

Before you proceed with the instructions below, ensure that you have performed the purchased T1 E1 Analyzer Hardware, Software, License and Warranty License installations referring to the respective Hardware Installation Guide.

## **Quick Verification**

For functional verification, **MAPS<sup>TM</sup> CAS** application is configured on Card #1 and Card #2 in loopback mode on a single PC. The following steps explain MAPS<sup>TM</sup> CAS configuration to simulate **CAS R1 Wink call scenario using T1 Analyzer.** 

Cross-connect T1 E1 Port #1 and Port #2 of the Hardware unit back-to-back using RJ48c loopback cable.



**RJ48c Loopback Cable** 

• Click on the **T1 E1 Analyzer** icon created on the desktop (or) from the installation directory, click on **UsbNGT1.exe** and launch T1 E1 Analyzer application.



- The application may take some time to get started due to hardware and software initializations.
- The "Warranty Error" as shown in the figure may be prompted, when the user tries to start the application, then you may not have installed the Warranty licenses, or the license has been expired. Refer to T1 E1 tProbe Hardware Quick Install Guide for installation of Warranty Licenses.



- Verify the following **Interface** settings in the T1 E1 main GUI
- For T1 Analyzer, configure Port #1 and Port #2 with the following Framing = ESF, Loopback = No Loopback, Termination = Terminate, Clock = Internal, Cross Port = Normal
- For E1 Analyzer, configure Port #1 and Port #2 with the following Framing = CAS, Loopback = No Loopback, Termination = Terminate, Clock = Internal, Cross Port = Normal
- 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.

File Config View I	Monitor In	ntrusiveTest	Special Ap	plications	Window	Help			
x Port Framing Loopback		ck T	k Termination		B8ZS Cross-port	Cross-port	Set all cards as selected		
1 ESF (193E 2 ESF (193E	1 ESF (193E) No Loopback 2 ESF (193E) No Loopback		erminate erminate	Internal Internal	On On	Normal Normal	<- Double-click to change value		
					×				
	T1/E1	Alarms			•				
Reset	All Ports	#1	#2		_				
Sync Loss	<ul> <li>Image: A second s</li></ul>	<ul> <li>Image: A second s</li></ul>	<ul> <li>Image: A second s</li></ul>						
Bipolar Violation	<ul> <li>Image: A second s</li></ul>								
Carrier Loss		<ul> <li>Image: A second s</li></ul>							
Frame Error	<ul> <li>Image: A second s</li></ul>	<ul> <li>Image: A second s</li></ul>			_				
Blue Alarm	<ul> <li></li> </ul>	<ul> <li></li> </ul>	<ul> <li></li> </ul>		_				
Yellow Alarm		<b></b>	×.		- 10				
AIS	~	<b>~</b>	<b>~</b>		- 100				
	T1/E1	Statistics			•				
Frequency (Hz)		1543999	1543999		-				
evel (dBdsx)		0,396	0.368						
3PV Errors		0	0						
CRC Errors		0	0						
Frame Errors		0	0						
Fransmit Under Run		0	0						
Receive Over Run		0	0						



- From T1 E1 Analyzer main window, invoke the WCS Server [Special Applications →Windows Client Server (WCS) →WCS Server].
- Configure WCS as follows:-
  - Listen Port = 17080 (for T1 systems); 17090 (for E1 systems)
  - Messaging = Binary
  - $\blacktriangleright$  Version = 4
  - > Click on Start GL Server button

Start GL Server							
Listen Port							
17080	Start GL Server						
CDefault>	Exit						
🔲 Server is Invisible							
Messa	Messaging						
Send / Receive Binary Messages							
C Send / Receive ASCII Messages							
Version							
C Send / Receive Version 3 Messages							
Send / Receive Versid	on 4 Messages						
🔲 Use These Settings u	ntil Further Notice						
🔲 Start Server Auttomati	cally At Analyzer Start-Up						

• From T1 E1 Analyzer main window, select **Special Applications** → **Protocol Emulation** to invoke MAPS CAS emulator.



- In the MAPS<sup>TM</sup> CAS window, on the default **Testbed Setup** window, click **Open Configuration** in and select **R1\_TestBedSetup** and check for the following settings:
  - > Interface = T1
  - ➤ WCS Listener Port = 17080 (for T1)
  - **Server IP Address** = 127.0.0.1

🚰 MAPS (Message Automation Protocol Simulation) (CAS ) - [Testbed Setup - R1_TestBedSetup] - 🗆 🗙							
<u>Configurations</u> Emulator <u>Reports</u> Editor <u>Debug</u> Tools	s <u>W</u> indows <u>H</u> elp	_ & ×					
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Config	Value	↑ Enable					
Configurations							
- GL Server Configuration							
<ul> <li>Interface</li> </ul>	T1						
<ul> <li>WCS Listener Port</li> </ul>	17080						
<ul> <li>Server IP Address</li> </ul>	127.0.0.1						
<ul> <li>Latency</li> </ul>	9						
Response	9						
- R1 Signaling Bits							
– Idle	0000						
– Seizure	1111						
– Answer	1111						
<ul> <li>Clear Forward</li> </ul>	0000						
<ul> <li>Clear Back</li> </ul>	0000						
<ul> <li>Wink ON</li> </ul>	1111						
└── Wink Off	0000						
- Dial Digit Parameters							
<ul> <li>Tx ANI DID Format</li> </ul>	ANI*DID						
<ul> <li>Waiting Untill Nth Digit</li> </ul>	8000						
<ul> <li>Type Of Dial Digit</li> </ul>	DTMF						
<ul> <li>Dial Digit On Time in msec</li> </ul>	80						
<ul> <li>Dial Digit Off Time in msec</li> </ul>	80						
<ul> <li>Dial Digit Power1 in db</li> </ul>	-10.00						
Dial Digit Power2 in db	-10.00						
- Wink Parameters							
<ul> <li>Wink Duration in msec</li> </ul>	200						
<ul> <li>Wait For Receive Wink in msec</li> </ul>	2000						
<ul> <li>Wait to Send Wink in msec</li> </ul>	0						
<ul> <li>Wait for Receive Dial Digits in msec</li> </ul>	5000						
Wait For Receive Answer Signal in msec	10000						
L End User Configurations	CAS_Profiles.xml	V Start Edit					
1	Initialisation Errors	ror Events Gaptured E					

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- In MAPS<sup>™</sup> CAS main window, select Editor → Profile Editor to invoke profile editor window and verify the following parameter settings:
  - > Click **Open Configuration** icon *mail and load* "CAS\_Profiles" file.
  - > Select the **Card1TS00** profiles from the left pane.
  - Verify the Card number = 1, Timeslot = 0, and the default ANI, DID parameter values already set in the window.



- Click Save to save the changes.
- Similarly, scroll down the left pane and select the Card2TS00 profile, and repeat the above steps verifying the settings for the profile.
- > In the same Profile Editor window, click **Open Configuration** icon *icon* and load **"TrafficProfile"** file,
- Select the **Card1TS00** profiles from the left pane,
- > Set Enable Traffic to AutoTraffic-Fax and Traffic Direction for Auto Traffic to Tx-Rx.
- > Click Save
- Similarly, scroll down the left pane and select the Card2TS00 profile, and set the same traffic settings as above. Click Save



- Click **Start** and initialize the Testbed setup.
- In the MAPS<sup>TM</sup> CAS window, select **Emulator**  $\rightarrow$  Call Generation to invoke call generation window.
- Click Open Configuration icon 🖾 available on the Call Generation window, select Default-R1 pre-saved configuration file.
- This configuration loads three call instances with T1\_R1\_Place Call.gls, and T1\_R1\_AnswerCall.gls scripts with Card1TS00 and Card2TS00 profiles respectively. The third call instance is loaded with T1\_R1\_Reset Timeslots.gls script.
- Verify that Sequential Execution button is enabled in the Call Generation window. Also verify if the Total Iterations column is set to 1.

- Observe the script **Status and Events** in the respective columns. Wait for the call to terminate and verify the **Message Sequence** flow.
- Select any message in the ladder diagram and observe the respective decode message on the right pane for the respective message.





• In the MAPS<sup>™</sup> CAS main window, select **Report** → **Events** to invoke statistics and observe the occurring call events in the log.

MAPS (Message Automation Protocol Simulation) (CAS ) - [Events]										
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Event Log Error Events Captured Errors										
Captured Events	Call Trace Id	Script Name	Script Id	^						
Task Started			CGProtScriptId-8-153270061							
Task Started			CGProtScriptId-8-153270061							
P: CASD etected Signals at 2019-05-13 12:29:23.523000 =	.1,0	T1 R1 Place Call.gls	CGProtScriptId-8-153270061							
Task Started			CGProtScriptId-9-153270229							
Task Started			CGProtScriptId-9-153270229							
P: CASDetectedSignals at 2019-05-13 12:29:25.189000 =	. 2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
P: CASDetectedSignals at 2019-05-13 12:29:25.195000 =	. 1,0	T1_R1_Place Call.gls	CGProtScriptId-8-153270061							
P: Placing Call	1,0	T1_R1_Place Call.gls	CGProtScriptId-8-153270061							
P: CASDetectedSignals at 2019-05-13 12:29:28.522000 =	. 2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
A: Seizure Detected	2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
P: CASDetectedSignals at 2019-05-13 12:29:28.546000 =	.1,0	T1_R1_Place Call.gls	CGProtScriptId-8-153270061							
A: Seizure Acknowledged	2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
P: CASDetectedSignals at 2019-05-13 12:29:28.767000 =	. 1,0	T1_R1_Place Call.gls	CGProtScriptId-8-153270061							
P: Seizure Acknowledged	1,0	T1_R1_Place Call.gls	CGProtScriptId-8-153270061							
TxDigits = 5551234001*5551000001	1,0	T1_R1_Place Call.gls	CGProtScriptId-8-153270061							
P: Dialing	1,0	T1_R1_Place Call.gls	CGProtScriptId-8-153270061							
Task Started			CGProtScriptId-8-153270061							
26880 bytes transmitted			CGProtScriptId-8-153270061							
A: Alerting	2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
P: Remote User Answered Call	2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
Card and Timeslot = Card2TS00	2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
Loaded Traffic Profile: Card2TS00	2,0	T1_R1_Answer Call.gls	CGProtScriptId-9-153270229							
	mation Protocol Simulation) (CAS ) - [Events] Jator Reports Editor Debug Tools Windows H Captured Errors Captured Errors Captured Events Task Started P: CASDetectedSignals at 2019-05-13 12:29:23.523000 = Task Started P: CASDetectedSignals at 2019-05-13 12:29:25.189000 = P: CASDetectedSignals at 2019-05-13 12:29:25.195000 = P: CASDetectedSignals at 2019-05-13 12:29:25.195000 = P: CASDetectedSignals at 2019-05-13 12:29:28.522000 = P: CASDetectedSignals at 2019-05-13 12:29:28.522000 = P: CASDetectedSignals at 2019-05-13 12:29:28.542000 = P: CASDetectedSignals at 2019-05-13 12:29:28.546000 = A: Seizure Detected P: CASDetectedSignals at 2019-05-13 12:29:28.767000 = P: Seizure Acknowledged P: CASDetectedSignals at 2019-05-13 12:29:28.767000 = P: Seizure Acknowledged TxDigits = 5551234001*5551000001 P: Dialing Task Started 26880 bytes transmitted A: Alerting P: Remote User Answered Call Card and Timeslot = Card2TS00 Loaded Traffic Profile: Card2TS00	mation Protocol Simulation) (CAS ) - [Events] Jator Reports Editor Debug Tools Windows Help Captured Errors Captured Errors Captured Events Captured Events Captured Events Call Trace Id Task Started Task Started P: CASDetectedSignals at 2019-05-13 12:29:23.523000 = 1.0 Task Started Task Started P: CASDetectedSignals at 2019-05-13 12:29:25.189000 = 2.0 P: CASDetectedSignals at 2019-05-13 12:29:28.522000 = 2.0 P: CASDetectedSignals at 2019-05-13 12:29:28.546000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.546000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.546000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.767000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.546000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.546000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.767000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.767000 = 1.0 P: CASDetectedSignals at 2019-05-13 12:29:28.767000 = 1.0 P: Dialng 1.0 TxDigits = 5551234001*5551000001 1.0 P: Dialng 2.0 P: Remote User Answered Call 2.0 Card and Timeslot = CardZTS00 2.0 Loaded Traffic Profile: CardZTS00 2.0	mation Protocol Simulation) (CAS ) - [Events]         Jator Reports Editor Debug Tools Windows Help         Image: State of the s	mation Protocol Simulation) (CAS ) - [Events]       —         Jator Reports Editor Debug Tools Windows Help						

• This completes the functional verification of MAPS<sup>™</sup> CAS application. For any technical issues contact GL Communications Inc.