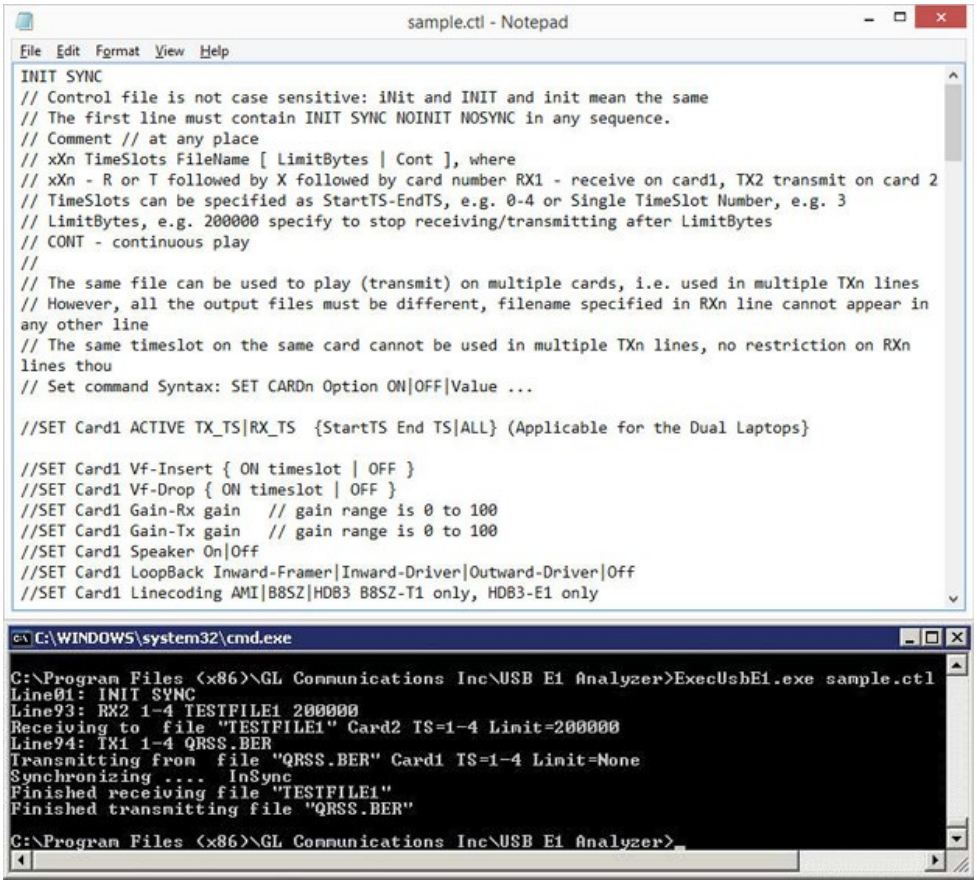
Transmit-Receive File Utility



Tx-Rx File Utility Application

The Transmit or Receive file utility allows transmission and reception of files to or from T1 / E1 lines with greater flexibility than the Record or Playback Software. The optional Record or Playback software runs as a feature under the T1 / E1 GUI application software. The transmit or receive file utility program however, runs as a “console” program and is intended for use by other Windows applications as a “callable” function. The program can also be run as a standalone program. For example, the MATLAB programs or other programs that can call external programs.

For more details, refer to T1/E1 Transmit / Receive File Utility Software webpage.

Tx-Rx File Utility Main Features:

- Simultaneously transmit and receive different files on multiple T1 / E1 (24 for T1, 32 for E1) timeslots
- Send or receive a limited or unlimited number of bytes
- Perform the above operations on four different boards simultaneously
- Program runs from a Windows DOS prompt simultaneously with other WIN programs (but not WIN T1 / E1 programs)
- Option of initialization or no initialization of T1 / E1 boards
- Option of synchronization up to four boards i.e. simultaneous transmission of files into multiple boards or reception of files from more than one board
- The execution of the utility is controlled from an ASCII file which defines boards, filenames, timeslots, initialization options, and synchronization options
- Supports Wait feature
- Option to select Active time slots for Dual Laptop Analyzers
- Drop and Insert Time slots capability

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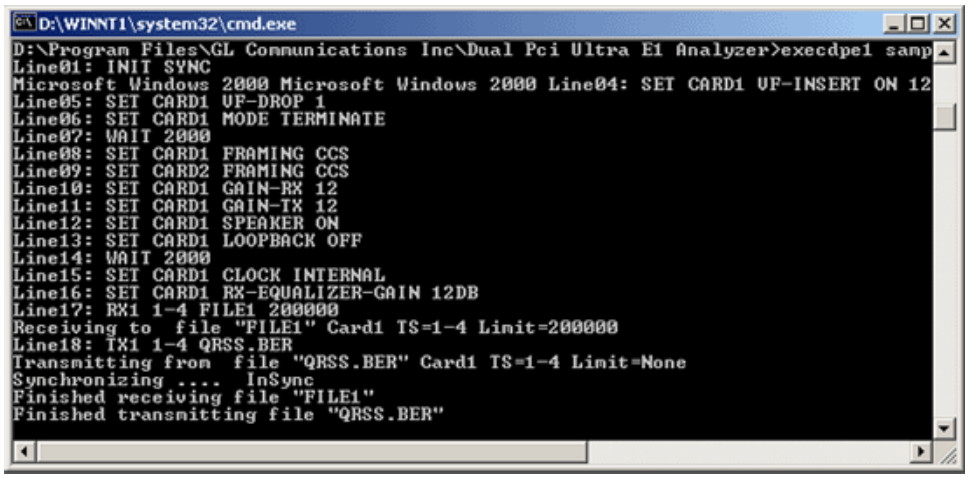
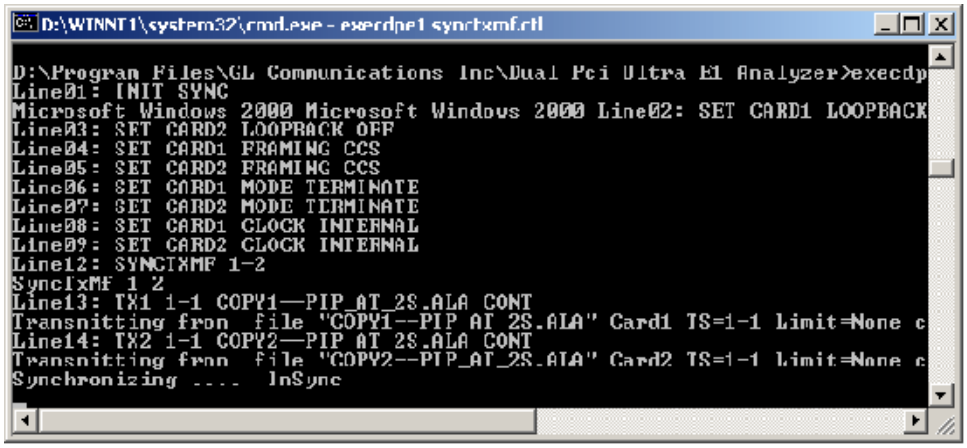
Summary of the commands

The execution of some of these commands from a Windows DOS prompt is shown in the screenshot below.



SyncTxMf

Tx-Rx utility provides a methods to approximately "synchronize" the transmit multiframe outputs of different T1 / E1 ports. By "synchronize", it is meant that the multiframe marker (beginning of multiframe) occurs at exactly the same instant for the different transmit outputs. For example if Card 1 and 2 are so "synchronized", than their respective transmit multiframe markers occur at the same time. This feature is useful when there is a requirement for simultaneously transmitting signals over multiple T1 / E1 ports. For example, the command “SyncTxMF 1-2 4 5-7” will initiate the synchronization starting with CARD 1, then 2, 4, 5, 6, and finally 7.



Command Summary

Command Syntax	Description
HELP or?	Displays command syntax
CONNECT [ip.add.re.ss]	Connect to server, when omitted server assumes that server is on local machine
WAIT	Waits until all the running tasks end
SYNC	Synchronizes all pending Xmit commands
QUIT	Quits the script, MUST be the last command in a script file
Q task_id	Queries the task progress with the specified id
QALL	Displays the running tasks identifiers
STOP task_id	Stops the task identifier
ECHO CMD|RESP|ALL|OFF	Controls details of the data printed to the screen. Default ECHO ALL
TX_SERVER_FILE #card_no start_ts end_ts filename limit|CONT	Schedules transmission of a file
RX_SERVER_FILE #card_no start_ts end_ts filename limit	Schedules reception of a file
SET #card_no VF_INSERT {ON timeslot | OFF }	Controls VF insert
SET #card_no VF_DROP timeslot	Controls VF drop
SET #card_no GAIN_RX gain	Controls Rx gain
SET #card_no GAIN_TX gain	Controls Tx gain
SET #card_no SPEAKER ON|OFF	Turns speaker on and off
SET #card_no LOOPBACK INWARD_FRAMER | INWARD_DRIVER | OUTWARD_DRIVER | OFF	Controls inward and outward loopbacks
SET #card_no LINECODING AMI|B8SZ|HDB3	Controls line coding, parameters are different for T1 and E1 cards:
SET #card_no FRAMING 193S|193E| CCS|CAS|CCS+CRC|CAS+CRC	Controls framing, parameters are different for T1 and E1 cards: 193S, 193E T1-only, others E1-only
SET #card_no MODE TERMINATE|MONITOR|BRIDGE	Controls card mode
SET #card_no RX_EQUALIZER_GAIN 12DB|26DB|36DB",	Sets Rx equalizer gain
SET #card_no CLOCK INTERNAL | EXTERNAL | RECOVERED	Sets clock to internal, external or recovery

TCP/IP Client and Server

The RemExec is a script client allowing executing commands controlling GL Communications T1/E1 cards installed on a remote computer called "server". The client can be running on the same machine where cards are installed or on a computer that can be connected to the "server" machine via TCP/IP.

Multiple client machines can control server cards simultaneously. Each client machine can access multiple server machines one at a time. Clients can send commands interactively from the console (DOS) window accepting user input via keyboard or can redirect the input from a file or other device.

RemExec Invocation:

Before client RemExec is started the server must be launched. To start the Server run RemServ command from the directory where RemServ.EXE is installed. The general syntax for this command is “RemExec”. User should type the name and hit enter in the console (DOS) window. Then one can proceed with other commands starting with the connect command. The first command should always be “connect” and the last one should always be “quit”**.**

Transmitting and Receiving Files Located on Server Computer

The transmit and receive commands are submitted to the server for execution using TX_SERVER_FILE and RX_SERVER_FILE accordingly. The server initializes and synchronizes the cards but does not start the operation immediately. The client must issue the SYNC command to actually start transmitting or receiving. The SYNC command enables all pending TX, RX commands to run on the server. Client can then either continue with other commands or wait till all the ongoing transmissions end using WAIT command .

The typical sequence of commands is

TX_SERVER_FILE #1 1 1 c:\tx1.dat 200000

TX_SERVER_FILE #1 11 20 c:\tx1.dat 2000000

RX_SERVER_FILE #2 1 1 c:\rx1.dat 200000

RX_SERVER_FILE #2 11 20 c:\rx2.dat 2000000

SYNC

WAIT

This example shows how to schedule two transmit and two receive commands, synchronously launch all four of them using SYNC and then wait till all four commands are completed.

When an transmission is scheduled the server assigns a task identifier (TASKID) to it. This TASKID number is used to report status and allows client to terminate a task.

Buyer's Guide

Item No	Product Description
XX019	Transmit / Receive File Utility Software

Item No	Related Software
XX020	Record / Playback File Software
XX030	Call Capture and Analysis
XX070	MFC-R2 Capture and Analysis
SA026	Adobe Audition
SA048	Goldwave Software
SA021	File Edit Software (Ultraedit32 SW)
STE40	Mux-Demux Software

For more details, refer to T1/E1 Transmit / Receive File Utility Software webpage.

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