General Description

TK3721 Command Line Interface (CLI) allows communication between a PC Terminal and the TK3721 OLT chip. The CLI application enables the user to read and write TK3721 registers, to run text-based configuration scripts, to read statistics, to upgrade firmware, and more. There are two Windows-based terminal emulator applications that a user can use: MSWindows "HyperTerminal", and "TeraTerm" (freeware). Teknovus recommends using TeraTerm application.

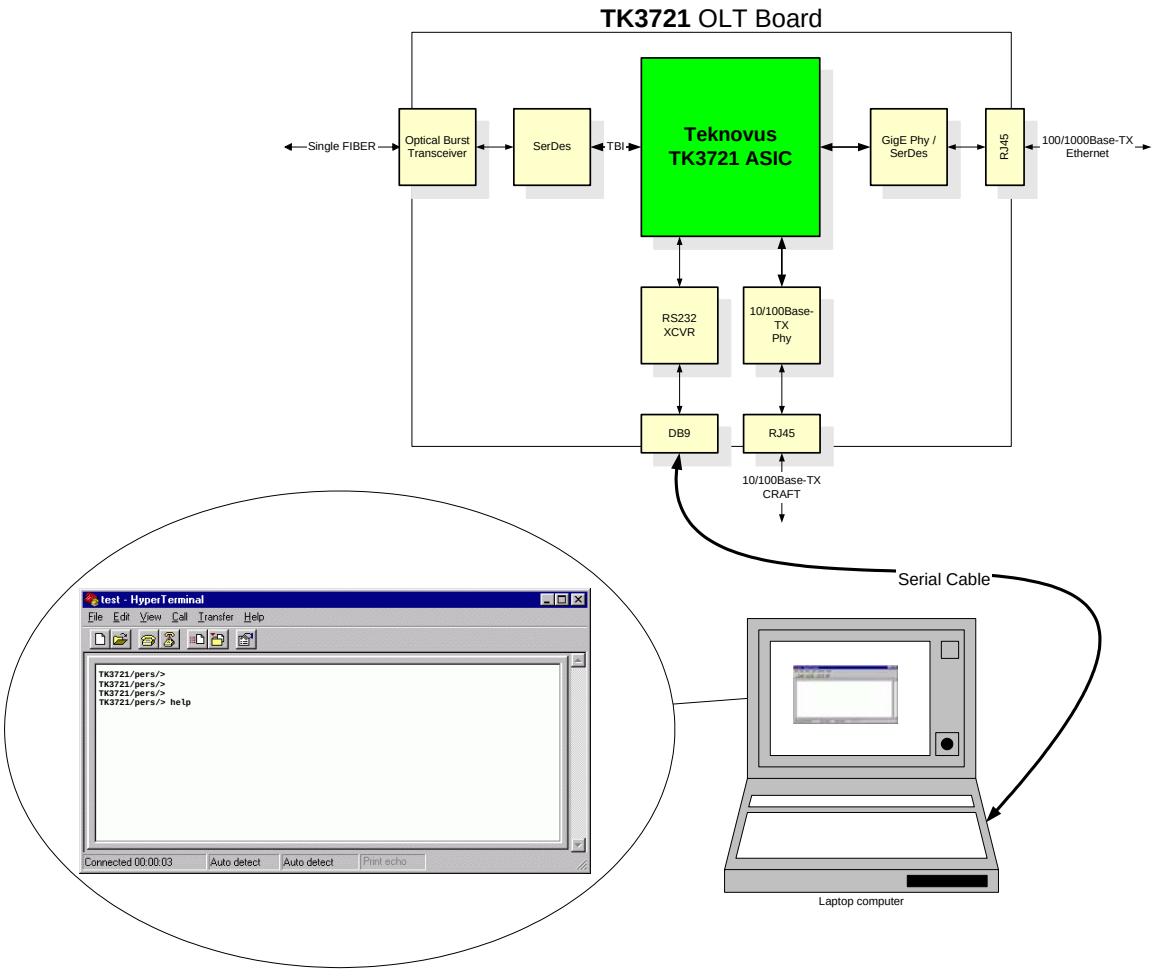

Figure 1. System Connection Diagram for CLI Access

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1 Introduction

TK3721 CLI uses commands structured as a directory tree. Each entry in the directory is either a command, or another directory name.

Typing the name of a directory will take you to that directory. Note that typing "**cd**" is not necessary; the name of the directory serves as a command to take you there. Typing the name of a command will invoke that command. Directories are named with Unix-style "/" separators. The name of the root directory is "/", and you can type full pathnames to change directories or execute commands. "**..**" takes you up one level. For example, from "/" directory, if one wishes to go to "**mem**" director, he would simply type "**/mem**".

A special command called "**help**" is available and it can be executed from all the directories. It shows the help menu related to the present working directory.

The "**#**" character serves as a comment character. All inputs following "**#**" are ignored until end of line. This is useful when a comment is to be used in a script, either for a whole line, or after a command.

The CLI supports history buffer. It stores in its circular buffer up to 8 commands typed last. The <Up> and <Down> arrow keys on a VT100 emulator keyboard will scroll through the history of commands.

<Left> and <Right> arrows, <Backspace> and <Delete> keys can be used to edit commands before pressing <Enter>. The firmware consists of two parts, the "Boot Code" and the "Application Code". The Boot Code is a relatively small loader stub that loads the main code from FLASH memory. The Boot Code in the lab has a timeout value of 5 seconds, before it will start loading the Application Code. This is to give a user time to break into the boot process itself. Press <Enter> twice to interrupt the loading process and remain in the Boot Code. Otherwise, the Application Code will start executing and two banners will be seen.

1.1 Hardware

Communication between a PC and the TK3721 ONU chip is carried out using a RS232, DB9 serial cable. The serial cable connects the UART interface of the TK3721 chip and the COMM port on the PC. The baud rate used in this system is fixed and it is 9600.

Note: serial cable must NOT be the "null-modem" type. It must of the "straight-through" type.

Recommended port settings of the terminal emulator software are as follows:

Terminal Port Settings

Parameter	Value
Baud Rate	9600
Parity	None
Stop Bit	1
Data Bits	8
Flow Control	None

1.2 Parameters Passed on Command Line

Commands may take several parameters, which are typed on the command line after the command, separated by spaces. In this document, these parameters are shown embedded in brackets "<" and ">" The parameters which are embedded in square brackets, "**[**" and "**]**", are optional on the command line. They may or may not be passed, depending upon the application, but the command is meaningful. Integers follow **C** Language format rules. That is, a prefix of "**0x**" for hexadecimal.

1.3 Scripting

Text files created with any editor can be used as scripts for the CLI. Just create a file full of commands and have your terminal program transmit the text file.

1.4 Pacing Scripts

Note that you'll probably need to pace the transmission to avoid overrunning the receiving CLI. Most terminal programs let you set a pause time per-character and per-line. Try adding a few milliseconds per character and a few tens or hundreds of milliseconds per line.

1.4.1 Why Pacing?

The terminal program transmitting the script has nothing to do but transmit. The receiving CLI has to do at least a little work to execute a command, while the transmitter can just plow ahead. Thus,

every time you execute a command in a script, the CLI loses a little time and gets a little further

The purpose of the pacing settings is to allow the CLI this time to execute. When the transmitter hits the end of line and pauses, the CLI can finish a command, or for quick commands even catch up with its input buffer.

One way (the correct way, actually) to solve the problem would be for the terminal program to wait for the CLI prompt before sending each line. You could do this with Procomm's scripting language (or expect, etc.).

But it's a pain, and we have only one Procomm license. Setting a per-line pacing time also gives the CLI time to execute, and if you give it long enough, the CLI will be able to keep up with no explicit synchronization with the transmitted needed. Setting the pacing times is just a quick expedient that works with small scripts.

1.4.2 Pacing Tips

Before downloading a firmware upgrade, set the pacing times to zero to get the fastest download speed.

You can give individual commands that need longer to execute some more time simply by putting in blank lines (or better yet, a blank line with lots of spaces to save vertical space in your script). These characters would be intended to be dropped while the previous command executes, and thus ‘buy’ a little more time in key places without needing to slow the whole script down. If you see characters being dropped out of your script, you need to increase the pacing times.

2 Directory Structure

The directory structure for CLI interface is as shown in the Figure 2. The root directory "/" contains several other sub-directories. The root directory as well as sub-directories contains commands. These commands can be executed only from the root ("/") directory.

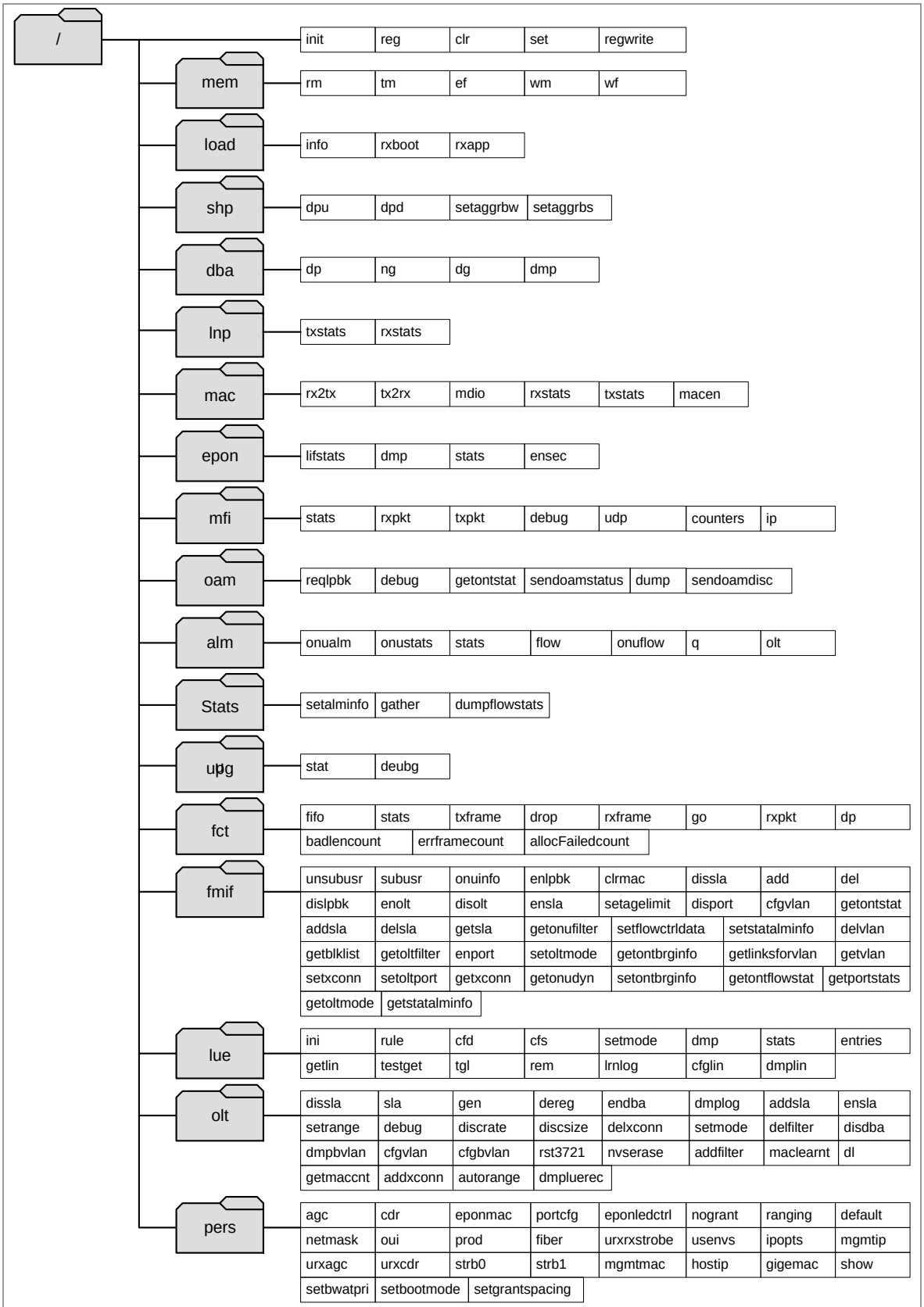

Figure 2. TK3721 CLI Directory Structure

3 Root Directory

3.1 /init

Usage	**init**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command re-initializes all the modules in TK3721, except the ARM-7 processor.				

3.2 /regwrite

Usage	**regwrite** <addr> <value>				
Parameters	<addr>	<value>			
Type	Integer	Integer			
Min Value	0	0			
Max Value	8000000	$2^{32} - 1$			
Default Value	-	-			
Unit	-	-			
Description	This command writes to a TK3721 register. The parameter <addr> is a 32-bit register offset as given by the TK3721 register document. This command writes to a register with a value specified by <value> parameter. But the command does not read back the value. Note that the address specified in the parameter <addr> is offset that is added to the base address of TK3721 address space. For more details refer to the section 4 in TK3721 data-sheet.				

3.3 /reg

Usage	**reg** <addr> <value>				
Parameters	<addr>	<value>			
Type	Integer	Integer			
Min Value	0	0			
Max Value	8000000	$2^{32} - 1$			
Default Value	-	-			
Unit	-	-			
Description	This command displays or sets a TK3721 register. The parameter <addr> is a 32-bit register offset as given in the TK3721 register document. It is not a byte address. So, for example, the DBA control register is viewed with reg 0x400 command. Values displayed have the MSB as the first byte shown. So, if one wants to set bit 31 in register 0x006, he would use the command “reg 6 0x80000000”. Note that the address specified in the parameter <addr> is offset that is added to the base address of TK3721 address space. For more details refer to the section 4 in TK3721 data-sheet.				

3.4 /set

Usage	**set** <addr> <bitmask>				
Parameters	<addr>	<bitmask>			
Type	Integer	Integer			
Min Value	0	0			
Max Value	8000000	255			
Default Value	-	-			

Unit	-	-			
Description	This command takes a TK3721 register, like “reg”. It sets any bits in the register that are set in the bitmask, preserving any bits that are 0 in the bitmask. So, if register 2 has the value 0xf0, the command “set 2 0x55” will set register 2 to the value of 0xf5.				

3.5 /clr

Usage	**clr** <addr> <bitmask>				
Parameters	<addr>	<bitmask>			
Type	Integer	Integer			
Min Value	0	0			
Max Value	8000000	255			
Default Value	-	-			
Unit	-	-			
Description	This command takes a TK3721 address like “reg”. It clears (sets to zero) any bits set in the bistmask. So, if register 2 has a value of 0x1f, “clr 2 0x01” will set register 2 to the value of 0x1e.				

4 Directory: mem

4.1 /mem/rm : Read Memory

Usage	**rm** <address> [<num bytes>]				
Parameters	<address>	[num bytes]			
Type	Integer	Integer			
Min Value	C0000000	1			
Max Value	C1000000	255			
Default Value	-	4			
Unit	-	Bytes			
Description	This command reads the contents of the RAM at the address location specified by the <address> parameter. The <numbytes> is the number bytes to be read.				

4.2 /mem/wm : Write Memory

Usage	**wm** <address> <value1> [<value2><value3> ..... <value12>]				
Parameters	<address>	<value1>	<value2>	<value3>	
Type	Integer	Integer	Integer	Integer	
Min Value	C0000000	0	0	0	
Max Value	C1000000	255	255	255	
Default Value	-	-	-	-	
Unit	-	-	-	-	
Description	This command writes to the address location of the memory specified by parameter <address> . The values to be written can be passed using the <value> parameter. Number of these arguement passed on the CLI is number bytes to be written.				

4.3 /mem/tm : Test Memory

Usage	**tm** <address> <size>		
Parameters	<address>	<size>	
Type	Integer	Integer	
Min Value	C0000000	0	
Max Value	C1000000	65535	
Default Value	-	-	
Unit	-	Bytes	
Description	This command runs a test where ones/zeros are walked over the address and data bus for the specified memory base address and size.		

4.4 /mem/wf : Write FLASH Memory

Usage	**wf** <destination> <source> <size>			
Parameters	<destination>	<source>	<size>	
Type	Integer	Integer	Integer	
Min Value	C8000000	C0000000	1	
Max Value	C8400000	C0400000	65535	
Default Value	-	-	-	
Unit	-	-	Bytes	
Description	This command copies the size bytes from the source address (generally xdata in SRAM) to destination address using the AMD FLASH memory programming algorithm. To use this command, it is generally needed to load RAM with the values you want to program to value, say with an emulator. This command will then burn that RAM into FLASH memory. The parameter size is limited to 64K bytes.			

4.5 /mem/ef : Erase FLASH Memory

Usage	**ef** <address>	
Parameters	<address>	
Type	Integer	
Min Value	C8000000	
Max Value	C8400000	
Default Value	-	
Unit	-	
Description	FLASH memory map is 4MB in size of 64KB sectors. Address specified by the <address> paramter erases the entire sector that the address belongs to.	

5 Directory: load

5.1 /load/info : Show Load Information

Usage	**info**	
Parameters	None	
Min Value	-	
Max Value	-	
Default Value	None	
Description	This command displays information about the firmware loads on the board. This command gives the information about the firmware loads on the board.	

5.2 /load/rxboot : Download Boot Code

Usage	**rxboot**	
Parameters	None	
Type		
Min Value		
Max Value		
Default Value		
Unit		
Description	This command starts the operation to download a new boot code. It uses a raw binary transfer (not text with CR/LF conversions and not a protocol, like X/Y/Zmodem) to download a new "**tk3721boot.tkf**" file to the FLASH memory. The board must be rebooted for the load to take effect. Parameter <timeout> is the time after the last character received, that the download will terminate.	

5.3 /load/rxapp : Download Application Code

Usage	**rxapp**	
Parameters	None	
Type		
Min Value		
Max Value		
Default Value		
Unit		
Description	This command downloads a new Application Code, using a raw binary transfer.	

6 Directory: mfi

6.1 /mfi/stats : Show FIFO Statistics

Usage	**stats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command shows the management fifo interface statistics.				

6.2 /mfi/txpkt : Send out a packet

Usage	**txpkt** <numbytes>			
Parameters	<numbytes>			
Type	Integer			
Min Value	0			
Max Value	65535			
Default Value	-			
Unit	-			
Description	This command transmits the packets out through management interface			

6.3 /mfi/rxpkt: Receive a packet

Usage	**rxpkt** <numbytes>			
Parameters	<numbytes>			
Type	Integer			
Min Value	0			
Max Value	65535			
Default Value	-			
Unit	-			
Description	This command shows the dump of of packets received by the management interface			

6.4 /mfi/counters: Display driver counters

Usage	**counters**			
Parameters	None			
Type				
Min Value				
Max Value				
Default Value				
Unit				
Description	This command shows the counters of the driver for the TCPIP connection			

6.5 /mfi/debug : Set level of the debug mode or Clear debug mode

Usage	**debug** <level>			
Parameters	<level>			
Type	Integer			
Min Value	0			
Max Value	3			
Default Value	-			

Unit				
Description	This command sets the level of debug.			

6.6 /mfi/ip : Show IP statistics

Usage	**ip**			
Parameters	None			
Type				
Min Value				
Max Value				
Default Value				
Unit				
Description	This command displays the statistics of IP packets send and received via management interface and also shows the MP addresses of the host and management interface			

6.7 /mfi/udp: Show UDP statistics

Usage	**udp**			
Parameters	None			
Type				
Min Value				
Max Value				
Default Value				
Unit				
Description	This command shows the UDP (User Datagram Protocol) packets sent and received via management interface.			

7 Directory: fmif

7.1 /fmif/unsubusr : Unsubscribe user

Usage	**unsubusr** <mac>		
Parameters	<mac>		
Type	Integer		
Min Value	-		
Max Value	-		
Default Value	-		
Unit	-		
Description	This command unsubscribes the specifed user with a particular MAC address from the EPON. The address specified by the parameter <mac> is the ONU EPON MAC address. MAC address is a 48 bit field, the user input is in the form as shown below : 0xABCDEFABCDEF. Entire string of values is passed on the CLI without any gap in between them.		

7.2 /fmif/subusr : Subscribe user

Usage	**subusr** <mac>		
Parameters	<mac>		
Type	Integer		
Min Value	-		
Max Value	-		
Default Value	-		
Unit	-		
Description	This command subscribes the specifed user with a particular MAC address from the EPON. The address specified by the parameter <mac> is the ONU EPON MAC address. MAC address is a 48 bit field, the user input is in the form as shown below : 0xABCDEFABCDEF. Entire string of values is passed on the CLI without any gap in between them.		

7.3 /fmif/onuinfo : Get OUN info

Usage	**onuinfo** <mac>			
Parameters	<mac>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	This command gets the extended information from the specified virtual ONU that is identified by the ONU EPON MAC address.			

7.4 /fmif/enlpbk: Enable OAM level loop-back

Usage	**enlpbk** <mac>			
Parameters	<mac>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	This command enables the OAM level loop back . The loop back takes place for the			

	MAC logical link specified by the MAC address passed as <mac> parameter. The loop back takes place on the ONU side making the traffic going back to the EPON side of the network.

7.5 /fmif/dislpbk : Disable OAM level loop-back

Usage	**dislpbk** <mac>			
Parameters	<mac>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	This command disables the OAM level loop back.			

7.6 /fmif/enolt: Enable OLT

Usage	**enolt**			
Parameters	None			
Type				
Min Value				
Max Value				
Default Value				
Unit				
Description	This command brings back the isolated OLT box for data traffic.			

7.7 /fmif/disolt : Disable OLT

Usage	**disolt**			
Parameters	None			
Type				
Min Value				
Max Value				
Default Value				
Unit				
Description	This command de-registers all logical links and shuts down EPON and network (uplink) port, thereby isolating the OLT box for data traffic.			

7.8 /fmif/ensla : Enable SLA record

Usage	**ensla** <mac>			
Parameters	<mac>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	This command activates the SLA for a particular logical link. The logical link is specified by the parameter <mac>.			

7.9 /fmif/dissla : Disable SLA record

Usage	**dissla** <mac>			
Parameters	<mac>	<dir>	<mac>	<dir>
Type	Integer	Integer	Integer	Integer

Min Value	-	0	-	0
Max Value	-	1	-	1
Default Value	-	-	-	-
Unit	-	-	-	-
Description	This command disables the current SLA for a particular logical link. The logical link is specified by the parameter <mac>. The Ethernet traffic will not flow for that logical link.			

7.10 /fmif/addsla : Add SLA

Usage	**addsla** <mac><dir><minbw><maxbw><burstsize><d>					
Parameters	<mac>	<dir>	<minbw>	<maxbw>	<burstsize>	<d>
Type	Integer	Integer	Integer	Integer	Integer	Integer
Min Value	-	0	0	0	0	0
Max Value	-	1	1000000	1000000		0
Default Value	-	-	-	-	-	-
Unit	-	-	Kbps	Kbps	Kbytes	-
Description	This command sets the parameters for a specific SLA associated with a logical link specified by the MAC address by parameter <mac>. The parameter <dir> sets the downstream SLA if 0 and sets the upstream SLA if 1. Parameter <minbw> and <maxbw> set the upper and lower limits for the SLA. Note that <minbw> must be less than <maxbw>. Parameter <burstsize> is programmed in the increaments of 1KB. Parameter <d> is set to 1 if the SLA is delay sensitive, and set to 0 if SLA is not delay sensitive.					

7.11 /fmif/delsla : Delete SLA

Usage	**delsla** <mac> <dir>			
Parameters	<mac>	<dir>		
Type	Integer	Integer		
Min Value	-	0		
Max Value	-	1		
Default Value	-	-		
Unit	-	-	-	
Description	This command deletes SLA for a logical link specified by the paramter <mac> in the direction specified by <dir>. If <dir> is 1, the direction is upstream and if <dir> is set to 0, the direction is downstream.			

7.12 /fmif/getsla : Get SLA

Usage	**getsla** <mac><dir>			
Parameters	<mac>	<dir>		
Type	Integer	Integer		
Min Value	-	0		
Max Value	-	1		
Default Value	-	-		
Unit	-	-		
Description	This command shows the minimum and maximum burst sizes for the logical link specified by parameter <mac> and specified direction by parameter <dir> . It also displays if SLA is enabled or disabled.			

7.13 /fmif/add : Add static ONU entry

Usage	**add** <mac><filtermac>			
Parameters	<mac>	<filtermac>		

Type	Integer	Integer		
Min Value	-	-		
Max Value	-	-		
Default Value	-	-		
Unit	-	-		
Description	This command adds a static rule into bridging table of the ONU to drop the MAC address specified by the paramter <filtermac>.			

7.14 /fmif/del : Delete static ONU entry

Usage	**del** <mac><filtermac>			
Parameters	<mac>	<filtermac>		
Type	Integer	Integer		
Min Value	-	-		
Max Value	-	-		
Default Value	-	-		
Unit	-	-		
Description	This command deletes the static rule that was added into bridging table of the ONU to drop the MAC address specified by the parameter <filtermac>			

7.15 /fmif/getportstats : Get OLT port statistics

Usage	**getportstats** <port><direction>			
Parameters	<port>	<direction>		
Type	Integer	Integer		
Min Value	0	0		
Max Value	1	1		
Default Value	-	-		
Unit	-	-		
Description	This command displays the statistics for the specified port in the specified direction. The parameter <port> will be EPON port when 0 or network port when 1. Parameter direction is upstream when 1 and downstream when 0			

7.16 /fmif/enport : Enables specified port

Usage	**enport** <port>			
Parameters	<port>			
Type	Integer			
Min Value	0			
Max Value	1			
Default Value	-			
Unit	-			
Description	This command will enable the specified OLT port. When <port> is 0, it refers to OLT EPON port and when <port> is 1, it refers to the network port.			

7.17 /fmif/disport : Disable specified port

Usage	**disport** <port>			
Parameters	<port>			
Type	Integer			
Min Value	0			
Max Value	1			
Default Value	-			
Unit	-			
Description	This command will disable the specified OLT port. When <port> is 0, it refers to			

	OLT EPON port and when <port> is 1, it refers to the network port.

7.18 /fmif/setoltmode : Set OLT bridge mode

Usage	**setloltmode** <macaddress><mode><maclearnlimit>			
Parameters	<macaddress>	<mode>	<maclearnlimit>	
Type	Integer	Integer	Integer	
Min Value	-	0		
Max Value	-	5		
Default Value	-	-		
Unit	-			
Description	This command sets the mode of the logical link. The mode can be any one of the six values. They are 0 : simple bridge, 1 : dedicated single VLAN 2,: dedicated double VLAN, 3 : shared VLAN, 4 : transparent VLAN, 5 : translated VLAN, Parameter <maclearnlimit> sets the limit on the maximum bridging table size for that logic link			

7.19 /fmif/setagelimit : Set age limit

Usage	**setagelimit** <agevalue>			
Parameters	<agevalue>			
Type	Integer			
Min Value	0			
Max Value	65536			
Default Value	-			
Unit	10ms			
Description	This command sets the aging limit for the bridging table for all logical links. The increments are 2^n and the units are 10ms			

7.20 /fmif/getoltmode : Get OLT bridge mode

Usage	**getoltmode** <mac>			
Parameters	<mac>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	This is a command gets the OLT mode for the logica link specified by the MAC address given by parameter <mac>			

7.21 /fmif/cfgvlan : Configure a VLAN

Usage	**cfgvlan** <mac><networkvlan><outvlan>			
Parameters	<mac>	<networkvlan>	<outvlan>	
Type	Integer	Integer	Integer	
Min Value	-	1	1	
Max Value	-	4094	4094	
Default Value	-	-	-	
Unit	-	-	-	
Description	This command configures VLAN for a specified MAC address. The parameter <networkvlan> is the VLAN tag for the frame going to the network side. The parameter <outvlan> is the outbound VLAN tag for the network frames going toward EPON side. The only time EPON side will receive such frames is when VLAN is either translated or it is transparent.			

7.22 /fmif/delvlan : Delete a VLAN

Usage	**delvlan** <mac>			
Parameters	<mac>	<networkvlan>	<outvlan>	
Type	Integer	Integer	Integer	
Min Value	-	1	1	
Max Value	-	4094	4094	
Default Value	-	-	-	
Unit	-	-	-	
Description	This command delets the VLAN tag provisioned by 'cfgvlan' command. The parameter <networkvlan> is the VLAN tag for the frame going to the network side. The parameter <outvlan> is the outbound VLAN tag for the network frames going toward EPON side. The only time EPON side will receive such frames is when VLAN is either translated or it is transparent.			

7.23 /fmif/getvlan : Get configured VLAN list

Usage	**getvlan** <mac>			
Parameters	<mac>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	This command displays the configured VLANs for the logical links specified by the ONU MAC address given by <mac> parameter. Parameter <mac> is the MAC address string of 48 bits.			

7.24 /fmif/getlinksforvlan : Get links for a VLAN

Usage	**getlinksforvlan** <number>			
Parameters	<number>			
Type	Integer			
Min Value	1			
Max Value	4095			
Default Value	-			
Unit	-			
Description	This command returns the number of links shared by the VLAN given by parameter <vlannumber>.			

7.25 /fmif/getontstat : Get ONU port statistics

Usage	**getontstat** <mac><port><dir>			
Parameters	<mac>	<port>	<dir>	
Type	Integer	Integer	Integer	
Min Value	-	0	0	
Max Value	-	2	1	
Default Value	-	-	-	
Unit	-	-	-	
Description	This command gets the ports statistics for a particular ONU specified by the MAC address for a particular port on that ONU specified by the <port> parameter. The parameter <dir> configures the direction, 1 is upstream and 0 is downstream direction for Ethernet traffic. Parameter <port> can take values from 0 to 2.Value 0 = EPON Port 1, Value 1 = User port 1, Value 2 = User port 2. Parameter <mac> is the MAC address string of 48 bits.			

7.26 /fmif/getontflowstat : Get ONU flow statistics

Usage	**getontflowstat** <mac><dir>			
Parameters	<mac>	<dir>		
Type	Integer	Integer		
Min Value	-	0		
Max Value	-	1		
Default Value	-	-		
Unit	-	-		
Description	This command return the flow (Logical Link Statistics) statistics for the logical link specified by the MAC address in the parameter <mac> in the direction specified by parameter <dir>. When <dir> = 1, the direction is upstream and when <dir> = 0, the direction of Ethernet traffic is down-stream. Parameter <mac> is the MAC address which is string of 48 bits.			

7.27 /fmif/getstatalminfo : Get OLT alarm threshold information

Usage	**getstatalminfo**						
Parameters	<mac>	<dir>	<port>	<llid>	<hxstatid>		
Type	Integer	Integer	Integer	Integer	Integer		
Min Value	-	0	0	0	-		
Max Value	-	1	1	65535	-		
Default Value	-	-	-	-	-		
Unit	-	-	-	-	-		
Description	This command retrieves the alarm statistics information for the specified port and the logical link identity for the specified alarm identity. The list of all the statistics identity is defined in the Host Interface Document (Appendix C). Parameter <mac> always refers to OLT MAC address. Direction is determined by <dir> parameter, when 1 it is upstream and when 0 it is downstream. The parameter <port> when 0 refers to EPON port and when 1, it refers to Network port. Parameter <onth> sets the level of threshold beyond which alarm indication is activated and <offth> parameter is lower level of threshold below which alarm indication is de-activated. Parameter <mac> is the MAC address string of 48 bits.						

7.28 /fmif/setstatalminfo : Set OLT alarm threshold information

Usage	**setstatalminfo**						
Parameters	<mac>	<dir>	<port>	<llid>	<hxstatid>	<onth>	<offth>
Type	Integer	Integer	Integer	Integer	Integer	Integer	Integer
Min Value	-	0	0	0	-	0	0
Max Value	-	1	1	65535	-	2^{32} - 1	2^{32} - 1
Default Value	-	-	-	-	-	-	-
Unit	-	-	-	-	-	-	-
Description	User can set thresholds on various staistics to generate alarm if that particular statistics crosses the threshold. The list of all the statistics identity is defined in the Host Interface Document. (Appendix C) Parameter <mac> always refers to OLT MAC address. Direction is determined by <dir> parameter, when 1 it is upstream and when 0 it is downstream. The parameter <port> when 0 refers to EPON port and when 1, it refers to Network port. Parameter <onth> sets the level of threshold beyond which alarm indication is activated and <offth> parameter is lower level of threshold below which alarm indication is de-activated. Parameter <mac> is the MAC address string of 48-bits.						

7.29 /fmif/getontbrginfo : Get dynamic learn table size and age limit

Usage	**getontbrginfo** <mac> <port>			
Parameters	<mac>	<port>		
Type	Integer	Integer		
Min Value	-	0		
Max Value	-	2		
Default Value	-	-		
Unit	-	-		
Description	This command gets the current learning table size on the ONU identified by the EPON MAC and the specified port. This command also retrieves the age limit after which a learnt entry is invalid. Parameter <port> when 0, refers to EPON port, when 1 refers to User port 1, when 2 refers to User port 2. Parameter <mac> is the MAC address which is string of 48 bits.			

7.30 /fmif/setontbrginfo : Set dynamic learn table size and age limit

Usage	**setontbrginfo** <mac><tablesize><agelimit>			
Parameters	<mac>	<port>	<tablesize>	<agelimit>
Type	Integer	Integer	Integer	Integer
Min Value	-	0	0	
Max Value	-	2	127	
Default Value	-	-	-	
Unit	-	-	-	
Description	This command gets the current learning table size on the ONU identified by the EPON MAC and the specified port. This command also retrieves the age limit after which a learnt entry is invalid. Parameter <port> when 0, refers to EPON port, when 1 refers to User port 1, when 2 refers to User port 2. Parameter <mac> is the MAC address which is string of 48 bits.			

7.31 /fmif/clrmac : Clear OLT mac table

Usage	**clrmac**			
Parameters	None			
Type				
Min Value				
Max Value				
Default Value				
Unit				
Description	This command clears all the dynamic bridging entries learnt by the OLT.			

7.32 /fmif/getblklist : Getlist of blocked ONUs

Usage	**getblklist**			
Parameters	None			
Type				
Min Value				
Max Value				
Default Value				
Unit				
Description	This command lists all the un-subscribed ONUs			

7.33 /fmif/setflowctrldata : Set queue size and threshold

Usage	**setflowctrldata** <queue><onth><offth>			
Parameters	<queue>	<onth>	<offth>	

Type	Integer	Integer	Integer	
Min Value	1	0	0	
Max Value	511	100	100	
Default Value	32	-	-	
Unit	Kilobytes	Percent	Percent	
Description	This command sets the queue size and the upper and lower limits on the flow threshold. The parameters <onth> and <offth> are stated as percentages of queue size.			

7.34 /fmif/setxconn : Set xconn

Usage	**setxconn** <mac1><mac2><operation>			
Parameters	<mac1>	<mac2>	<operation>	
Type	Integer	Integer	Boolean	
Min Value	-	-	0	
Max Value	-	-	1	
Default Value	-	-	-	
Unit	-	-	-	
Description	This command sets up or delets a cross connect between two logical links identified by MAC addresses given by paramters <mac1> and <mac2>. If <operation> is 1, then cross connect is added, if <operation> is 0, it is deleted. MAC address is a string of 48 bits given by <mac1> and <mac2> parameters.			

7.35 /fmif/getxconn : Get xconn

Usage	**getxconn** <mac>			
Parameters	<mac1>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	When given one end of the cross connect, this command retieves the other end of the cross connect. The ends of the cross connect are identified by the logical link specified by the MAC address. The MAC address is specified by parameter <mac>, which is a string of 48 bits.			

7.36 /fmif/resetonu : Reset the specified ONU

Usage	**resetoun** <mac>			
Parameters	<mac>			
Type	Integer			
Min Value	-			
Max Value	-			
Default Value	-			
Unit	-			
Description	This command resets the ONU specified by the MAC address. The MAC address is specified by parameter <mac>, which is a string of 48 bits.			

8 Directory: stats

8.1 /stats/setalminfo: Configure statistics on alarms

Usage	**setalminfo**				
Parameters	None				
Min Value	None				
Max Value	None				
Default Value	None				
Description	This command shows FIFO statistics.				

8.2 /stats/gather: Gather statistics

Usage	**gather**				
Parameters	None				
Min Value	None				
Max Value	None				
Default Value	None				
Description	This command shows FIFO statistics.				

8.3 /stats/dumpflowstats: Dump flow statistics

Usage	**dumpflowstats**				
Parameters	None				
Min Value	None				
Max Value	None				
Default Value	None				
Description	This command shows FIFO statistics.				

9 Directory: upg

9.1 /upg/stat: Display ONU upgrade status

Usage	**stat**				
Parameters	None				
Min Value	None				
Max Value	None				
Default Value	None				
Description	This command shows status of file transfer to ONU.				

9.2 /upg/debug: Set debug levels

Usage	**debug**				
Parameters	None				
Min Value	None				
Max Value	None				
Default Value	None				
Description	This command affects the debug print level for file transfer to ONU.				

10 Directory: olt

10.1 /olt/dl: Dump LLID data

Usage	**dl** <start><count>				
Parameters	<start>	<count>			
Min Value					
Max Value					
Default Value					
Description	This command dumps the LLID registration data. This lists how many LLIDs have been registered with the OLT and the LLID indices allocated to them and the current state of the state machine.				

10.2 /olt/discrate: Set new discovery rate

Usage	**discrate** <rate>				
Parameters	<rate>				
Min Value					
Max Value					
Default Value					
Unit	10ms				
Description	This command changes the rate at which discovery gates are sent down to the ONU. This value specified is in the increments or decrements of 10ms.				

10.3 /olt/discsize: Sets LUE mode

Usage	**discsize** <size>				
Parameters	<size>				
Min Value					
Max Value					
Default Value					
Unit					
Description	This command changes the Gate size sent down to the ONU				

10.4 /olt/addtokensize: Sets Token sizes for DBA and Shapaer

Usage	**addtokensize <mac>** <dir> <DBA token size> <Shp Max Token size> <Shp Min Size>				
Parameters	<mac>	dir	Dba	Shp Max	Shp Min
Min Value		0	0	0	0
Max Value	-	1	255	511	511
Default Value	-		4	2	2
Unit	-		1KB	1KB	1KB
Description	This command sets the token/weights sizes for the DBA and the Shaper for the Logical Link identified by the virtual Onu Mac address. These values must be derived based on the SLAset for that logical link.				

10.5 /olt/deltokensize: Deletes the Token sizes provisioned

Usage	**deltokensize** <mac> <dir>				
Parameters	<mac>	<dir>			
Min Value		0			
Max Value		0			
Default Value					

Unit					
Description	This command deletes the provisioned token sizes for the specified logical link indetified by the ONU mac address.				

10.6 /olt/gettokensize: Gets Token Sizes

Usage	**gettokensize** <mac> <dir>				
Parameters	<mac>	<dir>			
Min Value	-	0			
Max Value	-	1			
Default Value	-				
Unit					
Description	This command deletes the provisioned token sizes for the specified logical link indetified by the ONU mac address.				

11 Directory: pers

11.1 /pers/discsynctime: Program discovery sync time

Usage	**discsynctime** <time>				
Parameters	<time>				
Min Value					
Max Value					
Default Value	112				
Unit	16ns				
Description	Note : Do not modify this parameter.				

11.2 /pers/synctime: Program sync time

Usage	**synctime** <time>				
Parameters	<time>				
Min Value					
Max Value					
Default Value	112				
Unit	16ns				
Description	The sync time accounts for the laser ON and laser OFF, propagation delay; etc				

11.3 /pers/eponmac: Edit EPON MAC

Usage	**eponmac**				
Parameters					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command allows user to edit the OLT EPON MAC address. If the argumen to thecommand is empty, then it read the current value in the personality FLASH.				

11.4 /pers/gigemac: Edit gigabit Ethernet MAC

Usage	**gigiemac**				
Parameters					
Min Value					
Max Value					
Default Value					
Description					

11.5 /pers/mgmtmac: Edit management MAC

Usage	**mgmtmac**				
Parameters					
Min Value					
Max Value					
Default Value					
Description					

11.6 /pers/oui: Edit OUI (Organizationally Unique Identifier)

Usage	**oui**

Parameters					
Min Value					
Max Value					
Default Value					
Description					

11.7 /pers/urxrxstrobe: Edit URX receive strobe / offset

Usage	**urxrxstrobe**				
Parameters					
Min Value					
Max Value					
Default Value					
Description					

11.8 /pers/setgrantspacing: Edit grant spacing

Usage	**setgrantspacing**				
Parameters					
Min Value					
Max Value					
Default Value					
Description					

11.9 /pers/setbootmode: Edit boot mode

Usage	**setbootmode** <hostdriven>				
Parameters	<hostdriven>				
Type	Boolean				
Min Value	0				
Max Value	1				
Default Value	-				
Unit	-				
Description	This command sets the boot mode. When parameter <hostdriven> is reset to 0, the boot mode is automatic, when set to 1, the boot mode is host driven.				

11.10 /pers/default: Set personality FLASH to default

Usage	**default**				
Parameters	None				
Min Value					
Max Value					
Default Value					
Description	This command sets all the fields in the personality section of the FLASH memory to their default values. Note : All provisioned values are lost when this command is executed.				

11.11 /pers/portcfg: Set port configuration

Usage	**portconfig** <mode><auto-eg><flowctrl><maxfrsz><linktimer><copper><macmode>						
Parameters	<mode>	<auto-neg>	<flowctrl>	<maxfrsz>	<linktimer>	<copper>	<mac mode>
Type	Boolean	Boolean	Boolean	Integer	Integer	Boolean	Boolean
Min Value	0 : TBI	0 : Off	0 : Off	0	0	0	0
Max Value	1 : GMII	1 : On	1 : On	65535	65535	1	1

Default Value	0	1	-	1536	65535	1	0
Description	This command configures network (uplink) port on the OLT. Parameter <maxfrsz> denotes the maximum size of frame that will not be discarded by Local Network Port. Parameter <linktimer> defines the time value when a Pause frame is sent out. Paramter <mode> denotes the type of interface the port will operate in. Whe the parameter <mode> is set to 0, the uplink network port will operate in Ten Bit Interface (TBI) mode. When parameter <mode> is set to 1, the uplink network port will operate in Gigabit Media Independent Interface (GMII) mode. The parameter <auto-neg> enables auto-negotiation for this port when set to 1, and disables auto-negotiation when set to 0. When the parameter <flowctrl> is set to 1, the uplink port flow control is enabled, when 0, the flow control is disabled. Note: In order for Local Network Port to discard the frame with a size greater than the value of <framesz>, the 'Discard on Length Error' switch in the Teknovus EPON GUI has to be set "ON". The Copper bit when set to 0 uses the Fiber GigE LNP interface else uses the 100/1000 Copper interface. Mac Mode determines whether the LNP is interface to a PHY device or Mac Device 0- Phy Device 1- MAC device						

11.12 /pers/show: Show personality information

Usage	**show**				
Parameters	None				
Min Value					
Max Value					
Default Value					
Description	This command displays the currently set parameters in the personality section of FLASH memory, which are of interest. There are a few parameters which are not displayed.				

11.13 /pers/setbwatpri: Set bandwidth at different priorities

Usage	**setbwatpri**				
Parameters					
Min Value					
Max Value					
Default Value					
Description	This command sets an un-used section of personality. Do not use this command.				

11.14 /pers/usenvs: Determines to use NVS on reboot

Usage	**usenvs** <0 : Don't use NVS, 1 :use NVS>				
Parameters					
Min Value					
Max Value					
Default Value					
Description	When value passed to this command is 1, the OLT will restore provisioning from non-volatile store (NVS). When set to 0, the OLT will not restore the provisioning from the non-volatile store.				

11.15 /pers/hostip: Edit remote host IP

Usage	**hostip** <ip1> <ip2> <ip3> <ip4>				
Parameters	<ip1>	<ip2>	<ip3>	<ip4>	
Min Value	-	-	-	-	
Max Value	-	-	-	-	
Default Value	-	-	-	-	
Description	This command configures the host (PC side) IP address, when the host is configured for the static IP.				

11.16 /pers/mgmtip: Edit local management interface IP

Usage	**mgmtip** <ip1><ip2><ip3><ip4>				
Parameters	<ip1>	<ip2>	<ip3>	<ip4>	
Min Value	-	-	-	-	
Max Value	-	-	-	-	
Default Value	-	-	-	-	
Description	This command configures the management IP address, when the host is configured for the static IP.				

11.17 /pers/netmask: Edit IP network mask

Usage	**netmask** <ip1><ip2><ip3><ip4>				
Parameters	<ip1>	<ip2>	<ip3>	<ip4>	
Min Value	-	-	-	-	
Max Value	-	-	-	-	
Default Value	-	-	-	-	
Description	This command configures the netmask for the management port.				

11.18 /pers/eponledctrl: Configure GPIO30-31 for TX and RX activity

Usage	**eponledctrl** <enable>				
Parameters	<enable>				
Min Value	0				
Max Value	1				
Default Value					
Unit	-	-	-	-	-
Description	This command controls the usage of GPIO pin 30 and 31. If enabled, that is <enable> parameter is set to 1, the pins will be used to indicate RX and TX network link activitiy. When <enable> parameter is set to 0, the GPIO pins 30 and 31 will be set for User alarm function.				

11.19 /pers/ipopts: Edit IP options

Usage	**ipopts** <local-ip> < host-ip>				
Parameters	<local-ip>	<host-ip>			
Min Value	0	0			
Max Value	1	1			
Default Value	-	-			
Unit	-	-			
Description	This command configures the method by which a host would communicate to the firmware. Parameter <local-ip> when set to 1, it runs DHCP protocol on the firmware side and when set to 0, it uses static IP address. Parameter <host-ip> when set to 1, it runs Teknvous discovery protocol, when set to 0, it uses static IP. Refer to hostip and mgmtip commands to configure static IP address for the host and management.				

11.20 /pers/ramsize: Takes the RAM size

Usage	**ramsize** <size>				
Parameters	<size>				
Min Value					
Max Value					
Default Value					
Unit	bytes				
Description	This command specifies the size of on board SDRAM used for the buffering.				

11.21 /pers/vlanethertype: Provisions a new ether type for VLAN frames

Usage	**vlanethertype** <ether type>				
Parameters	< ether type >				
Min Value					
Max Value					
Default Value	0x8100				
Unit	bytes				
Description	This command specifies the new ether type that the HW will look for in addition to 0x8100. The parameter <ether type> is a 16 bit binary number.				

11.22 /pers/vlanflags: Provisions VLAN frames

Usage	**vlanflags** <UseTagUp> <UseTagDn>				
Parameters	<UseTagUp>	<UseTagDn>			
Min Value	0	0			
Max Value	1	1			
Default Value	0	0			
Unit					
Description	This command allows the user to specify the ether type for VLANS appended by the OLT in each direction				

11.23 /pers/polarity: Set the Polarity for EPON Optics Module

Usage	**polarity** <value>				
Parameters	<value>				
Min Value	0				
Max Value	1				
Default Value	-				
Unit	-				
Description	This command sets the polarity of the Optics Module that is used on EPON side of the OLT board. When *Oki* optics module is used, the paramter <value> is 0. It means that the 'shut' signal of the Optics Module is active high. When *Zenko* optics module is used, the paramter <value> is 1, It means that the 'shut' signal of the Optics Module is active low.				

11.24 /pers/laseron: Sets the laser on time

Usage	**laseron**<value>				
Parameters	<value>				
Min Value	0				
Max Value	32				
Default Value	-				
Unit	16 ns				

Description	This command sets the laser on value at the OLT so that the OLT grant accounts for the ONU's laser on time

11.25 /pers/laseroff: Sets the laser off time

Usage	**laseroff**<value>				
Parameters	<value>				
Min Value	0				
Max Value	32				
Default Value	-				
Unit	16 ns				
Description	This command sets the laser off value at the OLT so that the OLT grant accounts for the ONU's laser off time				

11.26 /pers/mgmtif: Select management physical interface, transport

Usage	**mgmtif** <phy> <transport>				
Parameters	<phy>	<transport>			
Min Value	0 (async-bus)	0 (raw)			
Max Value	1 (Ethernet)	1 (udp)			
Default Value	-				
Unit	-				
Description	This command selects of the management physical interface and the management transport protocol. <phy>, <transport> values of 0, 0 select the async-bus with raw transport. <phy>, <transport> values of 1, 1 select Ethernet with UDP transport. This command will need a re-boot to take effect.				

11.27 /pers/numlinks: Sets Number of Logical Links to discover

Usage	**numlinks** <Number of Links to Register>				
Parameters	<Number Of Links>				
Min Value	32				
Max Value	239				
Default Value	150				
Unit	-				
Description	This command sets the number of links tha t the OLT will register. If more links try to register then the OLT will raise an alarm.				

11.28 /pers/dnfifosize: Sets size for the Down Stream Fifo (Unicast Links)

Usage	**dnfifosizes** <Fifo Size in 1.25KB>				
Parameters	<Fifo Size>				
Min Value	32				
Max Value	512				
Default Value	32				
Unit	1.25KB				
Description	This command sets the fifo size in the down stream direction.				

11.29 /pers/bcastfifosize: Sets size for the Broadcast Fifo

Usage	**bcafifosizes** <Fifo Size in 1.25KB>				
Parameters	<Fifo Size>				
Min Value	32				

Max Value	512				
Default Value	96				
Unit	1.25KB				
Description	This command sets the broadcast fifo size.				

11.30 /pers/mcastfifosize: Sets size for the Multicast Fifo

Usage	**mcastfifosizes** <Fifo Size in 1.25KB>				
Parameters	<Fifo Size>				
Min Value	32				
Max Value	512				
Default Value	256				
Unit	1.25KB				
Description	This command sets the IP multicast fifo size.				

11.31 /pers/enableprivlan:

Usage	**enableprivlan** <1-Enable or 0-Disable>				
Parameters	<Enable or Disable>				
Min Value	0				
Max Value	1				
Default Value	1				
Unit	-				
Description	This command enables the system to allow Priority Vlan mode or not based on this setting.				

11.32 /pers/choosepri : Chooses between TOS or COS for Priority

Usage	**choosepri** <1- COS, 0-TOS>				
Parameters	<1-Tos, 0-Cos>				
Min Value	0				
Max Value	1				
Default Value	1				
Unit	-				
Description	This command chooses either COS or TOS for classification based on the priority in the down stream direction for 1) Priority Vlan Mode 2) Priority Shared Vlan Mode.				

11.33 /pers/macmove: Enables or Disables MAC to move across links

Usage	**macmove** <1-Enable , 0-Disable>				
Parameters	<1 0r 0>				
Min Value	0				
Max Value	1				
Default Value	1				
Unit	-				
Description	If Mac move is enabled then whenever a MAC address jumps from one link to another firmware will track the move and learn it on the appropriate link. If Disabled then it won't track when the MAC moves. This setting is used ONLYin conjunction with the SHARED VLAN MODES				

11.34 /pers/pricopyenable: Enables or Disables Modes that Require Priority Copy

Usage	**pricopynable** <1-Enable , 0-Disable>				
Parameters	<1 0r 0>				
Min Value	0				
Max Value	1				
Default Value	1				
Unit	-				
Description	If PriCopyEnable is set to 1, then the system will let the user provision modes that require priority copying in the upstream direction, but Translated Vlan will not be allowed. If PriCopyEnable is set to 0 then Translated Vlan provisioning will be allowed but any mode that requires Priority Copy will not be allowed.				

11.35 /pers/extid : Edit Extended Identity

Usage	**extid** [<string>]	
Parameters	<string>	
Type	ASCII	
Min Value	-	
Max Value	-	
Default Value	-	
Unit	Bytes	
Description	This command edits extended identity information. Up to 64 bytes may be entered in the parameter <string>. There is a limitation, however, that the CLI parser will break up the string into two parameters if there is a space between them.	

11.36 /pers/resetoltonjumbo : Edit Extended Identity

Usage	**resetoltonjumbo** <1-Yes , 0-No>				
Parameters	<1 or 0>				
Min Value	0				
Max Value	1				
Default Value	1				
Unit	-				
Description	If ResetOltOnJumbo is set to 1, then the system will automatically reset upon receiving a jumbo-size frame over 2032-bytes. If ResetOltOnJumbo is set to 0, then the system will not automatically reset upon receiving a jumbo-size frame; therefore, the responsibility falls upon the Host I/F to then reset the TK3721 system.				

11.37 /pers/prod : Edit Product Code and Version

Usage	**prod** <code> <version>				
Parameters	<code>	<version>			
Min Value	0x0000	0x0000			
Max Value	0xFFFF	0xFFFF			
Default Value	0x3700	0x0600			
Unit	-				
Description	This command displays or sets the product code and version of the TK3721.				

11.38 /pers/fiber : Edit Fiber Loop Length

Usage	**fiber** <loop length>				
Parameters	<loop length>				

Min Value	0 x0000				
Max Value	0xFFFF				
Default Value	0x0000				
Unit	-				
Description	This command displays or sets the fiber loop length.				

11.39 /pers/urxagc : Edit URX AGC Strobe/Offset

Usage	**urxagc** <flags> <offset>				
Parameters	<flags>	<offset>			
Min Value	0x00	0x000000			
Max Value	0xFF	0x000000			
Default Value	0x32	0x000005			
Unit	-				
Description	This is one of four programmable output strobe signals that are used to control the OLT optical transceiver, making this a flexible OLT optical transevier interface with use of any brand of optical transeivers. See TK3721 Datasheet and optical transceiver technical note TN100_HW_OLTXCVR for details in proper settings.				

11.40 /pers/urxcdr : Edit URX CDR Strobe/Offset

Usage	**urxcdr** <flags> <offset>				
Parameters	<flags>	<offset>			
Min Value	0x00	0x000000			
Max Value	0xFF	0x000000			
Default Value	0x32	0x000005			
Unit	-				
Description	This is one of four programmable output strobe signals that are used to control the OLT optical transceiver, making this a flexible OLT optical transevier interface with use of any brand of optical transeivers. See TK3721 Datasheet and optical transceiver technical note TN100_HW_OLTXCVR for details in proper settings.				

11.41 /pers/strb0 : Edit URX Strobe 0 Strobe/Offset

Usage	**strb0** <flags> <offset>				
Parameters	<flags>	<offset>			
Min Value	0x00	0x000000			
Max Value	0xFF	0x000000			
Default Value	0x32	0x000005			
Unit	-				
Description	This is one of four programmable output strobe signals that are used to control the OLT optical transceiver, making this a flexible OLT optical transevier interface with use of any brand of optical transeivers. See TK3721 Datasheet and optical transceiver technical note TN100_HW_OLTXCVR for details in proper settings.				

11.42 /pers/strb1 : Edit URX Strobe 1 Strobe/Offset

Usage	**strb1** <flags> <offset>				
Parameters	<flags>	<offset>			
Min Value	0x00	0x000000			
Max Value	0xFF	0x000000			
Default Value	0x32	0x000005			
Unit	-				
Description	This is one of four programmable output strobe signals that are used to control the OLT optical transceiver, making this a flexible OLT optical transevier interface with				

	use of any brand of optical transeivers. See TK3721 Datasheet and optical transceiver technical note TN100_HW_OLTXCVR for details in proper settings.

11.43 /pers/nogrant : Edit URX No Grant Strobe Offset

Usage	**nogrant** <offset>				
Parameters	<offset>				
Min Value	0x0000				
Max Value	0xFFFF				
Default Value	0x0000				
Unit	-				
Description	This command displays or sets URX no grant strobe offset for the OLT optical transceiver, making this a flexible OLT optical transevier interface with use of any brand of optical transeivers. See TK3721 Datasheet and optical transceiver technical note TN100_HW_OLTXCVR for details in proper settings.				

11.44 /pers/ranging : Edit URX Ranging Strobe Offset

Usage	**ranging** <offset>				
Parameters	<offset>				
Min Value	0x0000				
Max Value	0xFFFF				
Default Value	0x0000				
Unit	-				
Description	This command displays or sets URX ranging strobe offset for the OLT optical transceiver, making this a flexible OLT optical transevier interface with use of any brand of optical transeivers. See TK3721 Datasheet and optical transceiver technical note TN100_HW_OLTXCVR for details in proper settings.				

11.45 /pers/mgmtvlan : Edit VLAN for Management Use

Usage	**mgmtvlan** <value>				
Parameters	<value>				
Min Value	0				
Max Value	4095				
Default Value	0				
Unit	-				
Description	This command displays or sets the VLAN for management use.				

11.46 /pers/slotid : Edit Slot ID (Use GPIO to Determine Slot)

Usage	**slotid** <1-enabled , 0-disabled>				
Parameters	<1 or 0>				
Min Value	0				
Max Value	1				
Default Value	0				
Unit	-				
Description	This commands enables or disables the feature of using the GPIO to determine the slot ID.				

11.47 /pers/setphy : Edit LNP/Mgmt PHY Address

Usage	**setphy** <lnp phy> <mgmt phy>				
Parameters	<lnp phy>	<mgmt phy>			
Min Value	0	0			
Max Value	1	1			

Default Value	0	1			
Unit	-				
Description	This command displays or sets the LNP/management PHY address.				

11.48 /pers/l3enable : Enable L3 Aware Mode

Usage	**l3enable** <1-enabled | 0-disabled >				
Parameters	<enabled>				
Min Value	0				
Max Value	1				
Default Value	0				
Unit	boolean				
Description	This command enables use of L3 Aware mode on the OLT.				

12 Directory: lue

12.1 /lue/rule : Write rule to any search

Usage	**rule** <tblsel> <adddr> <word2> <word1> <word0> <				
Parameters	<tblsel>	<addr>	<word2>	<word1>	<word0>
Type	Integer	-	Integer	Integer	Integer
Min Value	0	-	0	0	0
Max Value	15	-	2^{32} - 1	2^{32} – 1	2^{32} - 1
Default Value	-	-			
Unit	-	-			
Description	This command allows a rule to be programmed into any of the look up tables in the lookup engines. The above command allows access to the dual port RAM in the look up engine modules. The parameter <addr> is address specified in the RAM by <tblsel>. Note : Not all the RAM address spaces are 96-bits wide. If such a RAM location is written with 96-bits then corresponding MSBs for the data in the parameter <word2> are not written. The parameter <tblsel> can take values as follows: 0 – Direct Lookup Table 1 – Statistics Table 2 – Downstream Linear Search Table 3 – Upstream Linear Search Table 4 – Mapping Table 5 – Downstream FIFO SRAM 6 - Upstream FIFO SRAM 7 – Random Access Table 8 – Random Access Table with current time insert 9 – Random Access Table (Copy) 10 – Random Access Table (Toggle) 11 to 15 - *Reserved*				

12.2 /lue/cfd : Configure dynamic entry in random search table

Usage	**cfd** <mac> <llid>				
Parameters	<mac>	<llid>			
Type	Mac Address	Integer			
Min Value	-	0			
Max Value	-	65535			
Default Value	-	-			
Unit	-	-			
Description	When frames are received by OLT going upstream, it updates the bridging table with the MAC addresses for that LLID. When frames are received by OLT that are going in the downstream direction with destination address of the user MAC, OLT has to know which LLID that MAC address belongs to. This command associates a user MAC address to an LLID and provisions the bridging table entry at the OLT for it.				

12.3 /lue/cfs : Configure static entry in random search table

Usage	**cfs** <mac> <llid>				
Parameters	<mac>	<llid>			
Type	Mac Address	Integer			
Min Value	-	0			
Max Value	-	65535			
Default Value	-	-			

Unit	-	-			
Description	The MAC address entry that is put in the random search table is either dynamic (can age out) or it can be static (has to be deleted, or does not age out by itself). When frames are received by OLT going upstream, it updates the bridging table with the MAC addresses for that LLID. When frames are received by OLT that are going in the downstream direction with destination address of the user MAC, OLT has to know which LLID that MAC address belongs to. This command associates a user MAC address to an LLID and provisions the bridging table static entry at the OLT for it.				

12.4 /lue/dmp : Dump current rule

Usage	**dmp** <tblsel> <startaddr> <numentdmp>				
Parameters	<tblsel>	<startaddr>	<numentdmp>		
Type	Integer	Integer			
Min Value	0				
Max Value	15	-			
Default Value	-	-			
Unit	-	-			
Description	This command dumps the rule that is currently active. The parameter <tblsel> can take any of the following values and their function is as given below : The parameter <tblsel> can take values as follows: 0 – Direct Lookup Table 1 – Statistics Table 2 – Downstream Linear Search Table 3 – Upstream Linear Search Table 4 – Mapping Table 5 – Downstream FIFO SRAM 6 - Upstream FIFO SRAM 7 – Random Access Table 8 – Random Access Table with current time insert 9 – Random Access Table (Copy) 10 – Random Access Table (Toggle) 11 to 15 – *Reserved* The parameter <startaddr> is the starting address in the RAM from where you want to start dumping the table. The parameter <numentdmp> is the total number of entries that you want to dump. The minium and maximum values that the paramter <startaddr> can take, depends upon the RAM that is used for that table.				

12.5 /lue/stats : Write per LLID statistics

Usage	**stats** <llid> <dir>				
Parameters	<llid>	<dir>			
Type	Integer				
Min Value	0	0			
Max Value	65535	1			
Default Value	-	-			
Unit	-	-			
Description	This command displays the LUE block statistics for the specified LLID by the parametert <llid>. Both, the bytes and the frames received in that direction are shown. The parameter <dir> can take a value of either a 0 or 1, when 0, the direction is downstream and when 1, the direction is upstream.				

12.6 /lue/rem : Remove entry from random search table

Usage	**rem** <addr>

Parameters	<addr>				
Type	Integer				
Min Value	1				
Max Value	4095				
Default Value	-				
Unit	-				
Description	This command removes a dynamic or static bridging table entry at the RAM address specified by the paramtere <addr>.				

12.7 /lue/cfglin : Add linear table entry

Usage	**cfglin** <addr> <word2> <word1> <word0> <dir>				
Parameters	<addr>	<word2>	<word1>	<word0>	<dir>
Type	Integer	Integer	Integer	Integer	Boolean
Min Value	0	0	0	0	0
Max Value	127	2^{32} - 1	2^{32} – 1	2^{32} - 1	1
Default Value	-	-	-		-
Unit	-	-	-	-	-
Description	This command configures the linear search entry in the direction and at the address specified by the user. The parameters <word2>, <word1> and <word0> are 32-bit words and the paramter <dir> chooses the direction. When <dir> is 0, the direction is downstream and when 1, it chooses the upstream direction.				

12.8 /lue/dmplin : Dump linear table entry

Usage	**dmplin**				
Parameters	None				
Min Value					
Type					
Max Value					
Default Value					
Unit					
Description	This command dumps all the linear table entries, both in upstream and downstream directions.				

12.9 /lue/entries : Display number of random search entries

Usage	**entries**				
Parameters	None				
Min Value					
Max Value					
Default Value					
Unit					
Description	This command displays the number of entries in the bridging table.				

12.10 /lue/lrnlog : Show learning ISR (Interrupt Service Routine) log

Usage	**lrnlog**				
Parameters	None				
Min Value					
Max Value					
Default Value					
Unit					
Description	This command shows the log of the learning table process.				

13 Directory: shp

13.1 /shp/dpu : Read or write upstream DP RAM

Usage	**dpu** <cmd> <addr> [<data1> <data2>]]				
Parameters	<cmd>	<addr>	<data1>	<data2>	
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command reads from or writes to the upstream DPRAM. If parameters <data1> and <data2> are not passed on the CLI, then the command reads from the data port. If these two parameters are passed on the command line, then it writes those parameters. Both <data1> and <data2> are 32-bit hexadecimal values.				

13.2 /shp/dpd : Read or write Downstream DP RAM

Usage	**dpd** <cmd> <addr> [<data1> <data2>]]				
Parameters	<cmd>	<addr>	<data1>	<data2>	
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command reads from or writes to the downstream DPRAM. If parameters <data1> and <data2> are not passed on the CLI, then the command reads from the data port. If these two parameters are passed on the command line, then it writes those parameters. Both <data1> and <data2> are 32-bit hexadecimal values.				

13.3 /shp/setaggrbw : Set aggregate bandwidth

Usage	**setaggrbw** <dir> <bw>				
Parameters	<dir>	<bw>			
Type	Boolean	Integer			
Min Value	0	0			
Max Value	1	$2^{32} - 1$			
Default Value	-	-			
Unit	-	Kilo Bits			
Description	This command sets the aggregate bandwidth on the Ethernet traffic going out to the network side from OLT when parameter <dir> is 1, or going out from OLT towards EPON side, when parameter <dir> is 0. It is advised that user should use “setaggrbs” command and set the aggregate burst size, before using this command.				

13.4 /shp/setaggrbs : Set aggregate burst size

Usage	**setaggrbs**				
Parameters	<dir>	<burstsize>			
Type	Boolean	Integer			
Min Value	0	0			
Max Value	1	255			
Default Value	-	-			
Unit	-	Kilo Bytes			
Description	This command sets the aggregate burst size on the Ethernet traffic going out to the				

	network side from OLT, when parameter <dir> is 1, or going out from OLT towards the EPON side, when the parameter <dir> is 0. Note that burst size is set in the increments of 1 kilo byte. The <burstsize> field is 32-bits word, but the maximum burst size is limited to 255 kilo bytes.

14 Directory: dba

14.1 /dba/dp : Read / Write DP RAM

Usage	**dp** <ramselect> <addr> [<data1> [<data2>]]				
Parameters	<ramselect>	<addr>	<data1>	<data2>	
Type	Integer	Integer	Integer	Integer	
Min Value	0	0	0	0	
Max Value	7	255	$2^{32} - 1$	$2^{32} - 1$	
Default Value	-	-	-	-	
Unit	-	-	-	-	
Description	This command reads from or writes to the DBA RAMs. Parameters <data1> and <data2> are 32-bit hexadecimal values. These parameters are to be used directly from DBA data port sections of the TK3721 data sheet.				

14.2 /dba/dg : Send discovery gate

Usage	**dg** <sceidx> <gatesize> <gateoverhead>				
Parameters	<sceidx>	<gatesize>	<gateoverhead>		
Type	Integer				
Min Value	0				
Max Value	255				
Default Value	-				
Unit	-				
Description	This command sends a discovery gate downstream for the scheduling element index given by the parameter <sceidx>.				

14.3 /dba/ng : Send normal gate

Usage	**ng** <sceidx> <gatesize> <gateoverhead>				
Parameters	<sceidx>	<gatesize>	<gateoverhead>		
Type	Integer				
Min Value	0				
Max Value	255				
Default Value	-				
Unit	-				
Description	This command sends a normal gate frame downstream for the scheduling element index given by the parameter <sceidx>.				

14.4 /dba/dmp : Dump DBA RAM

Usage	**dmp** <ramselect> <startaddr> <nument>				
Parameters	<ramselect>	<startaddr>	<nument>		
Type	Integer				
Min Value	0				
Max Value	7				
Default Value	-				
Unit	-				
Description	This command dumps the DBA RAMs specified by the parameter <ramselect>. The parameter <startaddr> is the starting address in the RAM from where you want to start dumping the table. The parameter <numentdmp> is the total number of entries that you want to dump. The minium and maximum values that the paramter <startaddr> can take, depends upon the RAM that is used for that table.				

15 Directory: lnp

15.1 /lnp/txstats : Show transmit statistics

Usage	**txstats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command displays the statistics of the Ethernet frames that are transmitted by the local network port.				

15.2 /lnp/rxstats : Show receive statistics

Usage	**rxstats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command displays the statistics of the Ethernet frames that are received by the local network port.				

16 Directory: mac

16.1 /mac/rx2tx : Set and clear loop back

Usage	**rx2tx** <setclear>				
Parameters	<setclear>				
Type	Boolean				
Min Value	0				
Max Value	1				
Default Value	-				
Unit	-				
Description	This command enables or disables receive to transmit loop back on the MAC.				

16.2 /mac/tx2rx: Set and clear loop back

Usage	**tx2rx** <setclear>				
Parameters	<setclear>				
Type	Boolean				
Min Value	0				
Max Value	1				
Default Value	-				
Unit	-				
Description	This command enables or disables transmit to receive loop back.				

16.3 /mac/mdio: Read or write from MDIO

Usage	**mdio** <phyadd> <regadd> <data>				
Parameters	<phyadd>	<regadd>	<data>		
Type	Integer	Integer	Integer		
Min Value	0	-	0		
Max Value	1	-	2^{32} - 1		
Default Value	-	-	-		
Unit	-	-	-		
Description	This command reads from or writes to a register <regadd> in the register map addressed by the parameter <phyadd>. When the parameter <data> is passed as an argument, then it is a write operation. When parameter <data> is not passed on the command as an argument, it is read operation. The range of parameter <regadd> varies depending upon the optics module used. The data bus is 32-bits wide.				

16.4 /mac/macen: Enable MAC

Usage	**macen**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	Enables the MAC module				

16.5 /mac/rxstats: Receive statistics

Usage	**rxstats**				
Parameters	None				

Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command displays statistics in the receive direction of MAC..				

16.6 /mac/txstats: Transmit statistics

Usage	**txstats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command displays the statistics in the transmit direction of MAC.				

17 Directory: fct

17.1 /fct/fifo : Get fifo information

Usage	**fifo** <number>				
Parameters	<number>				
Type	Integer				
Min Value	0				
Max Value	511				
Default Value	-				
Unit	-				
Description	This command displays the information for a fifo number between 0 and 511.				

17.2 /fct/stats : Get FCT statistics

Usage	**stats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command shows the statistics summary of all the FIFO.				

17.3 /fct/go : Transmit a packet

Usage	**go** <da><sa><length><llid><fifo><seed>					
Parameters	<da>	<sa>	<length>	<llid>	<fifo>	<seed>
Type	Mac Address	Mac Address	Integer	Integer	Integer	Integer
Min Value	-	-	64	0	0	0
Max Value	-	-	200	65535	511	255
Default Value	-	-	-	-	-	-
Unit	-	-	-	-	-	-
Description	This command composes a frame with the specified parameters, which are <da>, <sa>, <length> and <llid> and enqueues it with the specified <fifo> parameter. Parameter <seed> is an integer that makes the first number and the payload of the frame is constructed based on that value.					

17.4 /fct/errframecount : Unknown ethernet type frame count

Usage	**errframecount**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command returns the number of frames which are not processed by the ARM processor. Currently, only frames of the type MPCP and OAM are processed by ARM.				

17.5 /fct/badlencount : Bad frame length count

Usage	**badlencount**

Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command returns the number of Ethernet frames which have incorrect length.				

17.6 /fct/allocFailedcount : Operating System Allocation Fail Count

Usage					
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description					

17.7 /fct/Drop : Fifo information that has dropped packets

Usage					
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description					

17.8 /fct/dp : Data port access

Usage					
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description					

18 Directory: oam

18.1 /oam/reqlpbk : Request OAM loop back

Usage	**reqlpbk** <llid> <timervalue>				
Parameters	<llid>	<timervalue>			
Type	Integer	Integer			
Min Value	0	0			
Max Value	65535*	65535			
Default Value	-	-			
Unit	-	10ms			
Description	Though LLID can take a value between 0 and 65535, the value needs to be registered by OLT for the command to be meaningful. If any number is not registered and passed as an arguement, nothing is returned at the CLI. The parameter <timervalue> is a number that sets the duration for the loop back.				

18.2 /oam/dump : Dumps OAM data

Usage	**dump** <llid>				
Parameters	<llid>				
Type	Integer				
Min Value	0				
Max Value	65535				
Default Value	-				
Unit	-				
Description	This command displays the OAM state variables for the LLID specified by the parameter <lid>.				

18.3 /oam/debug : Set OAM debug level

Usage	**debug** <level>				
Parameters	<level>				
Type	Integer				
Min Value	0				
Max Value	3				
Default Value	-				
Unit	-				
Description	This command sets the debug level. Lower the debug level, lesser are the details.				

19 Directory: alm

19.1 /alm/onualm* : Raise / Clear ONU alarm

Usage	**onualm*** <type> <raise> <llid> [<port>]				
Parameters	<type>	<raise>	<llid>	<port>	
Type	Integer	Boolean	Integer	Integer	
Min Value	0	0	0	1	
Max Value	4	1	65535	2	
Default Value	-	-	-	-	
Unit	-		-	-	
Description	This command raises or clears the alarms related to ONU. The parameter <type> is a number to which certain alarm condition is assigned. Note: Parameter <port> is optional on the CLI. That means when it is passed, the command invokes actions for the port related alarms, which have assignements as shown in the table below in the column “Port related alarms”. The parameter <llid> is the number with which a logical link is identified. Although, the command can accept any integer between 0 and 65535 as an identity of logical link, only registered logical link identity passed in this parameter will make the command meaningful. Parameter <raise>, when 0 clears the alarm condition and when 1, sets the alarm condition. The parameter <port> is optional on the CLI. When parameter <port> is 1, it refers to the User port 1 on ONU board, when paramter <port> is 2, it refers to the User port 2 on the ONU board. When it is not passed on the CLI, the command invokes assignments related to the system, which are listed in the column “System related alarms” *__Important Note__: This command is not to be used by the customer. This command is for the programmers only.				

19.2 /alm/onuflow* : Raise / Clear ONU flow alarm

Usage	**onuflow*** <type> <raise> <llid>				
Parameters	<type<	<raise>	<llid>		
Type	Integer	Boolean	Integer		
Min Value	0	0	0		
Max Value	5	1	65535		
Default Value	-	-	-		
Unit	-	-	-		
Description	This command either raises or clears the alarms related to ONU flow. (Flow means traffic flow for that LLID). The parameter <type> selects one of the conditions described in the table below under “Flow or LLID related alarms”. Parameter <raise>, when 1 sets the alarm and when 0, clears it. The parameter <llid> is the number with which logical link is identified. command can accept any integer between 0 and 65535 as an identity of logical link, only registered logical link identity passed in this parameter will make the command meaningful. *__Important Note__: This command is not to be used by the customer. This command is for the programmers only.				

19.3 /alm/onustats* : Raise / Clear ONU statistics alarm

Usage	**onustats*** <type> <dir> <portllid> <raise>				
Parameters	<type>	<dir>	<portllid>	<raise>	
Type	Integer	Boolean	Integer	Boolean	
Min Value	-	0	1	0	
Max Value	-	1	2	1	

Default Value	-	-	-	-	
Unit	-	-	-	-	
Description	This command raises or clears ONU statistics alarms. Parameter <dir> sets the direction, when 0, it is upstream and when 1, it is downstream. (Note : This is opposite of commands in other directories). The parameter <type> is one of the statistics identities described in the Appendix C of TK3721 Host Interface document. The parameter <port> when 1, refers to User port 1 and when 2, refers to User port 2 on the ONU board. Parameter <raise> when 1, raises the alarm and when 0, clears it. *__Important Note__: This command is not to be used by the customer. This command is for the programmers only.				

19.4 /alm/stats* : Raise / Clear OLT statistics alarm

Usage	**stats*** <type> <dir> <port llid> <raise>				
Parameters	<type>	<dir>	<portllid>	<raise>	
Type	Integer		Integer	Boolean	
Min Value	0				
Max Value	5				
Default Value	-				
Unit	-				
Description	This command raises or clears OLT statistics alarms. Parameter <dir> sets the direction, when 0, it is upstream and when 1, it is downstream. (Note : This is opposite of commands in other directories). The parameter <type> is one of the statistics identities described in the Appendix C of TK3721 Host Interface document. The parameter <port> when 0, refers to EPON port and when 1, refers to Network port on the OLT board. Parameter <raise> when 1, raises the alarm and when 0, clears it. *__Important Note__: This command is not to be used by the customer. This command is for the programmers only.				

19.5 /alm/olt* : Raise / Clear OLT port / system alarm

Usage	**olt*** <type> [<port>] <raise>				
Parameters	<type>	<port>	<raise>		
Type	Integer	Integer	Boolean		
Min Value	0	0	0		
Max Value	4	1	1		
Default Value	-	-	-		
Unit	-	-	-		
Description	This command raises or clears the alarm related to OLT EPON port or Network port. When parameter <port> is 0, it refers to EPON port, when the parameter is 1, it refers to the Network port. When parameter <raise> is 0, it clears the alarm, when 1 it sets the alarm. The parameter <type> is a number to which various alarm conditions are assigned. The table at the end of this section shows thse assignments. Note: Parameter <port> is optional on the CLI. That means, when it is passed, the command invokes actions for the port related alarms, which have assignements as shown in the table below in the column “Port related alarms”. *__Important Note__: This command is not to be used by the customer. This command is for the programmers only.				

19.6 /alm/flow* : Raise / Clear OLT flow alarm

Usage	**flow*** <type> <llid> <raise>				
Parameters	<type>	<llid>	<raise>		
Type	Integer	Integer	Boolean		
Min Value	0	0	0		

Max Value	5	65535	1		
Default Value	-	-	-		
Unit	-	-	-		
Description	This command raises or clears alarms related to flow. (Flow means the traffic flow for that LLID). The parameter <llid> is the number with which a logical link is identified. Although, the command can accept any integer between 0 and 65535 as an identity of logical link, only registered logical link identity passed in this parameter will make the command meaningful. Parameter <raise>, when 0 clears the alarm condition and when 1, sets the alarm condition. The parameter <type> is a number to which various alarm conditons are assigned. The table at the end of this section describes these assignments. ***Important Note**: This command is not to be used by the customer. This command is for the programmers only.				

System related alarms	**User port related alarms**	**Flow (LLID) related alarms**
0 – Temperature exceeded	0 – Loss of signal	0 – No response to grant
1 – Power failure	1 – Transmit signal fail	1 – Gate timeout
2 – Authentication Un-available	2 – Transmit degrade	2 – OAM Timeout
3 – GPIO0 alarm	3 – Loop back enabled	3 – Generic link fault
4 – GPIO1 alarm	4 – MAC learn table overflow	4 – Generic dying gasp
		5 – MAC table overflow

20 Directory: epon

20.1 /epon/setdownbroadcast : Set Downstream Broadcast LLID

Usage	**setdownbroadcast** <llid>				
Parameters	<llid>				
Type	Integer				
Min Value	7FFF				
Max Value	FFFF				
Default Value	7FFF				
Unit	-				
Description	This command changes the downstream broadcast LLID to a new value given by the paramter <llid>. The default value of LLID is 7FFF. The new value passed in <llid> parameter will overwrite the previous or default LLID value.				

20.2 /epon/lifstats : Get EPON LIF statistics

Usage	**lifstats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command displays line interface statistics. Line interface is the interface on the EPON side on OLT before optics module.				

20.3 /epon/stats : Get EPON statistics

Usage	**stats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	This command displays EPON port statistics.				

20.4 /epon/dmp : Dump EPON RAM

Usage	**dmp**				
Parameters	<ramselect>	<startaddr>	<nument>		
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description					

20.5 /epon/ensec : Enable downstream security

Usage	**ensec** <enable> <llid>				
Parameters	<enable>	<llid>			
Type	Boolean	Integer			

Min Value	0	0			
Max Value	1	65535			
Default Value	-	-			
Unit	-	-			
Description	This command enables the downstream security when paramter <enable> is 1 and disables the downstream security when the parameter <enable> is 0. The parameter <llid> passes the number which identifies the LLID for which the security is enabled or disabled.				

21 Directory: igmp

21.1 /igmp/groups : Dump IGMP Group table

Usage	**groups**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command dumps the current IGMP Group Database.				

21.2 /igmp/prov : Set / Show IGMP parameters

Usage	**prov** [show | <Parameter #> <Parameter Value>]				
Parameters	Show	Parameter #	Parameter Val.		
Type	Literal	Integer	Integer		
Min Value		1	0		
Max Value		13	65535		
Default Value					
Unit	-		Depends on Parameter #		
Description	This command either shows IGMP parameter settings, or modifies the given parameter to the supplied value.				

21.3 /igmp/stats : Dump IGMP Statistics

Usage	**stats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command dumps IGMP Statistics.				

21.4 /igmp/clear : Clear IGMP Statistics

Usage	**clear**				
Parameters	None				
Type					

Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command clears IGMP Statistics				

21.5 /igmp/dbg : Display / Set current IGMP Debug Trace Level

Usage	**Dbg [<New Level>]**				
Parameters	New Level				
Type	Integer				
Min Value	0				
Max Value	3				
Default Value	2				
Unit	-				
Description	This command dumps the current IGMP Debug Trace Level. 0 = Off, 1 = High, 2 = Standard, 3 = Low. Low = most verbose.				

22 Directory: dhcp

22.1 /dhcp/prov : Show / Set DHCP Provisioning

Usage	**prov**				
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command shows / sets the DHCP provisioning.				

22.2 /dhcp/prov82 : Show / Set DHCP Option 82 Provisioning

Usage	**Prov82**				
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command shows / sets the DHCP Option 82 provisioning.				

22.3 /dhcp/ipaddr : Set DHCP Relay Agent IP SA

Usage	**ipaddr**				
Parameters	IP SA				
Type					
Min Value					
Max Value					
Default Value					

Unit	-				
Description	This command sets the DHCP Relay Agent IP SA.				

22.4 /dhcp/dmp : Dump DHCP MAC / IP Table

Usage	**dmp**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command dumps the DHCP MAC / IP Table.				

22.5 /dhcp/stats : Dump DHCP Statistics

Usage	**stats**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command dumps the DHCP statistics.				

22.6 /dhcp/clear : Clear DHCP Statistics

Usage	**clear**				
Parameters	None				
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command clears the DHCP statistics.				

22.7 /dhcp/trace : Enable / Disable DHCP Trace

Usage	**trace**				
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command enables / disables DHCP trace.				

22.8 /dhcp/arptrace : Enable / Disable ARP Trace

Usage	**arptrace**				
Parameters					

Type					
Min Value					
Max Value					
Default Value					
Unit	-				
Description	This command enables / disables ARP trace.				

22.9 /dhcp/debug : Set level of the debug mode or Clear debug mode

Usage	**debug** <level>			
Parameters	<level>			
Type	Integer			
Min Value	0			
Max Value	3			
Default Value	-			

23 Directory: wdt (Watchdog Timer)

23.1 /wdt/status: Displays task ping status

Usage	**status**				
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	Displays the time since each task was pinged and the maximum amount of time that a task has ever taken to reply to a ping.				

23.2 /wdt/reset : Reset status

Usage	**reset**				
Parameters					
Type					
Min Value					
Max Value					
Default Value					
Unit					
Description	Zeros the maximum ping times reported in status.				

23.3 /wdt/enable : Enable watchdog

Usage	**enable**		
Parameters			
Type			
Min Value			
Max Value			
Default Value			
Unit			
Description	Reenables the watchdog timer if it has been disabled.		

23.4 /wdt/disable: Disable watchdog

Usage	**disable <key>**		
Parameters			
Type			
Min Value			
Max Value			
Default Value			
Unit			
Description	Disables the watchdog timer using the hardware unlock key specified by the user. If the user specifies the wrong key the watchdog hardware will not be disabled but the software that resets it will be. This will eventually cause the OLT to reset. Note that this command also disables task 'pinging.' The OLT will display the key required to unlock the watchdog hardware whenever the user enters /wdt/disable with no arguments.		

23.5 /wdt/debug: Disable watchdog

Usage	**debug level**		
Parameters			
Type			
Min Value			
Max Value			
Default Value			
Unit			
Description	Modifies watchdog debug trace levels.		