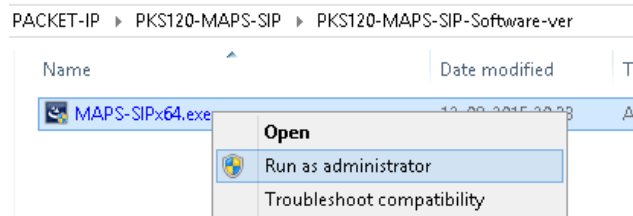


## Software and License Installation

**DO NOT CONNECT USB DONGLE TO THE PC FIRST.** Perform Software installation first, followed by License installation and then plug-in the USB hardware dongle to the PC.

- PC Requirements
  - Windows® 7 and above Operating System (**64 bit Only**).
  - Core i3 to i7 (or equivalent), 4 GB Memory, NIC, and USB 2.0 Ports.
- Plug-in the **USB Installation Stick** (pen drive) to the PC. This is provided with the shipment package by GL Communications.
- Go to **PKS120-MAPS-SIP \MAPS-SIP Software** folder, right-click **MAPS-SIPx64.exe** and select **Run as Administrator**.



- Navigate back to root directory in USB installation stick (pen drive) to **\GL-Dongle License Installer** folder, execute **GLDongleLicenseInstaller\_x64.exe** (or **GLDongleLicenseInstaller\_x86.exe** for MAPS™ 32-bit installers)
- NOW PLUG-IN the USB Dongle to the PC to the USB 2.0 port of your computer. Windows® should install all required drivers automatically. A red light should appear on the dongle indicating that the device is functioning correctly and ready to use.
- It is recommended to reboot the system after the software installation. If you had problems with installation so far, refer to [Troubleshoot](#) section explained in this document.
- You can verify if the required licenses are installed. Navigate to **C:\Program Files\GL Communications Inc\GLDONGLE** (or **C:\Program Files(x86)\GL Communications Inc\GLDONGLE** for 32-bit version) directory, execute **appl\_list.exe** and confirm that the following licenses are listed:
  - PKS120 (MAPS™ SIP)
  - PKS102 (RTP Traffic)\*


**\*Note:** Additional licenses may be required for optional codec. Please verify that all licenses purchased are displayed using the **appl\_list.exe** utility.



## Verification

Functional verification requires 2 systems with **MAPS™ SIP** application installed on each, and connected back-to-back with an Ethernet cable or the systems can be connected in same subnet via switch.



Invoke the **MAPS™ SIP** application on **two different PC's** say PC1 with IP Address 192.xx.xx.50 and PC2 with IP Address 192.xx.xx.39. The configurations below allows MAPS™ SIP on PC1 to perform as **User Agent Client (UAC)** and on PC2 as **User Agent Server (UAS)** to simulate Audio and Video calls.

### MAPS™ SIP on PC1 (GUI)

- Configure MAPS™ SIP following the steps below:
- On the Test Bed Default window, click  and select **TestBedDefault** configuration file and check for the following settings:
  - Verify the **Adapter Index** value. This value indicates the NIC interface on which the RTP Core binds for RTP traffic generation and reception. The **Display Adapter Info** option under the **Help** menu displays all the network adapters available in the system. Select the adapter index value listed against the actual IP address of the system in use.

- Open **Profile Editor** from “**Editor**” menu, click  and select “**UA\_IPV4\_Profiles**”. Choose and edit **Profile0001** and **Profile0002** profiles from the left pane.
- **Profile0001** is edited to handle ‘**Video Call**’
  - Set **Call Type** ---> **Video Call**
  - Edit **Contact Address** ---> **348@192.xx.xx.50** (Enter the PC 1 SIP URI here)
  - Edit **Address of Record** ---> **348@192.xx.xx.50** (Enter the PC 1 SIP URI here)
  - Edit **To Address** --->**345@ 192.xx.xx.39** (Enter the destination PC or DUT SIP URI here)
  - Edit **RTP IP Address** -> **192.xx.xx.50** (Enter the PC 1 IP Address here)
- **Profile0002** is edited to handle ‘**Audio Call**’
  - Set **Call Type** ---> **Audio Call**
  - Edit **Contact Address** ---> **348@192.xx.xx.50** (Enter the PC 1 SIP URI here)
  - Edit **Address of Record** ---> **348@192.xx.xx.50** (Enter the PC 1 SIP URI here)
  - Edit **To Address** --->**345@ 192.xx.xx.39** (Enter the destination PC or DUT SIP URI here)
  - Edit **RTP IP Address** -> **192.xx.xx.50** (Enter the PC 1 IP Address here)
  - Scroll down to **Codec and Traffic Options**, and select **Codec** as **PCMU** from the Codec list; set **Traffic Type** to **IVR** type. This automatically sends and detects DTMF digits verifying the traffic. **Note:** Traffic direction settings for IVR Traffic type is not applicable
- Click  **Save** button to save the changes to the same configuration “**UA\_IPV4\_Profiles**” file.
- Select **Configuration** ---> **Incoming Call Handler Configuration** from the main menu. Verify that the **SipCallControl.gls** script is loaded against the **INVITE** message in the **Incoming Call Handler Configuration** window.

### MAPS™ SIP on PC2 (GUI)

- Configure MAPS™ SIP following the steps below:
- On the Test Bed Default window, click  and select **TestBedDefault** configuration file and check for the following settings:
  - Verify the **Adapter Index** value. This value indicates the NIC interface on which the RTP Core binds for RTP traffic generation and reception. The **Display Adapter Info** option under the **Help** menu displays all the network adapters available in the system. Select the adapter index value listed against the actual IP address of the system in use.
- Open **Profile Editor** from “**Editor**” menu, click  and select “**UA\_IPV4\_Profiles**”. Choose and edit **Profile0001** and **Profile0002** profiles from the left pane.
- **Profile0001** is edited to handle ‘**Video Call**’
  - Set **Call Type** ---> **Video Call**
  - Edit **Contact Address** ---> **345@192.xx.xx.39** (Enter the PC 2 SIP URI here)
  - Edit **Address of Record** ---> **345@192.xx.xx.39** (Enter the PC 2 SIP URI here)
  - Edit **To Address** --->**348@ 192.xx.xx.50** (Enter the destination PC 1 or DUT SIP URI here)
  - Edit **RTP IP Address** -> **192.xx.xx.39** (Enter the PC 2 IP Address here)
- **Profile0002** is edited to handle ‘**Audio Call**’
  - Set **Call Type** ---> **Audio Call**
  - Edit **Contact Address** ---> **345@192.xx.xx.39** (Enter the PC 2 SIP URI here)
  - Edit **Address of Record** ---> **345@192.xx.xx.39** (Enter the PC 2 SIP URI here)
  - Edit **To Address** --->**348@ 192.xx.xx.50** (Enter the destination PC 1 or DUT SIP URI here)
  - Edit **RTP IP Address** -> **192.xx.xx.39** (Enter the PC 2 IP Address here)
  - Scroll down to **Codec and Traffic Options**, and select **Codec** as **PCMU** from the Codec list; set **Traffic Type** to **IVR** type. This automatically sends and detects DTMF digits verifying the traffic. **Note:** Traffic direction settings for IVR Traffic type is not applicable



- Click **Save** button to save the changes to the same configuration “UA\_IPV4\_Profiles” file.
- **Start** the testbed setup on both the PCs and wait for RTP-Core console window to appear. If the SIP/RTP Core console does not invoke with the MAPS™ Testbed start-up, refer to [Troubleshoot](#) section explained in this document.
- From any of the MAPS™ SIP instance, select **Emulator > Call Generation** from main menu.
- **Add** an instance in the Call Generation window and select **SipCallControl.gls** script and **Profile0001** profile from the drop-down list. Similarly, add another instance in the Call Generation window and select **SipCallControl.gls** script and **Profile0002** profile. The first call instance generates video call and the second call instance generates audio IVR call.
- Click **Start** button to execute the scripts.
- Observe the received call instance in the **Call Reception Window** (on the other PC) running the **SipCallControl.gls** answer scripts.
- Once call gets terminated, verify the **Message Sequence Flow** by selecting the call objects at both generation and reception end.
- Verify the RTP traffic event reported in the **Event Log** window from **Reports** menu -> **Events**

## Troubleshoot

- “**Security Error: Application is not licensed**”, if you see this error when you run MAPS™ SIP it indicates a problem with either your dongle or license file.
  - First verify that the dongle is plugged in and the red light is on
  - To use MAPS™ 64-bit version – use **GLDongleLicenseInstaller\_x64.exe** utility to install licenses
  - To use MAPS™ 32-bit version – use **GLDongleLicenseInstaller\_x86.exe** utility to install licenses
  - Navigate to **C:\Program Files\GL Communications Inc\GLDONGLE** (or **C:\Program Files(x86)\GL Communications Inc\GLDONGLE**)
  - Run **haspinfohl.exe**. Verify that Status is **OK** and make a note of the Serial #.
  - Run **appl\_list.exe**. Verify that there is a line in the table reading **PKS120 MAPS™ SIP** with the serial number you noted above.
  - If the dongle does not appear in **haspinfohl.exe**, verify that it appears as a USB device in the **Windows Device Manager**. If it does not appear even in the device manager, remove the dongle and plug it into a different USB port, preferably one directly on the motherboard.
- If the SIP/RTP Core console does not invoke with the MAPS™ TestBed start-up, check for the following:
  - RTP Soft Core licenses may not be installed for the dongle used. Run **appl\_list.exe** available in the **C:\Program Files\GL Communications Inc\GLDONGLE** directory. Verify that **PKS102 RTP Soft Core** is listed.
  - Verify that the SIP IP Address and RTP IP Address in the profiles are configured with the proper system IP address.
- If you cannot resolve your issues, please contact your appointed technical support person. If you do not know your technical support contact, please reach us at [info@gl.com](mailto:info@gl.com)