Windows Client/Server for T1/E1 Analysis Cards

Easy Client Scripting and Automation of Testing Functions
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Shared Use of T1/E1 Test Gear via Multiple Clients
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Central Client Access of Multiple Server Sites
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Complex and Automated Task Processing
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Multi-Tasking Server Architecture
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Batch Script Execution
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Network Management Applications
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Digital Signal Processing operations
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Factory Test Automation
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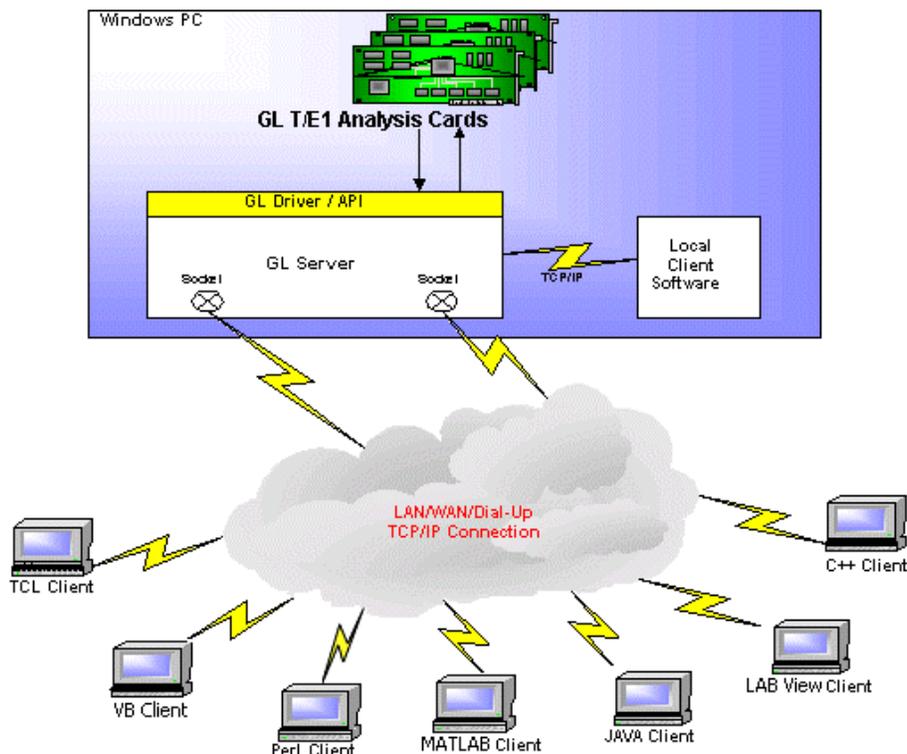
Windows Client/Server Main Features

GL's Windows® Client/Server software offers users the ability to remotely configure and operate T1/E1 Analysis cards, to automate custom test procedures, and to control T1/E1 analysis cards from multiple sites. T1/E1 Analysis cards on a server machine may be easily controlled through software Clients at remote or local sites via TCP/IP sockets. Dial-up, LAN, WAN, and Internet connectivity is supported. Server software can run multiple tasks simultaneously at the request of Clients. The GL Server software runs under Windows® 2000, NT, and XP. Typical applications include:

- Intrusive / Non-Intrusive T1/E1 Testing
- Performance monitoring and testing of multiple site locations from a single client
- Shared use of T1/E1 test equipment from multiple client locations,
- Automated factory testing on production lines,
- Simultaneous testing of high capacity T1/E1 systems through a single Client,
- Integration of T1/E1 testing into more complex testing systems
- Collection of call records from remote locations based on signaling (SS7, CAS, ISDN, etc.)
- Digital Signal Processing operations

Client software for typical tasks is provided free of charge and can be used as a template for more complex tasks. Example Clients are available in TCL, Perl, C++, Java, Visual Basic and other easy-to-use scripting languages. Clients can be run under any OS, including UNIX, LINUX, Windows, etc. Typical tasks include:

- Monitor, report, and record alarms at various sites every two seconds or as they occur,
- Detect and report DTMF/MF/MFC-R2 digits on channels as they occur,
- Perform BERT on selected timeslots involving multiple paths simultaneously,
- Decode SS7, ISDN, or CAS signaling and trap on fraudulent calls
- Perform Active Voice Level monitoring as per ITU-T P.56
- Simulate Echo Canceller and model echo path

GL Communications Inc.

GL Server Functions

Server operations fall into two general categories, called "actions" and "tasks". Actions are operations that for all practical purposes take place instantaneously. Typical actions are configuration commands and status requests. A task is a real-time operation that takes place over a span of time and generally involves the generation, processing, monitoring, or capture of T1/E1 traffic. The number of tasks that can be run simultaneously is limited only by the processing power of the server machine. Typical tasks include:

- BER testing (as shown below)
- File playback and recording
- Alarm monitoring
- DTMF/MF/MFR2 digit generation and detection
- DS0 power level monitoring, Active Speech Level monitoring
- Echo canceller simulation, echo path determination and modeling
- Digital Signal Processing (DSP) operations
- FDL/HDLC generation and decoding

For a complete list, see the GL Server Command Reference and the GL Server Guide to DSP Operations, which are available at our web site.
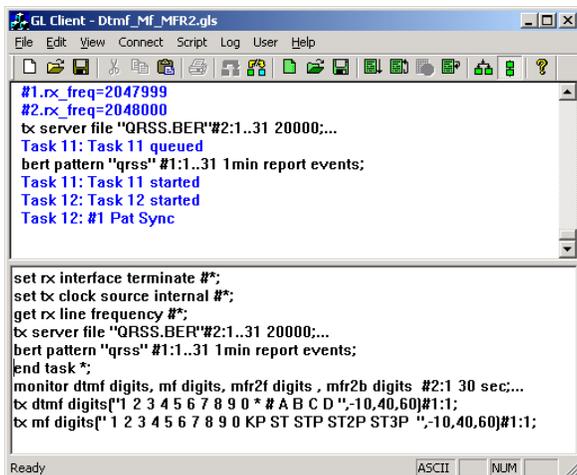
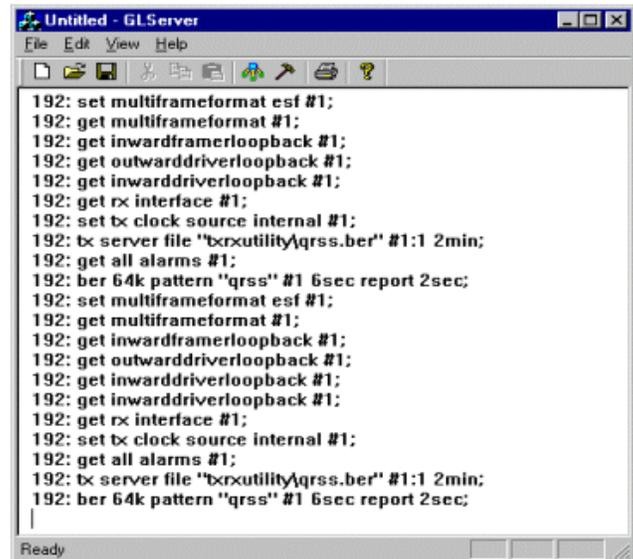### Single / Dual PCI T1/E1 Cards and Dual Laptop Analyzers

Shown to the right are single and dual PCI T1/E1 Cards and Dual Laptop Analyzers. A Server can be configured with as many as sixteen ports in a single PC. Processing constraints should be taken into account.

Buyers Guide
XX600 Basic Windows Client/Server Software
w/ Optional Server Software as follows
XX610 w/ Transmit And Receive File capability
XX620 w/ DTMF/MF/MfC-R2 + Answer/Place call capability
XX630 w/ DSP capability
XX640 w/ HDLC Encode/Decode capability
XX650 w/ SA bits Encode/Decode
XX660 w/ FDL
Platforms
PCI Single and Dual Cards, Dual Laptop Analyzer
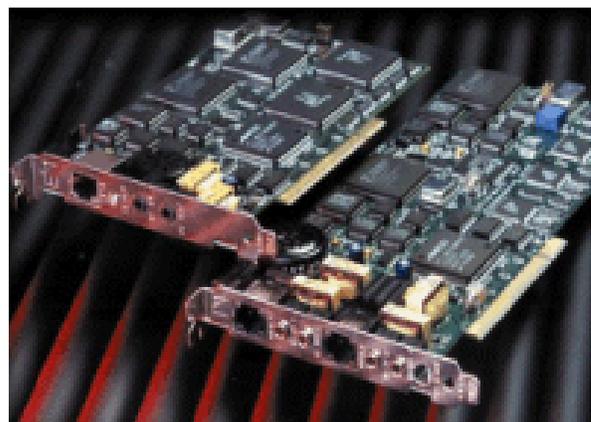* Specifications and features subject to change without notice

GL Client Functions

Client programs communicate with the GL Server via TCP/IP-encapsulated commands and responses. GL provides working clients written in C++, TCL, and Java. Users may expand on these sample clients to suit their needs. Other environments commonly used for client development include Perl, MatLab, Visual Basic, and LabView.

In addition to working clients, GL provides various client development modules for the Microsoft Windows® environment, including core modules available as ActiveX controls, automation servers, and DLLs. Client programs can initiate multiple tasks simultaneously or sequentially. Command scripts may be developed interactively and then saved for batch execution. The possibilities are limited only by the processing power of the server and the ingenuity of the user.

Single/ Dual PCI T1 Cards