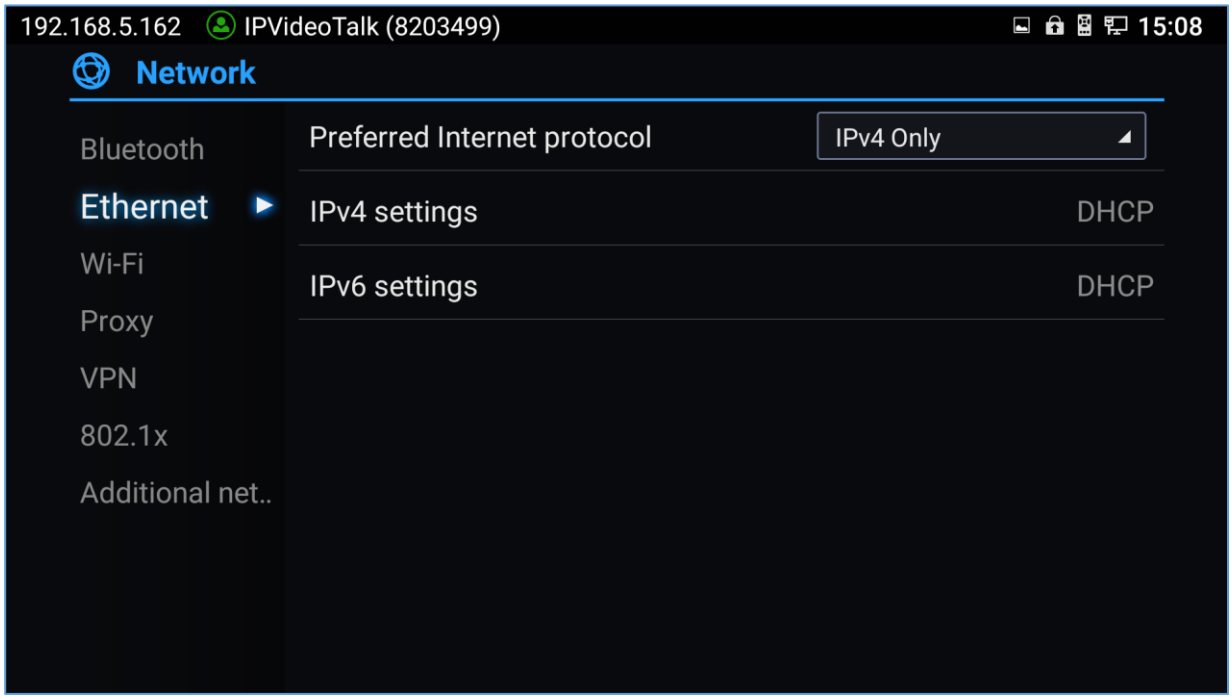


Figure 13: Ethernet Settings

The GVC3210 offers the possibility to prioritize a protocol over another by setting Preferred Internet protocol to “IPv4”, “IPv6”, “Both, prefer IPv4” or “Both, prefer IPv6”.

Using IPv4

To configure the GVC3210 using IPv4 protocol, follow the below steps:

1. Plug the Ethernet cable into the LAN port on the back of GVC3210.
2. Go to LCD menu → **Settings** → **Network** → **Ethernet** → **IPv4 Settings**.
3. Tap on "Address Type" to select DHCP, Static IP or PPPoE as the address type.
   - For DHCP, save the setting and GVC3210 should be able to get IP address from the DHCP server in the network.
   - For static IP, enter IP Address, Subnet Mask, Default router, DNS Server 1 and DNS server 2 for GVC3210 to correctly connect to the network.
   - For PPPoE, enter PPPoE account ID and password so that GVC3210 can get IP address from the PPPoE server.

Using IPv6

To configure the GVC3210 using IPv6 protocol, follow the below steps:

1. Plug the Ethernet cable into the LAN port on the back of the GVC3210
2. Go to LCD menu → **Settings** → **Network** → **Ethernet** → **IPv6 Settings**.
3. Tap “Address Type” to select DHCP or Static IP as the address type.
   - For DHCP, save the setting and GVC3210 should be able to get IP address from the DHCP server in the network.
   - For static IP, configure IPv6 address, DNS server 1, DNS server 2 and Preferred DNS server, enter the IPv6 address in the format of 2001:db8:1:2::3.

Note:
The same steps are applied in the case of using “Both, prefer IPv4” and “Both, prefer IPv6” and the user needs to configure the options of both protocols IPv4 and IPv6.

Wi-Fi

Connecting to Wi-Fi Network

On the LCD display, go to **Settings** → **Network** → **Wi-Fi** to turn on and configure Wi-Fi.

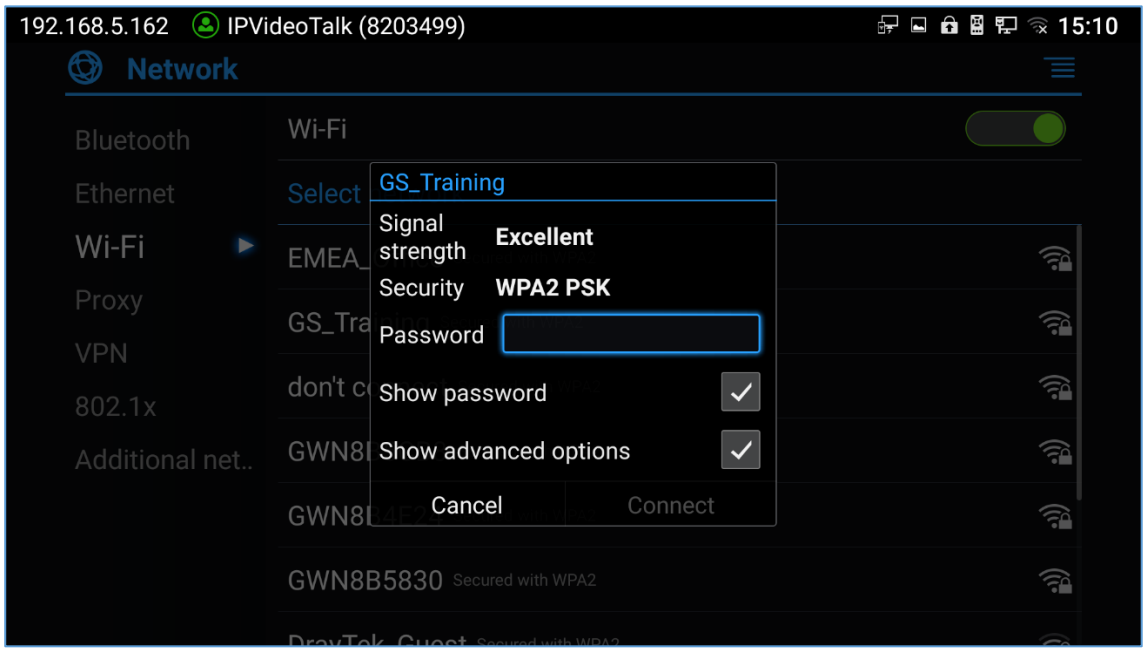


Figure 14: GVC3210 Add Wi-Fi Screen

Once Wi-Fi is turned on, GVC3210 will automatically start the scanning within the range. A list of Wi-Fi networks will be displayed as scanning result. Tap on the SSID and enter the correct password information to connect to the selected Wi-Fi network.

Follow the steps below for static IP usage under Wi-Fi environment:

1. Tap on one Wi-Fi network in the scanned Wi-Fi list to bring up the dialog that shows signal strength, security, password and option "Show advanced options".
2. Select "Show advanced options". The dialog will show additional option "IP settings".
3. In "IP settings", select Static IP, enter IP Address, Subnet Mask, and Default router for GVC3210 to correctly connect to the network.

Wi-Fi Protected Setup (WPS)

In order to connect the GVC3210 to a secure Wireless Network without selecting the network name and entering the password, WPS can be used in two ways to perform this feature:

- **Push button WPS**

On the Wi-Fi page, press the MENU key ☰ on the remote control, and select "Push button WPS". Then, look on your Wi-Fi Router to see if it has a WPS button. Once the WPS button is found, press it to establish the connection with the GVC3210.

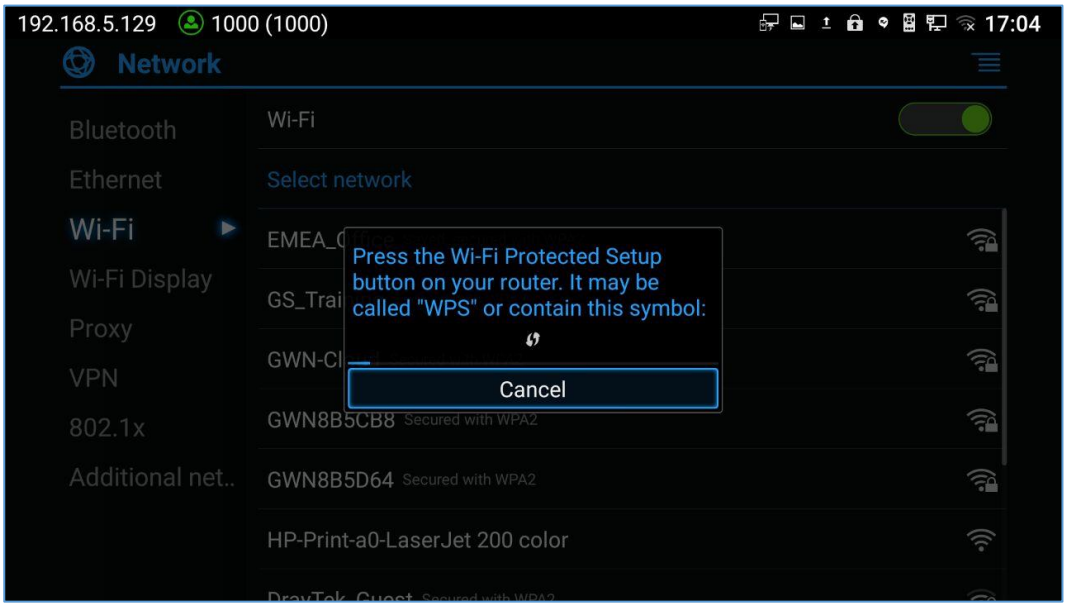


Figure 15: GVC3210 Push button WPS feature

- **PIN Entry WPS**

On the **Wi-Fi** page, press the MENU key on the remote control, and select "PIN Entry WPS". A PIN code will be generated by GVC3210 and the user will need to enter it and register it in the “Wi-Fi Protected Setup” page of the Wi-Fi Router.

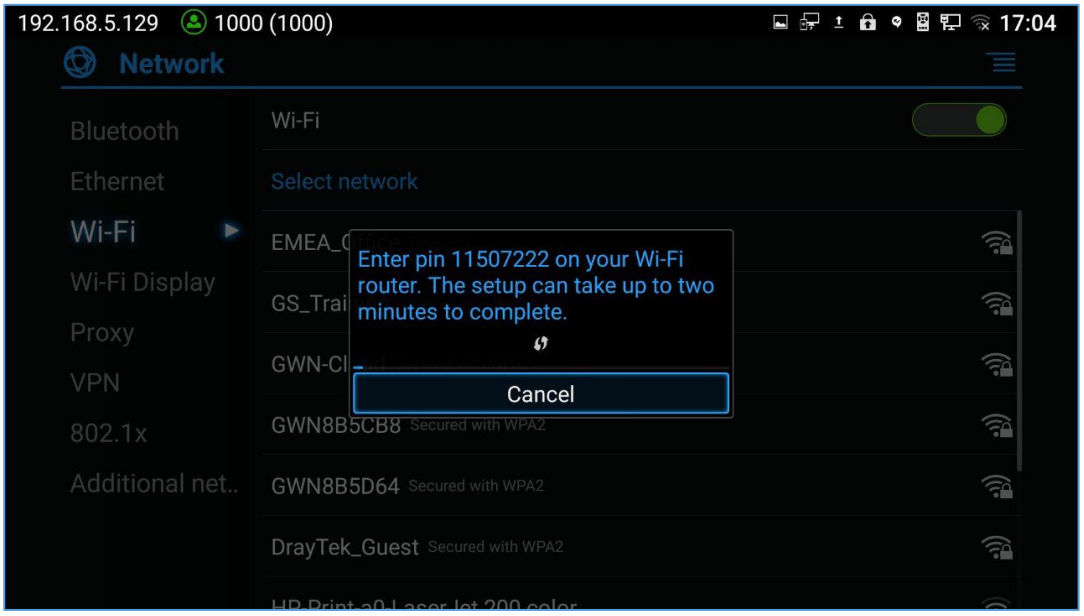


Figure 16: GVC3210 PIN Entry WPS feature

Add Network

The user can automatically connect the GVC3210 to the network using Wi-Fi by adding the network on your GVC3210. To do so, Please, refer to the following steps:

1. Go to the Wi-Fi page and press the MENU key ☰ on the remote control, then select "Add Network"
2. Enter the Network SSID.
3. Tap the security type that your network is using (None, WEP, WPA/WPA2 PSK, 802.1x EAP)
4. Enter the Password.
5. Click on “Save”.

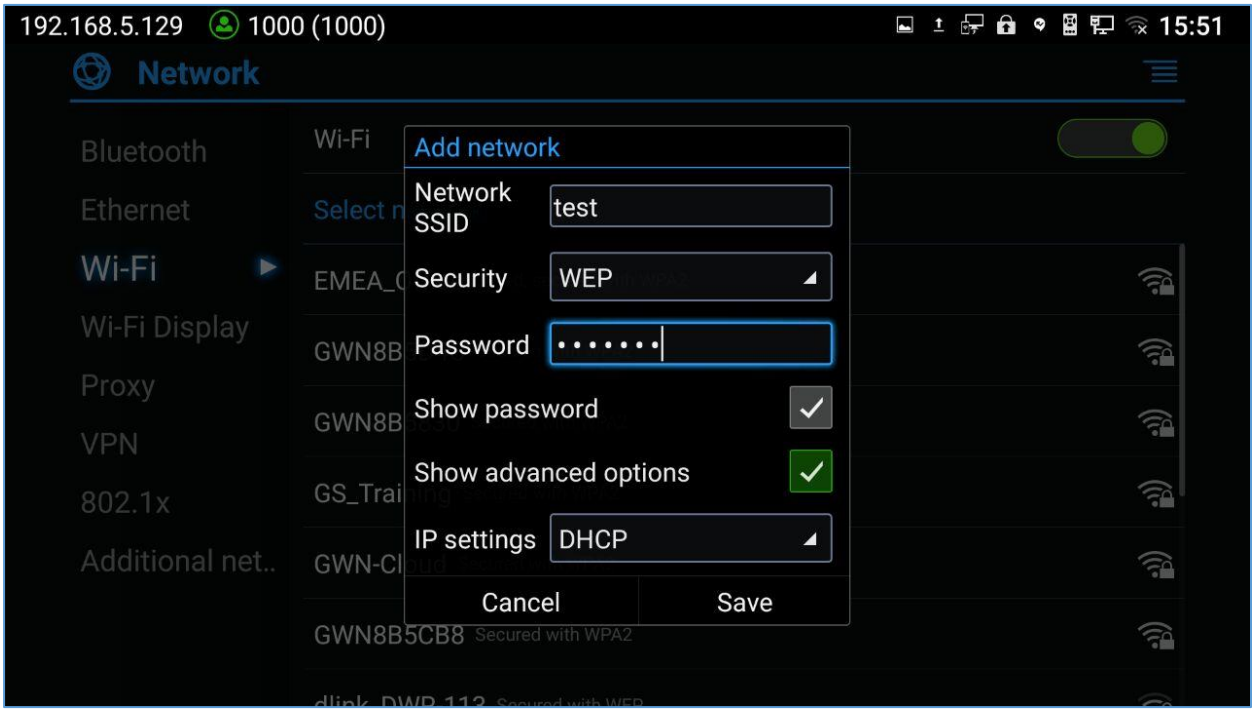


Figure 17: GVC3210 Add network feature

Wi-Fi Direct

The Wi-Fi Direct feature gives the ability to the user to connect the GVC3210 with another device supporting Wi-Fi direct as well with no requirement of the Wi-Fi Router, and it is generally used for “file transfer” between the two devices. At the same time, Wi-Fi Direct only work in 2.4G Wi-Fi mode.

Figure 18: GVC3210 Wi-Fi Direct feature

Advanced Settings

On the **Wi-Fi** page, press the MENU key on the remote control, and select "Advanced Settings". In this page, the user can enable/disable “Network Notifications” and to set the “Wi-Fi frequency band” to Auto, 5GHz only or 2.4 GHz only.

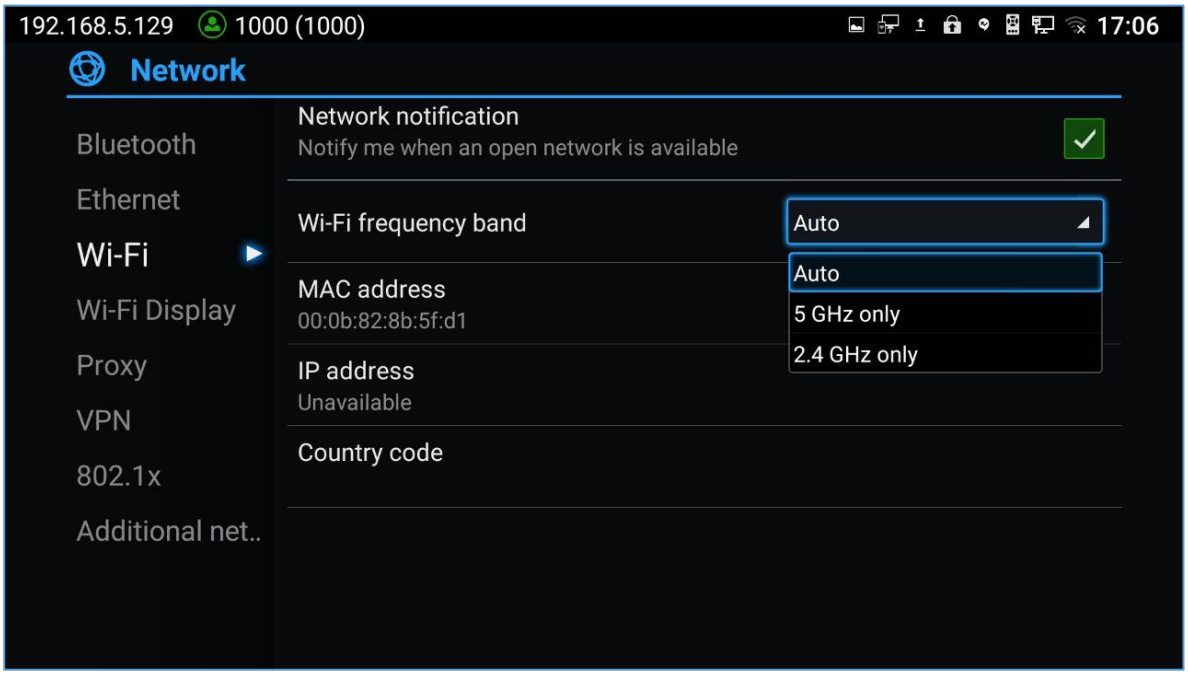


Figure 19: GVC3210 Wi-Fi Advanced Settings page

Wi-Fi Display

Wi-Fi Display feature is used for screen stream mirroring of other devices in the GVC3210 via Wi-Fi. Please refer to the following steps to display your device's screen on the GVC3210 screen:

1. On the LCD display, go to **Settings** → **Network** → **Wi-Fi** to turn on Wi-Fi.
2. Go to **Settings** → **Network** → **Wi-Fi Display** and enable Wi-Fi Display.

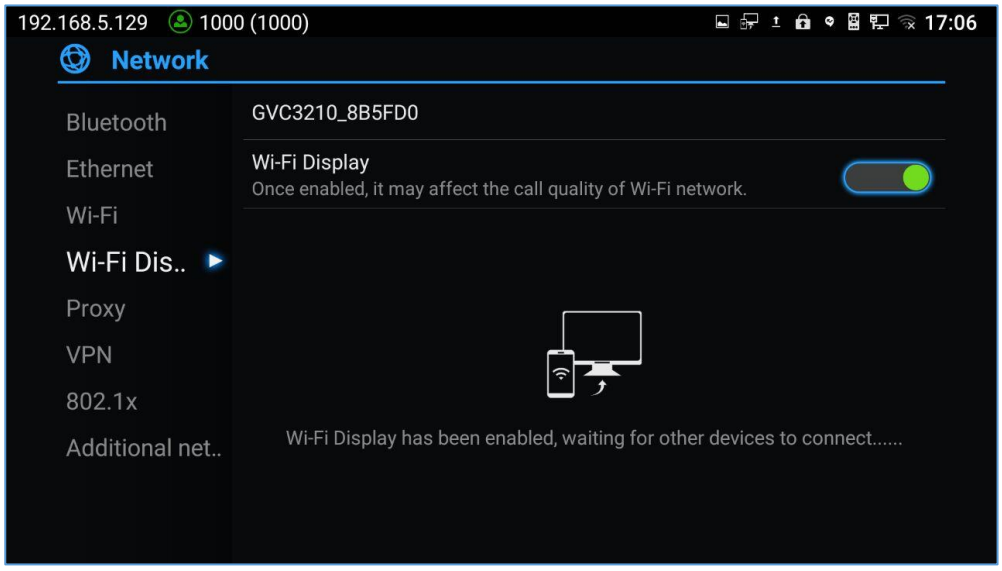


Figure 20: Wi-Fi Display feature

3. On the device you want to cast its screen, go to "Screen mirroring" feature page and enable Wireless display.
4. The phone will show the GVC3210 in the devices list. Select the GVC3210.
5. On the GVC3210, select the display screen and the screen mirroring will start immediately.

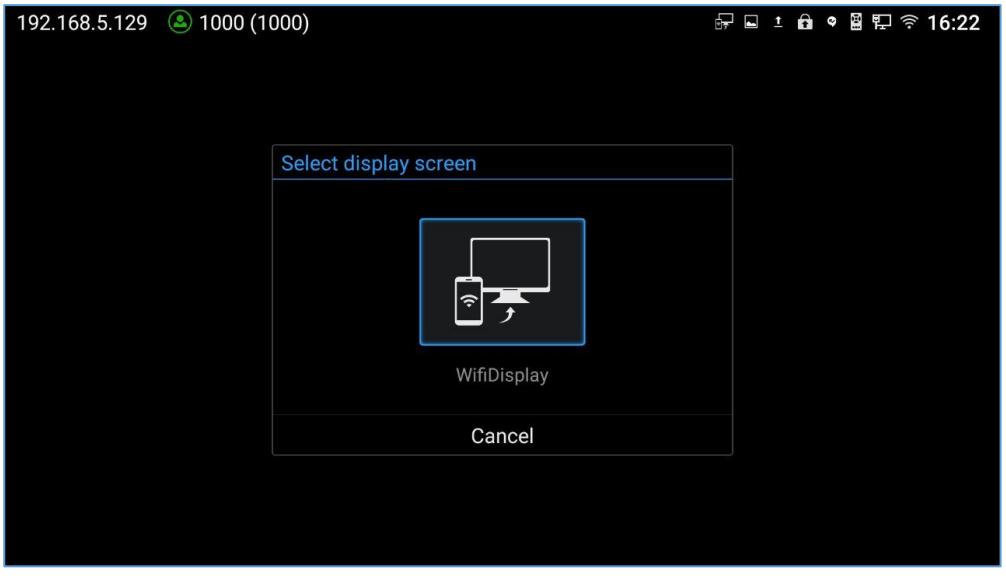


Figure 21: Select display screen

Bluetooth

On GVC3210, Bluetooth is enabled by default. Users could connect Bluetooth by remote control, send or receive files to cellphone, or use Bluetooth speaker and etc on GVC3210.

Pairing GVC3210 with a Bluetooth Device

Before connecting GVC3210 with other Bluetooth device, users must pair them first. They will stay paired afterwards unless they are manually unpaired. To pair Bluetooth device:

1. On the LCD display device, go to **Settings → Network → Bluetooth**.
2. Press button on the remote control and select "Search for devices".
3. GVC3210 scans and displays the IDs of all available Bluetooth devices in range. Once the Bluetooth device shows up in the result, tap on it to start pairing.
4. Confirm the passkey in the prompted message (if any). Or, if passcode is required, please refer to the device's documentation or contact with the device administrator to obtain the passcode.

Note:

The external speaker provided with GVC3210 is not pre-paired to GVC3210. If the user would like to use external speaker via Bluetooth connection with GVC3210, the user must pair and connect it to GVC3210 manually before using it for audio output.

Connecting to a Bluetooth Device

After pairing successfully, the device will be connected to GVC3210 immediately. Users will see this device listed under "Paired Devices". Tap on next to the connected device. Users will see options "Rename", "Unpair" and etc.

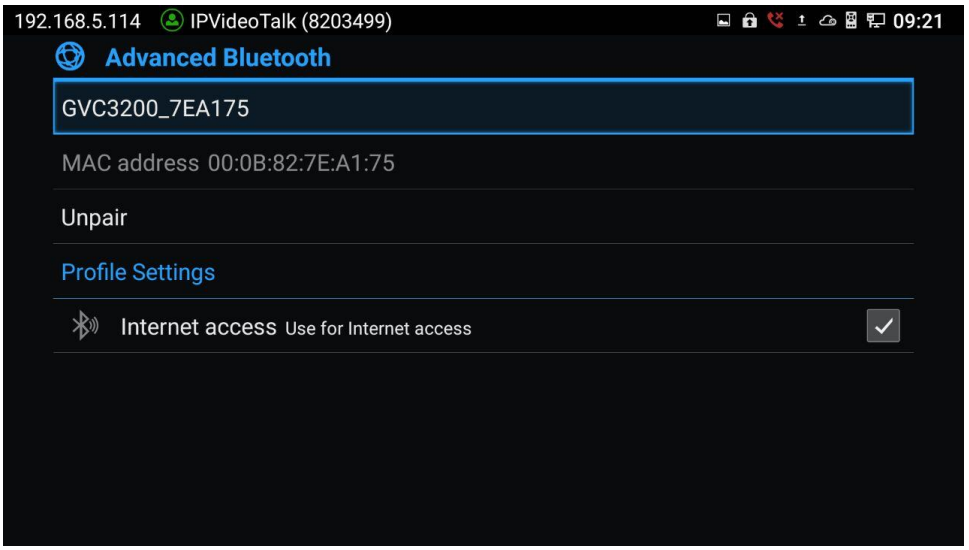


Figure 22: GVC3210 Bluetooth - Paired Device

If the connection is lost between the Bluetooth device and GVC3210, go to LCD menu → **Settings** → **Network** → **Bluetooth** and click on the device name under "Paired devices" again to reconnect.

Using Bluetooth Remote Control

Users could use GVC3210 Bluetooth remote control that comes with the GVC3210 packaging to control and configure a GVC3210. When the GVC3210 boots up for the first time, a setup wizard will guide the users to pair and connect the remote control to the GVC3210.

When the remote control is connected to GVC3210, users will see icon on the top status bar of the LCD display device.

If the remote control is not paired with the GVC3210 anymore (e.g., a factory reset is made), press OK button and number 5 button at the same time for about 4 seconds. This will initiate pairing process on the remote control.

Note: The remote control needs to be placed within the Bluetooth effective range, i.e., 10m from GVC3210.

If the user needs to pair a different remote control to GVC3210, please follow the methods below:

Connect a second remote control to GVC3210 and both remote controls can be used at the same time.

1. When remote control A is paired and connected to GVC3210, press OK + 5 keys at the same time for about 5 seconds on remote control B to trigger pairing process.
2. Now both remote controls can be used with GVC3210.
3. (Optional) If you wish to use only one remote control, Long press OK+0 keys at the same time for about 5 seconds to trigger unpair process on the remote control. Or you can try this, use the desired remote control to go to GVC3210 LCD Settings → Network → Bluetooth, Tap on next to the other connected remote, then click on "Unpair" to disconnect and unpair it from the GVC3210.

Note: Please use the proprietary factory remote control that comes with the GVC3210 packaging.

Transfer Files with Bluetooth

Users could transfer files, share contacts information with other Bluetooth portable devices after pairing and connection. A prompt for file transferring will be displayed on GVC3210 LCD display device when it receives the file transferring request. Accept the request to receive the file and it will be stored under LCD → **Applications** → **File Manager** → **Internal Storage** → **Bluetooth** folder.

Using Bluetooth Headset

Once the Bluetooth headset is connected with GVC3210, it will automatically use Bluetooth headset for calls. By default, the ringing tone will be generated in Bluetooth headset when there is an incoming call.

VPN Settings

Users can add VPN using different protocols (PPTP, L2TP/IPSec PSK, L2TP/IPSec RSA, IPSec Xauth PSK, IPSec Xauth RSA and IPSec Hybrid RSA). Follow the steps below to set up VPN:

1. Access GVC3210 home screen, go to **Applications** → **Settings** → **Network** → **VPN**.
2. Tap on "Add VPN file" to access configuration page as shown below:

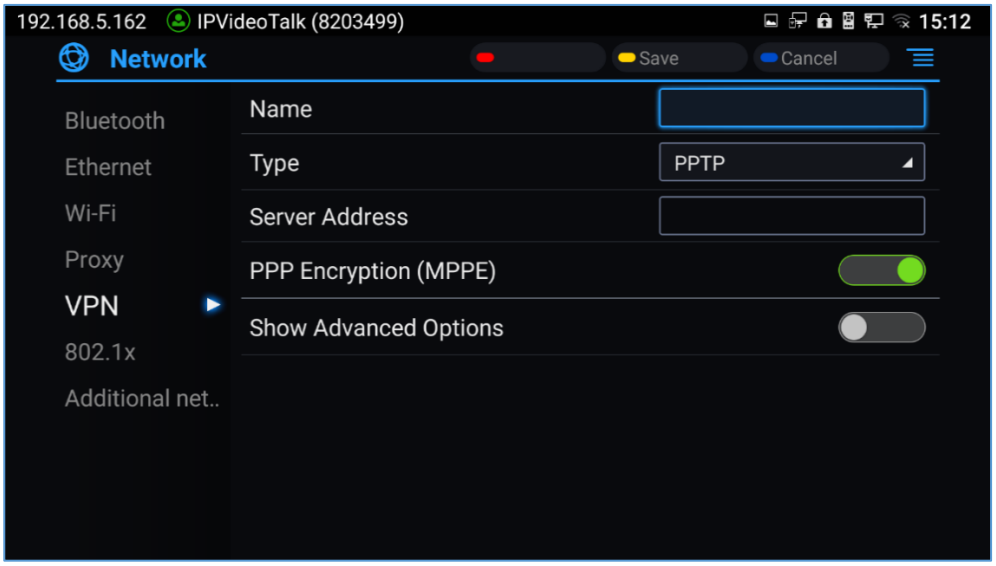


Figure 23: GVC3210 Add VPN Files Screen

3. Fill in and save the configurations, go back to VPN page, you will find the new VPN file you just added.

4. Tap on the VPN file to open the validation page as shown below:

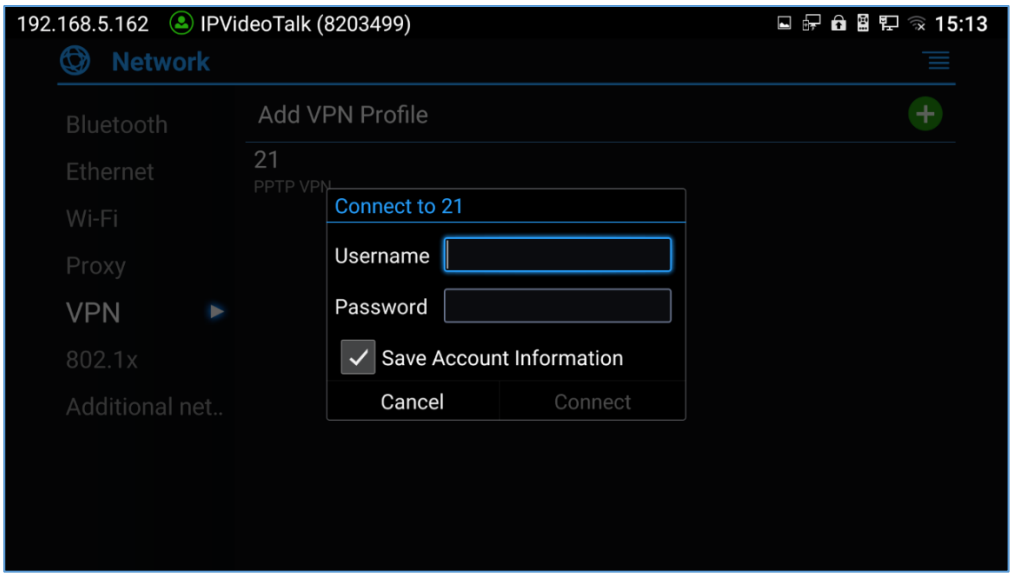


Figure 24: GVC3210 VPN Validation Screen

5. Fill in correct username and password to connect to VPN.

If GVC3210 is connected to VPN successfully, icon VPN will be shown in the top status bar; if the connection is failed, a prompt box will pop up to remind users whether to reconnect to VPN. If icon displays VPN in the top status bar, please check whether if your VPN configuration is correct.

Table 8: GVC3210 VPN File Parameters

Parameters	Descriptions
Name	Fill in your company address or the server you are connecting to.
Type	Set to PPTP, L2TP/IPSec PSK, L2TP/IPSec RSA, IPSec Xauth PSK, IPSeXauth RSA or IPSec Hybrid RSA.
Server Address	Fill in the server URL or IP address.
PPP Encryption (MPPE)	Defines whether to use PPP encryption.
Show Advanced Options	Check this option to display more options below.
DNS Search Domains	Enter DNS search domain.
DNS Servers	Enter DNS server address.
Forwarding Routes	Enter Forwarding Routes, for example, 10.0.0.0/8.

VLAN Settings

Access GVC3210 home screen, go to **Applications → Settings → Network → Additional Network Settings → VLAN** to configure VLAN settings on GVC3210.

Table 9: GVC3210 VLAN Configuration Parameters

Parameters	Descriptions
Layer 2 QoS 802.1q/VLAN Tag	Assigns the VLAN Tag of the Layer 2 QoS packets for LAN port. Default value is 0. **Note:** Please do not change the setting before understanding the VLAN's settings or consulting with the network administrator. Otherwise, the device might not be able to get the correct IP address.
Layer 2 QoS 802.1p Priority	Assigns the priority value of the Layer 2 QoS packets. Default value is 0.

LLDP Settings

Access GVC3210 home screen, go to **Applications → Settings → Network → Additional Network Settings → LLDP** to configure LLDP settings on GVC3210.

Table 10: GVC3210 LLDP Configuration Parameters

Parameters	Descriptions
LLDP	Enable or disable LLDP. The default setting is disabled.
Layer 3 QoS for SIP	This field defines the layer 3 QoS parameter for SIP packets. It is the value used for IP Precedence, Diff-Serv or MPLS. The default value is 26.
Layer 3 QoS for Audio	This field defines the layer 3 QoS parameter for audio packets. It is the value used for IP Precedence, Diff-Serv or MPLS. The default value is 46.
Layer 3 QoS for Video	This field defines the layer 3 QoS parameter for video packets. It is the value used for IP Precedence, Diff-Serv or MPLS. The default value is 34.

802.1X Mode

Access GVC3210 home screen, go to **Applications → Settings → Network → 802.1x**.

By default, 802.1x is disabled. Selecting 802.1x mode to "EAP-MD5", "EAP-TLS" or "EAP-PEAP" to turn on 802.1x. Once it is enabled, the user will be required to enter the identity and password to be authenticated in the network.

Table 11: 802.1x Mode Parameters on GVC3210

Parameters	Descriptions
802.1x Mode	Allows the user to enable/disable 802.1x and configure 802.1x mode. The default setting is disabled.
Identity	Enter the Identity information for 802.1x mode.
802.1x Password	Enter the MD5 Password for 802.1x mode.
CA Certificate	Upload the CA certificate for 802.1x mode.
Client Certificate	Upload the CA certificate for 802.1x mode.
Private Key	Upload the private key for 802.1x mode.

CAMERA

Users could set preset, configure camera parameters, start recording and make screenshots on camera screen. There are 3 ways to access camera screen:

- Click on icon on home screen.
- Press key on the remote control.
- Select on home screen to access Applications, then click on .

GVC3210 camera screen has the following options:

- Press recording button on the remote control to start or stop local recording. Please, refer to the chapter **Recording** for more details.
- Press the red shortcut button on the remote control to edit preset.
- Press the yellow shortcut button on the remote control to edit image parameters such as scene, white balance, etc.
- Press the blue shortcut button on the remote control for screenshot.
- Press digit key on the remote control to apply a pre-configured preset.

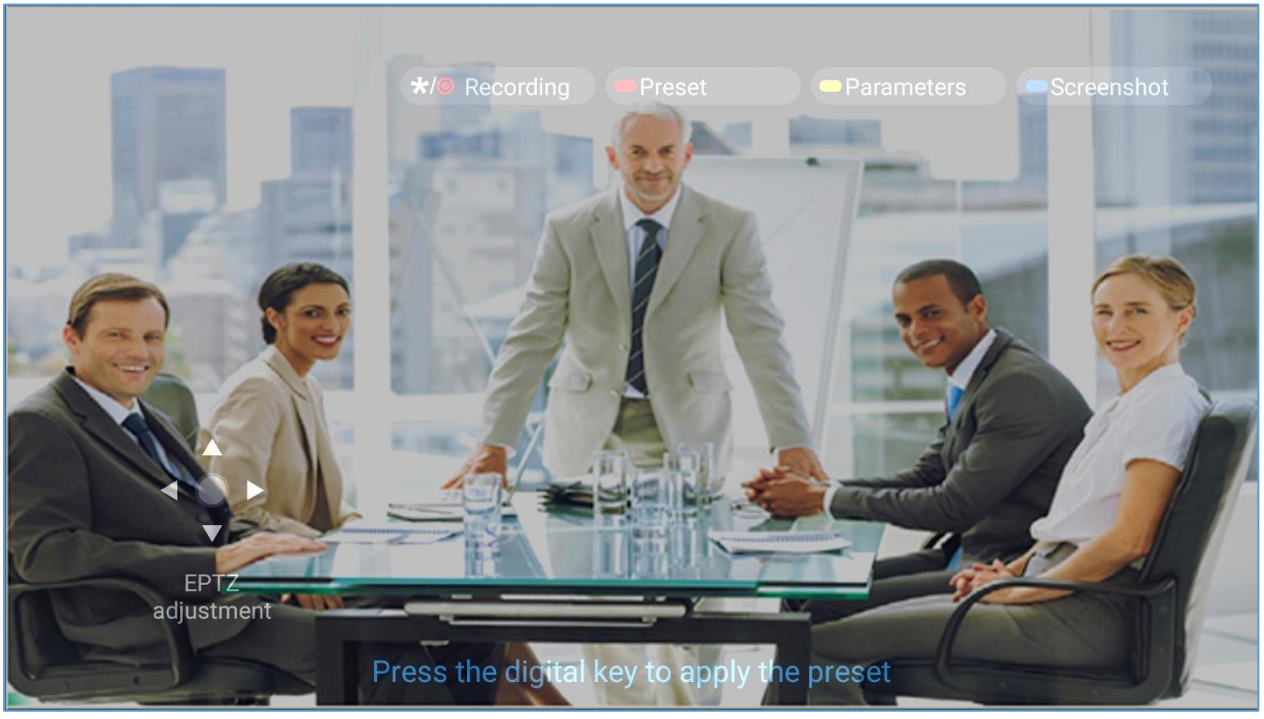


Figure 25: GVC3210 Camera Screen

Preset

Add Preset

Users can create and save maximum of 24 camera presets, with each preset storing the camera position and focal length. Follow the steps below to add preset:

1. Access camera screen and press the red shortcut key on the remote control to access preset screen.

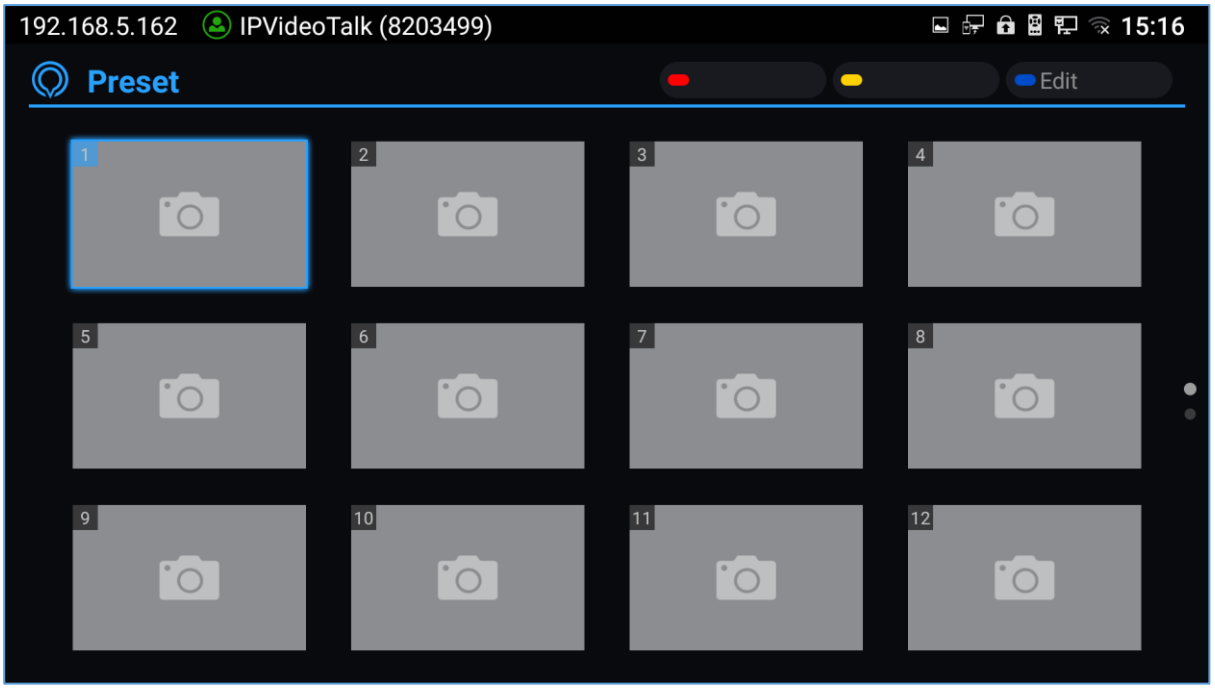


Figure 26: GVC3210 Add Preset Screen

2. Select the preset window and press the blue shortcut key on the remote control to access the editing screen.
3. Adjust camera position and zoom in/zoom out using the remote control.
4. On GVC3210 remote control, press "OK" key to save the preset, or press Back key ⮌ to cancel.

Edit Preset

To edit an existing preset, press the blue shortcut key on the remote control to access the editing screen to edit. The created preset can also be renamed by pressing the yellow shortcut key on the remote control for better identification purpose.

Delete Preset

Access the preset editing screen, select preset and press the red shortcut key on GVC3210 remote control to delete it.

Apply Preset

If you have already set preset on camera, you can apply preset via one of the following two ways:

- Access camera screen and press the digital keys on the remote control to adjust camera to the preset.
- Access preset screen and press the digital keys to switch to the corresponding preset, press the yellow shortcut key to apply.

Initial Position

Users can also define a preset as initial position when the GVC3210 boots up from LCD **menu** → **Settings** → **Peripheral** → **Camera**, three options are available:

- **System default position**: The GVC3210 will boot up at default camera position.
- **Position when power off**: The GVC3210 will return to the last position before power off.
- **Custom**: The GVC3210 will boot up at a custom position. When chosen, users will be redirected to Preset settings page to set a custom preset.

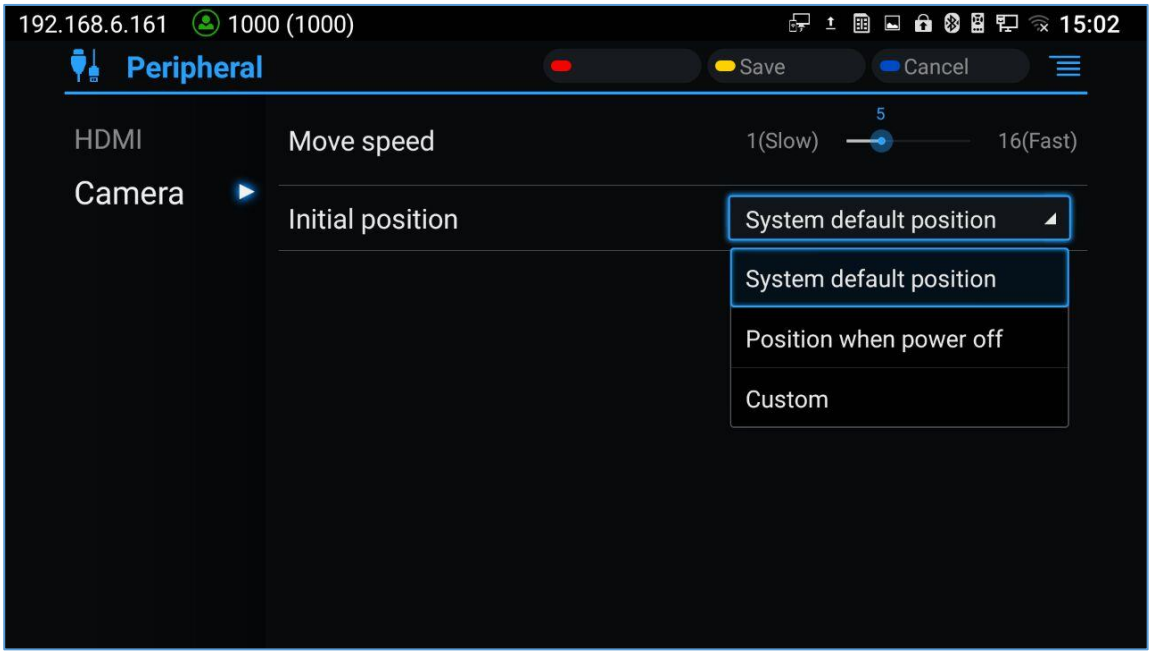


Figure 27: Initial Position

Camera Parameters Configurations

Press the yellow shortcut key on GVC3210 remote control to bring out camera parameters setting screen as shown below. Refer to the table below and configure the parameters using navigation keys on the remote control.

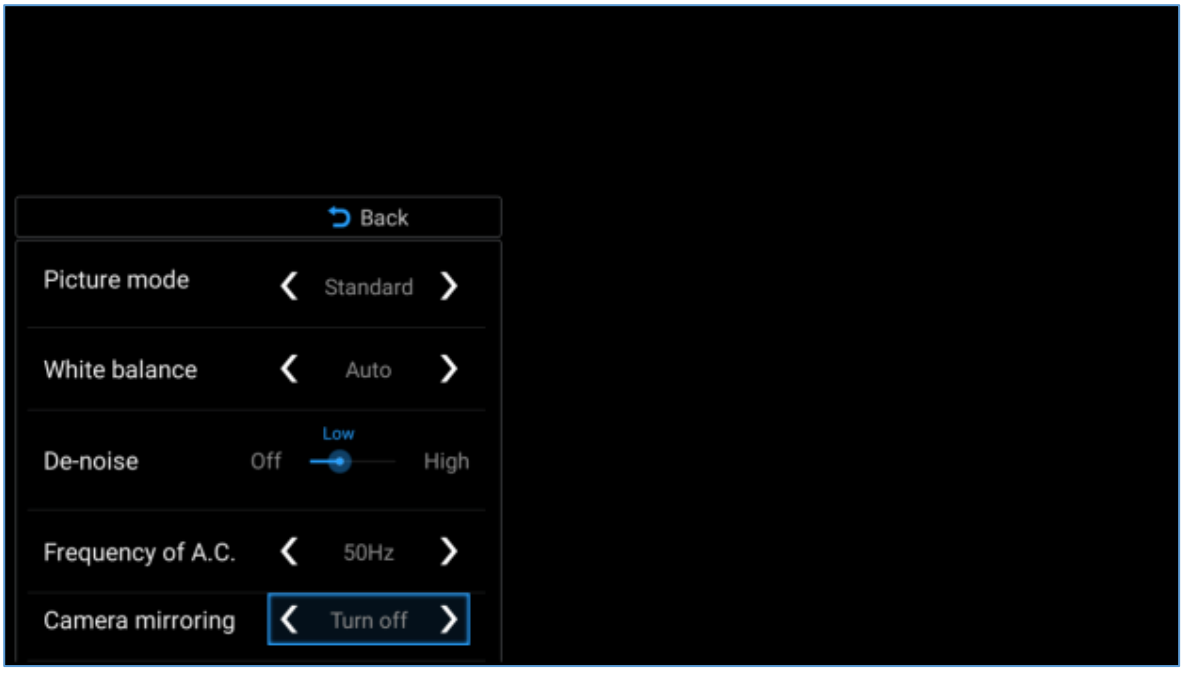


Figure 28: GVC3210 Camera Parameters Setting Screen

Table 12: GVC3210 Camera Parameters

Parameters	Descriptions
Picture Mode	GVC3210 has 4 built-in modes as well as "Manual" for customization. When set to "Manual", press "OK" key to access each setting to configure contrast, saturation, and brightness. • **Contrast**: Higher value brings more distinct color contrast. • **Saturation**: Higher value brings deeper color. • **Brightness**: Higher value brings brighter color.
White Balance	This is used to display accurate images. Users could set to "Manual" or "Auto". • When set to "**Auto**", the device will adjust parameters automatically according to the current environment. • When set to "**Manual**", the device will disable "Auto" mode. Press "OK" key to access manual setting screen, and adjust red or blue gain manually for better white balance.
Denoise	Users could set to "off", "low", "medium" or "high". Higher reduction level brings less image noises.
AC Frequency	Users could set to 50HZ or 60HZ.
Camera mirroring	When this feature is turned on, users will see the video image reverses from left to right.

PERIPHERAL

External USB Device

GVC3210 USB interface could be connected with a USB mouse, a USB keyboard, or a USB storage device.

Using USB Mouse/Keyboard

When a USB mouse is plugged into GVC3210, users could see the cursor on the screen, move the cursor to perform operations. When a USB keyboard is plugged into GVC3210, users could use GVC3210 remote control to navigate to an input interface, and click on the keys on the keyboard to check if it is installed successfully.

Using USB Storage Device

To connect and access USB storage device:

1. Insert USB storage device intone of the GVC3210 USB ports.
2. It will take a few seconds for GVC3210 to prepare the connection.
3. Once it is installed successfully, the USB storage icon will show up on the status bar. Users could go to GVC3210 LCD → **Applications** → **File Manager** → **USB** to access and manage your data.
4. Users could view, copy and paste files by using the USB storage device.

Micro SD Card

1. Insert your Micro SD card into Micro SD card slot at the back of GVC3210. Please make sure the Micro SD card is inserted with right direction on GVC3210.
2. It will take a few seconds for GVC3210 to prepare the connection. Then, the Micro SD card icon will show up on the status bar.
3. To access the Micro SD Card, go to GVC3210 LCD → **Applications** → **File Manager** → **sdcard**. Tap on it to access and manage your data.

Note:

The external Micro SD card must be plugged in if the users would like to record calls and the recording files will be automatically saved in the external Micro SD card. It is recommended to use a Micro SD card with large capacity for call recording purpose. Please, refer to the chapter **Recording** for more details.

Microphone and Speaker

GVC3210 is equipped with a built-in microphone. Alternatively, you can connect external audio devices to GVC3210 as audio input/output sources.

If the external speaker supports Bluetooth, users could also pair and connect the speaker to the GVC3210 via Bluetooth. This will provide better mobility and make cabling easier when deploying the GVC3210 conference Endpoint in your conference room.

When there are multiple audio devices connected to the GVC3210, the users could configure the audio device priority from LCD **Menu → Settings → Audio →Audio Priority**, or from web UI → **Device Control → Audio Control**: "Audio Device". Please refer to more details in "**Audio Device**" section.

MAKING PHONE CALLS

Account

GVC3210 comes with one IPVideoTalk account, supports one configurable SIP account registration, one H.323 account and one Blue Jeans account. Please enable the IPVideoTalk account, or register SIP account to a SIP server before making calls. The following figure shows the SIP account is registered successfully (account icon is green). This displays on the left side of the top status bar on your LCD display device.

Figure 29: GVC3210 SIP Account

Dial Screen

Once the account is registered successfully, users could use one of the following 3 ways to bring up dial screen to start making calls.

- Press the DIAL icon in the lower right corner of the remote control.
- On the LCD display device, click on icon on home screen.
- On the LCD display device, click on Applications and select to bring up dial screen.

Enter digits in the dial-up box. If the digits or the letters for the digit match contacts and call history in GVC3210, a dropdown list of numbers will be displayed. For example, entering 5 (JKL), 6 (MNO), 4 (GHI) and 6 (MNO) will display “5646” or “john” if contact "john" exists. The matching characters will be highlighted in red.

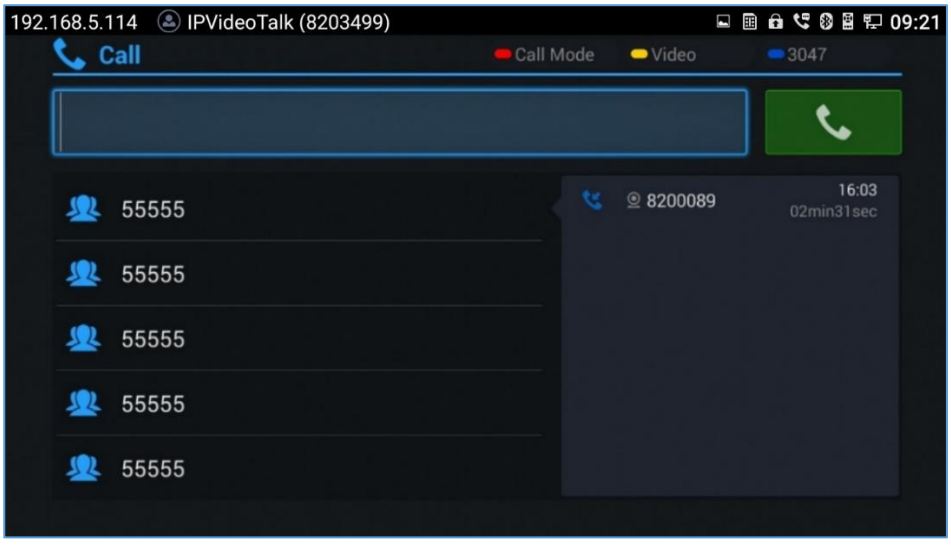


Figure 30: GVC3210 Call Screen

- Press the red shortcut key on the GVC3210 remote control to bring up call mode setting screen, set call mode to Call or IP call.
- Press the yellow shortcut key to set call type to Audio or Video.
- Press the blue shortcut key to switch account among SIP account, H.323 account, IPVideoTalk account and Blue Jeans account.
- Click on "Cancel" icon on the screen, or press key on the remote control to cancel the call.

Dialing a Number Directly

1. Open the dial screen.
2. Use the remote control keyboard to enter digits, or click the input box to enter digits using the pop out soft keyboard.
3. Press on the remote control to dial out, or move the cursor to the icon on dial screen and click it to dial out.

Notes:

1. By default, GVC3210 allows users to press # key as SEND key. This behavior can be disabled via option "Use # as Dial Key" in web GUI → **SIP Account** → **Call page**.
2. When entering initials or full spellings of a name that exists in the contact, this contact will show up in the dropdown list. For example, if the user inputs Amy by pressing the corresponding digits "2" (ABC), "6" (MNO), "9" (WXYZ) on the remote control, Amy's name and number will be displayed in the list if it exists in the contact, users can select it to dial out.
3. In order to make the calls to Polycom MCU, users need to do it with the number format “IP##ID”.

Redial

Users can dial out the last dialed number if there is dialed call log. Access the dial screen, and then press "#" key or on the remote control to dial out.

Dialing a Number via Contact

Follow the steps below to dial a number via Contacts.

1. On the LCD display device, access Contacts by tapping on button on home screen.
2. Navigate and select in the contacts entries using the remote control navigation keys.
3. Press on the remote control to dial out.

Dialing a Number via Call History

1. On the LCD display device, access Applications on home screen and access call history by selecting the icon .
2. The LCD will display all call history types. Navigate in the call history list by selecting the call history category. Select the call history entry you would like to dial out.
3. Press on the remote control to dial out.

Direct IP Call

Direct IP Call allows GVC3210 and another VoIP device to talk to each other in an ad-hoc fashion without a SIP proxy. Direct IP calls can be made if:

- Both GVC3210 and VoIP phone have public IP addresses, Or
- Both GVC3210 and VoIP phone are under the same LAN / VPN using private or public IP addresses, Or
- NAT is disabled or GVC3210 NAT is disabled.

Both devices 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:

1. Access the dial screen on GVC3210 LCD.
2. Press the red shortcut key on the remote control to bring up call mode setting screen, set the mode to "IP Call".
3. Input the target IP address. For example, if the target IP address is 192.168.124.123 and the port is 5062, input the following: 192*168*124*123#5062

   The * key represents the dot (.) and the # key represents the colon (:).
4. Press the yellow shortcut key on the remote control to select "Audio Call" or "Video Call".
5. Press on the remote control to dial out.

Paging/Intercom

Before placing paging/intercom, please make sure the callee has paging/intercom enabled so that it can answer the paging/intercom call automatically. To make paging/intercom call:

1. Access the dial screen on GVC3210.
2. Enter the number to dial followed by *74. Please refer to **Call Features** for more details.
3. Press the yellow shortcut key on the remote control to select "Audio Call" or "Video Call".
4. Press on the remote control to dial out.

Answering a Call

When the device is in idle and there is an incoming video call made by SIP or IPVideoTalk account, the device will show the call screen as below:

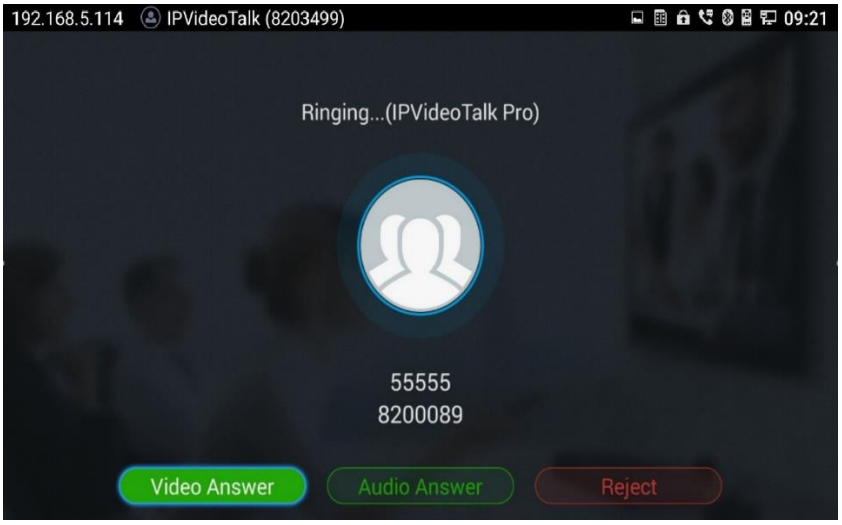


Figure 31: GVC3210 Single Incoming Call Screen

If the incoming video call is made by H.323 account, the call screen will display as bellow:

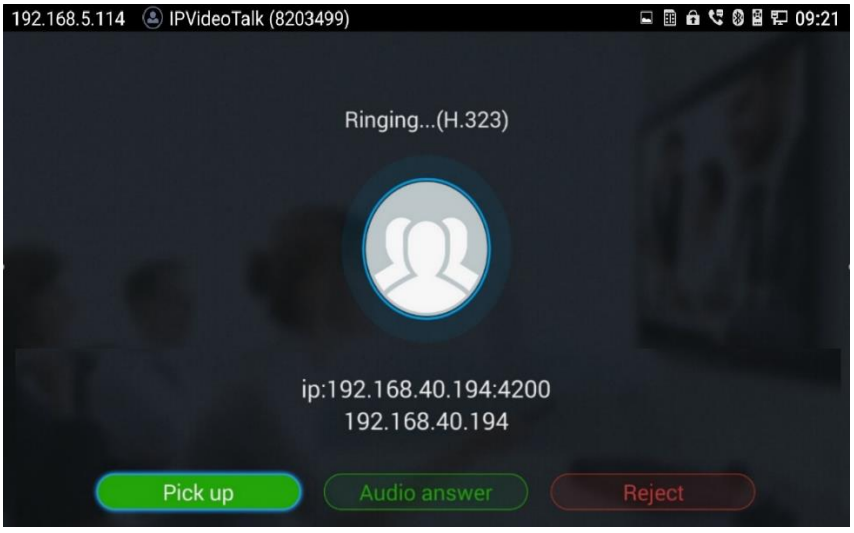


Figure 32: GVC3210 Single Incoming H.323 Call Screen

Select "Video Answer" or “Pick up” to answer the call with both video and audio, "Audio Answer" to answer the call with audio only, or "Reject" to reject the call.

Call Hold

During an active call, press HOLD button to put the call on hold.

- On the LCD display, click on to resume the call.
- On the LCD display, click on or press on the remote control to end the call.

If the current call is a video call, the screen will not display remote video when the call is on hold.

Mute Local Audio

During an active call, press the MUTE button to mute the call, press the button again to unmute the call.

Call Recording

During an active call, users could record the video to the external Micro SD card plugged into GVC3210. Once recorded, users can view the recorded video in Recorder application, and download the video from web UI → **Maintenance** → **Recording**. For more details, please refer to the chapter **Recording**.

1. During an active call, press the recording key on the remote control. A red Rec icon will show up on the upper left of the screen.
2. The recording files will be saved to the configured save path automatically when the call is finished. Users could also press on the remote control to stop recording anytime.

DND (Do Not Disturb)

When DND is on, the incoming calls to GVC3210 will be blocked without ringing. Users could see the blocked calls in call history. Once it is enabled, the DND icon

will be displayed in the status bar on the top of the screen.

- When GVC3210 is in idle screen, users can press button on the remote control to turn on/off DND.
- When GVC3210 is in an active call, users could turn on/off DND in call screen→MORE options. This will not affect the current call, and it will take effect starting from the next incoming call.

- At any time, users could log in GVC3210 web UI and click on “DND” on the top tool bar of the web page to turn on/turn off DND.

Note:

After enabling DND mode during a conference, the DND mode will remain effective after the call is over.

Missed Call

When there is a missed call, the call icon on home screen will show the number of missed calls. Once accessed the dial screen, the reminder icon will disappear.

Call Forward

Call forward (Unconditional/No Answer/Busy/Time Based) can be set up from web GUI. Log in GVC3210 web GUI and go to **Settings → SIP Account → Call**. For details, please refer to "GVC3210 Administration Guide".

Remote Camera Control in Call (FECC)

During the video call, if the local party (GVC3210) and remote party support FECC, the remote camera can be controlled on the GVC3210.

Here is how to use FECC on the GVC3210 to control remote party’s camera:

1. Make sure the GVC3210 and the remote party support FECC and it’s enabled on both parties. For GVC3210, FECC setting is under web UI → **Settings → Account Settings → Codec**: “Enable FECC”. If the remote party is another vendor’s video device, please check the documentation from the vendor to enable FECC.

2. Establish video call between GVC3210 and the remote party.

3. On the GVC3210 remote control, press the camera button and the following prompt pops up on GVC3210 display device.

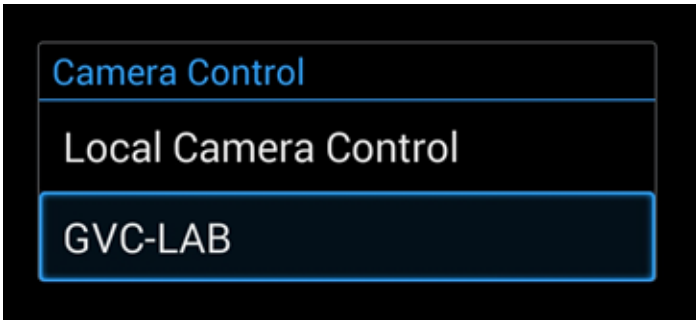


Figure 33: FECC – Remote Camera Control

4. Use UP/DOWN/OK navigation keys on the GVC3210 remote control to select the remote party, e.g., GVC-LAB in the above figure. This will bring up camera control interface.

5. On the GVC3210 remote control, press the navigation keys and zoom in/zoom out buttons on trackpad to adjust remote camera.

UCM Conference Control

Users can join an UCM conference room and control it with GVC3210. This is a compatible feature with Grandstream UCM product. Users could create video conference room in an UCM device, and register SIP account in GVC3210 to join into the conference.

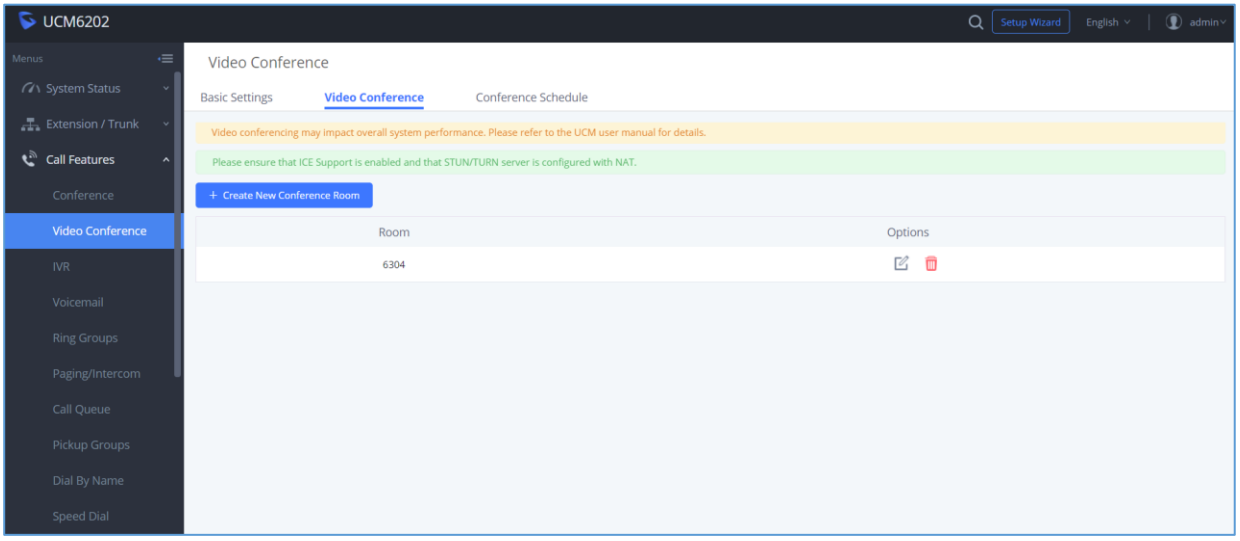


Figure 34:Create a Conference room in the UCM

The conference supports up to 4 video members to join into the conference's room. GVC3210 conference host could also control the UCM conference as the following:

1. Support to switch video layout of multiple video members.
2. Display UCM conference information.

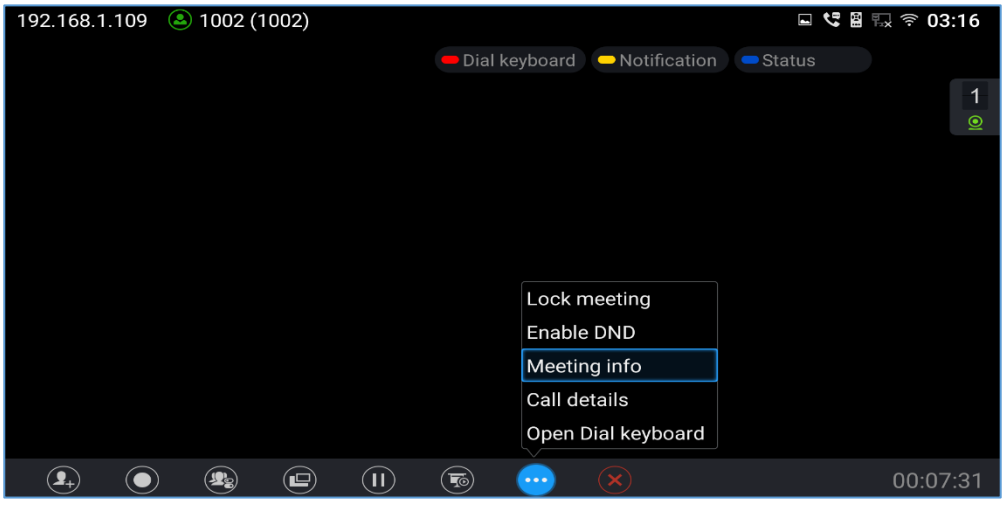


Figure 35: View Conference information

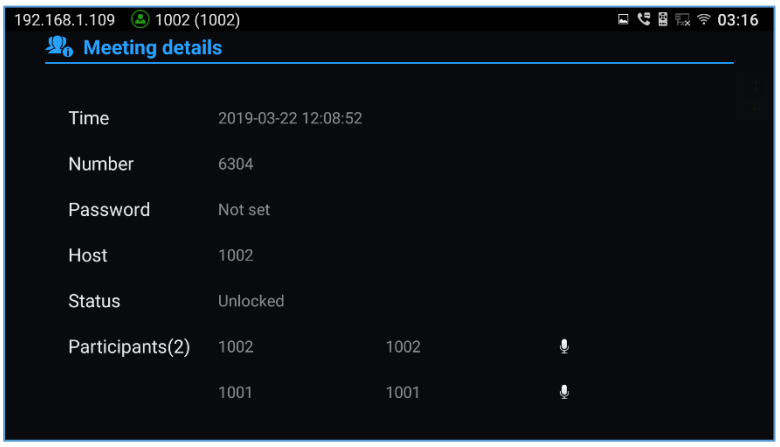


Figure 36: Conference details

3. Lock the conference.
4. Freely select video member recording, maximum support for recording 3 video members.
5. The member's name is displayed in the upper left corner of the video source.
6. Host Conference Control.

Figure 37: Host Conference Control

The conference host can:

- Mute other participants.
- Remove the participant.
- Grant the participant as the host.
- The host can close the presentation opened by the participant.

IPVIDEOTALK CONFERENCE

Device Layout

GVC3210 supports IPVideoTalk conference and it can be the host to initiate a conference or join other conferences as a member.

Users can connect two HDMI output devices for conference. HDMI 1 interface is the primary output when plugging in the two HDMI display devices. The device connected to HDMI 1 interface will display local site by default while other devices automatically display the remote site.

During a conference, user can tap on ⮌ button on GVC3210 remote control trackpad to go back to HOME screen, with the conference video displayed in the background.

Initiating Conference

The conference can be initiated in multiple ways:

- **From Call Screen:**
  1. Access the call screen, enter the number in the text box or select the member from the list below.
  2. Press on the remote control or click on button on the screen to dial out.

- **From Schedule:**
  For more details, please refer to section **Schedule**.

Answering an Incoming Call in Conference

You can specify how your GVC3210 handles incoming calls. Depending on your configuration, your GVC3210 answers a call automatically or prompts you to answer a call manually:

- Log in GVC3210 web GUI and go to **Settings→IPVideoTalk Account→Call page**, and set "Auto-answer when idle" option to "Yes". All incoming calls will be answered automatically. If it is an IPVideoTalk call to join a conference, it will be answered with video as well.

- If "Auto Answer when idle" is set to “No”, users will need to select to answer with video manually, audio or reject the call using the remote control on the LCD prompt.

- If the conference host answers the call, the caller will join into the current active conference.

Conference Management

The following figure shows a 3-way IPVT conference:

Figure 38: GVC3210 3-Way IPVT Conference

On the bottom of the call screen, users will see a list of icons for menu options. This menu will be automatically hidden if there is no operation in 5 seconds. Press any key to bring up the menu options again. Here are the functions for each icon.

Table 13: GVC3210 IPVT Call Screen Bottom Menu Icons

Icons	Name	Definitions
	Add Member	Access dial screen and add more numbers to join conference.
	Record	Start/Stop Local/Cloud recording the ongoing conference. The recording files will be saved to the connected Micro SD card or USB.
	Conference Control	Control video and audio for conference members. It includes the following options for each party: - The selected party will not be heard by other parties. - The selected party will not hear other parties. - The video call with the selected party will turn into audio call.