AK-L3000-P Series Cassette OLT

General description

AK-L3000-4P/8P is designed for chassis OLT device which provides 4/8 downlink 1000M PON ports and 8 uplink GE Combo ports. The height is only 1U for easy installation and space saving. Each PON supports up to 64 terminals, the whole device supports up to 256/512 ONUs under full configuration. AK-L3000-4P/8P adopts advanced technology to support SLA and DBA to keep strong function on the Ethernet and QoS features. AK-L3000-4P/8P is applied for commercial and grid network digital management to provide perfect, smart, strong, advanced, professional solutions for "automatic distribution" and "electricity information collection" in the implemented project for the national grid.

Product Features

Carrier-class stability and network resiliency

■ Adopt large-scale operation system with intellectual property rights in the global carrier network

■ Support PON fiber redundancy protection and device redundancy protection protocol

■ Support rich security features to protect the users, devices and network.

■ Dual power supply input and power redundancy

■ All PON and GE ports provide L2/L3 full-line speed without losing packets

Full PON service

■ Each PON support 1:64 splitting ratio (The maximum quantity of 64 ONU)

■ Hot plug PON fibber module design, the farthest 20Km transmission distance

■ Support 128bits triple churning function to ensure the confidential for the data transmission

■ Support dynamic bandwidth distribution DBA algorithm

Powerful OAM

■ Use packet forwarding based on hardware to be effective for feature detection and packet filtering

■ Support auto protection and user blocking for ARP attack based on MAC address

■ Support all kinds of protecting DDoS, CPU over-current and VRRP etc

■ Support BFD, FlexLink, auto linkage aggregation and Ethernet Ring protection

Product Specification:

Item	AK-L3000-4P	AK-L3000-8P
Switching capacity	32Gbps	
Throughput(IPv4/IPv6)	9.5Mpps	
Service port	4 PON，8*GE Combo	8 PON，8*GE Combo
Redundancy design	Dual power supply, support AC input、dual DC input and AC+DC input	
Power supply	AC：90～260V，47～63Hz ； DC：-36V～-72V；	
Power consumption	≤46W	
Outline dimensions (mm) (W*D*H)	442mm×44mm×315mm	
Weight (in maximum configuration)	≤3kg	
Environmental parameter	Working temperature：0°C～40°C Storage temperature：-40°C～70°C Relative humidity：10%～90%，no condensing	

Business Features:

Item		AK-L3000-4P/8P
PON features		IEEE 802.3ah EPON China telecom/Unicom　GEPON standard 20Km for single fibber Access 64 terminals for single fibber PON Uplink and downlink triple churning encrypted function ONU terminal legitimacy certification, report illegal ONU registration DBA algorithm Standard OAM and extended OAM ONU batch software upgrade, fixed time upgrade, real time upgrade PON transmit and inspect receiving optical power
L2 features	MAC	MAC Black Hole Port MAC Limit 16K MAC address
	VLAN	4K VLAN entries Port-based/MAC-based/IP subnet-based VLAN Port-based QinQ and Selective QinQ (StackVLAN) VLAN Swap and VLAN Remark and VLAN Translate GVRP Based on ONU service flow VLAN add, delete, replace
	Spanning	IEEE 802.1D Spanning Tree Protocol (STP)

	tree protocol	IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP) ONU remote loop detecting alarm
	Port	Bi-directional bandwidth control Static link aggregation and LACP(Link Aggregation Control Protocol) Port mirroring and traffic mirroring
Security features	User security	Anti-ARP-spoofing Anti-ARP-flooding IP Source Guard create IP+VLAN+MAC+Port binding Port Isolation MAC address binds to port and port MAC address filtration IEEE 802.1x and AAA/Radius authentication
	Device security	Anti-DOS attack(such as ARP，Synflood, Smurf, ICMP attack), ARP detection, worm and Msblaster worm attack SSHv2 Secure Shell SNMP v3 encrypted management Security IP login through Telnet Hierarchical management and password protection of users
	Network security	User-based MAC and ARP traffic examination Restrict ARP traffic of each user and force-out user with abnormal ARP traffic Dynamic ARP table-based binding Supports IP+VLAN+MAC+Port binding L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of user-defined packet Port-based broadcast/multicast suppression and auto-shutdown risk port URPF to prevent IP address counterfeit and attack DHCP Option82 and PPPoE+ upload user's physical location Plaintext authentication of OSPF、RIPv2 and BGPv4 packets and MD5 cryptograph authentication
Service features	ACL	Standard and extended ACL Time Range ACL Packet filter providing filtering based on source/destination MAC address, source/destination IP address, port, protocol, VLAN, VLAN range, MAC address range, or invalid frame. System supports concurrent identification at most 50 service traffic Support packet filtration of L2～L7 even deep to 80 bytes of IP packet head
	QoS	Rate-limit to packet sending/receiving speed of port or self-defined flow and provide general flow monitor and two-speed tri-color monitor of self-defined flow Priority remark to port or self-defined flow and provide 802.1P, DSCP priority and Remark CAR(Committed Access Rate)、Traffic Shaping and flow statistics Packet mirror and redirection of interface and self-defined flow Super queue scheduler based on port and self-defined flow. Each port/flow supports 8 priority queues and scheduler of SP, WRR and SP+WRR. Congestion avoid mechanism，including Tail-Drop and WRED
	IPv6	SA/DA Classification MLD Snooping
	Multicast	IGMPv1/v2/v3 IGMPv1/v2/v3 Snooping IGMP Filter MVR and cross VLAN multicast copy IGMP Fast leave IGMP Proxy

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		PIM-SM/PIM-DM/PIM-SSM PIM-SMv6、PIM-DMv6、PIM-SSMv6 MLDv2/MLDv2 Snooping
Reliability	Loop protection	EAPS and GERP (recover-time <50ms) Loopback-detection
	Link protection	FlexLink (recover-time <50ms) RSTP/MSTP (recover-time <1s) LACP (recover-time <10ms) BFD
	Device protection	VRRP host backup Double fault-tolerant backup of host program and configuration files PON card/fan hot-swappable 1+1 power hot backup
Maintenance	Network maintenance	Telnet-based statistics RFC3176 sFlow LLDP 802.3ah Ethernet OAM RFC 3164 BSD syslog Protocol Ping and Traceroute
	Device management	Command-line interface（CLI）, Console, Telnet and WEB configuration System configuration with SNMPv1/v2/v3 RMON (Remote Monitoring)1/2/3/9 groups of MIB NTP(Network Time Protocol) GN.LinkⅡ Server NGBNView network management

Purchase Information:

Model	Product description
AK-L3000-4P	Cassette OLT (4 downlink 1000M PON ports, 8 uplink GE Combo ports)
AK-L3000-8P	Cassette OLT (8 downlink 1000M PON ports, 8 uplink GE Combo ports)

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