

Layer3 Lite Platform for OS3/OS4

Operating system for Lantech managed Ethernet switches

OVERVIEW

Lantech Layer3 Lite Platform (for OS3/OS4) is a scalable & advanced operating system built with modularity, resiliency, and serviceability at its foundation. Based on the VLAN routing standard, Lantech Layer3 Lite Platform comes with a Web UI interface and a command-line interface (CLI) like that of Lantech's previous platform. The self-healing design of Lantech Layer3 Lite Platform makes zero-impact operations a reality.

Focused on the requirements of the data center, Lantech Layer3 Lite Platform provides a robust and comprehensive features that fulfill the switching and storage networking needs of present communication networks. Lantech Layer3 Lite Platform offers reliability, innovation, and operational consistency. Lantech Layer3 Lite Platform is based on our OS3/OS4 platform and adds major features of OS Layer 3, it runs on the Lantech OS3/OS4-supported hardware-based network switches, which include Lantech L6000 and L5000 Series Switches.

FEATURES & BENEFITS

- Command authorization**
 Leverages RADIUS to link a custom list of CLI commands to an individual network administrator's login; an audit trail log activity
- Secure Web GUI**
 Provides a secure, easy-to-use graphical interface for configuring the module via HTTPS
- Dual flash images**
 Provides independent primary and secondary operating system files for backup while upgrading
- Multiple configuration files**
 Stores easily to the flash image
- Complete session logging**
 Provides detailed information for problem identification and resolution
- SNMPv1, v2c, and v3**
 Facilitate centralized discovery, monitoring, and secure management of networking devices
- SNMP MIB – RMON**
 Uses standard SNMP to monitor essential network functions; supports events, alarm, history, and statistics group plus a private alarm extension group
- Inter-VLAN Routing**
 Route traffic between different VLAN by implementing a switch with routing function in the network.
- Router-on-a-stick**
 A type of routing configuration in which a single physical interface set as VLAN trunk port manages traffic between multiple VLANs from edge site.
- RRRP**
 Provides automatic assignment of available VLAN gateways to participating hosts and increases the availability and reliability of VLAN routing paths via automatic default gateway selections on different VLAN groups.

SPECIFICATION

Management	SNMP v1 v2c, v3/ Web/Telnet/CLI		
SNMP MIB	RFC 1215 Traps MIB**, RFC 1213 MIBII RFC 1158 MIBII RFC 1157 SNMP MIB, RFC 1493 Bridge MIB RFC 1573 IF MIB RFC 2674 VLAN MIB**, Partial RFC 1757 RMON, RFC 2674 Q-Bridge MIB**; LLDP MIB RSTP MIB** Private MIB		Support various ring/chain topologies Includes train ring*, auto ring*, basic single ring, enhanced ring, multiple-VLAN ring* Enhanced G.8032 ring configuration with ease Cover multicast & data packets protection
ITU G.8032	Support ITU G.8032 v2/2012 for Ring protection in less than 20ms for self-heal recovery (single ring enhanced mode)	PoE Management	<ol style="list-style-type: none"> PoE Detection to check if PD is hang up then restart the PD PoE Scheduling to On/OFF PD upon routine time table
		Per Port PoE Status	On/ Off, voltage, current, watts, temperature
		User friendly UI	<ul style="list-style-type: none"> ■ Auto topology drawing ■ Topology demo ■ Auto configuration for G.8032(auto mode**) for single ring ■ DDM threshold monitoring with dB values***

	<ul style="list-style-type: none"> ■ Complete CLI for professional setting
Port Trunk with LACP	LACP Port Trunk: 8 Trunk groups
LLDP	Supports LLDP to allow switch to advise its identification and capability on the LAN
CDP	Cisco Discovery Protocol for topology mapping
Environmental Monitoring	System status for input voltage, current and ambient temperature to be shown in GUI and sent alerting if any abnormal status
VLAN	Port Based VLAN IEEE 802.1Q Tag VLAN (256 entries)/ VLAN ID (Up to 4K, VLAN ID can be assigned from 1 to 4096.) GVRP, QinQ, QoS QinQ**, Protocol based VLAN ; IPv4 Subnet based VLAN
IPv6/4	Present
Spanning Tree	Supports IEEE802.1d Spanning Tree and IEEE802.1w Rapid Spanning Tree, IEEE802.1s Multiple Spanning Tree 8/16* MSTI
Quality of Service	The quality of service determined by IPv4 Type of service, IPv4 Differentiated Services Code Points - DSCP
Class of Service	Support IEEE802.1p class of service, per port provides 8 priority queues
QoS by VLAN	Tagged QoS by VLAN for all devices in the network
Remote Admin	Supports 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder.
Login Security	Supports IEEE802.1X Authentication/RADIUS
Port Mirror	Support 3 mirroring types: "RX, TX and Both packet"
Network Security	Support 10 IP addresses that have permission to access the switch management and to prevent unauthorized intruder. 802.1X access control for port based and MAC based authentication/static MAC-Port binding Ingress/Egress ACL L2/L3 SSL/ SSH for Management HTTPS for secure access to the web interface TACACS+ for Authentication
IGMP	Support IGMP snooping v1,v2,v3; Supports IGMP static route; 256 multicast groups; IGMP router port ; IGMP query; GMRP
Static multicast forwarding	Static multicast forwarding forward reversed IGMP flow with multicast packets binding with ports for IP surveillance application
Bandwidth Control	Support ingress packet filter and egress packet limit. The egress rate control supports all of packet type. Ingress filter packet type combination rules are

	Broadcast/Multicast/Flooded Unicast packet, Broadcast/Multicast packet, Broadcast packet only and all types of packet. The packet filter rate can be set an accurate value through the pull-down menu for the ingress packet filter and the egress packet limit.
Flow Control	Supports Flow Control for Full-duplex and Back Pressure for Half-duplex
System Log	Supports System log record and remote system log server
SMTP/Text SMS**	Supports SMTP Server and 8 e-mail accounts for receiving event alert; can send SMS** text alert via mobile
Protection	<ul style="list-style-type: none"> ■ Miss-wiring avoidance ■ Node failure protection ■ Loop protection
SNMP Trap	Up to 10 trap stations; trap types including: <ul style="list-style-type: none"> ● Device cold start ● Authorization failure ● Port link up/link down ● DI triggered ● Typology change(ITU ring) ● Power failure ● Environmental abnormal**
DHCP	Provide DHCP Client/ DHCP Server/DHCP Option 82/Port based or VLAN based DHCP distribution (DHCP relay agent); DHCP Option 66; IPv6 address resolution for basic DHCP server
Mac based DHCP Server	Assign IP address by Mac that can include dumb switch in DHCP network
DNS	Provide DNS client feature and connect with Primary and Secondary DNS server.
SNTP	Supports SNTP to synchronize system clock in Internet
Firmware Update	Supports TFTP/SFTP** firmware update, TFTP backup and restore; HTTP firmware upgrade; Lantech™ InstaView** for multiple upgrade
Configuration upload and download	Supports text configuration file for system quick installation; Support factory reset button to restore all settings back to factory default; USB for auto restore/backup configuration file
Dual Image Firmware	Support dual image firmware function
IEC61375-2-5/L3**	Optional IEC61375-2-5/L3 upgradable
Inter-VLAN routing	Support dynamic routing and static routing
Router-on-a stick	Route traffic between different VLAN groups via VLAN trunking port.
VRRP	Combine Max. 2 gateways as single virtual gateway

*Future release
**Optional

PLATFORMS COMPARISON

		Layer 3 Lite (L3L)	Layer 2 +			Layer 2
			OS4/OS3	OS2	OS1	2000 series
Management	SNMP v1 v2c v3	•	•	•	•	•
	Web browser	•	•	•	•	•
	Telnet	•	•	•	•	•
	SSH	•	•	•	•	•
	SNTP	•	•	•	•	•
	LLDP	•	•	•	•	•
	CDP	•	•	•	•	
	Topology View	•	•	•	•	
	Environment Monitoring	•	•	•	•	
Redundancy	STP	•	•	•	•	•
	RSTP	•	•	•	•	•
	MSTP	•	•	•	•	
	Loop Protection	•	•	•	•	
	Proprietary redundant protocol	ITU-Ring Enhance mode	ITU-Ring Enhance mode	ITU-Ring Enhance mode	ITU-Ring Enhance mode	ProRing2se
	MRP	•	•			
	Dual Homing	•	•	•	•	
Security	G.8032 standard				•	
	MAC filter	•	•	•	•	•
	IP Security (What IP can access switch)	•	•	•	•	•
	Login Security (RADIUS)	•	•	•	•	
	SSL	•	•	•	•	
	Login Security (TACACS+)	•	•	•	•	
	ACL	Ingress only	Ingress only	Ingress Only	•	•
	IEEE 802.1X	•	•	•	•	•
	IP Source Guard*	•	•		•	
	ARP inspection*	•	•		•	
BPDU Guard*	•	•		•		
VLAN	Remote admin (limitation of accessing way)	•	•	•	•	
	Port Based VALN	•	•	•	•	•
	Tagged VLAN	•	•	•	•	•
	GVRP	•	•	•	•	
	QinQ	•	•		•	
	Protocol Based	•	•			
Multicast	Subnet Based	•	•			
	IGMP Snooping	•	•	•	•	•
	MLD Snooping	•	•			
	IGMP router port	•	•	•	•	
	Static Multicast forwarding	•	•	•	•	•
Traffic control	GMRP	•	•	•	•	
	Rate Limiting	•	•	•	•	•
	Link aggregation	•	•	•	•	•
	Port based QoS	•	•	•	•	•
	VLAN based QoS	•	•	•	•	
	CoS/DSCP	•	•	•	•	•
DHCP	Port Monitoring	•	•			
	IP v6 version(Basic)	•	•			
	IP v4 version	•	•	•	•	•
	Port Based DHCP	•	•	•	•	•
	MAC based DHCP	•	•	•	•	
	Option82 DHCP Relay	•	•	•	•	
	Option 12/42/66	•	•	option 66 only	option 66 only	
	DHCP Snooping	•	•	•	•	
PXE application	•	•				
PoE	DHCP pool with per VLAN	•				
	Alive Detecting	•	•	•	•	•
	PoE Scheduling	•	•	•	•	•

Event&Log	SysLog client&server	•	•	•	•	•
	Email	•	•	•	•	•
	SNMP Trap	•	•	•	•	V1/V2c
	Relay	•	•	•	•	•
	Digital Input/Output	•	•	•	•	
	Triggered by event of environment	•	•	•	•	
	Triggered by event of SFP DDM	•	•	•	•	
Diagnostic	Ping	•	•	•	•	
	ARP	•	•	•	•	
	DDM information	•	•	•	•	•
Maintenance	Firmware upgrading	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP
	Configuration file import/export	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP/FTP	WEB/TFTP
	Auto Provision				•	
	Dual Image	•	•	•		
IEC61375	TTDP	•				
	RNAT*	•				
	QoS under 61375-3-4	•	•	•	•	
Routing	IP based port	•				
	VLAN routing	•				
	VRRP	•				
	Static Unicast Routing	•				
	Static Multicast Routing	•				

ORDERING INFORMATION

- **OS3 – L3L..... P/N: 9000-114**
OS3 software platform upgrade to Layer 3 Lite platform
- **OS4 – L3L..... P/N: 9000-110**
OS4 software platform upgrade to Layer 3 Lite platform

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