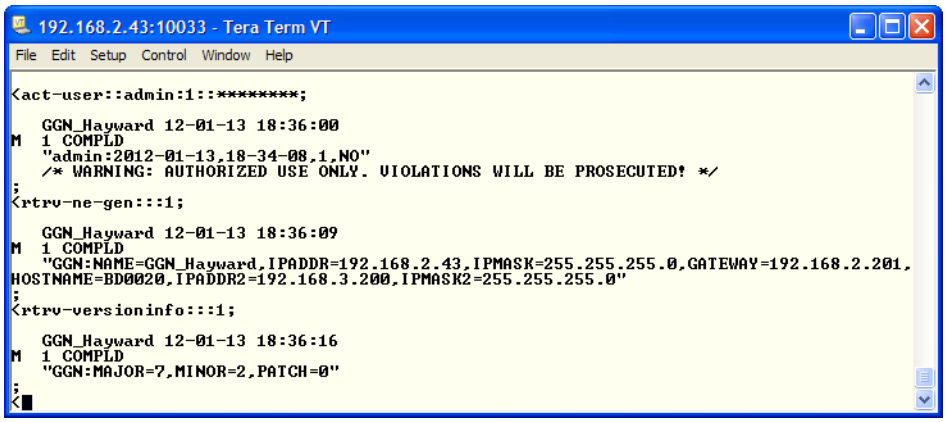
Glimmerglass
Optical Cyber Solutions

TL1 Quick Reference Guide

Software Release 8.0
Part Number 901-0104
Revision A



Last updated: July 1, 2013

The Glimmerglass Transaction Language 1 (TL1) interface allows a user to control and monitor remotely the Glimmerglass Intelligent Optical Switches.

This manual provides examples of commonly used TL1 commands used to administer and provision Glimmerglass Intelligent Optical Switches. For a full list of TL1 commands see *Glimmerglass Transaction Language 1 Manual*.

Release Notice

The following table lists the version of this document that supports the current release of the Intelligent Optical Switch application:

Release Date	Glimmerglass Intelligent Optical Switch Product Release Number	Most Recent Document Version
July 2013	R08.00p000	A

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User Access

Login

Input Format: `ACT-USER:[<tid>]:<uid>:<ctag>::<pid>;`

Example: Log in the admin user to the system:
`act-user::admin:1::03BD.009;`

Administrator Defaults

The admin user account has these factory-configured settings:

- User Name: admin
- Password: password

Logout

Input Format: `CANC-USER:[<tid>]:[<uid>]:<ctag>;`

Example: Terminate the current user session on the system:
`canc-user:::1;`

User Administration

Add User

Input Format:

```
ENT-USER-SECU:[<tid>]:<uid>:<ctag>::<pid>,[<cid>]
,[<uap>]:[PAGE=<page>][,PCND=<pcnd>][,UOUT=<uout>]
[,SYSPRIV=<sysPriv>][,PORTPRIV=<portPriv>]:[<pst>];
```

Example: Create a new user on the system:

```
ent-user-secu::erin:1::********;
```

Retrieve User

Input Format:

```
RTRV-USER-SECU:[<tid>]:[<uid>]:<ctag>;
```

Example: Retrieve a user on the system:

```
rtrv-user-secu::erin:1;
```

Delete User

Input Format:

```
DLT-USER-SECU:[<tid>]:<uid>:<ctag>;
```

Example: Delete a user account from the system:

```
dlt-user-secu::JFW:1;
```

Modify Default Password Policy Settings

Input Format:

```
SET-DFLT-SECU:[<tid>]::<ctag>:::[PAGE=<page>][,PCND=
<pcnd>][,PINT=<pint>][,UOUT=<uout>][,PMAXCONC=
<pmaxconc>][,PMAXHIST=<pmaxhist>][,PMINLENG=<pminleng>]
[,PMINPUNC=<pminpunc>][,PMINNUMR=<pminnumr>][,PMINLWRC=
<pminlwrc>][,PMINUPRC=<pminuprc>][,PMAXSAME=<pmaxsame>]
[PUSRNAME=<pusrname>][,CLPH=<cplh>];
```

Example: Configure the default password expiration policy for 30 days (password aging interval = 25 days, password change interval = 5 days), the minimum interval between user password changes as 6 days, and the account aging policy at 60 days.

```
<set-dflt-secu:::1:::PAGE=25,PCND=5,PINT=6,UOUT=60;
```

Retrieve Default User Account Settings

Input Format:

```
RTRV-DFLT-SECU:[<tid>]::<ctag>;
```

Example: Retrieve the system-wide security defaults that are used when setting up a new user account.

```
<rtrv-dflt-secu:::1;
```

List Active User Sessions

Input Format:

```
RTRV-STATUS:[<tid>]:[<cid>]:<ctag>;
```

Example: List all of the active user sessions on the system:

```
rtrv-status:::1;
```

Log out an Active User

Input Format: `CANC-USER-SECU:[<tid>]:<uid>:<ctag>;`

Example: Terminate all sessions (ClickFlow and TL1) for the specified user.
`canc-user-secu::erin:1;`

System Configuration

Retrieve System Information

Input Format: `RTRV-SYSTEM-INFO:[<tid>]::<ctag>;`

Example: Retrieve the system information for the current system:

```
rtrv-system-info:::1;
```

Assign System Name

Input Format: `SET-SID:[<tid>]::<ctag>::<sid>;`

Example: Set the system name to “System_Name”:

```
set-sid:::1::System_Name;
```

Edit Network Element Information

Input Format:

```
ED-NE-GEN:[<tid>]::<ctag>:::[HOSTNAME=<hostname>]
[,IPADDR=<ipaddr>][,IPMASK=<ipmask>][,GATEWAY=
<gatewayaddr>][,IPADDR2=<ipaddr2>][,IPMASK2=<ipmask2>];
```

Example: To configure all shelf parameters:

```
<ed-ne-gen:::1:::HOSTNAME=BD0236,IPADDR=192.168.2.41,
IPMASK=255.255.255.0,GATEWAY=192.168.2.201,IPADDR2=
192.168.3.200,IPMASK2=255.255.255.0;
```

Retrieve Network Element Information

Input Format: `RTRV-NE-GEN:[<tid>]::<ctag>;`

Example: To retrieve all shelf parameters:
`<rtrv-ne-gen:::1;`

Set System Date-Time

Input Format: `ED-DAT:[<tid>]::<ctag>::[<yy-mm-dd>][,<hh-mm-ss>];`

Example: Set the system UTC date and time:
`<ed-dat:::1::11-03-13,21-15-00;`

Retrieve the System Date and Time

Input Format: `RTRV-TOD:[<tid>]::<ctag>;`

Example: Retrieve the system's date and time:
`<rtrv-tod:::1;`

Configure the NTP (Network Time Protocol) Service

Input Format:
```
SET-NTP-SERVER:[<tid>]::<ctag>:::[SERVICE=<service>]
[,SERVERS=<servers>];
```

Example: Enable the NTP service with two local network NTP servers (192.168.1.8 and 192.168.1.24):
```
<set-ntp-server:::1:::SERVICE=ON,SERVERS=
192.168.1.8&192.168.1.24;
```

Retrieve the NTP (Network Time Protocol) Configuration

Input Format: `RTRV-NTP-SERVER:[<tid>]::<ctag>;`

Example: Retrieve the NTP service configuration and clock synchronization status:

```
<rtrv-ntp-server:::1;
```

SNMP Agent Configuration

Set SNMP v1/v2 Community Names

Input Format: `SET-SNMP-COMMUNITY:[<tid>]::<ctag>:::[READ=<read>][,WRITE=<write>];`

Example: To change the SNMP read-only and read/write community names from the installation default values to "public" and "private":

```
<SET-SNMP-COMMUNITY:::1:::READ=public,WRITE=private;
```

Retrieve SNMP v1/v2 Community Names

Input Format: `RTRV-SNMP-COMMUNITY:[<tid>]::<ctag>;`

Example: To retrieve the read-only and read/write community names:

```
<RTRV-SNMP-COMMUNITY:::1;
```

Delete SNMP v1/v2 Community Names

Input Format: `DLT-SNMP-COMMUNITY:[<tid>]::<ctag>:::[READ=<read>][,WRITE=<write>];`

Example: To delete the installation default snmpCommunityTable read/write community name row:

```
<DLT-SNMP-COMMUNITY:::1:::WRITE=glimmerPrivate;
```

Set SNMP Server Address

Input Format: `SET-SNMP-SERVER:[<tid>]:<ipaddr>:<ctag>:::PORT=<port>;`

Example: To insert SNMP trap destination address “192.168.1.100” with target port number “162”:

```
<set-snmp-server::192.168.1.100:1:::PORT=162;
```

Retrieve SNMP Server Address

Input Format: `RTRV-SNMP-SERVER:[<tid>]::<ctag>;`

Example: To retrieve the SNMP trap destination addresses:

```
<rtrv-snmp-server:::1;
```

Delete SNMP Server Address

Input Format: `DLT-SNMP-SERVER:[<tid>]:<ipaddr>:<ctag>:::PORT=<port>;`

Example: To delete the SNMP trap destination address "192.168.1.100" with target port number "162":

```
<dlt-snmp-server::192.168.1.100:1:::PORT=162;
```

Log Files

View the AUTO Log

Input Format: `RTRV-LOG:[<tid>]::<ctag>::AUTO;`

Example: To view the AUTO log:
`RTRV-LOG:::1::AUTO;`

View the Alarm Log

Input Format: `RTRV-LOG:[<tid>]::<ctag>::ALARM;`

Example: To view the Alarm Log:
`RTRV-LOG:::1::ALARM;`

View the Security Log

Input Format: `RTRV-LOG:[<tid>]::<ctag>::SECU;`

Example: To view the Security log:
`RTRV-LOG:::1::SECU;`

View the Auto Log in GGNMSG Format

Input Format: `RTRV-GGNMSG-LOG:[<tid>]:AUTO:<ctag>;`

Example: To view the Auto Log in GGNMSG format:
`RTRV-GGNMSG-LOG::AUTO:1;`

View the Security Log in GGNMSG Format

Input Format: `RTRV-GGNMSG-LOG:[<tid>]:SECU:<ctag>;`

Example: To view the Security Log in GGNMSG format:
`RTRV-GGNMSG-LOG::SECU:1;`

View the Alarm Log in GGNMSG format

Input Format: `RTRV-GGNMSG-LOG:[<tid>]:ALARM:<ctag>;`

Example: To view the Alarm Log in GGNMSG format:
`RTRV-GGNMSG-LOG::ALARM:1;`

Configure the SYSLOG (System Log) Service

Input Format: `SET-SYSLOG-SERVER:[<tid>]::<ctag>:::[SERVICE=<service>][,SERVERS=<servers>];`

Example: Enable logging of all messages (both AUTO & SECU) to two SYSLOG servers (192.168.1.8 and 192.168.1.24):
`<set-syslog-server:::1:::SERVICE=SECU,SERVERS=192.168.1.8&192.168.1.24;`

Retrieve the SYSLOG (System Log) Configuration

Input Format: `RTRV-SYSLOG-SERVER:[<tid>]::<ctag>;`

Example: To retrieve the system's SYSLOG configuration (logging level and server IP addresses):
`<rtrv-syslog-server:::1;`

Port-Level Privileges

Set Port-Level Privileges for Specified User(s) on Specified Port(s)

Input Format:

```
SET-PRIV-FIBER:[<tid>]:<PLIST>:<ctag>:::[PORTPRIV=
<portPriv>][,NAME=<uid>][,PCAT=<pcat>][,PPRIV=<ppriv>]
[,PGROUP=<pgroup>];
```

Example: Set the port-level privilege to “view” for user “erin” on input port 25:

```
set-priv-fiber::10025:1:::name=erin,portpriv=view;
```

Retrieve Port-Level Privileges for Specified User(s) on Specified Port(s)

Input Format:

```
RTRV-PRIV-FIBER:[<tid>]:<PLIST>:<ctag>:::[NAME=<uid>]
[,PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];
```

Example: Retrieve the port-level privileges for user “erin” on input ports 1, 9, 17, and 25:

```
rtrv-priv-fiber::10001&10009&10017&10025:1:::name=erin;
```

System-Level Privileges

Set System-Level Privileges for Specified User(s)

Input Format:

```
SET-PRIV-SYSTEM:[<tid>]::<ctag>:::[SYSPRIV=<sysPriv>]
[,NAME=<uid>];
```

Example: Set the system-level privilege to “Manage” for user “erin”:

```
set-priv-system:::1:::name=erin,SYSPRIV=manage;
```

Retrieve System-Level Privilege for Specified User(s)

Input Format: `RTRV-PRIV-SYSTEM:[<tid>]::<ctag>:::[NAME=<uid>];`

Example: Retrieve the system-level privilege for user “erin”:

```
rtrv-priv-system:::1:::name=erin;
```

Port Connections

Make a Connection

Input Format:

```
ENT-CRS-FIBER:[<tid>]:<IPLIST>,<OPLIST>:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>][,OPMODE=
<opmode>][,POFFSET=<poffset>][,CONNID=<connid>][,CM=
<cm>][,CONNLOCK=<connlock>][,CONNNAME=<connname>];
```

Example: Connect Input 1 to Output 5:

```
ent-crs-fiber::10001,20005:1;
```

Make a Group of Connections

Input Format:

```
ENT-CRS-FIBER:[<tid>]:<IPLIST>,<OPLIST>:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>][,OPMODE=
<opmode>][,POFFSET=<poffset>][,CONNID=<connid>][,CM=
<cm>][,CONNLOCK=<connlock>][,CONNNAME=<connname>];
```

Example: To create a fiber cross connection between input port 10001 and output port 20001, and between input port 10002 and output port 20002, assigning both connections the connection name of “Red Hook”:

```
ent-crs-fiber::10001&10002,20001&20002:1:::connname=
“Red Hook”;
```

Name an Existing Connection

Input Format:

```
SET-CRS-NAME:[<tid>]:<PLIST>:<ctag>:::[CONNNAME=
<connname>][,PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=
<pgroup>];
```

Example: Assigning a connection name to the connection between input port 10001 and output port 20001. Note that the output port was used in the PLIST. The same result would have been obtained using port 10001 in the PLIST. It is not necessary to list both ports in the connection.

```
set-crs-name::20001:1:::CONNNAME=Hayward;
```

Name Multiple Existing Connections

Input Format:
```
SET-CRS-NAME:[<tid>]:<PLIST>:<ctag>:::[CONNNAME=
<connname>][,PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=
<pgroup>];
```

Example: Assigning a connection name to multiple connections (input 10001 to output 20001 and input 10002 to output 20002):
```
set-crs-name::10001&20002:1:::CONNNAME=Glimmerglass;
```

Break a Connection

Input Format:
```
DLT-CRS-FIBER:[<tid>]:<PLIST>[,<OPLIST>]:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>][,OPMODE=
<opmode>][,POFFSET=<poffset>];
```

Example: Disconnect Input 1 from its connected output port:
```
dlt-crs-fiber::10001:1;
```

Break a Group of Connections

Input Format:
```
DLT-CRS-FIBER:[<tid>]:<PLIST>[,<OPLIST>]:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>][,OPMODE=
<opmode>][,POFFSET=<poffset>];
```

Example: Disconnect Input 1 and Inputs 3 through 5 from their connected output ports:
```
dlt-crs-fiber::10001&10003&&10005:1;
```

Break All Connections

Input Format:

```
DLT-CRS-FIBER:[<tid>]:<PLIST>[,<OPLIST>]:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>][,OPMODE=
<opmode>][,POFFSET=<poffset>];
```

Example: Disconnect all connections:

```
dlt-crs-fiber::all:1;
```

Connection Locking

Create a Locked Connection

Input Format:

```
ENT-CRS-FIBER:[<tid>]:<IPLIST>,<OPLIST>:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>][,OPMODE=
<opmode>][,POFFSET=<poffset>][,CONNID=<connid>][,CM=
<cm>][,CONNLOCK=<connlock>][,CONNNAME=<connname>];
```

Example: Establish a locked connection between Input 1 and Output 5:

```
ent-crs-fiber::10001,20005:1:::CONNLOCK=TRUE;
```

Lock an Existing Connection

Input Format:

```
SET-CRS-LOCK:[<tid>]:<PLIST>:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>]
[,CONNLOCK=<connlock>];
```

Example: Lock the active connection associated with Input 1:

```
set-crs-lock::10001:1:::CONNLOCK=TRUE;
```

Unlock a Connection

Input Format:

```
SET-CRS-LOCK:[<tid>]:<PLIST>:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>]
[,CONNLOCK=<connlock>];
```

Example: Unlock the active connection associated with Input 1:

```
set-crs-lock::10001:1:::CONNLOCK=FALSE;
```

Connection Maps

A connection map is an ordered set of input-output port pairings defined by the user and stored in the system, providing a convenient method for connecting a known set of cross-connects. The system can store up to 8 connection maps, and each map is assigned an ID between 1 and 8.

Create a Connection Map

Input Format:
```
SET-CFG-CMAP:[<tid>]:<CMAPID>:<ctag>::<IPLIST>,
<OPLIST>:[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>]
[,POFFSET=<poffset>];
```

Example: Define a connection map named “1” between Inputs 1-10 and Outputs 1-10:
```
set-cfg-cmap::1:2::10001&&10010,20001&&20010;
```

Retrieve Connection Map Details

Input Format:
```
RTRV-CFG-CMAP:[<tid>]:<CMAPID>:<ctag>;
```

Example: Retrieve the port pairings associated with connection map #1:
```
rtrv-cfg-cmap::1:2;
```

Make Connections using a Connection Map

Input Format:
```
ENT-CRS-CMAP:[<tid>]:<CMAPID>:<ctag>:::[OPMODE=<opmode>]
[,CONNID=<connid>][,CONNNAME=<connname>][,CONNLOCK=
<connlock>][,CM=<cm>][,CMAPMD=<cmapmd>];
```

Example: To apply the CMAP with ID “1” to the system, with all connections created with the name “Colt.”
```
ent-crs-cmap::1:1:::connid=45,connname=Colt;
```

Make Locked Connections using a Connection Map

Input Format:

```
ENT-CRS-CMAP:[<tid>]:<CMAPID>:<ctag>:::[OPMODE=<opmode>]
[,CONNID=<connid>][,CONNNAME=<connname>][,CONNLOCK=
<connlock>][,CM=<cm>][,CMAPMD=<cmapmd>];
```

Example: To apply the CMAP with ID “1” to the system, with all connections created as locked connections with the name “GGN Hayward.”

```
ent-crs-cmap::1:1:::connid=45,connlock=true,connname=
“GGN Hayward”;
```

Break Connections using a Connection Map

Input Format:

```
ENT-CRS-CMAP:[<tid>]:<CMAPID>:<ctag>:::[OPMODE=<opmode>]
[,CONNID=<connid>][,CONNNAME=<connname>][,CONNLOCK=
<connlock>][,CM=<cm>][,CMAPMD=<cmapmd>];
```

Example: Break the cross-connects defined in connection map #1:

```
ent-crs-cmap::1:2:::CMAPMD=d;
```

Delete a Connection Map

Input Format:

```
DLT-CFG-CMAP:[<tid>]:<CMAPID>:<ctag>;
```

Example: Delete connection map #1:

```
dlt-cfg-cmap::1:2;
```

Connection Restoration

Set the Connection Restoration Mode

Input Format: `ED-PARAM:[<tid>]::<ctag>:::NAME=<param>,VAL=<value>;`

Example: Configure the system to automatically restore the connections at power-up:

```
ed-param:::1:::NAME=RestoreConnections,VAL=Restore;
```

Retrieve the Connection Restoration Mode

Input Format: `RTRV-PARAM:[<tid>]::<ctag>[:::NAME=<param>];`

Example: To retrieve the configured settings for parameters governing system-level operation (including restoration mode):

```
rtrv-param:::1;
```

Port Health and Connection Status

Retrieve Connection Status of a Port

Input Format:
```
RTRV-CRS-FIBER:[<tid>]:<PLIST>:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>];
```

Example: Retrieve connection status detail for Input 1:
```
rtrv-crs-fiber::10001:1;
```

Retrieve Connection Status of All Ports

Input Format:
```
RTRV-CRS-FIBER:[<tid>]:<PLIST>:<ctag>:::
[PCAT=<pcat>][,PPRIV=<ppriv>][PGROUP=<pgroup>];
```

Example: Retrieve connection status detail for all ports:
```
rtrv-crs-fiber::all:1;
```

Retrieve Health Status of a Port

Input Format:
```
RTRV-CFG-FIBER:[<tid>]:<PLIST>:<ctag>:::[PCAT=<pcat>]
[,PPRIV=<ppriv>][PGROUP=<pgroup>];
```

Example: Retrieve health status for Input 1
```
rtrv-cfg-fiber::10001:1;
```

Retrieve Health Status of All Ports

Input Format:

```
RTRV-CFG-FIBER:[<tid>]:<PLIST>:<ctag>:::[PCAT=<pcat>]
[,PPRIV=<ppriv>][PGROUP=<pgroup>];
```

Example: Retrieve health status for all ports:

```
rtrv-cfg-fiber::all:1;
```

Signal Thresholds

Assign a Signal Threshold to a Port

Input Format:

```
SET-SIGTHRESH-FIBER:[<tid>]:<PLIST>:<ctag>:::[SIGTHRESH=
<sigthresh>][,PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=
<pgroup>];
```

Example: Configure Input 1 with the signal threshold named *TEST-SIG*:

```
set-sigthresh-fiber::20001:1:::sigthresh=TEST-SIG;
```

Retrieve the Signal Threshold Assigned to a Port

Input Format:

```
RTRV-SIGTHRESH-FIBER:[<tid>]:<PLIST>:<ctag>:::[PCAT=
<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];
```

Example: Retrieve the name of the signal threshold assigned to Input 1:

```
rtrv-sigthresh-fiber::10001:1;
```

Create a New Signal Threshold

Input Format:

```
SET-CFG-SIGTHRESH:[<tid>]:<SIGTHRESH>:<ctag>:::[STMIN=
<pwrmin>][,STMAX=<pwrmax>][,HYST=<hyst>];
```

Example: Create a new signal threshold with the following parameters:

- Signal threshold name: TEST-SIG
- Minimum expected power: -18 dBm
- Maximum expected power: +5 dBm
- Threshold hysteresis: 1.5 dB

```
set-cfg-sigthresh::TEST-SIG:1:::STMIN=-18,STMAX=5,HYST=
1.5;
```

Delete a Signal Threshold

Input Format: `DLT-CFG-SIGTHRESH:[<tid>]:<SIGTHRESH>:<ctag>;`

Example: Delete the signal threshold named *TEST-SIG*:
`dlt-cfg-sigthresh::TEST-SIG:1;`

Retrieve Signal Threshold Definition Detail

Input Format: `RTRV-CFG-SIGTHRESH:[<tid>]:<SIGTHRESH>:<ctag>;`

Example: Retrieve the configuration of the signal threshold named *TEST-SIG*:
`rtrv-cfg-sigthresh::TEST-SIG:1;`

Assign a Signal Band to an Input Port

Input Format: `SET-SIGBAND-FIBER:[<tid>]:<IPLIST>:<ctag>:::[SIGBAND=<sigband>][,PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];`

Example: Configure Input 1 for a signal band of 1310:
`set-sigband-fiber::10001:1:::sigband=1310;`

Retrieve the Signal Band Assigned to a Port

Input Format: `RTRV-SIGBAND-FIBER:[<tid>]:<PLIST>:<ctag>:::[PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];`

Example: Retrieve the signal band assigned to input port 1:
`rtrv-sigband-fiber::10001:1;`

Port Groups

Set Port Group

Input Format: `SET-CFG-PORTGROUP:[<tid>]:<PORTGROUP>:<ctag>:::[ALLOW=<allowlist>][,DESCR=<description>];`

Example: Add a Port Group named "Group_B":

```
set-cfg-portgroup::Group_B:1;
```

Modify Port Group

Input Format: `SET-CFG-PORTGROUP:[<tid>]:<PORTGROUP>:<ctag>:::[ALLOW=<allowlist>][,DESCR=<description>];`

Example: Modify the Allow List for Group_A to contain Group_B:

```
set-cfg-portgroup::Group_A:1:::allow=Group_B;
```

Retrieve Port Group

Input Format: `RTRV-CFG-PORTGROUP:[<tid>]:[<PORTGROUP>]:<ctag>;`

Example: Retrieve the configuration for Group_A and Group_B:

```
rtrv-cfg-portgroup::Group_A&Group_B:1;
```

Delete Port Group

Input Format: `DLT-CFG-PORTGROUP:[<tid>]:<PORTGROUP>:<ctag>;`

Example: Delete Group_A:

```
dlt-cfg-portgroup::Group_A:1;
```

Port Names

Set Port Name

Input Format: `SET-NAME-FIBER:[<tid>]:<PLIST>:<ctag>::<NLIST>:[PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>][,POFFSET=<poffset>];`

Example: Assign the name *123ABC* to Input 1:

```
set-name-fiber::10001:2::123ABC;
```

Retrieve Port Name

Input Format: `RTRV-NAME-FIBER:[<tid>]:<PLIST>:<ctag>:::[PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];`

Example: Retrieve the name assigned to Input 1:

```
rtrv-name-fiber::10001:2;
```

Delete Port Name

Input Format: `DLT-NAME-FIBER:[<tid>]:<PLIST>:<ctag>:::[PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];`

Example: Delete the name assigned to Input 1:

```
dlt-name-fiber::10001:2;
```

Port Comments

Add a Comment to a Port

Input Format:

```
SET-CFG-FIBER:[<tid>]:<PLIST>:<ctag>:::[PORTCOMMENT=
<portcomment>][,PORTGROUP=<portgroup>][,SIGBAND=
<sigband>][,SIGTHRESH=<sigthresh>][,STMINSEV=<sev>]
[,STMAXSEV=<sev>][,CSFLTSEV=<sev>][,PCAT=<pcat>][,PPRIV=
<ppriv>][,PGROUP=<pgroup>];
```

Example: To assign the port comment “GGN Switch” to port 10003:

```
set-cfg-fiber::10003:1:::PORTCOMMENT="GGN Switch";
```

Retrieve a Port Comment

Input Format:

```
RTRV-CFG-FIBER:[<tid>]:<PLIST>:<ctag>:::[PCAT=<pcat>]
[,PPRIV=<ppriv>][,PGROUP=<pgroup>];
```

Example: To retrieve the port comment for port 10001:

```
rtrv-cfg-fiber::10001:1;
```

Protection

Add a Protection Rule

Input Format:

```
SET-CFG-PROTECTION:[<tid>]:<WPORTID>,<PPORTID>:<ctag>:::
[WMODE=<arm-mode>][,WDELAY=<arm-delay>][,WTRIGGER=
<trigger-time>][,PMODE=<arm-mode>][,PDELAY=<arm-delay>]
[,PTRIGGER=<trigger-time>][,SYMMETRIC=<true-false>]
[,DUPLEX=<true-false>];
```

Example 1: Add a Simplex, symmetric rule for Inputs 1 and 2 with threshold arming and a 45-msec trigger delay:

```
set-cfg-protection::10001,10002:2:::WMODE=threshold,
WTRIGGER=45,SYMMETRIC=true;
```

Example 2: Add a Duplex, symmetric rule for Inputs 1 and 2 with threshold arming and a 45-msec trigger delay.

```
set-cfg-protection::10001,10002:2:::WMODE=threshold,
WTRIGGER=45,SYMMETRIC=true,DUPLEX=true;
```

Delete a Protection Rule

Input Format:

```
DLT-CFG-PROTECTION:[<tid>]:<IPLIST>:<ctag>:::[PCAT=
<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];
```

Example: Delete the protection rule associated with Input 1:

```
dlt-cfg-protection::10001:2;
```

Retrieve Configuration of All Protection Rules

Input Format:

```
RTRV-CFG-PROTECTION:[<tid>]::<ctag>;
```

Example: Retrieve all of the protection rules on the system:

```
rtrv-cfg-protection:::2;
```

Save the System Configuration

Save the System Configuration

Input Format: `WRT-DB:::<ctag>:::<force=n>;`

Example: Save all of the system databases that have been changed since the last save to non-volatile storage (Flash RAM):

```
wrt-db:::2:::FORCE=0;
```

Automatically Save the System Configuration

Input Format:

```
ED-PARAM:[<tid>]::<ctag>:::NAME=<param>,VAL=<value>
[,SERVERS=<servers>];
```

Example: Every 60 seconds automatically save the system databases that have changed since the last save to non-volatile storage (Flash RAM):

```
<ed-param:::1:::NAME=AutoSaveDelay,VAL=60;
<ed-param:::2:::NAME=AutoSaveEnable,VAL=On;
```

Retrieve the System Automatic Save Configuration

Input Format: `RTRV-PARAM:[<tid>]::<ctag>;`

Example: To retrieve the configured settings for parameters governing system-level operation (including autosave):

```
<rtrv-param:::1;
```

Save the System Configuration to an XML File

Input Format: `COPY-CFG:[<tid>]::<ctag>:::[DESCR=<descr>];`

Example: Copy (backup) the system configuration to a system configuration XML file in the system's download directory (/dnld):

```
<copy-cfg:::1;
```

Restore the System Configuration from an XML File

Input Format: `APPLY-CFG:[<tid>]::<ctag>;`

Example: Restore the system configuration from a system configuration (backup) file previously copied to the system download directory (/dnld):

```
<apply-cfg:::1;
```

Autonomous Messages

Autonomous messages may be issued to a user when logged in. By default, these messages are not sent. To enable receipt, use the ALW-MSG-ALL command below. All events associated with autonomous messages are automatically logged even when reporting to the active session is disabled. See the *Glimmerglass Transaction Language 1 Manual* for more information on autonomous messages.

Disable Autonomous Message Reporting on the Current TL1 Session

Input Format: `INH-MSG-ALL:[<tid>]::<ctag>;`

Example: Disable autonomous message reporting on this TL1 session:
`INH-MSG-ALL:::1;`

Enable Autonomous Message Reporting on the Current TL1 Session

Input Format: `ALW-MSG-ALL:[<tid>]::<ctag>;`

Example: Enable autonomous message reporting on this TL1 session:
`ALW-MSG-ALL:::1;`

Retrieving System Parameters

The RTRV-PARAM command can be used to retrieve the current settings for Power Monitoring Period, Connection Restoration, Autosave Enable and Delay, Event Reporting Mode, Performance Switch Throttling.

Retrieve System Parameters

Input Format:	`RTRV-PARAM:[<tid>]::<ctag>;`
Example:	Retrieve the current system parameter settings: `rtrv-param:::1;`

Variable Optical Attenuation (VOA)

Configure VOA for a Port

Input Format:

```
SET-VOA-FIBER:[<tid>]:<OPLIST>:<ctag>:::[VOAMODE=
<voamode][,VOAVAL=<voaval>][,PCAT=<pcat>][,PPRIV=
<ppriv>][,PGROUP=<pgroup>];
```

Example: Set the VOA mode to absolute power and the desired output power to -24.5 dBm for Output 5:

```
set-voa-fiber::20005:1:::VOAMODE=abspower,VOAVAL=-24.5;
```

Retrieve VOA Settings for All Ports with Dedicated or Switched VOA

Input Format:

```
RTRV-VOA-CFG:[<tid>]::<ctag>;
```

Example: Retrieve the VOA settings for all output ports on the system:

```
rtrv-voa-cfg:::1;
```

Retrieve VOA Settings for a Port

Input Format:

```
RTRV-VOA-FIBER:[<tid>]:<OPLIST>:<ctag>:::
[,PCAT=<pcat>][,PPRIV=<ppriv>][,PGROUP=<pgroup>];
```

Example: Retrieve the VOA settings for Output 5:

```
rtrv-voa-fiber::20005:1;
```

Turn off VOA for a Port

Input Format:

```
SET-VOA-FIBER:[<tid>]:<OPLIST>:<ctag>:::[VOAMODE=
<voamode][,VOAVAL=<voaval>][,PCAT=<pcat>][,PPRIV=
<ppriv>][,PGROUP=<pgroup>];
```

Example: Turn off VOA for Output 5:

```
set-voa-fiber::20005:1:::VOAMODE=none;
```