

Normal Instructions – Follow these precisely

START WITH DONGLE UNPLUGGED FROM MACHINE

- Run ..\Dongle License Installer\GLDongleLicenseInstaller_x86.exe (or GLDongleLicenseInstaller_x64.exe for PacketScan™ 64-bit installers) from the installation CD provided by GL Communications Inc.
- Plug the dongle 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 it is functioning correctly from a physical point of view.
- If a previous version of PacketScan™ is already installed, uninstall this program completely, manually delete all the files from the installation directory, and then run the above executable.
- Run *appl_list.exe* available in the *C:\Program Files(x86)\GL Communications Inc\GLDONGLE* (or *C:\Program Files\GL Communications Inc\GLDONGLE*) directory and confirm that the following licenses are listed:
 - PKV100 – PacketScan™
 - PKV103 – GSM and UMTS Analyzer
- Run the PacketScan™ Installation executable **PacketScan.exe** (or *PacketScan_x64.exe* for 64-bit OS) from the Installation CD.
- It is recommended to reboot the system after the software installation.
- Double-click the PacketScan™ icon  from the desktop. The application should invoke without any errors.



Note:

- Additional licenses may be required for optional codec. Please verify that all licenses purchased are displayed using the *appl_list.exe* utility

Verification

Follow the steps below for functional verification of **PacketScan™ Real-time** analysis feature.

- From the **PacketScan™** main menu, select **Configure → Protocol and GUI Options →**  **INI Decode Options** from **Configure → Protocol and GUI Options**. Click on **Edit INI**, to invoke **PacketScanProt.ini** file in the notepad.
- In the ini file, search for **#SCTP_PORT_FLAG_INDEX** and enter the value for SCTP ports on which **RANAP** signaling is known to receive as given below.
 - **SCTP_SRC_RANAP_MIN** = 0
 - **SCTP_SRC_RANAP_MAX** = 65535
 - **SCTP_DST_RANAP_MIN** = 0
 - **SCTP_DST_RANAP_MAX** = 65535



Note:

- The values shown here represent generic minimum and maximum values.
- User can enter the exact minimum and maximum port number range as required. If the user doesn't know the port number, configure minimum and maximum port range as given above.
- In the ini file, search for **#PROCESS_IUCS_GSMA_CALLS** and enter the **IuCS_GSMA_CALLS_PROCESS_FLAG** as 1. This allows to process IuCS calls in PDA.
- In case, if you are also looking to decode IuUP frames over IuCS, search for **#RTP_PAYLOAD_FOR_IUUP** in the ini file, and enter value as **IUUP_MIN_PAYLOAD** = 107 and **IUUP_MAX_PAYLOAD** = 107; this value indicates RTP payload value for AMR codec for IuUP.
- Save and close the **PacketScanProt.ini** file
- **Close the PacketScan™** application and invoke again to apply the changes done for **PacketScanProt.ini**.
- Select **Capture → Stream/Interface Selection** and enable the Ethernet card on which packet needs to be captured
- Select **Capture → Capture File Options** and enable **Circular Capture Buffer**

- Select **Capture** → **Capture Filter** option, click on **Deactivate all** and close the Capture Filter option
- Select **Capture** → **Capture Filter** option, click **SCTP** in the Filter Selection and check **Filter all SCTP data**. Do not activate any other filters in the **Capture Filter**.
- From the **PacketScan™** main menu, select **Call Detail Records** → **Build Call Detail Records**
- From the **PacketScan™** main menu, select **File** → **Start Real-time** or Click **Start Real-time**  icon from the toolbar.(Or Check Start real-time tracing option provided under **Configure** → **Startup Options**, and then click **Execute**)
- To playback an HDL file containing packets, use **PacketscanUtilities** application. From the GL installation directory double-click **PacketscanUtilities** application.
- Select **Utilities** > **HDL Playback** from the menu.
- In the **Device** option select the correct NIC card on which the PacketScan™ is set to capture the packets.
- In the **Select HDL File** option click on browse button to browse and select **C:\Program Files\GL Communications Inc\PacketScan\Examples\UMTS\IuCS-RTP.hdl** file from the GL installation directory
- Enable **Maintain Timing** option and click **Start**.
- Observe the **UMTS protocol** decodes displayed in PacketScan™ analyzer. The detail view of the decode should display all the UMTS protocol layers - MAC, IP, SCTP, M3UA, SCCP, and RANAP layers.
- From the **PacketScan™** main menu, select **Call Detail Records** → **Open Call Detail Records** to view Call Trace
- From the **PacketScan™** main toolbar, click on the PDA icon  to invoke PDA (Packet Data Analyzer) and view detail analysis of each session, call graphs and quality scores for the captured IuCS calls.
- In PDA, select **Call Summary** → **Protocols** → **IuCS Calls** and observe that calls are displayed in PDA with proper codec type.
- In case, if you are also looking to decode IuUP frames over IuCS, verify that the RTP payload value is set to 107 from the **Settings** > **Payload Map Table** > **AMR** = 107.
- Close and re-open the PDA to decode IuUP frames using AMR codec.



Note:

- If you are unable to view the real-time decodes, verify if the Windows® Firewall is enabled. You should **Turn off Windows Firewall** on Windows® and on any 3rd party Anti-Virus software that may be installed on the PC to make sure that Firewall is not blocking any packets or frames.

Troubleshoot

- “**Security Error: Application is not licensed**”, if you see this error when you run PacketScan™ 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
 - Navigate to *C:\Program Files\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 *PKVI00 PacketScan Online VoIP Analysis Software* 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.

- Reasons why the verification step might fail are various:
 - Intermittent Frame Errors or Bit Errors generally indicates faulty equipment, either due to the Ethernet cable, the NICs or both.
 - Complete failure to SYNC could be a configuration issue, please review your settings. It could also be due to firewalls or other forms of security software. Please disable any security software if possible and try again.
 - Make sure that Firewall is not blocking any packets or frames. **Turn off Windows Firewall** on Windows® and on any 3rd party Anti-Virus software that may be installed on the PC. **Turn OFF Windows Firewall** - navigate to Control Panel > Systems & Security > Windows Firewall, click Turn Off windows Firewall for all networks.

- 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