

# Firmware Release Note

Product Name:	IES-1248-51
Product Model:	3.53(ABQ.5)C0
Release Date:	2013/05/14

## Introduction

Release 3.53(ABQ.5)C0 for IES-1248-51

## Support Platforms:

IES-1248-51 3.53(ABQ.5)C0 supports model: IES-1248-51/IES-1248-51A, NetAtlas Access EMS V2.10

## Version Information:

ZyNOS version: V3.53(ABQ.5) | 05/14/2012

BootBase Version: V1.02 | 10/02/2009

DSP Version: 6.05.17

API Version: 6.05

Device Id: 0651017f

## Changes:

WAS:	3.53(ABQ.4)C0
IS:	3.53(ABQ.5)C0

Item	Category	Description
1.	[New]	<p>Add loopguard feature.</p> <p>Add alarm ad_loopguard and enet_loopguard.</p> <p>Add MIB loopguardPortTable (1.3.6.1.4.1.890.1.5.11.11.10.60.1) and MIB fields under loopguardStats (1.3.6.1.4.1.890.1.5.11.11.13.17).</p> <p>Add loopgaurd trap: dsLoopguard(1.3.6.1.4.1.890.1.5.11.11.12.5.1), dsLoopguardClear(1.3.6.1.4.1.890.1.5.11.11.12.5.2), enetLoopguard(1.3.6.1.4.1.890.1.5.11.11.12.6.1), and enetLoopguardClear(1.3.6.1.4.1.890.1.5.11.11.12.6.2).</p> <p>Add loopguard WEB under Advanced Application.</p> <p>[Risky area]</p> <p>Please also test CLI commands under “config” and “statistics showall” for loopguard.</p>
2.	[New]	<p>MIB OID for Management interface IP</p> <p>[Detailed Description]:</p>

		The new OID locates in zyxel-IESCommon.mib: iesSysIP                      OBJECT IDENTIFIER ::= { iesSysMgmt 16 } [Risky area] None.
3.	[New]	support MAC anti-spoofing & policy [Risky area] None.
4.	[New]	add MAC count limit per pvc [Risky area] None.
5.	[Change]	[CHANGE] ITS#130300916 [Symptom] To use the same OID and get the profile rate for Interleave mode profile and for Fast mode profile; Shatel When access the adslLineConfProfileTable, no matter in fast or interleave mode, user can get/set the rate configuration. The fast/interleave rate config value will be the same for fast and interleave mode. [Risky area] None.
6.	[Fix]	[FIX] ITS# 121007258 Adding wide, narrow and both mode in Annex L. [Detail] Support the Annex L mode with wide, narrow and both. Wide(default): higher transmission speed but shorter loop length. Narrow: Lower transmission speed but longer loop length. [Risky area] The hardware QA should test the Annex L mode with wide, narrow and both.
7.	[Fix]	[FIX] ITS# 120701765 Adding the circuit ID to dot1x packet. [Detail] Adding the circuit ID configure interface. The user can enable the circuit ID to attach the circuit ID to dot1x packet. [Risky area] Some radius server would not accept the dot1x packet with circuit ID.
8.	[Fix]	[FIX] ITS#130303517 [Symptom] ZyXEL request to keep only "relay-info" in remote ID of option82 [Solution] original remote ID format is "channId/relay-info/portName/portTel" new format becomes "relay-info" [Risky area] Some customer device might not accept the new format

### Features:

Item	Contents
1. ADSL	
	1.1 Standard Compliant for IES-1248-51/51A/ 53
	1.1.1 ADSL: G.992.1 Annex A, G.992.2 G.Lite, T1.413 issue 2 for IES-1248-51/ IES-1248-51A
	1.1.2 ADSL: G.992.1 Annex B for IES-1248-53
	1.1.3 ADSL2: G.992.3 Annex A, Annex L, Annex M for IES-1248-51/ IES-1248-51A
	1.1.4 ADSL2: G.992.3 Annex B for IES-1248-53
	1.1.5 ADSL2+: G.992.5 Annex A, Annex M for IES-1248-51/ IES-1248-51A

	1.1.6 ADSL2+: G.992.5 Annex B for IES-1248-53
	1.1.7 G.994.1 G.hs
	1.1.8 G.992.3, G.992.5, G.997.1 Spectral Mask and Physical Layer Parameter Management
	1.2 Standard Compliant for IES-1248-71/71 AC/ 73
	1.2.1 ADSL: G.992.1 Annex A, G.992.2 G.Lite, T1.413 issue 2 for IES-1248-71 IES-1248-71 AC
	1.2.2 ADSL: G.992.1 Annex B for IES-1248-73
	1.2.3 ADSL2: G.992.3 Annex A, Annex L for IES-1248-71/ IES-1248-71 AC
	1.2.4 ADSL2: G.992.3 Annex B for IES-1248-73
	1.2.5 ADSL2+: G.992.5 Annex A for IES-1248-71/ IES-1248-71 AC
	1.2.6 ADSL2+: G.992.5 Annex B for IES-1248-73
	1.2.7 G.994.1 G.hs
	1.2.8 G.992.3, G.992.5, G.997.1 Spectral Mask and Physical Layer Parameter Management
	1.3. Support Protocols
	1.3.1 Multiple Protocols over AAL5
	1.3.2 Multiple Protocols over AAL5 (RFC 2684,Routed mode)
	1.3.3 PPPoA and PPPoE conversion
	1.3.4 Support LLC and VC multiplexing modes.
	1.4 Monitor of ADSL lines quality
	1.5 Multiple PVC support
	1.5.1 8 PVCs per port and each PVC is configurable
	1.5.2 PVC to VLAN mapping, 802.1p priority mapping
	1.5.3 PVC default VLAN ID and 802.1p default priority
	1.5.4 PVC with ATM Forum TM 4.0 QoS traffic class (UBR, CBR, nrt-VBR, rt-VBR)
	1.5.5 Traffic downstream shaping/upstream policing
	1.5.6 Full range VPI and VCI
	1.5.7 RFC 2684 Routing Mode support(RPVC, Routed mode PVC)
	1.5.8 PPVC support(single VLAN, multiple PVC), eight priority level
	1.5.9 single PVC, multiple queue(eight priority) support
	1.5.10 IP bridging PVC
	1.6 ATM F5 OAM cells for end-to-end loop back test (ITU-T Rec. I610)
	1.7 Support EOC and Overhead Channel Access
	1.8 Support the latency path function
	1.9 Support loop diagnostic Management function
	1. DELT (dual end loop test)
	2. SELT (Single end loop test) for IES-1248-51/51A/53
	3. Tone diagnostic at link up
	1.10 Support the power Management capability, including the L2 parameters
	1.11 Support Seamless Rate Adaptation (SRA)
	1.12 US/DS Bin Mask supported
	1.13 DS/US Nominal PSD function supported
	1.14 ADSL profile Management
	1.15 Alarm profile Management with Threshold Crossing Alarm Management
	1.16 ATM profile management
	1.17 Ingress ATM Rate limiting per xDSL VC
	1.18 Per port, per PVC counter support
	1.19 15-minute ADSL PM counter support, at most 96 records(24 hour)
	1.20 24-hour ADSL PM counter support, include previous day and current day
	1.21 Up stream rate limit support (1~65535kbps)
	1.22 ITU-T G.998.1 G.bond to combine two ADSL links into one logical link.

2. Ethernet	
	2.1 Two 100/1000Base-TX or two mini GBIC for uplink and subrending
	2.2 1000Base-TX/mini GBIC auto selectable
	2.3 4 queues with packet priority scheduling (SPQ) for each ENET port
	2.4 Per port counter support
	2.5 Configurable MTU size support, 1526~1600 Bytes
3. Bridging	
	3.1 IEEE 802.1Q VLAN aware bridging
	3.1.1 Accept tagged and untagged packets from ADSL ports
	3.1.2 Accept tagged and untagged packets from uplink port
	3.2 VLAN membership definition
	3.2.1 802.1Q Tag-Based VLAN
	3.2.2 GVRP
	3.3 Port isolation in bridging
	3.3.1 CPE-CPE bridging is selectable within a VLAN, system-wise configurable
	3.4 1024 static VLAN entries (full-range VLAN ID 1~4094)
	3.5 14K (2 Etherport x 4K/Etherport + 48 DSLport x 128/DSLport) MAC address entries per system
	3.6 128 MAC per DSL port
	3.7 VLAN bridge function (multiple PVCs to one VLAN)
	3.8 VLAN cross connect (PVC to VLAN one to one mapping)
	3.9 VLAN trunking (super PVC join multiple VLAN)
	3.10 IEEE802.1ad VLAN STACKING (Double Tagging ,Q in Q) support
	3.11 IEEE 802.1w RSTP (Rapid Spanning Tree Protocol)
	3.12 Per VLAN isolation
4. Multicast support	
	4.1 Static multicast membership configuration/forwarding
	4.2 IGMP v1 & v 2 snooping/proxy support
	4.3 512 multicast groups and each group can contain 50 members
	4.4 IGMP MVLAN(Multicast VLAN) support
	4.5 IGMP group count limiting per DSL port
	4.6 IGMP filtering profile per DSL port
	4.7 IGMP Bandwidth limit per DSL port
5. Packet filtering	
	5.1 ARP filtering (pass through/block)
	5.2 IGMP filtering (pass through/block)
	5.3 DHCP filtering (pass through/block)
	5.4 NetBios filtering (pass through/block)
	5.5 PPPoE filtering (pass through/block)
	5.6 EAPoL filtering (pass through/block)
	5.7 IP filtering (pass through/block)
	5.8 ACL features are supported (which can specify more filter)
6. MAC filtering	
	6.1 MAC count limiting: the number of MAC addresses per-bridge port is configurable. (1~128, default disabled)
	6.2 Source MAC accept/deny is supported, 10 MAC address per ADSL port can be

	specified
	6.3 MAC anti-spoofing is supported
7. Downstream Broadcast control	
	7.1 Downstream Broadcast control is supported PER ADSL port PER VLAN
8. QoS	
	8.1 4 queues with packet priority scheduling (SPQ) per Ethernet port based on 802.1p
	8.2 8 queues with packet priority scheduling (SPQ) for each DSL port based on 802.1p
	8.3 Mapping of PVC to 802.1p priority
	8.4 Priority queuing based on physical port, VLAN ID, VLAN priority, MAC address source/destination, IP address source/destination and ToS & DSCP value as well as UDP/TCP source/destination port number.
	8.5 Mapping of 802.1p priority to a queue by a configurable table
	8.6 ACL features support
9. Alarm Severity Assignment Table(ASAT)	
	9.1 alarm severity assignment and setting
	9.2 Current alarm list support
	9.3 History alarm list support
	9.4 Manually alarm cleaning support
10. Broadband Access Service (BAS) support	
	10.1 DHCP relay agent option 82, sub option1(Circuit ID), sub Option2(Remote ID)
	10.2 IEEE 802.1x port-based authentication (local profile or remote Radius support)
	10.3 DHCP Relay per VLAN
	10.4 DHCP IP anti-spoofing support
	10.5 PPPoE intermediate agent
11. RSTP/GVRP support	
	11.1 On Ethernet interfaces
12. RFC 2684 routed mode support	
	12.1 IPoA to IPoE conversion: support CPE using RFC 2684 routed mode
13. PPPoA to PPPoE support	
	13.1 PPPoA to PPPoE conversion, support CPE using PPPoA mode

14. Broadcast storm control	
	14.1 System will limit Unknown unicast/broadcast traffic rate to save system resource
	14.2 System will limit the rate on Host terminated traffics(IGMP, DHCP, RSTP, GVRP, EAPoL)
15. Security	
	15.1 DHCP IP anti-spoofing
	15.1.1 Static IP entry pool for DHCP snoop support
	15.2 MAC anti-spoofing
	15.3 Multicast security feature
	15.3.1 Dynamic Multicast Group from ADSL will reject (prevent hacker attack)
	15.3.2 Static Multicast Group from ADSL will forward, to provide user-user
16. Management support	
	16.1 CLI-based Management from console/Ethernet port
	16.2 SNMP v1/v2c and telnet through Inband Ethernet interface.
	16.3 4 SNMP TRAP destination hosts can be configured
	16.4 Web-based Management through Inband Ethernet interface including status and even report.
	16.5 Secured Host
	16.5.1 Configure up to sixteen ranges of remote host IP addresses for Management
	16.6 System Error Logging
	16.6.1 The system error logs may be viewed again after a warm restart.
	16.7 F/W upgrade, configuration backup & restore via FTP and WEB
	16.8 Subscriber info support – through ADSL port name and telephone number
	16.9 Text system configuration file support
	16.10 multiple telnet(5 sessions) and multi-level (High/Middle/Low) login support
	16.11 CI timeout support
	16.12 EMS Management support ( NetAtlas Access V2.10 and above)
	16.13 remote reset
	16.14 TACACS+ authentication
17. Alarm input point support	
	17.1 support 3 external alarm input points, user-editable alarm name
18. Supported MIBs	
	18.1 RFC1213 SNMP MIB II
	18.2 RFC1493 Bridge MIB
	18.3 RFC1643 Ethernet MIB
	18.4 RFC2674 Q MIB
	18.5 RFC2662 ADSL line MIB
	18.6 RFC3440 ADSL Extension line MIB
	18.7 RFC1757 RMON MIB, group 1,2,3,9
	18.8 ZyXEL proprietary MIB

**CLI Command Table:**

Class	CLI/W EB	Command	Parameters	Description	Remark
sys					
	1/1	client disable	<index>	Turns off a secure client.	
	1/1	client enable	<index>	Turns on a secure client.	
	1/1	client set	<index> <start ip> <end ip> [[telnet] [ftp] [web] [icmp] [snmp]]	Sets a secured client set: a range of IP addresses from which you can manage the device and the protocols that can be used.	
	2/3	client show		Displays the device's secured client settings.	
	1/1	date set	<yyyy mm dd>	Sets the system's date.	
	3/3	date show		Displays the system's current date.	
	2/1	info contact	<contact>	Sets contact person information.	
	2/1	info hostname	<hostname>	Sets the system name.	
	2/1	info location	<location>	Sets location information.	
	3/3	info show		Displays general system information.	
	1/1	log clear		Clears the device's logs.	
	2/3	log show		Displays the device's logs.	
	1/1	monitor disable		Turns the hardware monitor off.	
	1/1	monitor enable		Turns the hardware monitor on.	
	1/1	monitor extalm	<idx> <name>	Set external alarm name.	For IES-1248 series only
	1/1	monitor flimit	<idx> <high> <low>	Sets the maximum (<high>) or minimum (<low>) fan revs per minute (RPM) at the specified fan (<idx>). Idx: 1=Fan 1, 2=Fan 2, 3=Fan 3.	For IES-1248 series only
	1/1	monitor ftrapmode	[normal two]	Displays or sets the Fan trap mode.	For IES-1248 series only
	3/3	monitor show		Displays the hardware monitor's statistics.	
	1/1	monitor tlimit	<idx> <high> <low>	Sets the maximum (<high>) or minimum (<low>) temperature at the specified temperature sensor. You can specify a temperature with up to three digits after a decimal point (-50.025 for example). Temperature sensor locations: Idx: 1=DSL, 2=CPU, 3=HW monitor	
	1/1	monitor vlimit	<idx> <high> <low>	Sets the maximum (<high>) or minimum (<low>) voltage at the specified voltage sensor. You can specify a voltage with up to three digits after a decimal point (0.941 for example). Normal voltage at each sensor: Idx: 1=1.0v, 2=1.8v, 3=3.3v, 4=24v	For IES-1248-71/71 AC/73 only
	1/1	monitor vlimit	<idx> <high> <low>	Sets the maximum (<high>) or minimum (<low>) voltage at the specified voltage	For IES-1248-51/

			sensor. You can specify a voltage with up to three digits after a decimal point (0.941 for example). Normal voltage at each sensor: idx: 1=1.2v, 2=1.8v, 3=3.3v, 4=24v	51A/53 only
1/1	monitor vlimit	<idx> <high> <low>	Sets the maximum (<high>) or minimum (<low>) voltage at the specified voltage sensor. You can specify a voltage with up to three digits after a decimal point (0.941 for example). Normal voltage at each sensor: idx: 1=1.2v, 2=1.8v, 3=3.3v, 4=18v	For AAM1212-51/53 only
1/1	reboot	[show sec cancel]	Sets the reboot timer or displays the timer and remaining time for reboot. If a reboot has been scheduled, use this command to prevent a reboot.	
1/1	server disable	<telnet ftp web icmp>	Turns off a service.	
1/1	server enable	<telnet ftp web icmp>	Turns on a service.	
1/1	server port	<telnet ftp web> <port>	Sets a port for a service.	
2/3	server show		Displays the device's service status and port numbers.	
1/1	snmp getcommunity	<community>	Sets the SNMP GetRequest community.	
1/1	snmp setcommunity	<community>	Sets the SNMP SetRequest community.	
1/1	snmp show		Displays SNMP settings.	
1/1	snmp trapcommunity	<community>	Sets the SNMP Trap community.	
1/1	snmp trapdst del	<index>	Deletes the SNMP trap server	
1/1	snmp trapdst set	<index> <ip> [<port>]	Sets the SNMP trap server and listening port. Set 0.0.0.0 to not send any SNMP traps.	
1/1	snmp trusthost	<ip>	Sets the SNMP trusted host. Set 0.0.0.0 to trust all hosts.	
1/~	stdio set	<minute 0:no timeout>	Sets Current Stdio Timeout.	
3/~	stdio show		Displays Current Stdio Timeout.	
1/1	syslog disable		Turns off the syslog logging.	
1/1	syslog enable		Turns on the syslog logging.	
1/1	syslog server	<ip>	Sets the IP address of the syslog server.	
2/3	syslog show		Displays the syslog settings.	
1/1	time set	<hh> [<mm> [ss]]	Sets the system's time.	
3/3	time show		Displays the system's current time.	
1/1	timeserver	<daytime> <ip>	Sets the time service protocol, time server's	



adsl

	set	[nosync]	IP address and the device's time zone.	
1/1	timeserver set	<none>	Sets the system to not use a time server.	
1/1	timeserver set	<time ntp> <ip> <utc[<+ ->0100~1200]> [nosync]	Sets the time service protocol, time server's IP address and the device's time zone.	
2/3	timeserver show		Displays the system's time server.	
1/1	timeserver sync		Retrieves the date and time from the time server.	
1/1	user auth	<local radius landr tacacsplus landt randl tandl>	Set authentication method.	
1/1	user delete	<name>	Removes the specified user name of multi-login.	
1/1	user disable	<name>	Turns off the specified user name of multi-login.	
1/1	user enable	<name>	Turns on the specified user name of multi-login.	
2/~	user online		Displays online user info.	
1/1	user server	<ip> <port> <secret> [high middle low deny]	Set remote authentication server IP address and secret	
1/1	user set	<username> <password> <high middle low>	Creates or edits the password and privilege level of the specified user name.	
2/3	user show		Displays the authentication mode, RADIUS server settings and user info.	
1/~	wdog set	<msec 0:disable>	Sets the watchdog count. 0 turns the watchdog off.	
1/~	wdog show		Displays the current watchdog firmware protection feature status and timer.	
2/1	slotid set	<slotid>	Set slot id of DHCP Relay Agent packet and PPPoE Intermediate Agent packet	
3/3	slotid show		Displays the slot id setting	
1/1	alarmprofile delete	<profile>	Removes an alarm profile.	
1/1	alarmprofile map	<portlist> <profile>	Maps specified ADSL ports to an alarm profile.	
1/1	alarmprofile set	<profile> [<atuc lofs> <atur lofs> <atuc loss> <atur loss> <atuc olls> <atuc lprs> <atur lprs> <atuc ess> <atur ess> <atuc fast rateup> <atur fast rateup> <atuc interleave rateup> <atur interleave rateup> <atuc fast ratedown> <atur fast ratedown>	Configures an alarm profile.	

		<atuc interleave ratedown> <atur interleave ratedown> <init fail enable> <atuc fail fast> <atuc ses> <atur ses> <atuc uas> <atur uas>]		
3/3	alarmprofile show	[profile]	Displays alarm profiles and their settings.	
3/3	alarmprofile showmap	[port number]	Displays alarm profile to ADSL port mapping.	
3/~	alarmprofile showport	<port number>	Displays which alarm profile parameters are mapped to an ADSL port.	
1/1	annexl disable	<portlist>	Turns off the Annex L feature on the specified port(s).	For IES-1248-51/ 51A/71/71 AC, AAM1212-51 only
1/1	annexl enable	<portlist>	Turns on the Annex L feature on the specified port(s).	For IES-1248-51/ 51A/71/71 AC, AAM1212-51 only
2/3	annexl show	<portlist>	Displays the Annex L feature setting for the specified port(s).	For IES-1248-51/ 51A/71/71 AC, AAM1212-51 only
1/1	annexm disable	<portlist>	Turns off the Annex M feature on the specified port(s).	For IES-1248-51/ 51A, AAM1212-51 only
1/1	annexm enable	<portlist>	Turns on the Annex M feature on the specified port(s).	For IES-1248-51/ 51A, AAM1212-51 only
2/3	annexm show	<portlist>	Displays the Annex M feature setting for the specified port(s).	For IES-1248-51/ 51A, AAM1212-51 only
2/1	disable	<portlist>	Turns off the specified ADSL ports.	
2/1	dsbcast disable	<portlist> <vlanlist>	Disable downstream broadcast on xDSL port	
2/1	dsbcast enable	<portlist> <vlanlist>	Enable downstream broadcast on xDSL port	
3/3	dsbcast show	<portlist>	Show downstream broadcast on xDSL port	

1/1	dscarrier0	<port> [<m1> <m2> <m3> <m4> <m5> <m6> <m7>]	Display or set DS carrier mask from tone 32 to 255	For IES-1248-51/51A/53/71/71 AC, AAM1212-51/53 only
1/1	dscarrier0	<port> [<m2> <m3> <m4> <m5> <m6> <m7>]	Display or set DS carrier mask from tone 64 to 255	For IES-1248-73 only
2/1	enable	<portlist>	Turns on the specified ADSL ports.	
1/1	gbond delete	<bond_name>	Remove gbond group setting	Available in 3.53 Not available In IES-1248-71 / IES-1247-73
1/1	gbond set	<bond_name> <portlist>	Set gbond name and its members.	Available in 3.53 Not available In IES-1248-71 / IES-1247-73
3/3	gbond show	[<bond_name>]	Display gbond setting.	Available in 3.53 Not available In IES-1248-71 / IES-1247-73
1/1	inp	<portlist> [<usINP> [,<dsINP>] ]	Display or set US/DS Impulse Noise Protection(INP)	
1/1	ipbpvc arproxy agingtime set	<sec>	Sets the valid time interval of a learned MAC address. 10..10000 seconds	Available in 3.53, For IES-1248 series only
2/3	ipbpvc arproxy agingtime show		Display the current time interval of a learned MAC address	Available in 3.53, For IES-1248 series only
1/1	ipbpvc arproxy flush	all   edgerouter [<ip> <vid>]   interface [<ip>/<mask> <vid>]	Flush the learned MAC addresses manually	Available in 3.53, For IES-1248 series only
2/3	ipbpvc arproxy show	[domain <domain> [edgerouter [<ip> <vid>]]   [interface [<ip/mask> <vid>]]]	Displays learnt MAC table for a domain. Displays learnt MAC table for all/an edge router. Displays learnt MAC table for all/an interface	Available in 3.53, For IES-1248 series only
1/1	ipbpvc delete	<portlist> <vpi> <vci>	Remove IP Bridge PVC.	Available in 3.53, For IES-1248 series only
1/1	ipbpvc	<domain name>	Delete a domain. Any domain which	Available in

	domain delete		contains VLANs can not be deleted, it must remove VLAN first.	3.53, For IES-1248 series only
1/1	ipbpvc domain dhcpvlan disable	<domain name>	Disable DHCP Vlan in a domain	Available in 3.53, For IES-1248 series only
1/1	ipbpvc domain dhcpvlan enable	<domain name> <vid>	Enable DHCP Vlan in a domain	Available in 3.53, For IES-1248 series only
1/1	ipbpvc domain set	<domain name>	Create domain, maximum 8 domains in the system.	Available in 3.53, For IES-1248 series only
2/3	ipbpvc domain show	[<domain name>]	Display domain setting	Available in 3.53, For IES-1248 series only
1/1	ipbpvc domain vlan	<domain name> <vlan list> <registration>	Set vlan to join or leave specified domain, maximum 8 vlans in one domain.	Available in 3.53, For IES-1248 series only
1/1	ipbpvc edgerouter delete	<ip> <vid>	Delete specified edge router setting	Available in 3.53, For IES-1248 series only
1/1	ipbpvc edgerouter set	<ip>/<mask> <vid>	Sets the edge router	Available in 3.53, For IES-1248 series only
2/3	ipbpvc edgerouter show	[<vid>]	Displays the edge router setting.	Available in 3.53, For IES-1248 series only
1/1	ipbpvc interface delete	<ip>/<mask> <vid>	Delete an IP interface.	Available in 3.53, For IES-1248 series only
2/3	ipbpvc interface runtime	[<ip>/<mask>   <vid>   <ip>/<mask> <vid>]	Display runtime interfaces by optional <ip>/<mask> and vlan id parameter	Available in 3.53, For IES-1248 series only
1/1	ipbpvc interface set	<ip>/<mask> <vid> [<port> <vpi> <vci>]	Sets the interface.	Available in 3.53, For IES-1248 series only
2/3	ipbpvc interface show	[<ip>/<mask>   <vid>   <ip>/<mask> <vid>]	Displays the interface setting by optional <ip>/<mask> and vlan id parameter	Available in 3.53, For IES-1248 series only
1/1	ipbpvc route delete	<domain name> <ip>/<mask>	Deletes route entry from specified domain	Available in 3.53, For

		<nexthop>		IES-1248 series only
2/3	ipbpvc route runtime	[<domain name>   <ip>/<mask>   <domain> <ip>/<mask>]	Displays the runtime route information	Available in 3.53, For IES-1248 series only
1/1	ipbpvc route set	<domain name> <ip>/<mask> <nexthop> <metric> [<priority>]	Sets a new route to specified edge router for a given domain. Maximum 16 routes in a domain	Available in 3.53, For IES-1248 series only
2/3	ipbpvc route show	[<domain name>   <ip>/<mask>   <domain> <ip>/<mask>]	Displays current routing table for specific domain.	Available in 3.53, For IES-1248 series only
1/1	ipbpvc set	<portlist> <vpi> <vci> <DS vcprofile[,US vcprofile]> <super  vid = 1..4094 <priority>> <ipab_type>	Sets IP Bridge PVC.	Available in 3.53, For IES-1248 series only
2/3	ipbpvc show	[<portlist> [<vpi> <vci>]]	Displays IP Bridge PVC setting	Available in 3.53, For IES-1248 series only
3/3	linediag getld	<port number>	Displays the specified port line diagnostics.	
3/3	linediag getld992_3	<port number>	Displays the specified port line diagnostics.	
3/3	linediag getselt	<port number>	Displays the specified port line SELT.	For IES-1248-51/51A/53, AAM1212-51/53 only
1/1	linediag setld	<port number>	Sets the specified port to line diagnostic mode.	
1/1	linediag setselt	<port number>	Sets the specified port to line SELT.	For IES-1248-51/51A/53, AAM1212-51/53 only
3/3	linediag toneDiag	<port number>	Displays the specified port line diagnostics.	
1/1	loopback	<portlist> <f5> <vpi> <vci>	Performs an OAMF5 loopback test.	
2/1	name	<portlist> <name>	Sets the name of a port(s).	
3/3	paepvc counter	<portlist> [<vpi> <vci>]	Display PPPoAoE PVC counter	
2/1	paepvc delete	<portlist> <vpi> <vci>	Delete a PPPoAoE PVC	
3/3	paepvc session	<portlist> [<vpi> <vci>]	Display PPPoAoE PVC session status	
2/1	paepvc set	<portlist> <vpi> <vci> <DS	Create/modify a PPPoAoE PVC <acname>: access concentrator name	

		vcprofile[,US vcprofile]> <pvid> <priority> [acname <string32> [<svcname <string32> [hellotime <time>]	<svcname>: service name, <time>: 0~600 in unit of second Default: acname="", svcname="", <time>=600	
3/3	paepvc show	[<portlist>[<vpi> <vci>]]	Display PPPoAoE PVC setting by 'port'	
1/1	pmm disable	<portlist>	Turns off the Power Management feature on the specified port(s).	
1/1	pmm enable	<portlist> <L2 L3>	Turns on the Power Management feature on the specified port(s).	
1/1	pmm param	<portlist> [<l0time> <l2time> <l2atpr> <l2atprt>][<max_l2r ate> <min_l2rate> <l0tol2_rate>]	Displays or sets the Power Management parameter	
1/1	pmm set	<portlist> <L0 L2 L3>	Sets the Power Management mode	For IES-1248-71/ 71 AC/73 series only
1/1	pmm set	<portlist> <L0 L2>	Sets the Power Management mode	For IES-1248-51/ 51A/53,AAM1 212-51/53 only
2/3	pmm show	<portlist>	Displays the Power Management feature setting for the specified port(s).	
1/1	ppvc delete	<portlist> <vpi> <vci>	Remove Priority PVC.	
1/1	ppvc member delete	<portlist> <vpi> <vci> <member vpi> <member vci>	Remove PPVC member.	
1/1	ppvc member set	<portlist> <vpi> <vci> <member vpi> <member vci> <DS vcprofile[,US vcprofile]> <level>	Set PPVC member.	
2/3	ppvc member show	[<portlist> [<vpi> <vci>]	Display PPVC member settings.	
1/1	ppvc set	<portlist> <vpi> <vci> <encap> <pvid> <priority>	Set priority PVC.	
2/3	ppvc show	[<portlist> [<vpi> <vci>]]	Display priority PVC settings	
1/1	profile delete	<profile>	Removes an ADSL profile.	
1/1	profile map	<portlist> <profile> <glite gdm t1413 a uto adsl2 adsl2+>	Assigns a specific profile to a port(s) and sets the port's ADSL mode).	For IES-1248-51/ 51A/71/71 AC, AAM1212-51 only

1/1	profile map	<portlist> <profile> <anxb etsi auto adsl2 adsl2+>	Assigns a specific profile to a port(s) and sets the port's ADSL mode).	For IES-1248-73 only
1/1	profile map	<portlist> <profile> <gdm etsi auto adsl2 adsl2+>	Assigns a specific profile to a port(s) and sets the port's ADSL mode).	For IES-1248-53, AAM1212-53 only
1/1	profile set	<profile> <fast interleave [=<up delay>,<down delay>]> <up max rate> <down max rate> [<up target margin> <up min margin> <up max margin> <up min rate> <down target margin> <down min margin> <down max margin> <down min rate> <up down-shift margin> <up up-shift margin> <down down-shift margin> <down up-shift margin>]	Creates an ADSL line profile.	
3/3	profile show	[profile]	Displays profile contents.	
1/1	pvc delete	<portlist> <vpi> <vci>	Removes a PVC setting.	
1/1	pvc set	<portlist> <vpi> <vci> <super  vid = 1..4094 <priority>> <DS vcprofile[,US vcprofile]>	Creates or modifies a PVC setting.	
2/3	pvc show	[<portlist> [<vpi> <vci>]]	Displays PVC settings.	
1/1	queuemap set	<priority> <queue level>	Set the xDSL priority level to physical queue mapping.	
2/3	queuemap show		Displays the xDSL priority level to physical queue mapping.	
1/1	reset	<portlist>	Reset xDSL port	
1/1	rpvc arp agingtime set	<sec, 10..10000 0:disable>	Set RPVC ARP proxy aging time	
2/3	rpvc arp agingtime show		Display RPVC ARP proxy aging time	
1/1	rpvc arp flush		Flush RPVC ARP proxy table	
2/3	rpvc arp show		Show RPVC ARP proxy table	
1/1	rpvc delete	<portlist> <vpi> <vci>	Delete RPVC on a port	

1/1	rpvc gateway delete	<gateway ip>	Delete gateway for RPVC	
1/1	rpvc gateway set	<gateway ip> <vlan id> [<priority>]	Set gateway for RPVC	
2/3	rpvc gateway show		Display gateway for RPVC	
1/1	rpvc route delete	<port number> <vpi> <vci> <ip>/<netmask>	Delete RPVC routing subnet on a port	
1/1	rpvc route set	<port number> <vpi> <vci> <ip>/<netmask>	Set RPVC routing subnet on a port	
2/3	rpvc route show	<portlist>	Display RPVC routing subnet on a port	
1/1	rpvc set	<portlist> <vpi> <vci> <DS vcprofile[,US vcprofile]> <ip>/<netmask> <gateway ip>	Set RPVC on a port	
2/3	rpvc show	<portlist>	Display RPVC on a port	
3/3	show	[<portlist>]	Displays the ADSL settings.	
1/1	sra disable	<portlist>	Turns off SRA ADSL2+ on the specified port(s).	
1/1	sra enable	<portlist>	Turns on Seamless Rate Adaptation (SRA) ADSL2+ on the specified port(s).	
2/3	sra show	<portlist>	Displays the SRA ADSL2+ setting for the specified port(s).	
2/1	tel	<portlist> <tel>	Records an ADSL port(s) subscriber's telephone number.	
2/1	tlspvc delete	<portlist> <vpi> <vci>	Delete a TLS PVC	
2/1	tlspvc set	<portlist> <vpi> <vci> <DS vcprofile[,US vcprofile]> <pvid> <priority>	Create/modify a TLS PVC <vid>: s-tag VLAN id <priority>: priority for s-tag	
3/3	tlspvc show	[<portlist> [<vpi> <vci>]]	Display TLS PVC setting by 'port'	
1/1	uscarrier	<port number> [<m0>]	Display or set US carrier mask from tone 0 to 31	For IES-1248-71/71 AC only
1/1	uscarrier	<port number> [<m0> <m1>]	Display or set US carrier mask from tone 0 to 63	For IES-1248-51/51A/53/73, AAM1212-51/53 only
1/1	usnompsd	<portNo> [<max nominal psd>]	Display or set Maximum nominal transmit PSD in the US direction	
1/1	uslimit disable	<portlist> <vpi> <vci>	Disable a upstream rate-limit setting	Available in 3.53
1/1	uslimit	<portlist> <vpi>	Enable a upstream rate-limit setting	Available in



alarm		enable	<vci>		3.53
	1/1	uslimit set	<portlist> <vpi> <vci> <rate>	Sets a upstream rate limit to a PVC (PVC could be pvc, ppvc, ipbpvc and tlspvc)	Available in 3.53
	2/3	uslimit show	[<portlist> [<vpi> <vci>]]	Displays current up rate-limit settings of PVCs	Available in 3.53
	1/1	vcprofile delete	<vcprofile>	Removes a virtual channel profile.	
	1/1	vcprofile set	<vcprofile> <vc llc> <vbr(rt-vbr) nrt-vbr> <pcr> <cdvt> <scr mcr> <bt nrm>	Creates a VBR virtual channel profile (with encapsulation).	
	1/1	vcprofile set	<vcprofile> <vc llc> <ubr cbr> <pcr> <cdvt>	Creates a UBR or CBR virtual channel profile (with encapsulation).	
	3/3	vcprofile show	[vcprofile]	Shows a virtual channel profile's contents.	
	1/1	pinarrange set	<IES1248  IES5000>	Set pin assignment type	
	1/1	pinarrange show		Display current pin assignment type	
	2/1	clear		Clear current alarm	
	2/~	cutoff		Alarm cutoff	
	2/~	history clear	<alarm> all <condition> all	Clear history alarm	
	2/~	history clear	<severity>	Clear history alarm	
	3/~	history show	[<severity> all] [<alarm> all] [<condition> all] [<sdate> all] [<edate> all] [for rev] [detail]	Display history alarm	
	2/1	port set	<all <portlist>> <severity>	Set xDSL port threshold of severity which will issue an alarm	
	3/3	port show		Display xDSL port threshold of severity which will issue an alarm	
	3/3	show	[<severity> all] [<alarm> all] [<condition> all] [<sdate> all] [<edate> all] [for rev] [detail]	Display current alarm	
	3/3	tablelist	[<alarm> all] [<severity> all] [<fac> all] [<target>[,<target>] ] [<condition> all]	Display system alarm table	
	2/1	xedit	<alarm> all <cond> <condcode> > <severity> <fac> <target>[,<target>] [clearable]	Edit system alarm table	
	2/1	acl delete	<portlist> <vpi>	Remove an acl profile from PVC	
switch					

		<vci> <profile>	<profile>: string32 up to 8 profiles if only one PVC has profiles	
2/1	acl profile delete	<profile>	delete an acl profile	
2/1	acl profile set	<profile> <rule> <action>	Create/modify a acl profile <rule>: <l2> <l3_protocol> <mfc> <l2>: Layer-2 match fields (listed in priority sequence match) etype <etype> vlan <vid> etype <etype> smac <mac> etype <etype> dmac <mac> vlan <vid> smac <mac> vlan <vid> dmac <mac> smac <mac> dmac <mac> vlan <vid> priority <priority> etype <etype> vlan <vid> smac <mac> dmac <mac> priority <priority> protocol <protocol>  <priority>: 0~7 <etype>: 0~65535 <protocol>: tcp udp ospf igmp ip gre icmp <ptype> <ptype>: 0~65535  Note: multiple-field rules (position independent):  MFC rules: {srcip <ip>/<mask>{  dstip <ip>/<mask>{  tos <tos>{  srcport <port>{  dstport <port>}}}}}  <mask>: 0~32 <tos>:0~255 <port>:0~65535  <action>: rate <rate> rvlan <rvlan> rpri <rpri> deny <rate>: 1~65535 in unit of kbps <rvlan>: replaced vlan 1~4094 <rpri>: replaced priority 0~7	
3/3	acl profile show	[<profile>]	Display an acl profile	
3/3	acl profile showmap	<profile>	Display acl profile reference	
2/1	acl set	<portlist> <vpi> <vci> <profile>	Apply an acl profile to a PVC. Max. 8 profiles per port	
3/3	acl show	[<portlist>] [<vpi> <vci>]	Show acl profile setting for a PVC	
2/1	dhcprelay	<vid> all	Disable DHCP relay function per vlan	Add <vid> all

	disable			in 3.53
2/1	dhcprelay enable	<vid> all	Enable DHCP relay function per vlan	Add <vid> all in 3.53
2/1	dhcprelay opt82sub2 disable	<vid> all	Turns off option 82 sub-option 2 per vlan	Add <vid> all in 3.53
2/1	dhcprelay opt82sub2 enable	<vid> all	Turns on option 82 sub-option 2 per vlan	Add <vid> all in 3.53
2/1	dhcprelay opt82sub2 set	<vid> all <relay info>	Adds the specified information for sub-option 2 per vlan	Add <vid> all in 3.53
2/1	dhcprelay option82 disable	<vid> all	Turns off the DHCP relay agent information (Option 82) feature per vlan.	Add <vid> all in 3.53
2/1	dhcprelay option82 enable	<vid> all	Turns on the DHCP relay agent information (Option 82) feature per vlan.	Add <vid> all in 3.53
2/1	dhcprelay option82 set	<vid> all <relay info>	Set option82 information per vlan	Add <vid> all in 3.53
1/1	dhcprelay optionmode	<<vid> all> <private tr101 [vid on off]>	Set option 82 Sub-option 1 and Sub-option 2 format to TR-101 or private mode.	Available in 3.53
2/1	dhcprelay relaymode	<mode>	<mode>:auto, both	
2/1	dhcprelay server active	<vid> all <active-server>	Set primary and secondary server per vlan	Add <vid> all in 3.53
2/1	dhcprelay server delete	<vid> all [<primary-server>]	Delete servers of specific vlan	Add <vid> all in 3.53
2/1	dhcprelay server set	<vid> <primary-server> [<secondary-server>]	Set DHCP server IP address where the DHCP request will forward to <vid>: VLAN <primary-server>: IP address for primary server <secondary-server>: IP address for secondary server. Maximum 32 entries can be configured.Default: (empty list)	
3/3	dhcprelay show		Displays DHCP relay settings.	
2/1	dhcpsnoop disable	<portlist>	Disable ip spoofing for a port	
2/1	dhcpsnoop enable	<portlist>	Enable ip spoofing for a port	
2/1	dhcpsnoop flush	<portlist>	Flush DHCP snooping table for a port	
2/~	dhcpsnoop lan2lan disable		Disable DHCP LAN to LAN service	
2/~	dhcpsnoop lan2lan enable		Enable DHCP LAN to LAN service	
2/~	dhcpsnoop lan2lan show		Displays DHCP LAN to LAN setting	

2/1	dhcpsnoop pool delete	<port> <ip>	Delete static IP for dhcp snoop per port	Available in 3.53
2/1	dhcpsnoop pool set	<port> <ip>	Set static IP for dhcp snoop per port	Available in 3.53
3/3	dhcpsnoop show	[portlist]	Display DHCP snooping result on a port	
1/1	dot1x auth	<profile radius>	Set authentication method to profile or radius.	
1/1	dot1x disable		Turn off dot1x.	
1/1	dot1x enable		Turn on dot1x.	
1/1	dot1x port control	<portlist> <auto auth unauth>	Set port authentication status.	
1/1	dot1x port disable	<portlist>	Turn off dot1x on port.	
1/1	dot1x port enable	<portlist>	Turn on dot1x on port.	
1/1	dot1x port peroid	<portlist> <period>	Set port reauth period.	
1/1	dot1x port reauth	<portlist> <on off>	Turn on or turn off port to do reauthentication.	
1/1	dot1x profile delete	<name>	Remove account for profile mode.	
1/1	dot1x profile set	<name> <password>	Set account and password for profile mode.	
2/3	dot1x profile show		Display accounts for profile mode.	
1/1	dot1x radius ip	<ip>	Set Radius server IP.	
1/1	dot1x radius port	<port>	Set Radius server port.	
1/1	dot1x radius secret	<secret>	Set Radius server secret.	
2/3	dot1x radius show		Display radius server settings.	
2/3	dot1x show	[portlist]	Display dot1x settings.	
2/1	dscp disable	<portlist>	Disable ADSL/ENET ports to use DSCP mapping	
2/1	dscp enable	<portlist>	Enable ADSL/ENET ports to use DSCP mapping	
2/1	dscp map set	<srccp> <mappri> <srccp>: source code point, 0~63, example: 1,3~5,10~15 <mappri> : mapping priority, 0~7	Setting the DSCP code to 802.1p mapping table	
3/3	dscp map show		Displaying the DSCP code to 802.1p mapping table	
3/3	dscp show	[portlist]	Displaying per port DSCP setting	
1/1	enet disable	<portlist>	Turns off the specified Ethernet port(s).	
1/1	enet enable	<portlist>	Turns on the specified Ethernet port(s).	
1/~	enet length set	<portlist> auto <length>	Manually set the ENET cable length, this is used for very rare cases when connect to some ENET PHY, in most cases, should set	AAM1212-51/53 only

			to auto(system default)	
2/~	enet length show		Display the ENET cable length setting	AAM1212-51/53 only
1/1	enet maxmtu set	<size>	Sets the maximum MTU size for layer 2 frame, size from 1526 to 1600, default value is 1526	Available in 3.53
2/3	enet maxmtu show		Displays current maximum MTU size	Available in 3.53
1/1	enet name	<portlist> <name>	Sets the Ethernet port(s) name.	
1/1	enet reset	<portlist>	Reset the ENET interface.	
2/3	enet show		Displays the Ethernet port settings.	
1/1	enet speed	<portlist> <1000fiber<auto full half> 1000copper 100copper<auto full half> auto>	Sets the Ethernet port(s) connection speed.	For IES-1248 series only
1/1	garptimer join	<join msec>	Set system's garp join time.	
1/1	garptimer leave	<leave msec>	Set system's garp leave time.	
1/1	garptimer leaveall	<leaveall msec>	Set system's garp leaveall time.	
2/3	garptimer show		Display the system's garp settings.	
1/1	igmpfilter profile delete	<name>	Removes an IGMP filter profile.	
1/1	igmpfilter profile set	<name> <index> <startip> <endip>	Configures an IGMP filter profile.	
2/3	igmpfilter profile show	[name]	Displays an IGMP filter profile's settings.	
1/1	igmpfilter set	<portlist> <name>	Sets an ADSL port(s) to use an IGMP filter profile.	
2/3	igmpfilter show	[portlist]	Displays which IGMP filter profile an ADSL port(s) is using.	
2/1	igmpsnoop bandwidth default	<bandwidth>	Set default bandwidth for multicast IP channels	
2/1	igmpsnoop bandwidth delete	<index>	Delete an entry of bandwidth budget setting specified in <index> field.	
2/1	igmpsnoop bandwidth port disable	<portlist>	Disable bandwidth budget control for a port	
2/1	igmpsnoop bandwidth port enable	<portlist>	Enable bandwidth budget control for a port	
2/1	igmpsnoop bandwidth port set	<portlist> <bandwidth>	Set bandwidth threshold for a port <bandwidth>: 1..100,000, in unit of kbps	
3/3	igmpsnoop bandwidth port show	<portlist>	Show bandwidth control setting for a port	
2/1	igmpsnoop	<index>	Set bandwidth budget for a range of	

	bandwidth set	<start-mcast-ip> <end-mcast-ip> <bandwidth>	multicast IP channels specified in <index> field. <index>: 1~96 <start-mcast-ip>: <ip>, start multicast IP address <end-mcast-ip>: <ip>, end multicast IP address	
3/3	igmpsnoop bandwidth show		Show bandwidth budget for a range of multicast IP channels	
1/1	igmpsnoop disable		Turns off IGMP snooping.	
1/1	igmpsnoop enable	<proxy snooping> [v2 v3]	Enable IGMP snooping or proxy with V2 or V3 mode (default is v2).	Add [v2 v3] in 3.53
1/1	igmpsnoop igmpcount disable	<portlist>	Disable IGMP count limiting to subscriber port	
1/1	igmpsnoop igmpcount enable	<portlist>	Enable IGMP count limiting to subscriber port	
1/1	igmpsnoop igmpcount set	<portlist> <count>	Set IGMP count limiting number to subscriber port	
2/3	igmpsnoop igmpcount show	[portlist]	Display IGMP count limiting setting status on the specified slot	
1/1	igmpsnoop mvlan delete	<vlanlist>	Removes a MVLAN entry.	
1/1	igmpsnoop mvlan disable	<vid>	Turns off a MVLAN entry.	
1/1	igmpsnoop mvlan enable	<vid>	Turns on a MVLAN entry.	
1/1	igmpsnoop mvlan group delete	<vid> <index>	Delete a multicast to VLAN translation entry.	
1/1	igmpsnoop mvlan group set	<vid> <index> <start_mcast_ip> <end_mcast_ip>	Create a multicast to VLAN translation entry. Up to 16 entries <index>: 1~16, Note: IP address in each entry should be disjointed	
2/3	igmpsnoop mvlan group show	<vlanlist>	Show a multicast to VLAN translation entry.	
1/1	igmpsnoop mvlan name	<vid> <name>	Sets the MVLAN ID name.	Available in 3.53
1/1	igmpsnoop mvlan set	<vid> <portlist>:<F<T U> X> [<portlist>:<F<T U> X> ...] [name]	Configures a MVLAN entry.	
2/3	igmpsnoop mvlan show	<vlanlist>	Show multicast vlans, include group information	
1/1	igmpsnoop qryvid delete	<vid>	Delete IGMP query VLAN ID in IGMP proxy mode	Available in 3.53
1/1	igmpsnoop	<vid>	Set IGMP query VLAN ID in IGMP proxy	Available in

	qryvid set		mode	3.53
2/3	igmpsnoop qryvid show		Show IGMP query VLAN ID setting	Available in 3.53
2/3	igmpsnoop show		Displays the IGMP snooping setting.	
1/1	isolation daisychain		Set switch mode to daisychain mode	
1/1	isolation disable		Turns the subscriber isolation feature off.	
1/1	isolation enable		Turns the subscriber isolation feature on.	
2/3	isolation show		Displays the subscriber isolation feature's current setting.	
1/1	isolation standalone		Set switch mode to standalone mode	
1/1	isolation vlan delete	<vid>	Delete an isolate VLAN.	Available in 3.53
1/1	isolation vlan set	<vid>	Create an isolate VLAN.	Available in 3.53
1/1	mac agingtime set	<sec, 10..10000 0:disable d>	Sets the MAC aging out time period.	
2/3	mac agingtime show		Displays the MAC aging out time period.	
1/1	mac antispoofing disable		Turns off the MAC antispoofing	
1/1	mac antispoofing enable		Turns on the MAC antispoofing	
2/3	mac antispoofing show		Show the MAC antispoofing status	
1/1	mac count disable	<portlist>	Turns off the MAC address count filter for an ADSL port(s).	
1/1	mac count enable	<portlist>	Turns on the MAC address count filter for an ADSL port(s).	
1/1	mac count set	<portlist> <count>	Sets the MAC address count filter for an ADSL port(s).	
2/3	mac count show	[portlist]	Displays the system's current MAC address count settings.	
1/1	mac filter delete	<port> <mac> [<mac> <mac> ...]	Removes a MAC filter MAC entry on an ADSL port(s).	
1/1	mac filter disable	[portlist]	Turns off the MAC filter.	
1/1	mac filter enable	[portlist]	Turns on the MAC filter.	
1/1	mac filter mode	<port> <accept deny>	Sets the MAC filter to accept or deny.	
1/1	mac filter set	<port> <mac> [<mac> <mac> ...]	Adds a MAC filter MAC entry on an ADSL port(s).	
2/3	mac filter show	[portlist]	Displays MAC filter settings.	

1/1	mac flush		Clears learned MAC addresses from the forwarding table.	
1/1	ouifilter delete	<port> <mac>	Removes an OUI filter OUI entry on an ADSL port(s).	Available in 3.53
1/1	ouifilter disable	<portlist>	Turns off the OUI filter.	Available in 3.53
1/1	ouifilter enable	<portlist>	Turns on the OUI filter.	Available in 3.53
1/1	ouifilter mode	<port> <accept deny>	Sets the OUI filter to accept or deny.	Available in 3.53
1/1	ouifilter set	<port> <mac>	Adds an OUI filter OUI entry on an ADSL port(s).	Available in 3.53
2/3	ouifilter show	[portlist]	Displays OUI filter settings.	Available in 3.53
1/1	pktfilter pppoeonly	<portlist>	Set packet filter to PPPoE only for port.	
1/1	pktfilter set	<portlist> <filter>	Set packet filter for port	
2/3	pktfilter show	[portlist]	Display packet filter settings.	
1/1	poeagent clearinfo	<<vid> all>	Clears Sub-option 1 of an Agent. vid is 0..4094	Available in 3.53
1/1	poeagent delete	<<vid> all>	Deletes a PPPoE Intermediate Agent vid is 1..4094	Available in 3.53
1/1	poeagent disable	<<vid> all>	Disalbe a PPPoE Intermediate Agent. vid is 0..4094	Available in 3.53
1/1	poeagent enable	<<vid> all>	Enable a PPPoE Intermediate Agent vid is 0..4094	Available in 3.53
1/1	poeagent info	<<vid> all> <info>	Sets Sub-option 1 (Circuit ID) of an Agent, it will append this string to BRAS. vid is 0..4094	Available in 3.53
1/1	poeagent optionmode	<<vid> all> <private tr101 [vid on off]>	Set Sub-option 1 (Circuit ID) format to TR-101 or private mode.	Available in 3.53
1/1	poeagent set	<vid>	Sets a PPPoE Intermediate Agent. vid is 1..4094	Available in 3.53
2/3	poeagent show	[<vlan list>]	Displays current settings of PPPoE Intermediate Agent	Available in 3.53
1/1	queuemap set	<priority> <queue level>	Maps a priority level to a physical queue.	
2/3	queuemap show		Displays the system's priority level to physical queue mapping.	
1/1	rstp disable		Turn system's rstp off.	
1/1	rstp enable		Turn system's rstp on.	
1/1	rstp fwdelay	<fwdelay sec>	Set system rstp's forward delay time.	
1/1	rstp hellotime	<hellotime sec>	Set system rstp's hello time.	
1/1	rstp maxage	<maxage sec>	Set system rstp's max age.	
1/1	rstp port disable	<portlist>	Set enet port to disable rstp.	
1/1	rstp port enable	<portlist>	Set enet port to enable rstp.	
1/1	rstp port pathcost	<portlist> <pathcost>	Set enet port's rstp pathcost.	
1/1	rstp port	<portlist> <priority>	Set enet port's rstp priority.	



	priority			
2/3	rstp port show		Display enet port rstp status.	
1/1	rstp priority	<priority>	Set system rstp's priority.	
2/3	rstp show		Display the system's rstp settings.	
1/1	smcast delete	<mac>	Removes a static multicast filter entry by deleting the associated MAC address.	
1/1	smcast set	<adsl_port> <mac> <join leave>	Use join/leave to add/ remove multicast MAC addresses on specified ADSL ports, a range of ADSL ports or all ADSL ports. MAC example: 01005E010203	
2/3	smcast show		Display all MAC addresses joined to ADSL ports.	
1/~	vlan cpu set	<vid> [priority]	Sets the VLAN ID, priority of the management VLAN.	
2/~	vlan cpu show		Displays the VLAN ID of the management VLAN.	
1/1	vlan delete	<vlanlist>	Removes a VLAN entry.	
1/1	vlan disable	<vid>	Turns off a VLAN entry.	
1/1	vlan enable	<vid>	Turns on a VLAN entry.	
1/1	vlan frametype	<portlist> <all tag>	Sets the specified DSL port to accept tagged, untagged or Ethernet frames (or both). Note: enet1, enet2 are fixed at 'all'.	
1/1	vlan gvrp	<portlist> <enable disable>	Set the port(s) to enable or disable gvrp.	
1/1	vlan name	<vid> <name>	Sets the VLAN ID name.	Available in 3.53
2/3	vlan portshow	[portlist]	Displays the port(s) VLAN settings.	
1/1	vlan priority	<portlist> <priority>	Sets a port's default IEEE 802.1p priority.	
1/1	vlan pvid	<portlist> <pvid>	Sets the PVID (Port VLAN ID) assigned to untagged frames or priority frames (0 VID) received on this port(s).	
1/1	vlan set	<vid> <portlist>:<F<T U> X N> [<portlist>:<F<T U> X N> ...] [name]	Configures a VLAN entry.	
2/3	vlan show	<vlanlist>	Displays VLAN settings.	
1/1	arp flush		Clears the device's IP Address Resolution Protocol (ARP) table.	
2/3	arp show		Displays the device's IP Address Resolution Protocol (ARP) table.	
1/1	gateway	<gateway ip>	Sets the IP address of the device's default gateway.	
2/3	ping	<ip> [count]	Pings a remote host.	
1/1	route delete	<dst ip>[/netmask]	Removes a routing table entry.	
1/~	route flush		Clears the routing table.	
1/1	route set	<dst ip>[/netmask] <gateway ip> [metric] <name>	Adds a routing table entry.	
1/1	route set	default <gateway ip> <metric>	Sets the device's default route.	

statistics	2/3	route show		Displays the routing table.	
	1/1	set	<ip>[/netmask] [<vid> [priority]]	Sets the Management IP address, subnet mask, VLAN ID of the management VLAN, and priority of the management VLAN.	
	2/3	show		Displays the Management IP address settings.	
	2/3	adsl 15mperf	<portlist> [count <0..96>]	Displays line performance statistics for the current and previous 15-minute periods.	
	2/3	adsl 1dayperf	<portlist>	Displays line performance statistics for the current and previous 24 hours.	
	2/3	adsl gbond	[<bond_name>]	Display gbond setting and link up US/DS rate.	Available in 3.53 Not available In IES-1248-71 / IES-1247-73
	2/3	adsl linedata	<portlist>	Displays the line data load per symbol (tone).	
	2/3	adsl lineinfo	<portlist>	Displays the info of the specified ADSL ports.	
	2/3	adsl lineperf	<portlist>	Displays the performance statistics of the specified ADSL port.	
	2/3	adsl linerate	<portlist>	Displays the line rate.	
	2/3	adsl show	[portlist]	Displays ADSL port connection status.	
	3/3	dhcp counter	[<portlist> [clear]]	Display DHCP statistics for a port	
	3/3	dhcp snoop	<portlist>	Display snooping	
	2/3	dot1x	[portlist]		
	2/3	enet		Displays Ethernet port settings and statistics.	
	3/3	igmpsnoop group		Display IGMP learned group member information	
	3/3	igmpsnoop info	[clear]	Display protocol packets counters & number of learned groups	
	3/3	igmpsnoop port group	<portlist>	Display joined groups in this port	
	3/3	igmpsnoop port info	[<portlist> [clear]]	Display received protocol packets counters, number of joined groups.	
	2/~	ip		Displays a Management port's status and performance data.	
	2/3	mac		Displays current MAC address forwarding table.	
	2/3	monitor		Displays hardware monitor status.	
	2/3	port	<portlist> [<vpi> <vci>] [clear]	This command displays and/or erases port statistics. *:[clear] can only be applied in WEB with high privilege	
	2/3	rmon	Stats history <enet port>	Display uplink/subtending link RMON information	
	2/3	rstp			
	2/3	vlan		Displays current VLANs.	
config					
	1/1	restore		Reloads the factory default configuration.	
	1/1	save		Saves the current configuration.	

exit	2/3	show	<sys sw ads ip alarm all> [nopause]	Displays the device's configuration.	
	3/3			Ends the console or telnet session.	

## Default Configuration

1. System information
  - hostname "ras"
  - location ""
  - contact ""
2. SNMP
  - get community "public"
  - set community "public"
  - trap community "public"
  - trusted host IP "0.0.0.0"
  - trap destination IP entry 1 "0.0.0.0/162"
  - trap destination IP entry 2 "0.0.0.0/162"
  - trap destination IP entry 3 "0.0.0.0/162"
  - trap destination IP entry 4 "0.0.0.0/162"
3. System service
  - telnet enable
  - ftp enable
  - web enable
  - icmp enable
  - telnet port 23
  - ftp port 21
  - web port 80
4. Secure client
  - accept icmp/telnet/ftp/web access from IP 0.0.0.0 to 223.255.255.255
5. CLI shell timeout
  - 5 mins
6. UNIX log
  - service disable
  - server IP 0.0.0.0
7. System watchdog timer 10000 ms
8. System hardware monitor
  - Enabled
  - Voltage monitor sensor point 1 threshold 1.284v / 1.116v
  - Voltage monitor sensor point 2 threshold 1.944v / 1.656v
  - Voltage monitor sensor point 3 threshold 3.564v / 3.036v
  - Voltage monitor sensor point 4 threshold 25.92v / 22.08v
  - Temperature monitor sensor point 1 threshold 97.000°C / -55.000°C
  - Temperature monitor sensor point 2 threshold 97.000°C / -55.000°C
  - Temperature monitor sensor point 3 threshold 97.000°C / -55.000°C
  - Fan monitor sensor point 1 threshold 8000RPM / 2000RPM
  - Fan monitor sensor point 2 threshold 8000RPM / 2000RPM
  - Fan monitor sensor point 3 threshold 8000RPM / 2000RPM
  - External alarm index 1 name "extalm1"
  - External alarm index 2 name "extalm2"
  - External alarm index 3 name "extalm3"
9. Multiuser
  - Set user "admin", password "\*\*\*\*\*" (encrypted)

- User authentication method “local and remote”
- 10. VLAN
  - Port default 802.1p priority 0
  - Port GVRP disabled
  - Port accept frametype(802.1Q VLAN tag) all
  - Set default VLAN(vid 1) join all ports
  - Port default pvid 1
  - System host port join join vid 1
- 11. System igmpsnooping disabled
- 12. 802.1p priority(0~7) to system ENET port priority(0~3) mapping
  - 0 ⇒ 1
  - 1 ⇒ 0
  - 2 ⇒ 0
  - 3 ⇒ 1
  - 4 ⇒ 2
  - 5 ⇒ 2
  - 6 ⇒ 3
  - 7 ⇒ 3
- 13. 802.1p priority(0~7) to system ADSL port priority(0~7) mapping
  - 0 ⇒ 0
  - 1 ⇒ 1
  - 2 ⇒ 2
  - 3 ⇒ 3
  - 4 ⇒ 4
  - 5 ⇒ 5
  - 6 ⇒ 6
  - 7 ⇒ 7
- 14. GARP timer default setting
  - Leaveall timer 10000ms
  - Leave timer 600ms
  - Join timer 200ms
- 15. RSTP parameters
  - Service disabled
  - Forward delay 15 sec
  - Maxage 20 sec
  - Hellotime 2 sec
  - Priority 32768
  - Port priority 128
  - Port path cost 4
  - Port RSTP disabled
- 16. DHCP relay
  - Service disabled
  - Relay server IP “0.0.0.0”
  - Option82 ""
  - Option82 disabled
  - Option82 suboption 2 ""
  - Option82 suboption 2 disabled
- 17. 802.1X
  - Service enabled
  - Port auth disabled
  - Authentication via radius server
  - Port auth control auto
  - Port re-auth on
  - Port re-auth period 3600ms
  - Radius server IP “0.0.0.0/1812”

- Radius server secret "1234"
  - Local user database set user "admin", password "\*\*\*\*\*" (encrypted)
18. ENET
- Naming enet port 1 "enet1"
  - Naming enet port 2 "enet2"
  - Port enabled
  - ENET speed mode auto
19. Isolation
- Enabled
  - Mode standalone mode
20. IP
- 192.168.1.1/24
  - Default gateway IP 192.168.1.254
21. MAC
- Aging time 300 sec
  - Port MAC count filter number 5
  - Port MAC count filter disabled
  - Port MAC filter disabled
22. System time server
- Time protocol none
  - Server IP "0.0.0.0"
  - Time zone UTC
23. ADSL port default setting
- Enabled
  - Default ADSL profile "DEFVAL\_MAX"
- |                   |               |             |      |
|-------------------|---------------|-------------|------|
| DEFVAL_MAX        | latency mode: | interleave  |      |
|                   | up stream     | down stream |      |
| -----             |               |             |      |
| max rate          | (kbps):       | 512         | 9088 |
| min rate          | (kbps):       | 64          | 64   |
| latency delay     | (ms):         | 4           | 4    |
| max margin        | (db):         | 31          | 31   |
| min margin        | (db):         | 0           | 0    |
| target margin     | (db):         | 6           | 6    |
| up shift margin   | (db):         | 9           | 9    |
| down shift margin | (db):         | 3           | 3    |
- ADSL mode: auto negotiate
  - Default Port VC 0/33, super channel, ATM profile "DEFVAL"
- |         |       |       |      |        |      |     |    |
|---------|-------|-------|------|--------|------|-----|----|
| profile | encap | class | aal  | pcr    | cdvt | scr | bt |
| -----   |       |       |      |        |      |     |    |
| DEFVAL  | llc   | ubr   | aal5 | 300000 | 0    | 0   | 0  |
- Default IGMP filter "DEFVAL"
- |         |           |                 |
|---------|-----------|-----------------|
| Profile | startip   | endip           |
| -----   |           |                 |
| DEFVAL  | 224.0.0.0 | 239.255.255.255 |
- Packet filter applied none
  - Default ADSL alarm profile "DEFVAL"
- |                        |        |       |       |
|------------------------|--------|-------|-------|
| DEFVAL                 |        | ATU-C | ATU-R |
| -----                  |        |       |       |
| Thresh15MinLofs        | (sec): | 0     | 0     |
| Thresh15MinLoss        | (sec): | 0     | 0     |
| Thresh15MinLols        | (sec): | 0     | ---   |
| Thresh15MinLprs        | :      | 0     | 0     |
| Thresh15MinESs         | (sec): | 0     | 0     |
| ThreshFastRateUp       | (bps): | 0     | 0     |
| ThreshInterleaveRateUp | (bps): | 0     | 0     |

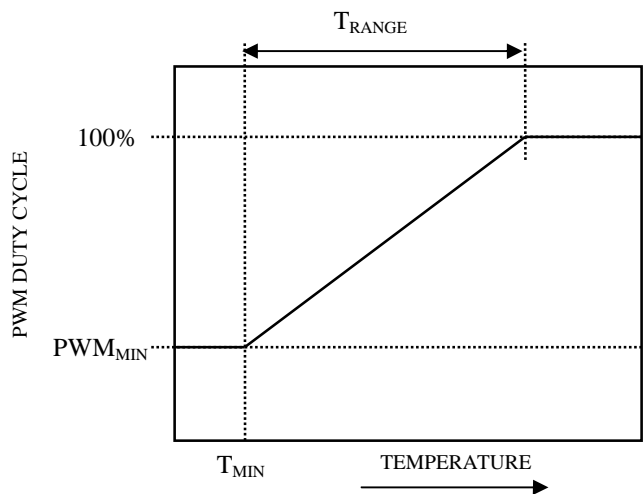
```

ThreshFastRateDown      (bps):      0      0
ThreshInterleaveRateDown (bps):      0      0
InitFailureTrap(1-enable, 2-disable): 2      ---
Thresh15MinFailedFastRetrain :      0      ---
Thresh15MinSes          (sec):      0      0
Thresh15MinUas          (sec):      0      0
➤ ADSL up/down stream nominal PSD 0
➤ ADSL up/down stream carrier mask 0
➤ ADSL annexL disabled
➤ ADSL annexM disabled
➤ ADSL PMM disabled
➤ ADSL PMM L0Time 300 sec, L2Time 30 sec, L2ATPR 1 dB, L2ATPRT 6 dB
➤ ADSL PMM maxL2rate 4096 Kbps, minL2rate 32 Kbps , L0toL2rate 16 Kbps
➤ ADSL SRA disabled
➤ ADSL up/down stream INP 0 DMT symbol
➤ ADSL port downstream broadcast disabled VLAN: none
➤ ADSL PPVC: none
24. RFC 2684 routed mode
➤ Routed mode ARP aging time 600 sec
25. Alarm manager alarm assignment

```

no	alarm	condition	facility	snmp	syslog	severity	clearable
1	dsl	( 5000) line_up	local1	V	V	info	-
2	dsl	( 5001) line_down	local1	V	V	minor	V
3	dsl	( 5002) ad_perf_lof_thresh	local1	V	V	minor	V
4	dsl	( 5003) ad_perf_lof_thresh	local1	V	V	minor	V
5	dsl	( 5004) ad_perf_los_thresh	local1	V	V	minor	V
6	dsl	( 5005) ad_perf_lop_thresh	local1	V	V	minor	V
7	dsl	( 5006) ad_perf_es_thresh	local1	V	V	minor	V
8	dsl	( 5007) ad_perf_ses_thresh	local1	V	V	minor	V
9	dsl	( 5008) ad_perf_uas_thresh	local1	V	V	minor	V
10	dsl	( 5009) ad_atuc_loftrap	local1	V	V	minor	-
11	dsl	( 5010) ad_atuc_lostrap	local1	V	V	minor	-
12	dsl	( 5011) ad_atur_loftrap	local1	V	V	minor	-
13	dsl	( 5012) ad_atur_lostrap	local1	V	V	minor	-
14	dsl	( 5013) ad_atur_lprtrap	local1	V	V	minor	-
15	eqpt	(10000) vol_err	local1	V	V	critical	-
16	eqpt	(10001) temp_err	local1	V	V	critical	-
17	eqpt	(10002) fan_err	local1	V	V	critical	-
18	eqpt	(10003) hw_rtc_fail	local1	V	V	critical	-
19	eqpt	(10004) hw_mon_fail	local1	V	V	critical	-
20	eqpt	(10005) cold_start	local1	V	V	info	-
21	eqpt	(10006) warm_start	local1	V	V	info	-
22	eqpt	(10007) alm_input	local1	V	V	critical	-
23	sys	(15000) reboot	local1	V	V	info	-
24	sys	(15001) aco	local1	V	V	info	-
25	sys	(15002) alm_clear	local1	V	V	info	-
26	sys	(15003) login_fail	local1	V	V	minor	V
27	sys	(15004) anti_spoofing	local1	V	V	minor	V
28	enet	(20000) up	local1	V	V	info	-
29	enet	(20001) down	local1	V	V	major	V

26. Fan speed control



- $PWM_{MIN} = 20\%$
- $T_{MIN} = 40^{\circ}C$
- $T_{RANGE} = 32^{\circ}C$

27. System MTU size is 1526 bytes
28. PPPoE intermediate agent disabled

**Table Size & Limitations**

- Per ADSL port limitations:
- Number of Mac filter: 10
  - Number of OUI filter: 10
  - Number of PVC: 8
  - Number of PPVC: 2
  - Number of PPVC member: 8
  - Number of RPVC: 8
  - Number of TLSPVC: 8
  - Number of PAEPVC: 8
  - Number of Vlan: 16
  - IGMP maximum group per DSL port is 16
  - IGMP maximum host IPs per DSL port is 16
  - IGMP maximum host IPs per Ethernet port is 1024
  - Number of DHCP snooping: 32
  - DHCP Snoop static IP pool entry: 3
  - Maximum joined MVLAN: 4
  - Maximum ACL profile mapping: 8

- System limitations:
- User Account: 16

Trap destination: 4  
Secured Client groups: 16  
Telnet Sessions : 5  
Number of VLAN: 1024  
ADSL profile: 96  
ATM profile: 96  
IGMP filter profile: 128  
IGMP proxy static query vid: 16  
ADSL ALARM profile: 8  
Dot1X profile: 64  
DHCP relay server: 32  
IP ROUTE: 128  
Static multicast address: 32  
Multicast Groups Range per MVLAN: 16  
Multicast Bandwidth Control Groups: 96  
Icmp groups: 512 groups  
MAC learning: 14k at most (128 per ADSL port at most, 4k per ENET port at most)  
RPVC gateway IP address: 96  
RPVC routing entry: 96  
ACL profile: 128  
IP bridging:  
    Domain: 8  
    VLAN per Domain: 8  
    Edge router: 64 (VLAN per Domain \* max of Domain)  
    Interface: 384 (DSL port number \* max of Domain)  
    Routes per Domain: 16  
    Routes: 128  
    ARP per ENET port: 64  
    ARP per DSL port: 32  
PPPoE Intermediate Agent: 48  
VLAN Isolation: 16