Key Features & Benefits

LinkPower™ NL3-54006 10G Managed Ethernet Switch

LinkPower™ NL3-54006 54-Port Layer 3 Full Managed Ethernet Switch

The NL3-54006 is a high-performance Layer 3 managed switch designed as a next-generation 10G convergence switch for IP metropolitan area networks, large-scale campus networks, and enterprise infrastructures. It features 48×10/100/1000M RJ45 ports and 6×1/10G SFP+ fiber ports.

This switch offers comprehensive Layer 3 management capabilities, supporting a wide range of protocols and applications. In addition to high-performance L2/L3/L4 wire-speed switching, it integrates advanced network services such as IPv6, MPLS VPN, security, traffic analysis, and virtualization. It is equipped with high-reliability data center technologies, including seamless upgrades, uninterrupted forwarding, graceful restart, and redundancy protection, ensuring maximum network uptime. Supporting advanced routing protocols like RIP, OSPF, BGP, and PIM-DM/SM, the NL3-54006 is well-suited for both traditional and fully virtualized high-speed data transmission. Network administrators can flexibly select the appropriate fiber connectivity based on transmission distance and speed requirements, effectively expanding the 1/10G network.

With a switching capacity of up to 598Gbps and 6×1/10G SFP+ uplink fiber ports, the NL3-54006 significantly enhances core network bandwidth, meeting the high-performance demands of voice, video, and data services. It is ideal for applications in smart campuses, large-scale smart communities, smart cities, intelligent transportation, and other high-bandwidth environments.

- **Advanced hardware architecture**
  High-performance 1U switch with 48×RJ45 and 6×SFP+ ports, designed for scalable, high-capacity data transmission.

- **Strong data service guarantee**
  Ensures uninterrupted network performance with ISSU, redundant power, real-time fault detection, and virtualization for enhanced reliability.

- **Rich business features**
  Supports advanced IPv6 capabilities, multicast routing, MPLS VPN, and IPv4-to-IPv6 transition, making it ideal for large-scale and evolving networks.

- **Security**
  Provides comprehensive protection with authentication protocols, access control, DoS attack prevention, and deep packet inspection for secure network operations.

- **Stable and reliable**
  Features energy-efficient Ethernet, intelligent fan control, and advanced power monitoring to optimize performance, reduce noise, and extend system life.

- **Easy O&M management**
  Supports multiple management interfaces, including Web GUI, CLI, and SNMP, along with encryption, monitoring, and diagnostic tools for efficient maintenance.

Applications

- Smart City
- IP Video Surveillance
- Campus Network
- Wireless Mesh Network
- Border Security Surveillance
- Municipal Network

- Energy & Re neries
- Hospitality Network
- Hotel Resort Network
- Hotspot Integration
- VOIP Service
- Traffic Monitoring

Model	NL3-54006
Interface Characteristics	
Fixed Port	6*1/10G SFP+ fiber ports (Data) 48*10/100/1000M RJ45 ports (Data) 1*Console RS232 port (9600,8,N,1)
Ethernet Port	Port 1-48 can support 10/100/1000Base-T auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meters) 100BASE-TX: Cat5 or later UTP(≤100 meters) 1000BASE-T: Cat5e or later UTP(≤100 meters)
Optical Fiber Port	1/10G SFP+ optical fiber interface, default no include optical modules (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km.
Chip Parameter	
Network Management Type	L3
Network Protocol	IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3ae 10Gb/s Ethernet, IEEE802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	598Gbps (non-blocking)
Forwarding Rate @64byte	160Mpps
MAC	32K
Buffer Memory	32M
Jumbo Frame	9K

Product Specifications

LED Indicator	Power: PWR (Green), System: SYS (Green), Network:1-48 (Green), Fiber port: TE1-6 (Green)
Power Supply	
Total PWR/ Input Voltage	75W/ (AC100-240V)
Power Consumption	Standby<30W, Full Load<50W
Power Supply	Built-in power supply, AC100~240V 50-60Hz, 1.0A
Physical Parameter	
Operation Temp/ Humidity	-20°C~+55°C, 5%~90% RH Non condensing
Storage Temp/ Humidity	-40°C~+75°C, 5%~95% RH Non condensing
Dimension (L*W*H)	440*280*44mm
Net /Gross Weight	<5.0kg / <5.3kg
Installation	Desktop, 1U/19" cabinet
Certification & Warranty	
Lightning Protection	Port lightning protection: 6KV 8/20us, Protection level: IP30
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	3 years, lifelong maintenance.
Network Management Feature	
Virtualization and Stacking	VRRP virtualization stack, active/standby switching
IPv4	Policy routing, BFD for OSPF, BGP Equal-cost routing to achieve load balancing Static routing, RIP v1/v2, OSPF, BGP, IS-IS, BEIGRP
IPv6	MLD v1/v2, IPv6 neighbor discovery MLD Snooping, Path MTU discovery ICMPv6, DHCPv6, ACLv6, IPv6 Telnet IPv6 static routing, RIPng, OSPFv3, BGP4+ Manual tunnel, ISATAP tunnel, 6to4 tunnel

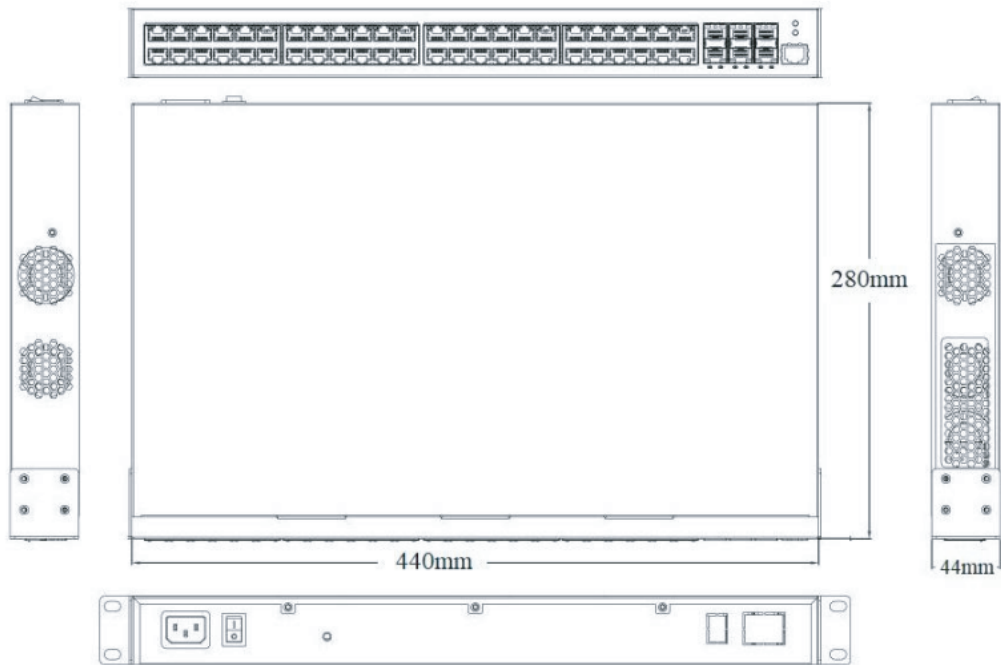|	
MAC Switching	Configuring MAC address aging time
	IEEE 802.1AE MacSec security control
	Static configuration and dynamically learning of MAC address
	MAC address filtering function, Check and delete MAC address
	Black-hole MAC table entries, Limit on MAC address learning number
VLAN	Basic QinQ and flexible QinQ function
	GVRP, Private VLAN, 4K Active VLAN, 1:1 and N:1 VLAN Mapping
Link Aggregation	10GE port aggregation, Static aggregation, Dynamic aggregation
Flow Monitoring	sFLOW
DHCP	DHCP Snooping option82/ DHCP Relay option82
	HCP Client, DHCP Snooping, DHCP Relay, DHCP Server
	Zero configuration methods such as DHCP auto-config and
	CWMP-TR069
STP/ERPS	802.1D (STP), 802.1W (RSTP), 802.1S (MSTP)
	BPDU protection, Root protection, Loop protection
	ERPS Ethernet Ring Protection Protocol (G.8032)
Multicast	Multicast group policy and multicast number limit
	IGMP V1/v2/v3, IGMP Snooping, IGMP Fast Leave
	PIM-SM.PIM-DM, Multicast traffic cross VLAN duplication
ARP	Static entries, ARP source suppression
	Standard proxy ARP and local proxy ARP
	Free ARP, Dynamic ARP Inspection, ARP anti-attack
	ARP Detection (check based on DHCP Snooping security entries,
	802.1x entries, or IP/MAC static binding entries)
Mirroring	Flow mirroring, N:4 port mirroring, Local and remote port mirroring
MPLS VPN	MCE, MPLS TE, MPLS OAM, LDP protocol, P/PE of MPLS VPN
QoS/ACL	Traffic supervision and traffic shaping
	SP, WRR, SP+WRR scheduling mode
	CAR traffic restriction, 802.1P/DSCP priority re-marking

	Tail-Drop, WRED, and other congestion avoidance mechanisms
	Traffic classification based on each field of the L2/L3/L4 protocol header
	Ingress and Egress ACL, matching L2, L3, L4 and IP five-tuple, copying, forwarding, and discarding
	Hash same-source and same-destination load balancing to ensure session integrity of traffic output
Security	Identification and filtering of L2/L3/L4 based ACL
	Urpf, Port isolation, Port security, IP + MAC + port binding
	IEEE 8021x certification, DHCP Snooping, DHCP Option 82
	Radius and BDTacacs+, Command line hierarchical protection
	Suppression of broadcast, multicast, and unknown unicast packet
	Defend against DDoS attack, SYN Flood attack of TCP, and UDP Flood attack
Reliability	EAPS, ERPS ring network protection
	ISSU service without interruption system upgrade
	HSRP, VRRP hot standby protocol, GR for OSPF, BGP
	Optional power supply 1+1 backup, BFD for OSPF, BGP
	Static/LACP link aggregation, support cross-service card link aggregation
Management	File upload and download management in TFTP mode
	Telnet remote maintenance, ZTP(Zero Touch Provisioning)
	Power alarm, Fan, temperature alarm, Console,Telnet, SSH 2.0
	ISSU, Track, Tracert, sFLOW and other traffic statistics analysis
	NTP, Ping, Debug information output, Web browser management
	System logs, Graded alarm, SNMP v1/v2/v3, 802.1AG and 802.3AH
	RMON event history, SNMP (Simple Network Management Protocol)
Energy Saving	IEEE802.3az green energy Ethernet
System	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable

Product Specifications

	TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable

Dimension