

It is assumed that the GL's T1E1 Hardware, Software, and License installations are already performed by referring to the respective T1E1 hardware Quick Installation Guide (for example, T1E1-Dual-USB-tProbe-Analyzer-Quick-Install-Guide.pdf).

T1E1 Fax Simulator is available as an optional software (XXFT0) with the GL's T1/E1 Hardware Applications. It also requires one of the following licenses.

- XXFT2 2 Fax ports licenses
- XXFT3 8 Fax ports licenses
- XXFT4 30 Fax ports licenses
- XXFT5 60 Fax ports licenses
- XXFT6 120 Fax ports licenses

From the installation directory C:\Program Files\GL Communications Inc\GL Hardware License Installer, double-click on T1E1AppList.exe and observe that Fax licenses are updated in the application.

<u>Note</u>: Proceed to the verification steps below after successfully installing the T1E1 hardware, software, and verifying the required T1E1 hardware licenses (for example, PTA001, PEA001 applicable for tProbeTM T1E1 Analyzer).

Verification

The below example depicts invoking T1E1 application, starting of WCS Server, connecting to the server through WCS Client, and executing fax commands available in the installation directory to verify proper working of Fax Simulator.

• After successful installation of T1E1 hardware such as, tProbe, Portable USB, Universal PCI Board, Dual PCIe Express

T1E1 Boards, and **Octal / Quad T1E1 PCIe Express Board**. Crossconnect **Port #1** and **Port #2** of the Hardware unit back-to-back with a **RJ-48C** T1 E1 Crossover Cable.



Bouble-click on the T1/E1 application short-cut icon created on the desktop. Ensure that
 application is invoked without any errors. In this example, tProbeTM T1 application is used to run fax commands.

- On the **Card Setting** dialog, for **Port** #1, set the Framing option as **ESF** (193E) for **T1** and **CCS** for E1, Loopback option as **No Loopback**, set the **Termination** as **Terminate**, and the clock as **Internal**. Refer to the below figures.
- Now, click on **Set all Cards as selected** option to apply the same card settings on all available ports.

Card Settings (T1)								
Port	Framing	Loopback	Termination	Clock	B8ZS	Cross-port	Set all cards as selected	
1	ESF (193E)	No Loopback	Terminate	Internal	On	Normal		
2	ESF (193E)	No Loopback	Terminate	Internal	On	Normal	<- Double-click to change values	
<						2	•	
Card Se	ttings (E1)						×	
Port	Framing	Loopback	Termination	Clock	Cross-po	rt 🛛	Set all cards as selected	
1	CCS	No Loopback	Terminate	Internal	Normal			
2	CCS	No Loopback	Terminate	Internal	Normal		<- Double-click to change values	



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• Verify the Sync and Alarm Status between the ports are indicated in Green ✓ in T1/E1 Alarms pane. Click Yellow Reset button to reset the alarms.

T1/E1 Alarms							
Reset	All Ports	#1	#2				
Sync Loss							
Bipolar Violation		 Image: A set of the set of the	 Image: A set of the set of the				
Carrier Loss		 Image: A second s	 Image: A set of the set of the				
Frame Error		 Image: A set of the set of the	 Image: A set of the set of the				
Blue Alarm		 Image: A set of the set of the	 Image: A set of the set of the				
Yellow Alarm		 Image: A second s	 Image: A set of the set of the				
AIS	 Image: A second s	 Image: A second s	 Image: A second s				

- On the T1E1 application main GUI, select Special Applications \rightarrow Windows Client Server (WCS) \rightarrow WCS Server. This will popup Start GL Server window as shown in the below figure.
 - Set the Listen Port to 17080 for T1 or 17090 for E1.
 - > Under Messaging, check Send / Receive Binary Messages option.
 - > Under Version, check Send / Receive Version 4 Messages option.
- Click on **Start GL Server** to star the server.
- From the tProbe[™] analyzer main window, select Special Applications → Windows
 Client Server (WCS) → WCS Client. This will invoke GL Client window.
- On the GL Client window, select Connect → Connect or click on the icon, this will popup connect window, set the Listen Port to 17080 for T1 or 17090 for E1 and ensure that proper Listen Port, Messaging and Versions are selected as discussed in the previous steps. Click on OK.



- Observe that GL Client window will display the message as Connected to GL Server on 'hostname'.
- Select Script → Open, navigate to the installation directory i.e. C:\Program Files (x86)\GL Communications Inc\tProbe T1(E1) Analyzer\WinClientServer\FaxSimulator, select FAX_Simulator_T1(E1).gls script and click on Open. This will load the commands from the selected *.gls file into the bottom pane of the GL Client window.

For 64-bit application, FAX_Simulator_T1(E1).gls file will be available in the following path: C:\Program Files\GL Communications Inc\tProbe T1(E1) Analyzer\WinClientServer\FaxSimulator

From the bottom pane, place the cursor on the command line run task "FaxSimulatorT1(E1):StartFaxSim"; and

press **F8** on the keyboard or click on **Step Script** icon on the **GL Client** window to run the task commands.

Observe that Task status is displayed as started (for example, Task 1: Task 1 started) in the GL Client window.

- Similarly, execute the command line inform task * "START".
- Now execute RXFAX script for V.34 Modem Type from FAX_Simulator_T1(E1).gls script. Before executing the command ensure that proper name is specified for the .tif file. In this example, we have specified as test.tif. refer to the below command.

inform task * "RXFAX #2:1 TIFF FILE

'WinClientServer\FAXSimulator\Recv\test.tif' CODEC_TYPE MULAW MODEM_TYPE 16
MIN_DATA_RATE 16800 MAX_DATA_RATE 33600 ECMENABLED 1";

Note:



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Similarly, execute **TXFAX** script for V.34 Modem Type. Refer to the below command.

inform task * "TXFAX #1:1 TIFF_FILE 'WinClientServer\FAXSimulator\send\1.tif'
CODEC_TYPE MULAW MODEM_TYPE 16 MIN_DATA_RATE 16800 MAX_DATA_RATE 33600
ECMENABLED 1";

🐺 FAX_Simulator_T1.gls - GLClient	x
File Edit View Connect Script Log User Help	
Task 2, Lazassiunatatus, Futuru - I, Timeatur - I, Lazunecutur - Inzi, message - Mich Message Cummitatum	_
Task 2: FaxSessionStatus, PortNo = 1, TimeSlot = 1, FaxDirection = "TX", Message = "DCN(Disconnect)"	~
Task 2: FaxSessionStatus, PortNo = 1, TimeSlot = 1, FaxDirection = "NONE", Status = "V21 Signal Done"	
Task 2: FaxSessionStatus, PortNo = 1, TimeSlot = 1, FaxDirection = "NONE", Status = "Successful"	
Task 2: FaxSessionCompleted, PortNo = 1, TimeSlot = 1, FaxDirection = "TX", SessionEndTime = "15:32:8"	
Task 2: FaxSessionStats, PortNo = 1, TimeSlot = 1, FaxDirection = "TX", FaxSessionDuration = 2932 msec, Modem = "V34", InitialRate = "33600",	
Modem = "V27", FinalRate = "2400", ECMUsed = 1, NegotiatedPageResoultion = "204x98", NegotiatedPageSize = "A4", NegotiatedCompression =	
"MMR",TransmittedPageCount = 1, TransmittedByteCount = 42252, TransmittedLineCount = 1162,FTTFrameCount = 0, CFRFrameCount = 1,	
MCFFrameCount = 1, PPRFrameCount = 0, RTNFrameCount = 0, DCNFrameCount = 1, EOPFrameCount = 0	
Task 2: FaxSessionStatus, PortNo = 2, TimeSlot = 1, FaxDirection = "RX", Message = "DCN(Disconnect)"	
Task 2: FaxSessionStatus, PortNo = 2, TimeSlot = 1, FaxDirection = "NONE", Status = "V21 Signal Done"	
Task 2: FaxSessionStatus, PortNo = 2, TimeSlot = 1, FaxDirection = "NONE", Status = "Successful"	
Task 2: FaxSessionCompleted, PortNo = 2, TimeSlot = 1, FaxDirection = "PX", SessionEndTime = "15:32:17"	
Task 2: FaxSessionStats, PortNo = 2, TimeSlot = 1, FaxDirection = "RX", FaxSessionDuration = 3882 msec, Modem = "V34", InitialRate = "33600",	
Modem = "V27", FinalRate = "2400", ECMUsed = 1, NegotiatedPageResoultion = "204x98", NegotiatedPageSize = "A4", NegotiatedCompression =	
"MMR", Received PageCount = 1, Received PageErrorCount = 0, Received ByteCount = 42240, Received LineCount = 1162, Received BadLineCount = 0,	
ReceivedBadPktCount = 0, FTTFrameCount = 0, CFRFrameCount = 1, MCFFrameCount = 1, PPRFrameCount = 0, RTNFrameCount = 0, DCNFrameCount	: 11
= 1, EOPFrameCount = 0	
1	~
**************To test V.34 Modem Type*********	^
inform task * "TXEAX #1:1 TIFE FUE "WinClientServer(FAXSimulator/send/1.tif" CODEC TYPE MULAW MODEM TYPE 16 MIN DATA BATE 16800	
MAX_DATA_RATE 33600 ECMENABLED 1";	
I	
Inform task * "IRXFAX #2:1 TIFF_FILE 'WINCIIentServer(FAXSImulator(Recv(test.tif' CODEC_TYPE MULAW MODEM_TYPE 16 MIN_DATA_RATE 16800	
MAA_DATA_RATE 33000 COMENADLED I ,	
<u> </u>	~
Ready Ver 4 B NUM	1

> Observe that test.tif image file is received in the following path C:\Program Files (x86)\GL Communications

Inc\tProbe T1(E1) Analyzer\WinClientServer\FaxSimulator\Recv.

Note:

For 64-bit application **tiff image** will be created in the following path C:\Program Files\ GL Communications Inc\tProbe T1(E1) Analyzer\WinClientServer\FaxSimulator\Recv

Troubleshoot

If the fax transmission and reception is not happening properly then, troubleshoot with the following steps:

• Check if the analyzer software invokes with the following alarm errors then, ensure that T1E1 Crossover cables are properly plugged-in.

T1/E1 Alarms							
Reset	All Ports	#1	#2				
Sync Loss	×	×					
Bipolar Violation	. H	 Image: A set of the set of the	. H				
Carrier Loss	×	×	 Image: A second s				
Frame Error	. H		. H				
Blue Alarm		 Image: A second s					
Yellow Alarm							
AIS	 Image: A second s	 Image: A second s	 Image: A second s				

- Check if the Card settings for **Termination** is set to **Terminate** mode for all the ports and click on **Reset** button to get the sync on both the ports.
- Check if the Start GL Settings is selected with proper Listener Port, Binary Message and Version 4 Message type.
- Check if the GL Client is connected to the server properly.

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