Wave Web – Administration Guide

INTRODUCTION

OVERVIEW

Wave web is a client application for the UCM63xx/Audio series IP PBX users to use a web browser to participate in web video/audio meetings and make calls via WebRTC. With Wave web client, users can easily create, schedule, manage, and join video meeting calls, share presentations, chat during meeting calls, register for UCM extension, and make point-to-point calls. Wave Web helps enterprise users to join meetings and communicate efficiently. It is an ideal product for enterprises looking for tools for users to communicate and work productively.

Feature Highlights

- Supports Google Chrome v75+ and Mozilla Firefox v70+.
- Native integration with UCM including contacts and the ability to display SIP users' online status.
- Supports LDAP to access contacts in the UCM LDAP server.
- Supports call display, voicemail, and call encryption.
- Support synchronized multi-terminal call records.
- Supports call history.
- High-quality point-to-point audio and video calling.
- Full integration with Grandstream UCM6300/A IP PBX, including the creation of a QR code for automatic login, call transfer, call recording from the server, etc.
- Supports Opus and G.722 for HD audio. Jitter resilience up to 50% audio packet loss and 20% video packet loss.
- Supports H.264.
- Supports joining meetings via link without logging in.
- Supports scheduling meetings and "Meet Now" anywhere anytime.
- Built-in NAT traversal including automatic NAT discovery and TURN/ICE.
- Integrated UCM user portal entry to access personal data, follow me settings, SCA, wakeup calls, etc.

Specifications

Protocols/Standards	SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, DNS (A record, SRV, NAPTR), STUN/TURN/ICE, SIMPLE, LDAP, TLS, SRTP, IPv6
Voice Codecs and Capabilities	Opus, G.711 A-law/U-law, G.722, G722.1 G722.1C, G.723.1 5.3K/6.3K, G.726-32, G.729A/B, iLBC, GSM, NetEQ FEC 2.0, NACK Full-duplex speaker, AEC, AGC, Noise Reduction, PLC, Adaptive JIB
DTMF	In-audio, RFC2833, SIP INFO
Video Codecs and Capabilities	H.264, H.263, H.263+, VP8 1080P HD video supports displaying multiple videos, screen sharing, camera on/off, GS-Fec

Telephony Features	Call hold/unhold, mute/unmute, call transfer, audio meeting room, call history, scheduling meeting, voicemail, call recording, etc. User portal entries allow access to personal data, wakeup call settings, SCA, follow me settings, call queue, CDR, CRM user settings, etc.
UCM Applications	Supports UCM feature codes (transfer, call park, recording, meeting control options, etc.)
QoS	Layer 3 QoS (ToS, DiffServ, MPLS)
Security	SIP over TLS, SRTP (128-bit and 256-bit), HTTPS
Multi-language Support	English, Simplified Chinese, French, Spanish (Latin America), Spanish (Spain), Italian, Greek, Arabic, Russian, German, Polish, Portuguese and Vietnamese.
Login	Supports login with SIP extension and password. Supports joining meetings via link without logging in.
Upgrade	Wave Web client is built-in with UCM and upgrades via UCM.

Wave Web Specifications

Please visit our website for more Wave web information and product documentation:

https://www.grandstream.com

WAVE CONFIGURATION

Grandstream Wave feature requires UCM WebRTC function which is build-in. To check and ensure that the UCM has WebRTC turned on, please make sure of the following:

1. Select the extensions that would use Wave Web and enable Wave on them under the Basic Settings section.

Extensions > Edit E	xtension:	1000					
Basic Settings	Media	Features	Voicemail	Specific Time	Wave Client	Follow Me	Advanced Settings
To use Wave in a public r recommended for a bett	network enviror er user experie	nment and ensure pro nce. Get more informa	per media traversal, Re ation at UCMRC User G	emoteConnect services mus uide	t be deployed, or STUN/TU	JRN servers must be co	nfigured. RemoteConnect is
Normal							
Enable Wave	~						
Wave Welcome Email	Email Te	mplate Send to E	xtension				
Wave Permission Settings	Go to Pa	ge					
Wave							
Wave is a web/desktop/n	nobile applicati	on for UCM that offer	s point-to-point calling,	multi-party conferencing, a	nd instant messaging. <u>Lea</u>	in more	
Web Client							
In Office, Please Visit:	https://1	192.168.5.99:8090	Ē				
PC Client/Mobile Clien	t						
Download Link:	https://f	w.gdms.cloud/wav	e/download/ 🗊				
	Cance	l Save					

Wave Web Support for Extension

2. Also, the administrator can configure some global meeting options like the maximum Concurrent Audio and Voice quality a meeting can have by navigating to the UCM web UI admin page \rightarrow Call Features \rightarrow Meeting Settings as shown in the figure below.

* Meeting Max Concurrent Audio	3				
Meeting Voice Indicator Sensitivity	Medium	~			
Meeting Audio Quality	Opus Fullband (48 kHz)	~			
Meeting AGC ^(Beta)					
Silence Suppression					
Enable Talk Detection					
 DSP Talking Threshold (ms) 	200				
DSP Silence Threshold (ms)	2500				
Max Number of Video Feeds	4	~			
Audio Codec Preference	0 item Available		8 items	Selected	
	Search Q		Search	Q	
			OPUS	*	$\overline{\mathbf{T}}$
		<	PCMU		^
	None	>	PCMA		
			GSM		
			G.726		
			C 722		
			© 2023 Grandstream Netwo	rks, Inc.	

Meeting Settings

Meeting Max Concurrent Audio	Maximum number of partipants that can be heard simultaenously in multimedia meetings. If the number of participants talking at any given point exceeds this value, the audio of the excess participants will not be heard.
Meeting Voice Indicator Sensitivity	Configures the sensitivity of the talking indicator in multimedia meetings. Setting this higher will make the talking indicator appear more easily for lower volumes of audio. Note: This does not adjust audio input sensitivity itself. Lower volumes of sounds may still be heard even if the talking indicator does not show the source.
	Configures the voice quality of audio meetings, two options are available:

Meeting Audio Quality	 Configures the voice quality of audio meetings, two options are available: OPUS Full band (48KHZ) OPUS Narrowband (8KHZ)
Allow New Participants to View Chat History	Configure whether new attendees joining in the middle of a Wave meeting can view the chat content already in the meeting.
Meeting AGC (beta)	Enabling this option will toggle on Automatic Gain Control for meeting audio. AGC is a system that dynamically reduces the variability of sound levels by adjusting high and low volumes based on the

	average or peak sound level. High volume sounds will be lowered, and low volume sounds will be boosted.
Silence Suppression	Silence suppression for temporary accounts (e.g., meeting participants that joined the meeting via link). If enabled, the UCM will send CN packets for silence suppression after a successful CN negotiation in the SIP SDP. If the client endpoint's OPUS codec supports the reception of DTX packets, the UCM will send DTX packets instead.
Add Contact Number to Email	Configure whether to add the enterprise contact number to meeting notification emails. Participants will be able to join meetings by dialing this number and then entering the room number when prompted. For security purposes, this information will only be added to the notification emails for meetings that do not use public meeting rooms.
Contact Number	When the option "Add Contact Number to Email" option is enabled, the user can select which Enterprise Contact Number to be displayed in the meeting invitation email sent to the users.
Enable Talk Detection	If enabled, the AMI will send the corresponding event when a user starts or stops talking.
DSP Talking Threshold (ms)	The amount of time(ms) that sound exceeds what the DSP has established as the baseline for silence before a user is considered to be talking. This value affects several operations and should not be changed unless the impact on call quality is fully understood.
DSP Silence Threshold (ms)	The amount of time(ms) that sound falls within what the DSP has established as the baseline for silence before a user is considered be silent. This value affects several operations and should not be changed unless the impact on call quality is fully understood.
Max Number of Video Feeds	Set the maximum number of video feeds supported per meeting room. Note:
Audio Codec Preference	Configures the preferred codecs for temporary accounts such as meeting participants who joined via link.
Packet Loss Retransmission	Packet Loss Retransmission configuration for temporary accounts (meeting participants without registered extensions who entered the meeting via link)
	Select jitter buffer method for temporary accounts such as meeting participants who joined via link. • Disable: Jitter buffer will not be used.

Jitter Buffer	• Fixed: Jitter buffer with a fixed size (equal to the value of "Jitter Buffer Size")
	• Adaptive: Jitter buffer with a adaptive size that will not exceed the value of "Max Jitter Buffer").
	NetEQ: Dynamic jitter buffer via NetEQ.

Meeting Settings

CONTACT MANAGEMENT

When the "Sync Contact" is enabled, this extension will be displayed in the UCM and Wave contact list. If disabled, it will not be shown in the contact list, but Wave users will still be able to manually dial the extension number. This option is enabled by default and can be accessed through the UCM63XX web UI by navigating to **Extension/Trunk** \rightarrow **Extensions** then edit an extension, the option is located under the **Contact**

Privileges category under Basic Settings.

Contact Privileges				
Same as Department Contact Privileges		* Contact View Privileges	All Contacts	~
			Add / Edit Privileges	
Sync Contact				
	Cancel Save			

Extension Basic Settings

Currently, it is possible to manage which group of extensions, otherwise known as Department, can see which group from the Wave web. By default, you can either set it to "see all" or "see department".

The former allows all contacts to see all the other departments, while the latter allows contacts to see only the other contacts within the same groups. You can also set a custom privilege in case you want contacts in two or more departments to be able to see each other. E.g., the Marketing department would have to be able to see the Sales department.

S UCM6301	l	Security level of current username or password is too low. Click here to change them. If you have forgotten your password, please enter an email address so that a password reset email may be sent.	🜒 admin v
Menus (=	Department Management	t	
n System Status 🔹 🗸	+ Add	Edit Department ×	
📕 Extension/Trunk 🗸	(9)		
🗳 Call Features 🗸 🗸	Ouglity Cantral	Department Name : Quality Control	
🗘 PBX Settings 🛛 🗸	Quality Control	Upper Level : Y	
🔓 System Settings 🗸	Finance	Contact View : All Contacts ~	
L Contacts ^	Marketing	Privileges Applied To Add / Edit Privileges	
Contact Management		Departments	
Department Manag	Technical Support	Carel OV	
Privilege Management	Sales (1)		
🗐 Device Management 🗸	Human Resources		
🗶 Maintenance 🗸 🗸			
🖹 CDR 🗸 🗸	П		
रि RemoteConnect	Logistics		
Other Features 🗸 🗸			
		Copyright © Grandstream Networks, Inc. 2022. All Rights Reserved.	

Adding/Editing Departments

S UCM6301		Security level of current username or password is too low. Click here to change them. If you have forgotten your password, please enter an email address so that a password reset email may be sent.	Q 🕦 admin v
Menus 🗧	Department Manageme	ent	
On System Status v	+ Add		
📇 Extension/Trunk 🗸	(9) 🗹		
📽 Call Features 🔹 🗸	Quality Control		
PBX Settings v			
🗔 System Settings 🗸 🗸	Finance		
L Contacts	Marketing		
Contact Management	Technical Support		
Department Manag	Technical support		
Privilege Management	Sales (1)		
ቯ Device Management 🗸	Human Resources		
🔀 Maintenance 🗸 🗸			
🖹 CDR 🗸 🗸	IT		
RemoteConnect	Logistics		
Other Features v			
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Department Management

The Contact Management section will show each extension and the department it belongs to.

S UCM6301		Security level of cu forgotten your pag	irrent username or password ssword, please enter an email	is too low. Click here to change them. If you have address so that a password reset email may be sent.		Q ① admin ~
Menus 🗧	Contact Managen	nent				
🗥 System Status 🔹 🗸	Extension Contacts	External Contacts				
🛃 Extension/Trunk 🗸		t 🗄 Contact Privileg	e Settings 👖 Delete		Q Extension Number or Na	me Search
🗳 Call Features 🗸 🗸	EXTENSION \$	NAME	DEPARTMENT \$	EMAIL ADDRESSES 🌻	CONTACT PRIVILEGES	OPTIONS
🗘 PBX Settings 🗸 🗸	1000	Room1 Moor1			All Contacts(Same as Department)	r 💼
😳 System Settings 🗸 🗸	1001	Arthur Morgan			All Contacts(Same as Department)	2 💼
L Contacts	1002	Bonnie MacFarlan			All Contacts(Same as Department)	C 📋
Contact Management	1003	Catherine Braitwaite			All Contacts(Same as Department)	2 💼
Department Manag	1004	John Marston			All Contacts(Same as Department)	2 💼
Privilege Management	1005	Abigail Roberts			All Contacts(Same as Department)	2 💼
ቯ Device Management 🗸	1006	Mary-Beth Gaskill			All Contacts(Same as Department)	r 💼
🔀 Maintenance 🗸 🗸	1007	Hosea Matthews			All Contacts(Same as Department)	C 💼
🖹 CDR 🗸 🗸					< <u>1</u> > Total: 8 10 / pa	age × Goto 1
₹≧ RemoteConnect						
Other Features 🗸 🗸						
			Copyright © Grandstream Net	works, Inc. 2022. All Rights Reserved.		

Contact Management Interface

On the Wave web interface, the contacts within the authority will be displayed in the Contacts section, as shown in the illustration below. Users can select **All** to display all available contacts, or **Favorites** to display favorites contacts only.

Note

The contacts displayed in the Grandstream Wave web portal contain UCM extensions (based on contact privilege settings), meeting room extensions, and LDAP contacts (based on the UCM's LDAP phonebook settings). (Refer to the UCM630x/A User Manual for more details)



Contacts Display on Wave Web

For more information regarding contact management for Wave, please refer to the UCM6300 User Manual, CONTACTS section.

PORTAL/WAVE PRIVILEGES

By default, the users are allowed to change settings that are related to their extension when they are logged into their user portal or Wave. In

certain cases, it might require that certain settings should not be modified by the extension users. Therefore, we have created a permission

management page in the UCM to allow the administrator to create custom privileges and assign them to the correspondent extension numbers.

To access the Portal/Wave Privileges configuration page, please access the web GUI of the UCM, then navigate to **Maintenance** \rightarrow **User**

 $Management \rightarrow User \ Portal/Wave \ Privileges$

User Management > Create New User Portal/Wave Privileges
* Privilege Name Wave Permissions @
 Chat Delete Chat
Send File 🕐
🐱 🍁 End-to-End Encrypted Chat 🐵
Video Call 🕖
 Meeting ② Start Video During Meeting ②
Online Status @
Clear Recent Call History 📀
Application 🕖
 Smart Devices Toggling off privileges will hide the corresponding pages and options in Wave.
Door System
Monitor
Cancel Save

Wave Premissions

User Portal/Wave Privileges 🕐
Account Settings 🛞
* 😑 Extension Settings 🛞
🔽 Do Not Disturb 🕜
Change Password Or Verify ID 👔
Configuration Voicemail
* 🖻 Manage Recording Files 💿
Delete Recordings 🛞
Personal Data Toggling off privileges will hide the corresponding pages and options in the User Portal and Wave.
CDR
Sollow Me
Voicemail
Recording Files 📀
V Fax Files
SCA
• Other Features. Toggling off privileges will hide the corresponding pages and options in the User Portal and Wave.
Fax Sending
Call Queue
Scheduled Call
Cancel Save

User Portal & Wave Privileges

1. Enter the name of the privilege, then select the privileges to limit for the user.

2. Click "Save" once the privileges have been selected.

3. Then navigate to **Extension/Trunk** \rightarrow **Extensions**, and edit the extension on which you want to apply the new privileges.

4. On the User Portal/Wave Privileges setting, please select the privilege that had been created. Please see the screenshot below.

Wave Permissions

- Chat: Toggles ability to use the Wave Chat feature.
 - Delete Chat: Toggles support for Wave to delete chats and chat history. This data will only be deleted on the Wave client side.
 - Send File: Controls whether sending files/images in Wave chat is supported. When disabled, it does not affect the normal downloading, viewing, and forwarding of historical chat files.
- End-to-End Encrypted Chat*: Toggles ability to use the Wave End-to-End Encrypted Chat feature.
- Video Call: Toggles ability to use the Wave Video Call feature.
- Meeting: Toggles ability to use the Wave Meeting feature.
 - Start Video During Meeting: Toggles ability to use the Wave Start During Meeting feature.
- Online Status: Toggles ability to set Wave online status such as "Busy", "Appear Away", "Do Not Disturb", "Appear Offline", etc. If unchecked, the status will be displayed as only either "Online" or "Idle".
- Clear Recent Call History: Toggles ability to delete recent call history entries and entire recent call history on Wave.
- **Application:** Toggles ability to access the "Applications" page under Wave Desktop and Wave Web.
- Smart Devices: Toggling off privileges will hide the corresponding pages and options in Wave.
 - Door System
 - Monitor
 - Call Device (CTI)
- 3rd Party Applications
 - App Store: Toggles ability to access the Wave App Store. If unchecked, the App Store will be hidden, but installed apps can still be used.
 - **Pre-installed Apps***: Configure Wave pre-installed add-ins and related settings.

User Portal/Wave Privileges

- Account Settings: If unchecked, the User Portal -> Basic Information -> Account Settings page and the Wave -> Sidebar -> User -> Account Settings option will be hidden.
- Extension Settings: If unchecked, the extension's User Portal->Basic Information->Extensions page and the Wave->Sidebar->User->Call Settings option will be hidden.
 - Do Not Disturb: Toggles ability to set DND through the User Portal.
 - Change Password Or Verify ID: Toggles ability to access the Password and AuthID settings under the User Portal > Basic Information >

Extensions > Basic Settings page.

• Configuration Voicemail

- Manage Recording Files: Toggles the ability to view recordings through the User Portal and Wave, including the recordings in call logs, meeting details, and Wave Application tab.
 - **Delete Recordings:** Toggles ability to delete recordings through the User Portal and Wave. For Wave, this includes the ability to delete call logs, meeting details, and recordings.
- **Personal Data:** Toggling off privileges will hide the corresponding pages and options in the User Portal and Wave.

 \circ CDR

• Follow Me

- Voicemail
- **Recording files:** Toggles ability to access the *Personal Data* pages in the User Portal and Wave.
- Fax Files
- SCA
- **Other Features:** Toggling off privileges will hide the corresponding pages and options in the User Portal and Wave.
 - Fax Sending
 - Call Queue
 - Schedule Call
- *: Features which are marked by an asterisk are a part of RemoteConnect plans.

Extensions > Edit E	xtension: 100	0					
< Basic Settings	Media	Features	Voicemail	Specific Time	Wave Client	Follow Me	Adva >
General							
* Extension	1000			CallerID Number			
* Call Privileges	Local	V		* SIP/IAX Password	•••••	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
AuthID				* Concurrent Registrations	3	~	
User Settings							
First Name				Last Name			
Email Address				* User/Wave Password	*****		
User Portal/Wave Privileges	Default	^		Mobile Number	+1 ~		
	Default						
Department	Privilege_1			Job Title			
Contact Privileges							
Same as Department				* Contact View	All Contacts	~	
condet rivinges				1 HAICES	Add / Edit Privileges		

Once this has been set, the user privileges should be limited according to the new privilege settings.

VIRTUAL MEETING

The UCM630X supports virtual meeting rooms allowing multiple rooms used at the same time.

The meeting room configurations can be accessed under Web GUI -> Call Features -> Multimedia Meeting for the UCM6300 series, and for the UCM6300 Audio series, you can access it under Call Features \rightarrow Meeting. On this page, users can create, edit, view, invite, manage the participants, and delete meeting rooms. The meeting room status and meeting call recordings (if recording is enabled) will be displayed on this web page as well.

For video meetings (video meetings are not supported on the UCM630x Audio series), which is based on WebRTC, participants can join the meeting from a PC without installing extra plug-ins or software.

The UCM admin can create multiple meeting rooms for users to dial in.

UCM630x series	Number of public meeting rooms	Participant limit
UCM6301	4	75
UCM6302	8	150
UCM6304	15	200
UCM6308	25	300

UCM Meeting Specifications

Meeting room specifications affect user participation to a certain extent. The UCM supports the forecasting of meeting resources. There will be corresponding judgments and adjustments in the following scenarios:

- 1. When the meeting resources are full, members of the scheduled meeting room cannot join the meeting in advance.
- 2. When meeting resources are full, joining a meeting is prohibited when a point-to-point call is transferred to a meeting.
- 3. When the meeting resources are full and the IM group chat initiates a meeting, it is forbidden to join the meeting.
- 4. When the meeting resources are full, when an instant meeting is initiated, joining the meeting is prohibited.
- 5. Close other instant meetings or scheduled meetings that have timed out to ensure that all invited members of the scheduled meeting can enter the meeting.
- 6. If the number of invited members in the ongoing meeting exceeds the maximum number of resources in the meeting, the invitation of members is not allowed to join the meeting.
- 7. Turn on the flow control of video and presentation in the meeting room.

Log in to the UCM Web GUI and open the **Call Features** \rightarrow **Multimedia Meeting** on the UCM6300 series, and on the UCM630x Audio series, open **Call Features** \rightarrow **Meeting** to manage the meeting room. Users can create, edit, view, invite, manage meeting members, and delete meeting rooms. The meeting room status and meeting call recording (if the recording function is enabled) will be displayed on the page. The meeting rooms in the list include public meeting rooms and temporary meeting rooms. For temporary meeting room administrators, only the "batch kicking people" function is supported. The temporary meeting room has no meeting password or host code. The member who initiates the group meeting is the host, and ordinary members have the right to invite.

Menus	÷	Multimedi	a Meeting				
(A) System Status	ř	Room	Meeting Schedule	Google Service Settings	Meeting Recordings		
📇 Extension/Trunk	~	Multimedia mee	ting may impact overall system	performance. Please refer to the UCM	user manual for details.		
🗳 Call Features	^	Please ensure th	at ICE Support is enabled and t	hat STUN/TURN server is configured wit	th NAT.		
Multimedia Meetin	8	+ Add	O Meeting Settings	It Call Statistics			
IVR			-	ATTEMPER	CTADT THAT	ACTIVITY	OPTIONS
Voicemail		RUOM		ATTENDEE	START TIME	ACTIVITY	OPTIONS
Blac Barris		▶ 6300		0		-	
King Groups		▶ 6301		0		-	2 0
Restrict Calls							

Multimedia Meeting

- Click on "Add" to create a new meeting room.
- Click on ^I to edit the meeting room.

Creating a Meeting Room

* Extension	6300	
Meeting Name		
* Call Privileges	Internal	X
Allow User Invite		
Allowed to Override Host Mute		
* Auto Record	None	

Click on "Add" to create a new meeting room. Users will be prompted to configure the following options for the meeting room:

Meeting Room Parameters

Extension	The number to dial to reach the meeting room.
Meeting Name	Meeting Name
Privilege	Please select the permission for outgoing calls.
Allow User Invite	If enabled, participants will be able to invite other to the meeting by pressing 1 on their keypad or by clicking the Participants -> Invite option on the Wave bottom bar.
Allowed to Override Most Mute	Allowed to Override Host Mute
	Meeting audio and video can be automatically recorded. These reconrdings can be found under the Meeting Recording or Meeting Video Recordings Page.
	Record Audio: Record only the meeting Audio.

Auto Record	Record video: Record the meeting audio and all video feeds. When there is a shared source (shared
	screen/shared whiteboard/shared document) or focus, only the shared or focus screen is recorded, and
	when both are present, the shared screen will b recorded.
	Record video (Focus Mode): Record the focus screen and all audio of the meeting. When a shared source is
	present in the meeting, only the shared screen is recorded.
Room Password	If meeting room password is configured, meeting participants will need to enter a password to enter the room. Scheduling meetings will not be supported for this room.

Meeting Settings

Click on O Meeting Settings on the audio meeting room page to access and configure global settings for all audio meeting rooms. The configuration settings page contains the following options:

Multimedia Meeting > Meeting Setting	gs					
* Meeting Max Concurrent Audio	3					
Meeting Voice Indicator Sensitivity	Medium		~			
Meeting Audio Quality	Opus Fullband (48 kHz)		~			
Meeting AGC ^(Beta)						
Silence Suppression						
Enable Talk Detection						
* DSP Talking Threshold (ms)	200					
* DSP Silence Threshold (ms)	2500					
Max Number of Video Feeds	4		~			
Audio Codec Preference	0 item	Available		8 items	Selected	
	Search	Q		Search	Q	
				OPUS	A	不
		<	<	PCMU		~
	None	>	>	D PCMA	1	\vee
				GSM		*
				G.726		
				G.722	-	
Packet Loss Retransmission	NACK+RTX(SSRC-GROUP)		Y			
Jitter Buffer	NetEQ		v			

Meeting Settings

Meeting Max Concurrent Audio	Maximum number of partipants that can be heard simultaenously in multimedia meetings. If the number of participants talking at any given point exceeds this value, the audio of the excess participants will not be heard.

Meeting Voice Indicator	Configures the sensitivity of the talking indicator in multimedia meetings. Setting this higher will make the talking indicator appear more easily for lower volumes of audio. Note: This does not adjust audio input
Sensitivity	sensitivity itself. Lower volumes of sounds may still be heard even if the talking indicator does not show the
	source.
Meeting Audio Quality	Audio quality of multimedia meetings
Meeting Record Prompt	If enabled, system will prompt the user before the start of meeting recording that your meeting will be recorded.

Allow New Participants To View Chat History	Configure whether new attendees joining in the middle of a Wave meeting can view the chat content already in the meeting.
Meeting AGC (beta)	Enabling this option will toggle on Automatic Gain Control for meeting audio. AGC is a system that dynamically reduces the variability of sound levels by adjusting high and low volumes based on the average or peak sound level. High volume sounds will be lowered, and low volume sounds will be boosted.
Silence Suppression	Silence suppression for temporary accounts (e.g., meeting participants that joined the meeting via link). If enabled, the UCM will send CN packets for silence suppression after a successful CN negotiation in the SIP SDP. If the client endpoint's OPUS codec supports the reception of DTX packets, the UCM will send DTX packets instead.
Add Switchboard Number Information to Email	Configure whether to add the enterprise switchboard number to the meeting notification email. The participants can join the meeting through the enterprise switchboard number. For security reasons, this information will only added for email of random meeting that do not use existing public meeting rooms.
The Switchboard Number in Email	The selected switchboard number will be displayed in the meeting notification email.
Enable Talk Detection	If enabled, the AMI will send the corresponding event when a user starts or stops talking.
DSP Talking Threshold (ms)	The amount of time(ms) that sound exceeds what the DSP has established as the baseline for silence before a user is considered to be talking. This value affects several operations and should not be changed unless the impact on call quality is fully understood.
DSP Silence Threshold (ms)	The amount of time(ms) that sound falls within what the DSP has established as the baseline for silence before a user is considered be silent. This value affects several operations and should not be changed unless the impact on call quality is fully understood.
Max Number of Video Feeds	Set the maximum number of video feeds supported per meeting room.
Audio Codec Preference	
Addio Godec Preference	Configures the preferred codecs for temporary accounts such as meeting participants who joined via link.
Packet Loss Retransmission	Configures the preferred codecs for temporary accounts such as meeting participants who joined via link. Packet Loss Retransmission configuration for temporary accounts (meeting participants without registered extensions who entered the meeting via link).

	• Disabled: Jitter buffer will not be used.
Jitter Buffer	• Fixed: Jitter buffer with a fixed size (equal to the value of "Jitter Buffer Size")
	• Adaptive: Jitter buffer with an adaptive size that will not exceed the value of "Max Jitter Buffer").
	• NetEQ: Dynamic jitter buffer via NetEQ.

Meeting Settings

Managing Virtual Meeting

During the meeting call, users can manage the meeting from Web GUI after logging in as admin.

- Click on → on the left of each meeting room to expand the real-time participant list for the admin to view.
- Click on 1 to remove selected participants from the meeting.
- Click on to mute selected participants.
- Click on
 to unmute selected participants.
- Click on <u>In</u> to invite contact group or remote meeting room so multiple meeting rooms can be bridged.
- Click on 14 to invite other users into the meeting room.
- In: This indicates the meeting room is unlocked. Click on Into lock meeting. If the meeting is locked, no new party can be invited or can join the meeting.
- •: This indicates the meeting room is locked. Click on •to unlock this meeting room.

S UCM6301		Security level of current use forgotten your password, p	ername or password is too low. Click lease enter an email address so tha	here to change them. If you have t a password reset email may be sent.		Q	💽 admin 🗸
Menus (☰	Multimedia Me	eeting					
🗥 System Status 🗸 🗸	Room Mee	ting Google Service Settings	Meeting Recordings	Meeting Video Recordings			
🛨 Extension/Trunk 🗸	Meetings may have a si	ignificant impact on system performance. Pl	ease refer to the UCM user manual i	for additional details.			
🗳 Call Features 🔹 🔺	Please ensure that ICE	Support is enabled and that STUN/TURN ser	ver is configured with NAT.				
Multimedia Meeting	+ Add D M	eeting Settings					
IVR					A.CT0.477/		OPTIONS
Voicemail	ROOM	MEETING NAME	ATTENDEE	START TIME	ACTIVITY		
Ring Groups	▶ 6300	Weekly_Meeting	0		-		
Restrict Calls							
Paging/Intercom							
Operator Panel							
Call Queue							
Pickup Groups							
Dial By Name							
Speed Dial							
DISA							
Callback							
Event List							
Feature Codes							
Fax/T.38							
Parking Lot		Copyrigh	t © Grandstream Networks, Inc. 2022	2. All Rights Reserved.			

An Ongoing Meeting with Participants

Schedule a Meeting

UCM admin can log in to UCM web UI to schedule a meeting. On the UCM630x series, log in to the UCM Web GUI, and open the **Call Features** \rightarrow **Multimedia Meeting** \rightarrow **Meeting Schedule** page. On the UCM630x Audio series, open **Call Features** \rightarrow **Meeting** \rightarrow **Meeting Schedule** Users can create, edit, view, and delete a Meeting Schedule.

The following is a set meeting room reservation, which shows the ongoing and pending reservations. Once the meeting room is reserved, all

users will be removed from the meeting room at the start time, and extensions will no longer be allowed to enter the meeting room. At the

scheduled meeting time, UCM will send invitations to the extensions that have been selected to participate in the meeting. At the same time, it

supports users to enter the meeting 10 minutes in advance. If the current meeting is occupied, enter the waiting room and wait (members

joining the meeting in advance occupy global member resources, but it will be released after the scheduled meeting starts); otherwise, you can

join the meeting directly and the meeting will be held in advance. After the meeting ends, the reservation record is transferred to the meeting

history list. Meeting History displays the information of the ended and expired meetings.

- Click on "Schedule Meeting" to add a new scheduled meeting.
- Click on 🛛 🗹 to edit a scheduled meeting.
- Click on (i) to view meeting schedule details.

Click on to delete the meeting schedule. Click the button, you can choose to delete the most recent meeting of the meeting room or delete the entire recurring meeting to delete the meeting room reservation.

Meeting > Schedu	le Meeting		
Meeting Subject		Meeting Room	Public Meeting Room
* Time	2023-11-23	* Time Zone	(UTC+01:00) Etc/GMT-1
Password		 Host Password 	3985
Host	×	Repeat	No Repeat
Allow User Invite		Call Participants	
• Email Reminder (m)	60	Allowed to Override Host Mute	
Enable Google Calendar	Google Service Settings	* Auto Record	None
Invitees	Please enter and submit participants with	Meeting Agenda	
	0/119		
	Add For improved voice audio quality of link users, please add Opus to the meeting room's supported codecs. Warning: Opus is a resource-intensive codec.		
	Cancel Save		

Schedule Meeting Interface

	Schedule Options					
Meeting Subject	Configure the name of the scheduled meeting. Letters, digits, Other special characters are also supported. such as #%&@*=					
Meeting Room	Choose which room to have this scheduled meeting. If this option has been enabled, please select an existing room for this meeting. If this option has not been enabled, a new meeting room will be created.					
Time	Configure the meeting date and time.					
Time Zone	Select the meeting time zone.					
Password	Configure the meeting's login password.					
Host Password	Configure the Host Password. Note : It is randomly generated when first creating a new meeting Schedule.					
Host	Configure Host.					
Repeat	Choose when to repeat a scheduled meeting.					

Allow User Invite	If this option is enabled, the user can: Press '0' to invite others to join the meeting with invited party's permission Press '1' to invite without invited party's permission Press '2' to create a multi-meeting room to another meeting room Press '3' to drop all current multi-meeting rooms. Note: Meeting host is always allowed to access this menu.
Call Participant	If enabled, the invited participants will be called upon meeting start time.
Allowed to Override Host Mute	If enabled, participants will be able to unmute themselves if they have been muted by the host.
Email Reminder (m)	Email reminders will be sent out x minutes prior to the start of the meeting. Valid range is 5-1440. 60 is the default value. 0 indicates not to send out email reminders for the meeting. Note: After editing the time of a single recurrence of a scheduled meeting, a cancelation email will now be sent out followed by a meeting update email.
Auto Record	If selected, the meeting will be recorded and saved as either a .WAV or .MKV file. The default filename is meeting-\${Meeting Number}-\${UNIQUEID}. Recordings can be downloaded from either the Meeting Recordings or the Meeting Video Recordings page. Video recordings require external storage to be available. When recording a screen share, only the screen share and meeting audio will be recorded. Note: Please note that UCM63XX Audio Series doesn't support Screen Sharing, Whiteboard, or PDF file sharing.
Enable Google Calendar	Select this option to sync scheduled meeting with Google Calendar. Note: Google Service Setting OAuth2.0 must be configured on the UCM630X. Please refer to section [Google Service Settings Support].
Meeting Agenda	Enter information about the meeting, e.g., the purpose of the meeting or the subjects that will be discussed in the meeting.
Invitees	Local extensions, remote extensions, and special extensions are supported.

Scheduled Meeting parameters

Once created, the Web GUI will display scheduled meetings under Pending Meeting,

After scheduling the meeting, an email reminder will be sent to the participants at the configured email reminder time. The email reminder will

include the meeting details and a link to the meeting. Upon clicking the link, participants will be prompted to enter their Grandstream Wave portal passwords to log in and join the meeting.



When there is a participant in the meeting, the meeting room configuration cannot be modified.

ou have been invited to attend the following meeting.
2020-11-11 17:00 - 2020-11-11 17:15
Etc/GMT-1 (UTC+1:00)
Mia (1000)
6301
3214
Sales goals
Join Meeting (From Inside Corporate Office) Join Meeting (From Outside Corporate Office) Please open the link address with <u>Chrome</u> or <u>Firefox</u> browser.
Scan to join the meeting
This is an automatically generated email. Please do not reply.
Company Info Contact Us

Email Reminder for the Scheduled Meeting

If meeting schedule information has been modified, participants will receive an email update immediately.

To join a meeting, the Wave user can click on the link in the email notification to join the meeting directly, or the Wave mobile app user can scan the QR code in the email notification to join the meeting as well.

Once the Meeting Schedule is configured, the scheduled meeting will be displayed as the below figure.

m Meeting Scl	hedule Goog	le Service Settings	Meeting Recordings			
ending Meeting Me	eeting History					
iost v						🛱 Schedule Meet
MEETING SUBJECT \$	MEETING ROOM \$	MEETING OWNER \$	START TIME \$	MEETING DURATION \$	REPEAT \$	OPTIO
Group Meeting Starting soon	6300	admin	Today 08:15 Etc/GMT+7	00:45:00	No Repeat	0 🗹
Weekly Status Meetin	20403041	admin	Tomorrow 13:45 Etc/GM	01:00:00	No Repeat	0 2

Meetings Schedule

• Click the button ①to view the meeting details in the Meeting room. The meeting details of Meeting History include actual participant information.

Meeting Details				×		
Room Number	6301					
Meeting Subject	meeting					
Start Time	2021-04-05	5 09:30				
End Time	2021-04-05	5 09:45				
Time Zone	Etc/GMT-1					
Session state	The sessio	on has expired				
Enable Google Calendar	No					
Repeat	No Repeat					
Invitees Attendee						
STATUS	FIRSTNAME	PHONE NUMBER	EMAIL	LEAVE A MESSAGE		
Require Confirmation	Amore	100				
Require Confirmation	John doe	1000				
Require Confirmation		1002	yi@grandstream.com			
Require Confirmation	Calvin	1004				
Require Confirmation		1008	ie@grandstream.com			

Meeting details

- \circ Click on \square to edit the Meeting Schedule.
- Click on 👘 to delete the Meeting Schedule.

At the scheduled meeting time, UCM630X will send INVITE to the extensions that have been selected for the meeting.

Once the meeting starts, it will be displayed under **Pending Meeting** with an "Ongoing" status, as displayed below:

ding Meeting Mee	ting History					
						🛱 Schedule Meeti
MEETING SUBJECT \$	MEETING ROOM \$	MEETING OWNER \$	START TIME \$	MEETING DURATION \$	REPEAT \$	OPTIO
meeting Ongoing	6301	admin	Today 10:50 Africa/Algiers	00:15:00	No Repeat	0 1

Meeting Scheduled – Ongoing

Once the meeting is finished, the meeting will be displayed under Meeting History as below:

is surreuure		and the second se	The state and the state of the			
9	contract of onep	andle service seconds	meening meenings			
		0 0	5			
M2 10 10 10 10 10 10						
		Manthan Mintana	Manine Minere	Manifest Materia	Manifest Materia	

	meeting	6301	admin	2021-04-02 10:50	00:15:00	No Repeat	0 🖪 🛍 🛅
1							

Meeting Schedule – Completed

- Click the button 🖪 to download the Meeting Report of the meeting.
- Click the button 🛛 👘 to reschedule the Meeting.

In addition, once the meeting ends, the system will send a meeting report email to the host including a PDF file where he/she can view the

meeting, participant information, device type, and trend graph of participant levels.



The user can clear the meeting history in the UCM either manually or using the automatic cleaner.

To clean the history of the meetings automatically, please access the web UI of the UCM63XX, then navigate to **Call Features** \rightarrow **Multimedia Meeting** \rightarrow **Meeting History**, for the UCM630x Audio series, please navigate to **Call Features** \rightarrow **Meeting** \rightarrow **Meet**

Meeting							
Room	Meeting	Google Service Setting	Meeting Record	ings			
Pending Me End Clear MEETING	eeting Meet Meetin GSUBJECT \$	ting History ng Su ∨ MEETING ROOM MEETIN \$ R \$	Time:	2023-11-01	G DURATI REPEAT \$	Search OPTIONS	Reset

Clear Scheduled Meeting History

To clean the history of the meetings automatically, please navigate to the UCM6300's web UI, navigate to **Maintenance** \rightarrow **System**

Cleanup/Reset, choose Cleaner then click on Automatic Cleaner

Report Cleaner		
Enable Cleaner		
* Data Type	Queue Statistics Report	Meeting Call Statistics
		Report
	Meeting History	

Automatic Report Cleaner

ONSITE MEETING

The UCM630x Onsite Meeting feature allows the user to manage the meetings that take place in the office. This feature will make managing onsite meetings easier by leveraging the rich and elaborate communication system that our UC portfolio provides to relay the information regarding on-site meetings to the intended invitees. This feature can be configured on the UCM and the users will be invited through Wave. Also, our GSC3570 device can be set as a door panel of the meeting rooms to manage scheduled on-site meetings.

To learn how to configure Onsite Meetings, please refer to the following guide: https://documentation.grandstream.com/knowledge-base/ucm6300-onsite-meeting/

To learn how to set the GSC3570 with the Onsite Meetings feature, please refer to the following guide:

https://documentation.grandstream.com/knowledge-base/gsc3570-meeting-room-panel-mode-guide/

OPERATOR PANEL

UCM supports the addition and configuration of the call console, which can realize one or more extensions as administrators to manage PBX activities, such as extension status, call queue status, call transfer, call monitoring, call hangup, etc. Grandstream Wave displays the status information of the extension, ring group, voice mailbox, call queue, and parking space managed by the current extension. This chapter mainly

introduces the configuration method of the Operator Panel.

Configure Operator Panel

The call console can be set through the **Call Features** \rightarrow **Operator Panel**.

Operator Panel		
+ Add		
NAME 0	ADMINISTRATOR	OPTIONS
User	1000	r 💼
	d <u>1</u> >	Total: 1 10 / page * Goto 1

Operator Panel Interface

The steps to configure the call console are as follows:

- Click the "Add" button to add the call console.
- $\circ~$ Click the button ~ $\blacksquare '$ to edit the call console.
- $\circ~$ Click the button $~~\overline{\rm m}$ to delete the call console.

Please refer to the following for the description of the specific configuration items of the Operator Panel:

Name	The Operator panel name.
Administrator	The operator of the call console can select extensions, extension groups, and departments. For the selected extension groups and departments, subsequent extensions will automatically become administrators.
Management Module	
Extension	The selected extensions will be supervised by the administrator, and you can choose extensions, extension groups, and departments. For the selected extension groups and departments, subsequent extensions will be automatically supervised by the administrator.
Ring Groups	The checked Ring Groups will be supervised by the administrator. Select "All", all Ring Groups and subsequent updates will be automatically supervised by the administrator.
Voicemail Groups	The checked Call Queue will be supervised by the administrator. Select "All", all Call Queue and subsequent updates will be automatically supervised by the administrator.
Call Queue	The checked Call Queue will be supervised by the administrator. Select "All", all Call Queue and subsequent updates will be automatically supervised by the administrator.
Parking Lot	The checked Parking Lot will be supervised by the administrator. Select "All", all Parking Lot and subsequent updates will be automatically supervised by the administrator.

Attendance console configuration parameters

MONITOR

This feature allows the integration with Grandstream Video Surveillance Cameras and Door Systems to retrieve audio and video feeds when dialed.

UCM63XX Device Management Guide

ENTERPRISE UI CUSTOMIZATION

On the UCM Web UI \rightarrow **UCM RemoteConnect** \rightarrow **Enterprise UI Customization page**, users can edit the company name and select a local image file as the new logo. The company name acts on the text part with the company's logo, and the pictures are in different formats and sizes according to the logo position, which are LOGO1 80*80px, LOGO2 256*256px, LOGO3 64*64px (only "ico" format is supported), these logos will be displayed on the "UCM management platform/login", "Reset Password", "Email Template", "Wave_PC", "Wave Login", "Browser Label", "Guide Page" interface preview.

Once done, the administrator can log in to the UCM management platform and customize the Wave LOGO, please refer to the UCM RemoteConnect user guide for details:

UCM RemoteConnect – User Guide

After customizing the logo, all Logos on the Wave page are displayed as customized Logos.

RemoteC	onnect						
Plan	Plan Settings	Integrated Customer	Service	Enterprise UI customization	Statistics	GDMS Clou	Cancel Save
Company Please ent	Name er				Prev	iew: Login	
Logo It is recomm the logo co LOGO 1 and format and	mended to not use blu lor. d LOGO 2 are recomm d cannot exceed 2MB ir	e, black, and white for ended to be in PNG n file size	S wa	ve	D	Welcome to Wave	
LOGO 1 8	0×80px Upload		<			۵	
LOGO 2 2	56x64px Logo	Upload			-		
LOGO 3 6	4x64px (.ico)				_		
Logo	Upload						

Company Brand Customization Interface

• Important

This feature is a part of the RemoteConnect service, please refer to the following website to view the plans offered in the service:

https://ucmrc.gdms.cloud/plans

IM SETTINGS

Under **System Settings** \rightarrow **IM Settings**, the user can enable or disable whether to show a read receipt to the message sender when the recipient reads the message.

Note

Please note that disabling read receipt will also disable the indication if a message has been delivered.



Enable/Disable Read Receipt

Parameter	Description
Read Receipts	Toggle on/off r the read receipts in the instant messages exchanged in Wave. When read receipts are enabled, Wave will show when a message is delivered and read by the recipient.
Notify Inactive Users of New Messages	If an extension under this server has not logged into Wave for more than 7 days, and a new message is received, an email notification will be sent to the extension notifying them of the amount of direct messages and @mentions received in the last 24 hours. Applies to both local IM and Cloud IM.
Max File Size Upload (MB)	Configures the maximum size of individual files users can upload to Wave chat. Only applicable when using local IM. If using Cloud IM or a custom IM server, the maximum file size upload must be configured on GDMS or the IM server instead. On GDMS, this can be found by navigating to the top right of the page -> Plans & Services -> My Plans -> Options column -> Edit Cloud IM page.

IM DATA CLEANING

Administrators can clean the Instance message data generated during chat discussions using Wave web and to do that, please navigate the

UCM630x web interface and go under Maintenance \rightarrow System Cleanup/Reset \rightarrow Cleaner.

It can either be done manually as shown in the figure below:

System Cleanup/R	eset				
Reset & Reboot	Cleaner				
Manual Cleaning	Automatic Cleaning				
Storage Usage					
Used	610.34 MB / 23.11 GB				
	58%				
2	2.30 /0				
All (2.589	%)	Recordings (0.01%)	Fax Files (0.01%)	Voicemail (0.01%)	
Music Or	n Hold (0.01%)	Voice Prompts (0.07%)	CDR (0.01%)	Zero Config Files (0.01%)	
Operatio	on Log (0.01%)	Backups (0.01%)	Coredumps (0.01%)	Troubleshooting (0.01%)	
Queue S	tatistics Reports				
(0.01%)		Meeting Reports (0.01%)	IM Files (0.01%)	IM Message (0.02%)	
Other (0.	.00%)				
Clear Chat	Data from Endpoint				
Clear Chat Endpoint	Data from				
Clean					

Manual IM Data cleaning

Alternatively, it can be done automatically by configuring IM Data Cleaner as shown below:

IM Data Cleaner		
Enable Cleaner		
Clear Chat Data from Endpoint		
* Data Type	IM Files	IM Message
* Clean Time	0	
Cleaning Conditions	By Schedule	×



Automatic IM Data Cleaner

Enable Cleaner	Enable the IM Data Cleaner function.
Cleanup Type	Choose the cleanup type; either IM message or IM shared files or both.
Clean Time	Enter the hour of the day to start the cleaning. The valid range is 0-23.

Cleaning Conditions	 By Schedule: If the clean interval is 3, cleaning will be performed every 3 days to delete all files. By Threshold: Check at the configured cleaning time every day to see if the storage threshold has been exceeded and perform cleaning of all files if it has. Keep Last X Days: Delete all files older than X days. 			
File Clean Interval	Enter 1-30 to specify the day of the month to clean up the files.			
	Automatic IM Data Cleaner			

CLOUD IM

When enabling the Cloud IM, all IM data in Grandstream Wave is stored in the external server Cloud IM, it is no longer stored in the UCM. The GDMS can configure CloudIM service for UCM devices. At this time, the UCM device synchronizes the configuration item information.

IM Settings						
IM Settings	Cloud IM Service	IM Server		Cancel	Save	
Enable Cloud IM	~					
Local Proxy						
* Cloud IM Server Address	im1.gdms.cloud					
	To view the external Clo please go to RemoteCo	oudIM server address, nnect				
* Service ID	100198					
* Кеу	•••••	2 ₇₇ 4				
* Site Name	UCM					
Trusted User						
Prepend						
Sync Local Chat Data						
Get more information a	oout Cloud IM Settings at 《Cl	oud IM Server Admin C	Suide)			ļ
		C	2023 Grandstream Networks, Inc.			

Cloud IM Service	
Enable Cloud IM	If you have purchased the UCM Cloud IM package or purchased the Grandstream IM server, you can configure it. If you have not purchased it, the configuration will not take effect, but UCM local IM service is allowed. Please note that after enabling this feature, local chat data will not be visible.
Local Proxy	If enabled, the local proxy will be used to forward files and text messages if the IM server cannot be connected to upon Wave login due to certificate issues.

Cloud IM Server Address	The address of the server that provides IM service, you can fill in the address of the Cloud IM server provided by the RemoteConnect package or the IM server address of the GDMS.
Service ID	The service ID of the Cloud IM server.
Кеу	The Key to the Cloud IM server.
Site Name	Enter the name of the site.
Trusted User	The trusted user of the cloud IM. Only letters, numbers, and special characters are allowed.
Prepend	As the extension prefix, it is added before the extension number.
Sync Local Chat Data	Syncing existing local chat data to Cloud IM server. The Wave chat feature will not be available during the syncing process. It is recommended to avoid syncing during active working hours. - Time Range - All - Last 12 Months - Last 4 Months - Data Type IM Data Images Files

Cloud IM parameters

Note

Only account details and department information will be synced on local IM and cloud IM. Other configurations such as profile picture, work status, and favorite contacts will not be synced and these are stored in local IM or cloud IM respectively. Therefore, please be aware that when switching between local IM and cloud IM, part of the data cannot be synced and the previously stored data on local IM or cloud IM (depending on which one is switched to) will be retrieved.

CHANGE LOG



Version 1.0.25.7

• New Wave permissions added: Send Attachment and View Recording File. [Portal/Wave Privileges]

Version 1.0.23.15

• No major changes.

Version 1.0.21.9

• Added support for enabling and disabling read receipt for Wave instant messaging. [IM Settings]

Version 1.0.19.9

• Added support for scheduling Onsite Meetings. [Onsite Meeting]

Version 1.0.17.7

 Added the Allowed to override Host Mute option to the Edit Meeting / Schedule Meeting pages → Advanced Settings page. If enabled, participants muted by the meeting host will be able to unmute themselves. [Schedule a Meeting]

Version 1.0.15.7

• No major change was added.

Version 1.0.13.6

- Made several UI improvements.
- Added Portuguese and Vietnamese language support. [Specifications]
- Added support to set permissions in the UCM admin to allow Wave users to view the specific contacts. [CONTACT MANAGEMENT]

Version 1.0.11.8

- Added support for Operator Panel. [Operator Panel]
- Support multi-terminal synchronization of call records.
- Grandstream Wave step update (only manual update, no functional configuration).
- Merged audio meetings and video meetings into a Multimedia Meeting module. [MULTIMEDIA MEETING]

Version 1.0.9.10

- Added support for deleting the most recent meeting of the recurring scheduled meeting and the entire recurring meeting. [SCHEDULE A MEETING]
- Added support for UI customization. [ENTERPRISE UI CUSTOMIZATION]

Version 1.0.7.12

• Added support for email reminders when editing the time of a scheduled meeting. [SCHEDULE A MEETING]

Version 1.0.7.9

- Video/Audio meeting room cancel the host password and meeting password. [Creating Meeting Room]
- Add email reminder configuration in the meeting room. [Schedule a Meeting]
- Record the actual member information in the meeting history meeting details. [MULTIMEDIA MEETING]
- Clean up the history of the scheduled audio and video meetings regularly. [Automatic Report Cleaner]
- Added support to use Cloud IM service. [CLOUD IM]
- Support to join the scheduled meeting 10 minutes in advance and affected by meeting management. [SCHEDULE A MEETING]

Version 1.0.5.4

• Added Meeting History under the meeting tab. [Schedule a Meeting]

- Added post-meeting report email reminder. [Schedule a Meeting]
- Improve meeting room specifications. [MULTIMEDIA MEETING]
- Added ability to customize logo. [ENTERPRISE UI CUSTOMIZATION]
- Added the ability to clean IM Data. [IM DATA CLEANING]

Version 1.0.3.10

• No major changes.

Version 1.0.2.25

• This is the initial version.