

U.motion

U.motion Intercom

Technical Manual

Intercom configuration for U.motion devices

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GENERAL INFORMATION

Schneider Electric SAS

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Note: please read the manual **before** beginning and keep the manual for later use.

Audience: the manual has been conceived and written for users who are experienced in the use of PCs and automation technology.

CONVENTIONS

[KEY] Keys that are to be pressed by the user are given in square brackets, e.g. [CTRL] or [DEL]

Courier On-screen messages are given in the Courier font, e.g. C:\>

Courier bold Keyboard input to be made by the user are given in Courier bold, e.g. **C:\>DIR**).

"..." (double quotes) Names of buttons to be pressed, menus or other onscreen elements and product names are given within double quotes. (e.g. "Configuration").

Symbolic In this manual the following symbolic are used to indicate particular text blocs.



Caution!

A dangerous situation may arise that may cause damage to material.



Note.

Hints and additional notes

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1 INTRODUCTION

1.1 PREMISE

The U.motion devices are able to handle numerous services of audio/video communication through network using the VOIP (Voice over IP) technology, allowing the communication between different devices, like:

- IP phones and IP video phones
- IP intercom external units (door stations)
- APPLE or ANDROID tablets and smartphones¹
- PC / MAC accessing U.motion KNX Server Plus through a browser (only U.motion KNX Server Plus)

Thanks to this feature, therefore, every device used for the supervision can also communicate in bi-directional way with the other devices, manage intercom calls (also with video) or call internal phone numbers.

The VoIP communication services present in the U.motion interface use the standard **SIP** protocol; every single device (hardware or software) that should be used in combination with the intercom services must therefore be compatible with this technology².

¹ For Android devices, the U.motion Communication app is available, for the APPLE world third-party apps need to be used; further details can be found in the corresponding chapter within this manual

² Please keep in mind that not all VoIP based applications – like e.g. SKYPE – are compatible with the SIP standard

1.2 REQUIREMENTS AND LIMITS

In order to use the VoIP functions within the U.motion interface, you will need:

- A U.motion device with active INTERCOM license³
- At least one compatible client device or VOIP participant, as explained more in detail in the following chapters of this manual

The VoIP support of the U.motion devices has been designed to extend the functionalities of the home automation system and should therefore not be seen as a professional telephony system, especially in tertiary ambient. Particularly, the use of the VoIP system of U.motion KNX Server Plus and U.motion KNX Server Plus Touch is not recommended above the following limitations:

Intercom module (included with U.motion KNX Server Plus)	Intercom module (included with U.motion KNX Server Plus Touch)
3 external intercom units possible	3 external intercom units possible
Up to 10 internal units (mobile devices, IP phones, ...) possible	Up to 10 internal units (mobile devices, IP phones, ...) possible
Unlimited amount of clients / users configurable	Use of clients / users for intercom functionality not supported
<i>Note: the object types "USERS" and "CLIENTS" supported by U.motion KNX Server Plus, on U.motion KNX Server Plus Touch can't be used for intercom functionality. A detailed explanation of the mentioned object types can be found in the info box in the next chapter.</i>	
3 call groups configurable	3 call groups configurable
2 concurrent calls possible	2 concurrent calls possible

If those limits need to be exceeded (or if the intercom management needs to be done in tertiary or professional ambient), it is recommended that a separate VoIP server is used which takes over the VoIP services from the **U.motion** device.

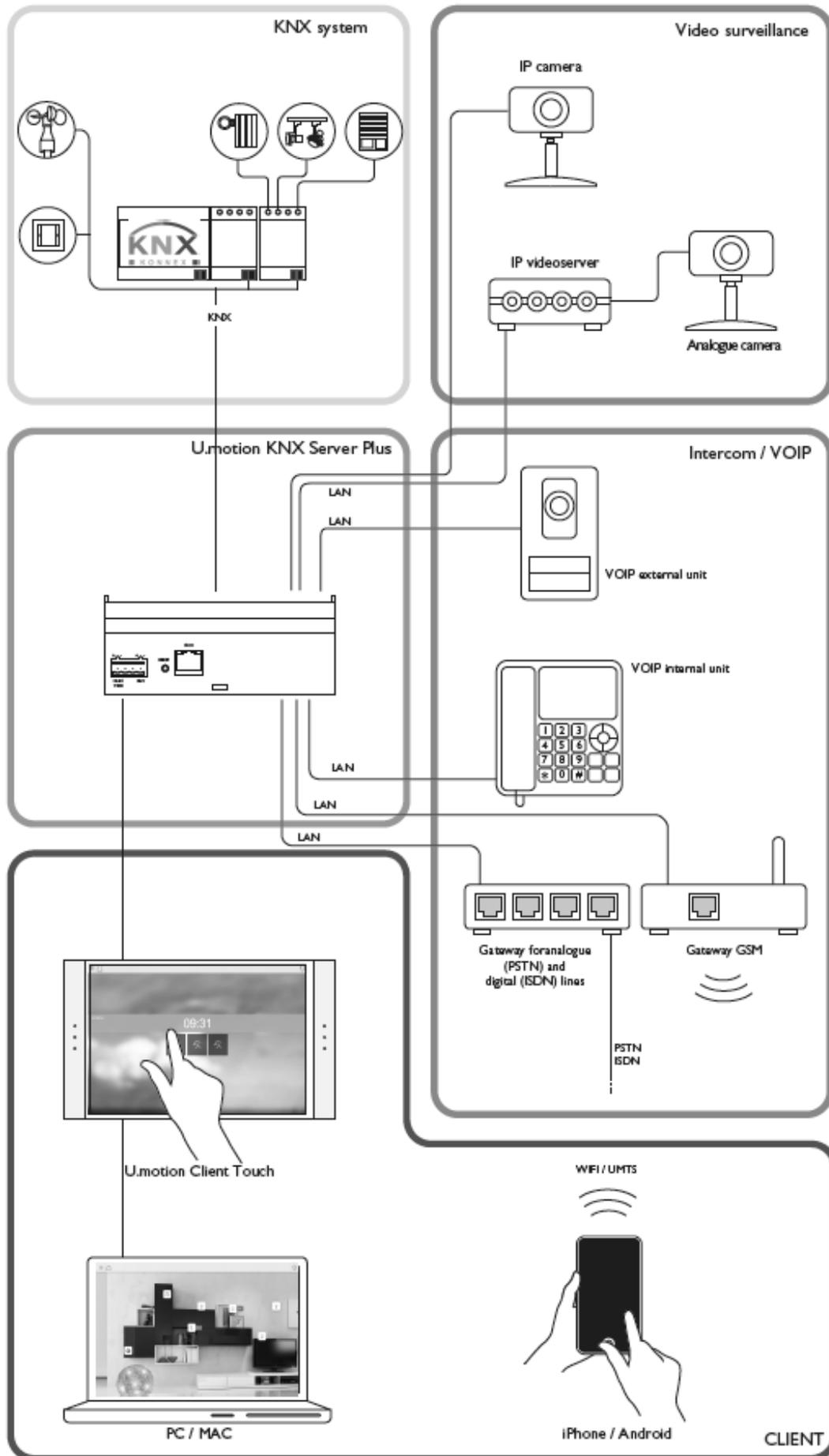


PLEASE NOTE: in contrast to U.motion KNX Server Plus, U.motion KNX Server Plus Touch must perform a registration also locally, since this product – in opposition to the server – permits to access and interact with the VISUALISATION also locally. Therefore, a special client object with IP address **127.0.0.1** (internal loopback address) is used, which can be assigned to the desired VoIP number and accomplish the registration.

1.3 GENERAL STRUCTURE

The scheme on the following page shows a general function diagram of the VoIP management system (in this case shown in combination with U.motion KNX Server Plus):

³ Please take care, the license depends on the version of your U.motion device; if you are using a U.motion KNX Server, the INTERCOM license is NOT available. For all other server versions (including U.motion KNX Server Touch), the INTERCOM license is pre-installed, with the limitations specified above.



Once correctly configured and connected to the network, your U.motion device takes the role of "coordinator" of the single VoIP devices present in the system; everything happens using the existing network infrastructure, without the necessity of additional transmitter devices or particular network configurations. The communication happens on the network (also WI-FI) with a very limited bandwidth occupation (provided that the previously listed limits are respected), so that there are no interferences with the other network functionalities.

As explained more in detail in the following chapters, the configuration of every single VoIP participant generally will require the following steps:

- The creation of a special VoIP object within the U.motion device (the needed object type depends on the type of VoIP participant you want to create) and the correct compilation of the required parameters
- In case of IP phones (hard- and software), mobile devices, intercom units or gateways, additionally the configuration of the device itself has to be done, in order to make it communicate with the U.motion device. Generally it is required that you specify the IP address of your U.motion device as VoIP server address within the configuration of the device, and then specify the username and password that you previously created in the configuration area of the U.motion interface.



Within the U.motion interface there are 3 possibilities to configure internal units:

- CLIENTS (only U.motion KNX Server Plus, requires JAVA support for VoIP)
- USERS (only U.motion KNX Server Plus, requires JAVA support for VoIP)
- VOIP PARTICIPANTS

You will see that this manual contains a chapter for every one of those object types; the following short description should just help you to understand which object is mostly suited for your configuration:

CLIENTS: this object type is an automatically created object. Whenever you will access the VISUALISATION of a U.motion device from another device (can be either a mobile device using the app or a PC-based device [like a U.motion Client Touch] using a browser [supported only by U.motion KNX Server Plus]), such a CLIENT object will be created in your U.motion device and associated to the IP address of the device. This object can consequently be edited in the configuration area of the U.motion device and – in case of U.motion KNX Server Plus - it is possible to assign a VOIP NUMBER to it. This will have as consequence that the device with the IP address of the CLIENT object can be reached by calling the VOIP NUMBER assigned to it. You can find general details regarding the CLIENT objects in the ADMIN MANUAL of U.motion KNX Server Plus; further information on how to use CLIENTS for the VoIP communication, please check out **chapter 2**.

USERS: you can assign VOIP NUMBERS directly to USERS (only for U.motion KNX Server Plus); this is probably the simplest way to assign VoIP functionality to your system. When a client device is online with a USER that has been configured with a VOIP NUMBER, it can be directly reached by dialing this number from another device; furthermore, if the USER is online on more than one device, all of the corresponding devices will start to ring when the number of the USER is called. Details on how to use USERS for the VoIP communication are found in **chapter 6**.

VOIP PARTICIPANTS: these objects are necessary for every kind of device that is not able to get the VoIP functionality using the 2 object types above or when using U.motion KNX Server Plus Touch. Since both CLIENTS and USERS will only be able to provide VoIP functionality if the related device supports a browser with working JAVA plug-in, all other VoIP devices (like IP phones, softphones, mobile apps etc.) must be configured using a VOIP PARTICIPANT object. Meanwhile USERS and CLIENTS handle the whole registration, the VOIP PARTICIPANT objects will just create a VoIP user on the U.motion device side; afterwards it is necessary that the VoIP device uses the same settings to register on the server, as explained in detail in **chapter 3**.

EXTERNAL UNITS: this object type is specially designed for the configuration of door stations and offers additional options (like DTMF tones), like explained in **chapter 4**.

1.4 EXAMPLE CONFIGURATION

The following example should help you to understand the new types of objects and therefore help you to find the correct object type for your system.



In this example a U.motion KNX Server Plus is used. Please remember that, when using a U.motion KNX Server Plus Touch, only mobile device, U.motion Client Touch 7, IP phones and external units can be used, but not other PCs / panels acting as clients (like U.motion Client Touch 10 / 15 or desktop PCs). Furthermore, the client object of U.motion KNX Server Plus Touch itself (127.0.0.1, check out the hint on page 6) must be connected to a VoIP number, too, in order to be used correctly.

Let's assume we have a system with the following components and IP addresses:

DEVICE	IP ADDRESS
U.motion KNX Server Plus	192.168.0.110
U.motion Client Touch 10	192.168.0.101
U.motion Client Touch 15	192.168.0.102
U.motion Client Touch 7	DHCP
Hardware IP Phone	DHCP
Mobile device	DHCP (WI-FI)
Intercom - Door station	192.168.0.120

All of the devices (except the IP phone and the door station) will access the VISUALISATION of U.motion KNX Server Plus. Furthermore, in front of the call of the door station, all client devices should start to ring.

The configuration of the door station is done in the following way: it is necessary to create an EXTERNAL UNIT object and afterwards the door station needs to register using the data specified in the EXTERNAL UNIT object. Please find the information about the configuration of EXTERNAL UNITS in **chapter 4** of this manual. We will just assume that the door station will dial the VOIP NUMBER 200 when the door bell is ringed.

Now let's refer to the different client devices: as first you will have to understand which object types you will have to use for the different client devices. As explained in the box on the previous page, two of the three available object types require a browser with JAVA support. This means, we will first check which devices offer this support:

DEVICE	BROWSER WITH JAVA SUPPORT
U.motion Client Touch 10	YES
U.motion Client Touch 15	YES
U.motion Client Touch 7	NO
Hardware IP Phone	NO
Mobile device	NO

We can see that only the PC-based devices (U.motion Client Touch 10 / 15) offer the required JAVA support. **This can be considered also as a rough guide: all PC-based devices (Windows / Linux / MacOS based notebooks, PCs, Touchpanels, ...) generally fulfill the JAVA compatibility, meanwhile hardware VoIP devices (like IP phones, IP video phones etc.), softphones or mobile devices (Android, iOS, etc.) do NOT offer this support.**

1.4.1 VOIP PARTICIPANTS

This automatically means that for the devices "U.motion Client Touch 7", "Hardware IP phone" and "Mobile device" the object type VOIP PARTICIPANT needs to be configured, according to the information in **chapter 3**.

Once the 3 objects have been created in U.motion KNX Server Plus, the devices still have to register on the server; you could see the VOIP PARTICIPANTS objects as configuration base, whose values afterwards can be used for the registration of the corresponding device. This means that the U.motion Client Touch 7 now could use the integrated U.motion Communication app in order to register on U.motion KNX Server Plus, the IP phone could be configured with those parameters through its web interface and the mobile device could use the parameters in combination with one of the apps recommended in **chapter 3.1**.

As next step we will take a closer look to the U.motion Client Touch 10 and 15; we have seen that both devices offer JAVA support, which means that we can use either the CLIENT objects or the USERS.

1.4.2 CLIENTS

Let's first check out the CLIENTS; as explained on the last page, for every device accessing U.motion KNX Server Plus, such a CLIENT object will automatically be created; this means that in our example system, we will find the following client devices:

- U.motion Client Touch 10
- U.motion Client Touch 15
- U.motion Client Touch 7
- Mobile device

Naturally you will not see the name of the client devices, but they will be listed using their IP address; now you probably will wonder why there are listed also the U.motion Client Touch 7 and the mobile device: this because the CLIENT objects are not limited to offer VoIP functionality, but also offer other functions like automatic PAGE JUMPS; so even if you can't use the VoIP functionality through the CLIENT object, you could still use it to perform page jumps on the mobile device and the U.motion Client Touch 7; information about the other usages of the CLIENT objects can be found inside the ADMIN MANUAL of U.motion KNX Server Plus.

So since we will focus on the VoIP functionality, we can ignore (or even delete) the CLIENT objects for the U.motion Client Touch 7 and the mobile device; if we instead open the properties page of the other 2 client devices, we will see that there is a field for a VOIP NUMBER; if we for example assign the number 101 to the U.motion Client Touch 10 and 102 to the U.motion Client Touch 15 and save the settings, we have already completed the VoIP configuration of those 2 devices. Now it would immediately be possible to open the intercom pop-up on one of the 2 devices and to call the other one using the assigned number. So, in contrast to the configuration via VOIP PARTICIPANTS, the CLIENTS need only a SINGLE configuration step and no further action needs to be done on the U.motion Client Touch devices. Details about the CLIENTS and the use of the intercom pop-up can be found in **chapter 2**.

1.4.3 USERS

The usage of the USERS is very similar to the one of the CLIENT object; even in the properties page of the USERS you will a field for a VOIP NUMBER, just as for the CLIENT objects. The differences are the following:

- CLIENTS are always limited to one device, through its IP address. So when assigning a number to a CLIENT, this number will always point to the connected client devices.
- USERS instead are not limited to a certain device; you can define which device should login using which user; this means that the VoIP configuration is more flexible and dynamic and can be changed more easily just by switching users. Furthermore, users can be logged in on more than one device and therefore, dialing the VoIP number of the user will cause all client devices that are currently logged in with this user to ring.
- CLIENTS are created automatically based on the IP address of devices, so you can only configure them when the corresponding client is online or at least has been connected once to U.motion KNX Server Plus.

So you can see that the users bring a few advantages under some circumstances; nevertheless, you are completely free to select between the two object types; it is even possible to use them AT THE SAME TIME: if for example we take the configuration from the last chapter (using the CLIENT objects) and now create a user "touch" with number "110" which will be used to login on both U.motion Client Touch devices, we will have the following scenario:

- If from another device the number "101" is dialed, the U.motion Client Touch 10 will ring
- If from another device the number "102" is dialed, the U.motion Client Touch 15 will ring
- If from another device the number "110" is dialed, both U.motion Client Touch devices will ring and the first one answering will take the call (meanwhile the other one will stop ringing)

So it can even make sense to use both CLIENTS and USERS at the same time! Further details on the configuration of the VoIP functionality using the USERS can be found in **chapter 6**.

1.4.4 EXAMPLE CONCLUSION

We have now seen an example for the three different object types.

In order to achieve the desired functionality, there is still one open point: we have seen how to configure the different devices, but we did not establish the call from the external unit to the client devices yet; we have just defined that - pressing the ring button - the door station should dial the number "200".

In order to make all client devices ring, we have to create an object of type CALL GROUP; in the properties page of this object we can set the VOIP NUMBER to "200" (in order to match with the number dialed by the external unit) and then we just have to add the single client devices as MEMBERS of the call group; when the CALL GROUP is dialed, it will automatically redirect the call to all client devices which are present in the MEMBERS section of the CALL GROUP. In our example case this would be:

- The 3 VOIP PARTICIPANT objects for "U.motion Client Touch 7", "Hardware IP phone" and "Mobile device"
- And, depending on your selection:
 - o EITHER the 2 CLIENT objects for the 2 U.motion Client Touch devices
 - o OR 1 USER object (if both U.motion Client Touch devices use the SAME user)
 - o OR 2 USER objects (if each U.motion Client Touch device has his own user)

In this way, in front of a call from the door station, all client devices will start to ring and the first one answering will take the conversation, stopping all other clients' ringtone.

Feel free to experiment with the different VoIP functionalities of the U.motion devices, trying to configure your VoIP system in different ways, using the possibilities explained on the further pages of this manual.

2 CLIENTS (ONLY U.MOTION KNX SERVER PLUS)

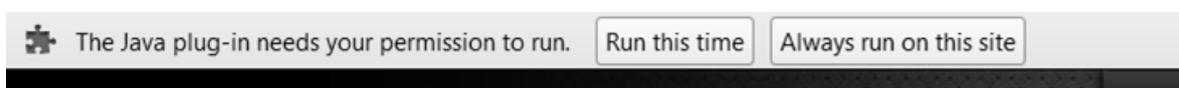
2.1 INTRODUCTION

Every PC or MAC endowed with a browser (provided that it is compatible with the JAVA technology) can be used for starting and receiving audio/video communications through the VOIP services of U.motion KNX Server Plus. U.motion KNX Server Plus Touch will as well show the CLIENT objects, but only of the mobile devices (which can't use the CLIENT object for VoIP communication) and of itself (**127.0.0.1**, in which the VoIP number of U.motion KNX Server Plus Touch needs to be defined). Since U.motion KNX Server Plus Touch supports no Desktop PCs / Touchpanels, this section is no longer from interest when using U.motion KNX Server Plus Touch.

2.2 CONFIGURATION

If the INTERCOM module is enabled, every JAVA compatible device accessing U.motion KNX Server Plus through a browser is automatically registered to the VoIP services of U.motion KNX Server Plus (without the necessity of any configuration).

When accessing the interface for the first time, normally an authentication request will be shown in order to permit the usage of the VoIP functions within the browser (depending on your system, the message can appear in different ways, please find some examples below):

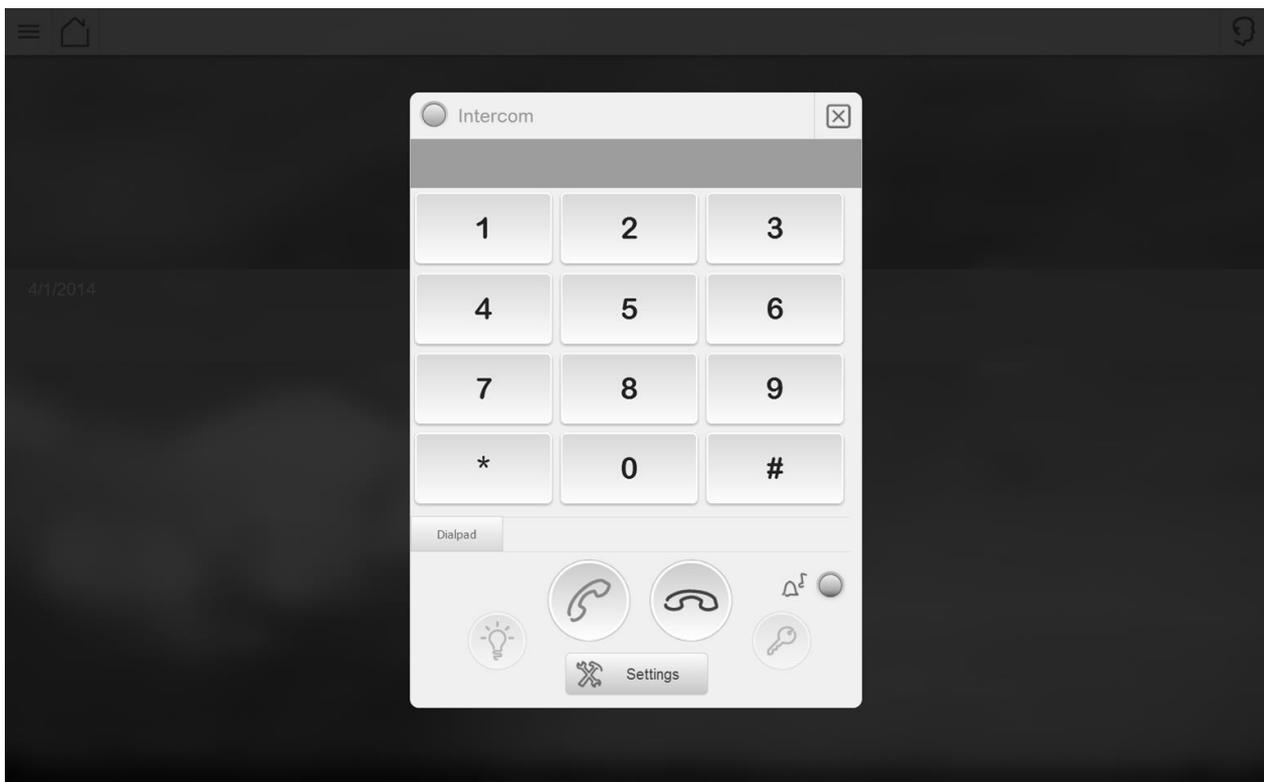




It is necessary to allow the execution of the JAVA plug-in, otherwise the VoIP services will not be available. It is recommended to select the option to always trust / always run the plug-in, in order to avoid that the warning is shown at every access.

2.3 USE OF THE VOIP FUNCTIONS

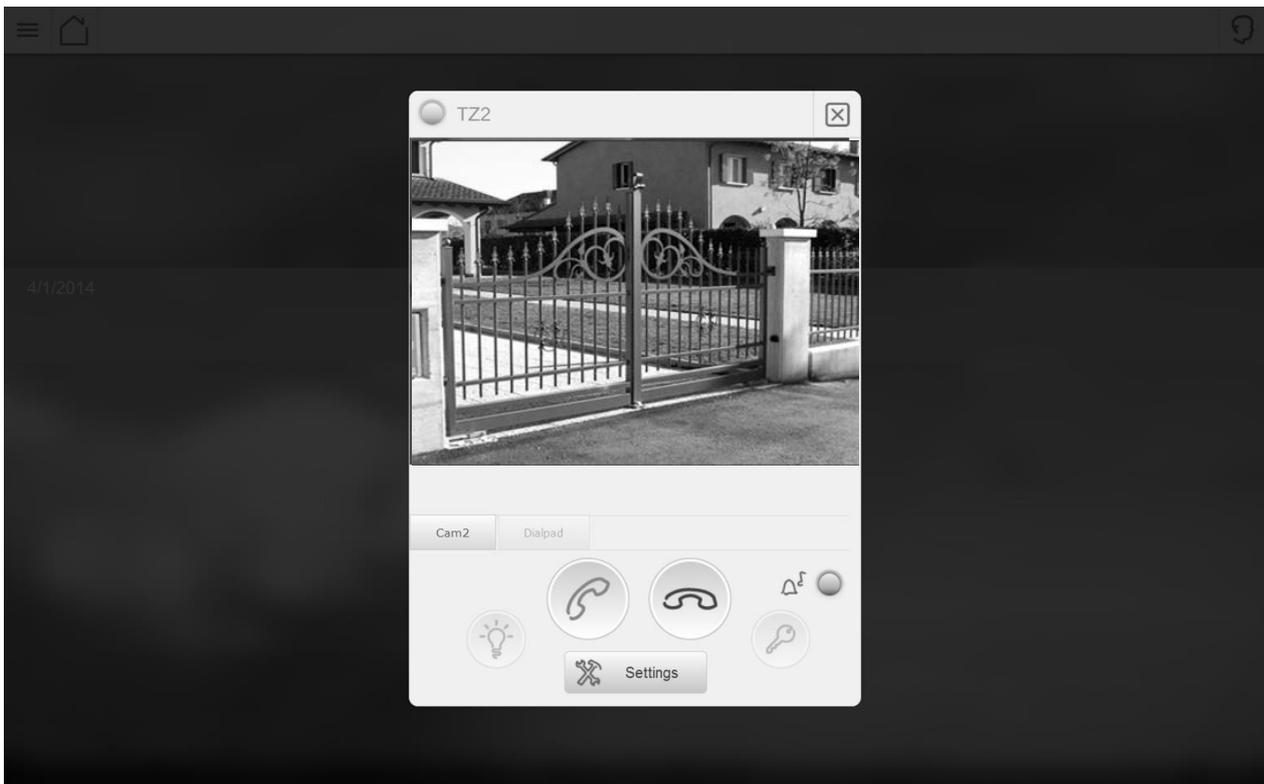
At this point it is already possible to start calls to other VoIP participants (if previously configured in U.motion KNX Server Plus): just select the entry "INTERCOM" from the NAVIGATION MENU in the VISUALISATION, digit the number you want to dial and hit the button "START CALL":



In order to close the call or the pop-up window, just hit the button "END CALL".

Please note that at this moment you are registered on the VoIP server through the CLIENT object as an ANONYMOUS participant, since you did not assign a VOIP NUMBER to the CLIENT object corresponding to the IP address of your device. This means that you are able to make outgoing calls, but that you can't be reached by other participants. In order to allow this, please access the administration menu of U.motion KNX Server Plus, open the properties page of the CLIENT object corresponding to the IP address of your device and insert a free VOIP NUMBER.

If you receive a call from another VoIP participant, the same pop-up window will be automatically opened and a ring tone will be enabled in order to notify about the incoming call; if for the calling VoIP device also a video signal has been configured (as explained in the next chapters), it will be shown instead of the dial pad:



In case of an intercom unit, during the conversation also the button "Open door" is available to activate the opening of the corresponding gate (through the integrated relay of the intercom unit). Furthermore, it is always possible to visualise the dial pad by pressing the corresponding entry among the available "TABS"; in the same way it is possible to switch between the different cameras associated to the calling VoIP participant.

Further information about intercom units and their configuration can be found in the corresponding chapter within this manual.

3 VOIP PARTICIPANTS

3.1 INTRODUCTION

Your U.motion device is able to handle the following devices as VoIP participants and enable audio/video communication between them:

- Hardware IP phones or video phones, if compatible with the SIP standard; find below some IP phones already tested and working with the U.motion family:
 - Cordless SIEMENS GIGASET IP
 - GRANDSTREAM phones and video phones
 - SNOM phones
- Phone / VoIP software (so called "softphones"), if compatible with the SIP standard; some examples:
 - Linphone (Windows, Mac, Linux)
 - X-Lite (Windows, Mac, Linux)
 - Bria (Windows, Mac)
- Smartphones with native SIP support (e.g.: NOKIA, BLACKBERRY)
- Apps for mobile devices with APPLE IOS or ANDROID; some examples:
 - Linphone
 - Vippie
 - Bria
 - U.motion Communication app (Android only)

This chapter will explain in detail how to configure a VoIP participant in your U.motion device and how to register it correctly to use the VoIP functionalities.

3.2 PREPARATION OF THE U.MOTION DEVICE

3.2.1 AUDIO CONFIGURATION

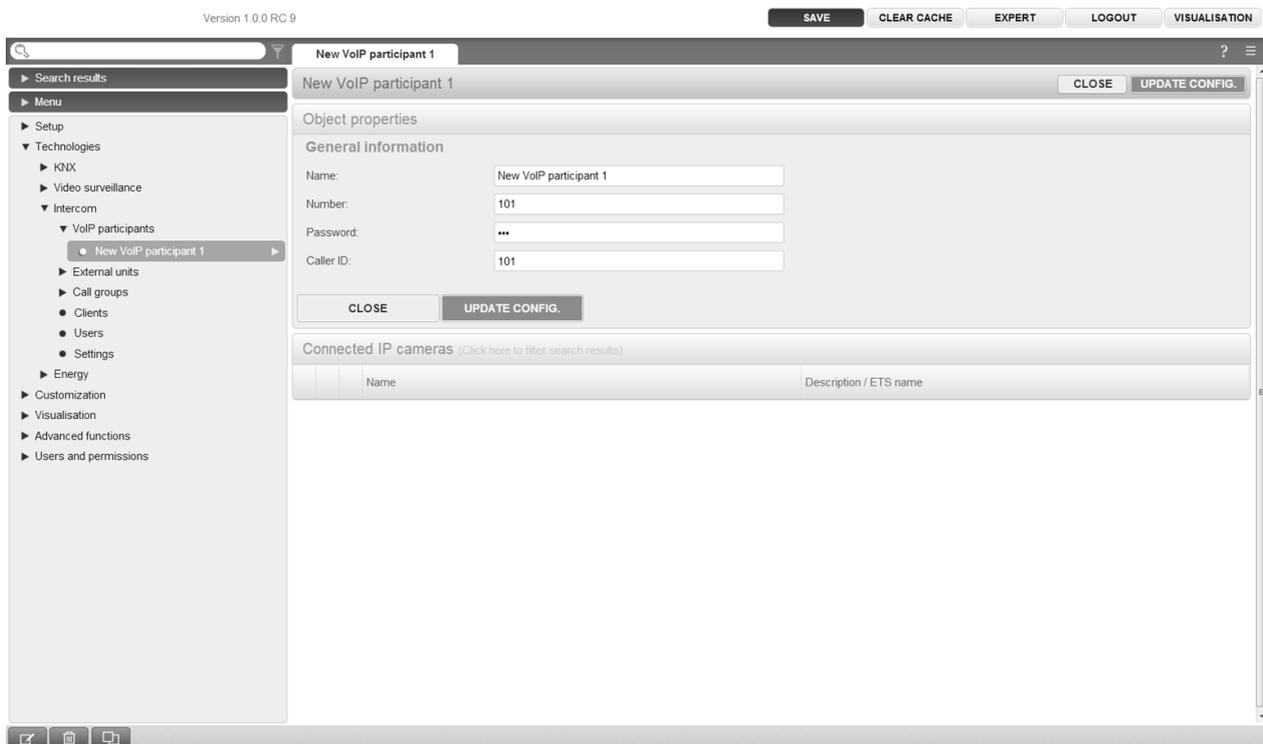
In order to enable a new VoIP participant, it is necessary to create a corresponding object within your U.motion device. In order to do so, please follow the steps below:

- Access the configuration area of the interface
- Select "TECHNOLOGIES" from the administration menu, then "INTERCOM" and finally "VOIP PARTICIPANTS"
- Please click on the "ADD" button within the toolbar at the bottom; a new object will be created and listed as "New VoIP participant"
- Now open the properties page of the new created object by clicking on the "EDIT" button in the toolbar (or alternatively on the "three dots" on the right side).



If the "INTERCOM" section is not present within the menu "TECHNOLOGIES" of your U.motion device, it means that you have not activated the INTERCOM license (as it is the case for the U.motion KNX Server)

The properties page of the new VoIP participant is similar to the one showed below:



The required parameters are:

NAME	Name, identifies the VoIP participant within the software
NUMBER	Number under which this VoIP participant registers and can be reached
PASSWORD	Password to be set in the configuration of the VoIP participant, in order to complete the registration on the integrated VoIP server
CALLER ID	Optional label that will be displayed instead of the phone number on other devices, when they receive a call from this VoIP participant

The examples within this manual assume that the enumeration of the VoIP participants starts with 101 and is incremented for every new device (102,103,104,...), even if the enumeration can be freely selected, as long as there are no double numbers.



In order to simplify the configuration of the VoIP participants, it is recommended to use the same value for the NUMBER also for the PASSWORD.

Once all data have been set, please click on the "UPDATE CONFIG." button in order to save the configuration and enable the newly created VoIP participant. Now a VoIP participant can register on the U.motion device using the parameters previously configured, as explained in chapter 3.3.

3.2.2 CAMERAS

It is possible to assign one or more camera signals to every VoIP participant, which will be shown in the intercom pop-up during calls; further information about this topic can be found in chapter 4.2.2 dedicated to the external units, which typically use this feature.

3.3 IP (VIDEO-) PHONES / SOFTPHONES / APPS

In order to use your IP (video-) phone, softphone or similar in combination with your U.motion device, first a corresponding VoIP participant object needs to be created, as described in chapter 3.2; afterwards, the data from the VoIP participant can be used to register the IP phone / softphone on the U.motion device.



Independent of the type of VoIP device you try to register (e.g. an IP phone, a PC with a VoIP software, a mobile device with a VoIP app), must support the SIP protocol. SKYPE for example does not use this technology and therefore can't be used in combination with the U.motion family.

Generally, it is necessary to follow the steps below:

- Use a browser to connect to the settings page of the IP phone (HARDWARE) OR open the settings page of your (mobile) softphone application (SOFTWARE)
- Create a new "SIP account" or "SIP profile" for your U.motion device, specifying:
 - The IP address of the U.motion device wherever the VoIP server reference is needed (or VoIP "domain", "proxy", "host" etc.)
 - The phone number of the corresponding VoIP participant wherever the "user ID" or similar is required
 - The password of the corresponding VoIP participant wherever the "auth ID" or similar is required
 - Optionally the label used to identify the IP phone / softphone wherever the "caller ID" or similar is required

At the end of the configuration (after rebooting the IP phone / softphone, if required), the registration on the U.motion device should take place and therefore the starting and receiving of calls should be possible. Generally, if the registration was not successful, great part of the IP phones / softphones will allow the check of the registration state and give information about eventual errors (like wrong IP, incorrect user or password data etc.)

Unfortunately the configuration menus of the single IP phones, softphones and mobile apps can be very different; therefore there is no general documentation that could be provided for sample purposes within this manual. If you are using the U.motion Communication app, you can find further information in the corresponding manual. Otherwise, please refer to the documentation of the used IP phone / soft phone. In chapter 3.1 you can find some tested devices / applications for your reference.

4 INTERCOM EXTERNAL UNITS

4.1 INTRODUCTION

In addition to the previously seen VoIP participants it is also possible to integrate into your U.motion device one or more IP based INTERCOM EXTERNAL UNITS (also with VIDEO), if compatible with the SIP standard. After the configuration of the corresponding objects, it is possible to receive calls from the external units in the same way as between VoIP participants, with the possibility to show in real time the video signal of one or more cameras, to open the door or to execute other actions (like turning the outdoor lights on).

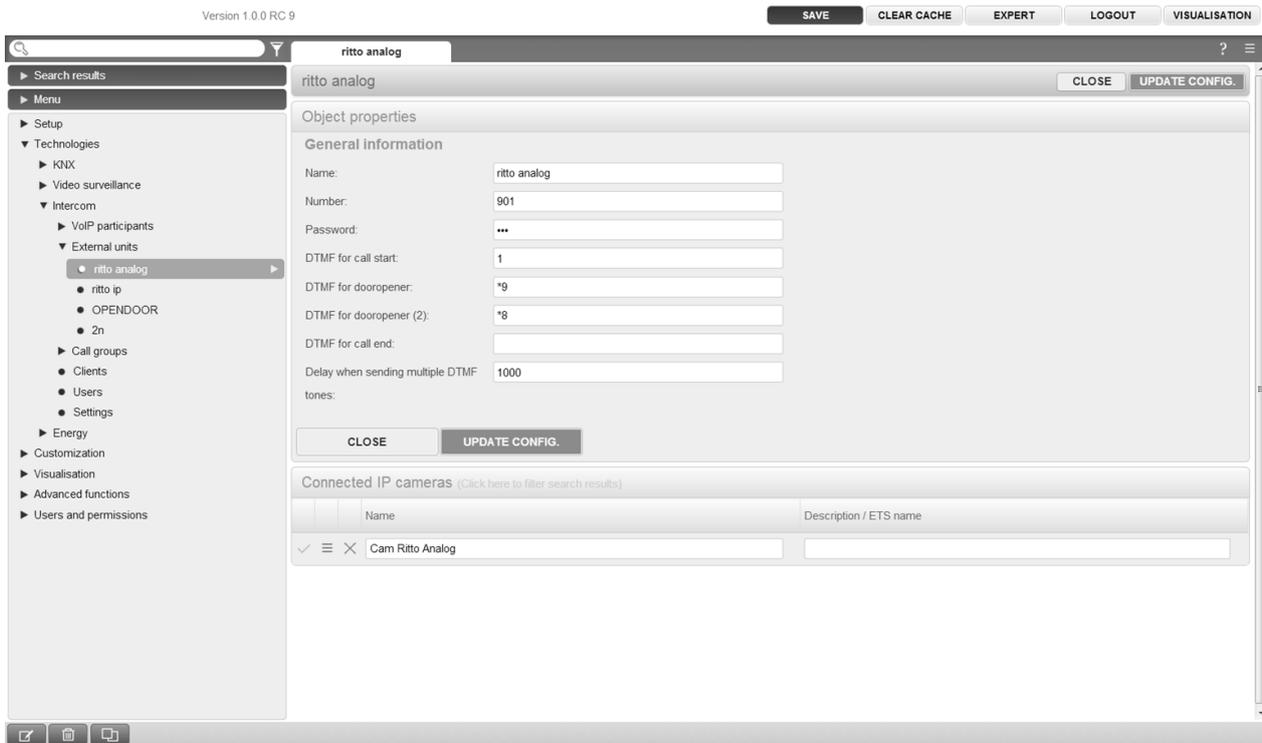
4.2 PREPARATION OF THE U.MOTION PRODUCT

4.2.1 AUDIO CONFIGURATION

As already seen for the IP phones / softphones, also for the external units it is necessary to create an object within the interface for every single unit that should access the VoIP services.

Therefore, first of all the entry "EXTERNAL UNITS" in the section "INTERCOM" under "TECHNOLOGIES" must be selected and a new object must be created using the "ADD" button within the TOOLBAR on the left bottom.

Then please open the properties page of the new object, which should appear in the following way:



The following parameters are available:

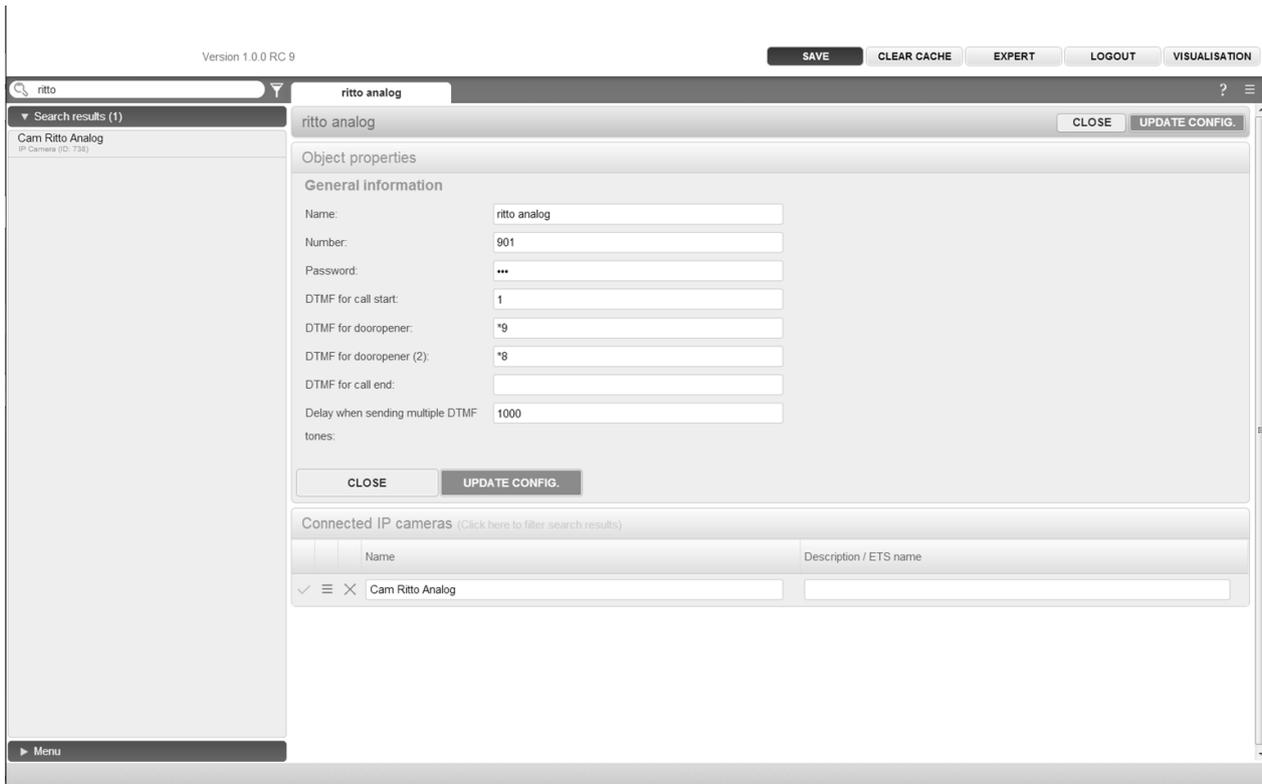
NAME	Name; identifies the external unit within the software.
NUMBER	Number under which the external unit registers and can be reached.
PASSWORD	Password to be set in the configuration of the external unit, in order to complete the registration on the integrated VoIP server.
ID NAME	Optional label that will be displayed instead of the phone number on other devices, when they receive a call from this external unit.
DTMF-TONES	If the external unit needs one or more DTMF tones after the ACCEPT signal in order to start the conversation, please specify them here.
DOOROPENER SIGNAL DOOROPENER SIGNAL (2)	Please use these fields to specify the DMTF tones which activate the primary and secondary (if present) door opener relay of the external unit.
DTMF TONE TO CLOSE CONVERSATION	If the external unit needs one or more DTMF tones before the HANGUP signal in order to close the conversation, please specify them here.
DELAY WHEN SENDING MULTIPLE DTMF	If the configured DTMF tones consist of more than one single tone, it is possible to specify the interval time (in milliseconds) between one and another signal. This because some external units will not accept tones if they are sent out too quickly.

Once the configuration has been updated, please hit the button "UPDATE CONFIG."

4.2.2 CAMERAS

Once the configuration of the VoIP / audio part of the external unit is completed, you can connect one or more cameras to the external unit. Therefore, in addition to the video signal of the external unit itself, it is also possible to add other camera signals, even if completely independent from the door station and to show them in the intercom pop-up.

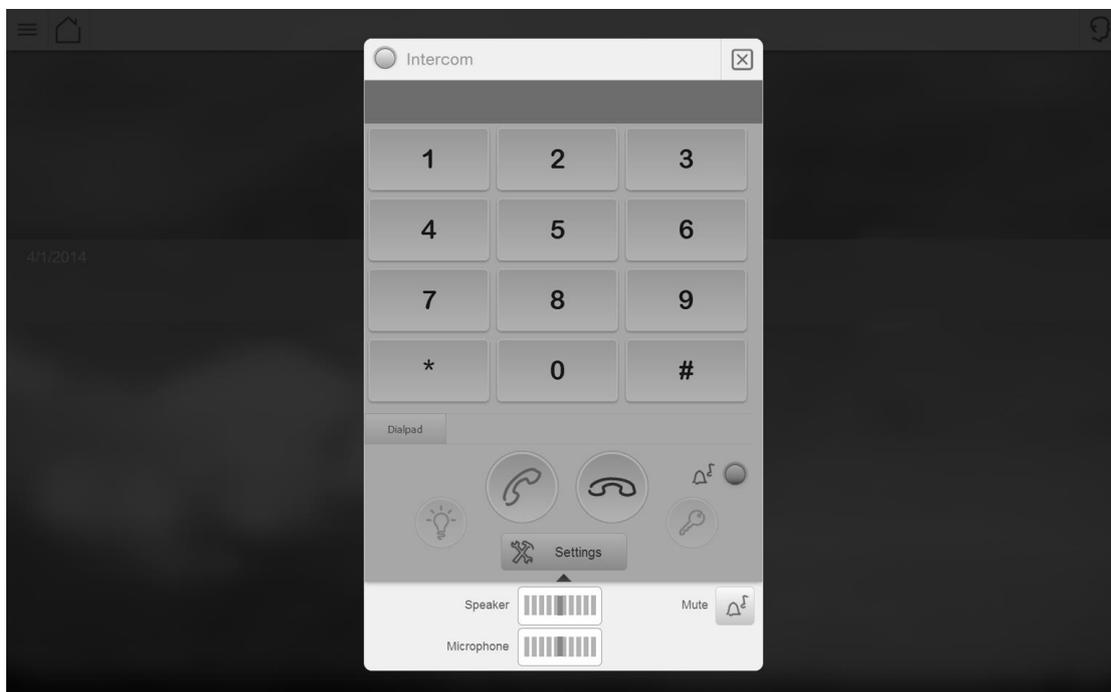
In order to connect the cameras to the external unit, they just need to be located through the search function and can then be dragged into the section "CONNECTED IP CAMERAS":



This means that the video signal of the external unit itself must be configured as a camera object, just like every other camera signal, too. Further details on the configuration and integration of video signals can be found within the ADMIN MANUAL of your U.motion device.

4.2.3 AUDIO CONTROLS

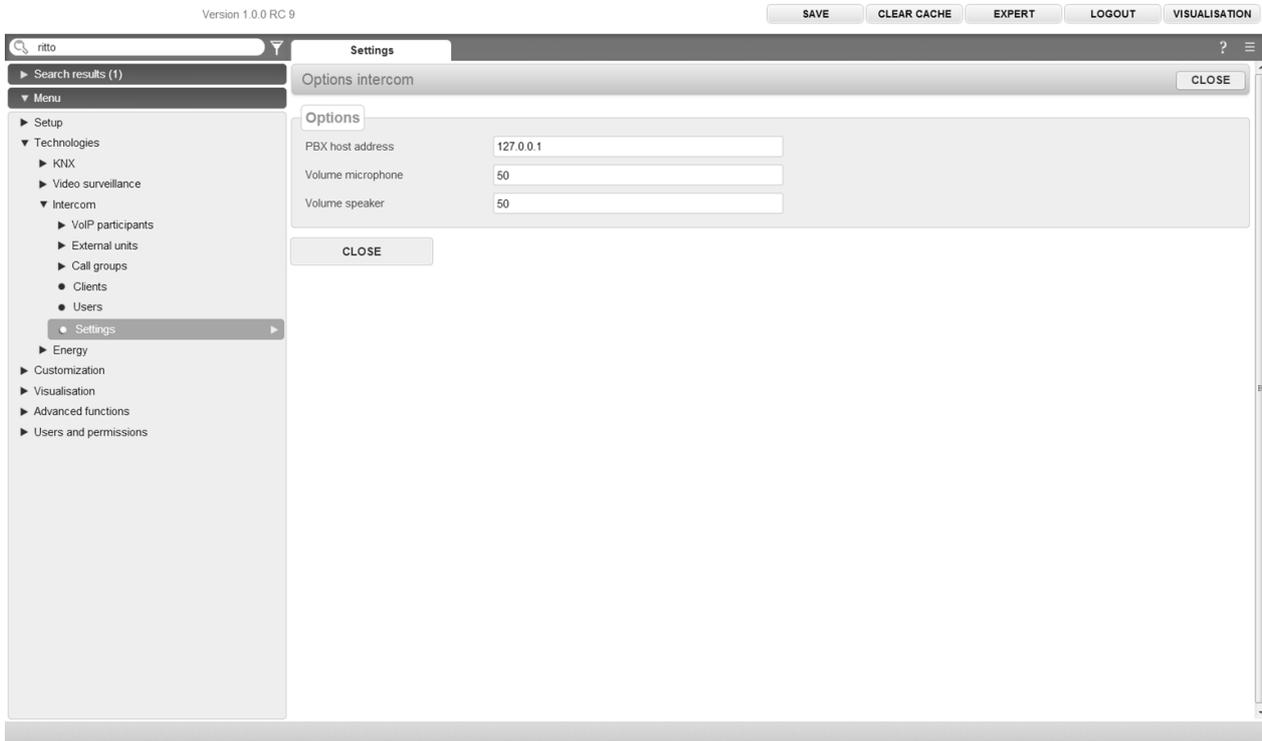
Beside the TABS for switching between the different cameras, the intercom pop-up also contains a „SETTINGS“ button, which offers settings to control loudspeaker and microphone also during a call. The currently set volume of the speaker and the currently set sensitivity of the microphone are shown in the corresponding controls. The values can be changed through the corresponding sliders; this adaption of the volumes is also possible during a running intercom conversation:



Furthermore, a MUTE button is available which permits to mute the ringtone of the client device!

Due to the different audio levels, which can occur when using different VoIP devices for communication, these values are only temporary adjustments that are lost when restarting the device. In the configuration area of the respective U.motion device, also default values for the speaker volume and the sensitivity of the microphone can be set and stored permanently; The U.motion device will load these values after every reboot as default values.

The corresponding settings are available under „TECHNOLOGIES->INTERCOM->SETTINGS“:



The audio settings must be adapted to fit with the installed door station. It is recommended to start with low volumes and then increase them gradually until reaching an optimal voice quality. In addition, in this menu you can set the IP address of your VoIP server; this setting called "PBX host address" is required only when an external VoIP server is used.

PBX-HOST-ADDRESS	IP address of the installed VoIP server. Normally the U.motion device itself is used as VoIP server („127.0.0.1“). If an external VoIP server is used (e.g. in condominiums, apartment buildings), the IP address of the used VoIP server must be inserted here.
VOLUME MICROPHONE	Default setting for the microphones sensitivity of the used U.motion KNX Server Plus Touch / the used client devices in percent.
VOLUME LOUDSPEAKER	Default setting for the loudspeakers volume of the used U.motion KNX Server Plus Touch / the used client devices in percent.



ATTENTION: please note that in case of excessive sensitivity of the microphone and high volumes for the loudspeaker, interruptions and echo can occur in the communication, since the built-in AEC (Acoustic Echo Cancellation) cannot process distorted signals!

NOTE: the intercom volume control affects only ongoing voice communication (e.g. door communication). Any acoustic signals, including the ringtone for intercom calls, are reproduced according to the configured system volume, independently from the volumes configured in the intercom pop-up. Furthermore, please note that this volume control is hardware-dependent: in case of U.motion KNX Server Plus Touch you will directly control the intercom volume of U.motion KNX Server Plus Touch; in case of U.motion KNX Server Plus instead you will only control the intercom volume on the client device where you are actually changing the values.

4.3 EXTERNAL UNITS

Once the object for the external unit has been created within your U.motion product, it is necessary to configure the door station itself in order to register with the given data and to use the VoIP services.

Generally, the configuration is very similar to the one of IP phones; even in this case you will have to access the IP address of the door station through a browser and configure the following parameters in the configuration page of the external unit:

- The IP address of the U.motion device wherever the VoIP server reference is needed (or VoIP "domain", "proxy", "host" etc.)
- The phone number of the corresponding external unit object wherever the "user ID" or "user name" is required
- The password of the corresponding external unit object wherever the "auth ID" or "password" is required

Even here, the configuration interfaces may vary from door station to door station. You will find the necessary documentation within the manual of the corresponding product.

5 CALL GROUPS

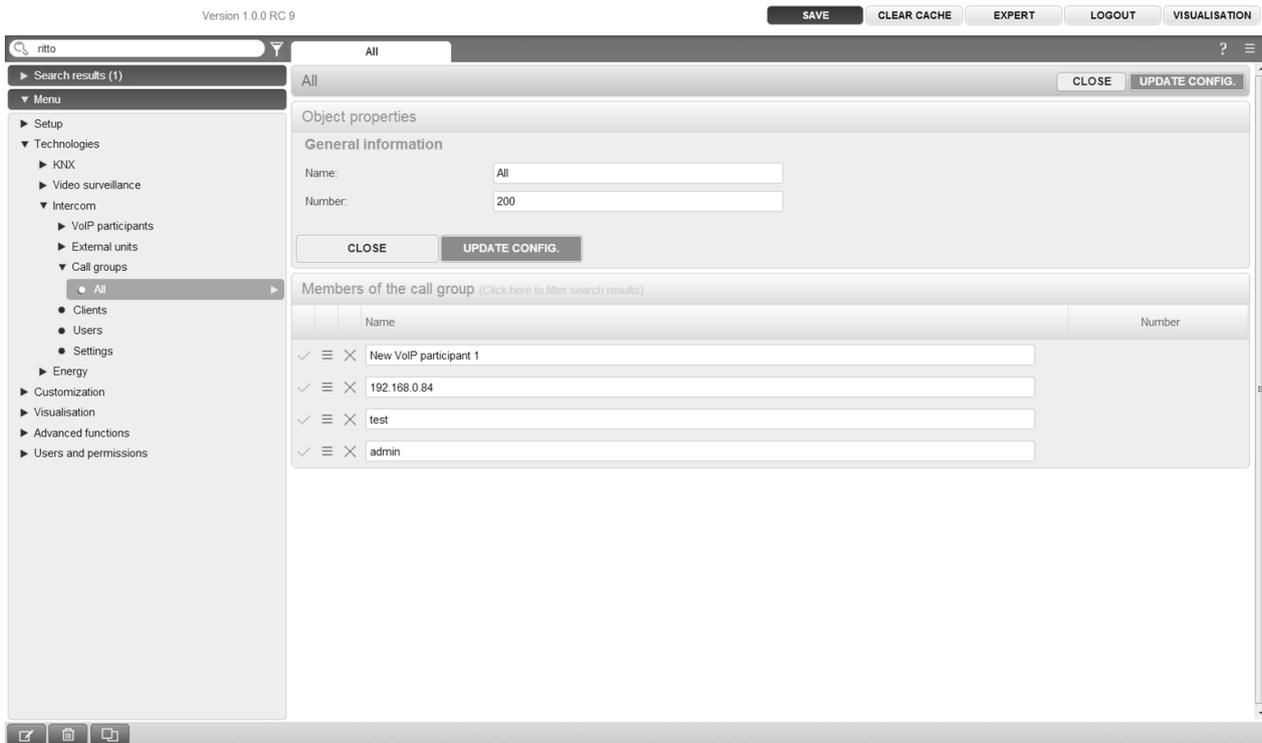
5.1 INTRODUCTION

It is possible to create one or more CALL GROUPS within your U.motion device; these objects permit to redirect VoIP calls to more than one target number: the first member of the CALL GROUP that answers the call will take the conversation, terminating the call on all other members.

5.2 CREATION OF A CALL GROUP

In order to create a new call group, please select the corresponding entry from the configuration area, under "TECHNOLOGIES" -> "INTERCOM"; by clicking on the "ADD" button in the TOOLBAR at the bottom you can create a new call group. Accessing to its properties page, you will be able to configure the following parameters:

NAME	Name; identifies the call group within the software
NUMBER	Number under which the call group can be reached (dials all connected members)
QUEUE ID	Keyword (without spaces or special characters) used by the system to identify the call group
TIMEOUT	Timeout after which the call is terminated automatically if no one of the members accepts it



Once the above parameters have been configured, it is necessary to add MEMBERS to the call group; in order to do so, please use the search function and drag the desired objects into the corresponding section of the properties page of the call group. The following object types can be connected to a call group:

- VoIP participants
- External units
- Users (only U.motion KNX Server Plus)
- Clients (only U.motion KNX Server Plus)

When connecting a USER, all client devices currently logged with the selected users will be called; if instead you are connecting a CLIENT, the call will go directly to the client device with the corresponding IP address.

Whenever you want to apply changes to the parameters or MEMBERS of the call group, please hit the button "UPDATE CONFIG." in order to save them permanently.

6 USERS (ONLY U.MOTION KNX SERVER PLUS)

6.1 INTRODUCTION

With U.motion KNX Server Plus, the USERS (which grant you access to the VISUALISATION of U.motion KNX Server Plus) can be used in order to start or receive VOIP calls.

6.2 DIRECT CALLS TO USERS

As already mentioned in chapter 2, all client devices compatible with JAVA will automatically become a VoIP participant as soon as they register with a certain user name through a browser. From this moment, those devices can be reached simply by starting a VoIP call directed to the corresponding user name. If more than one device is online with the same user, the call will be directed to all of them.

Therefore, it is possible to:

- Digit the user name in the intercom pop-up window from another client device (or IP phone / softphone), which supports the input of alphanumeric characters
- Digit the user name into the configuration of a door station / external unit, in order to start the call when one of the pushbuttons of the door station is pressed.

- Digit, in alternative to the user name, the "VOIP NUMBER" of the user to start the call (requires that the VoIP number has been configured in the properties page of the user itself)

