

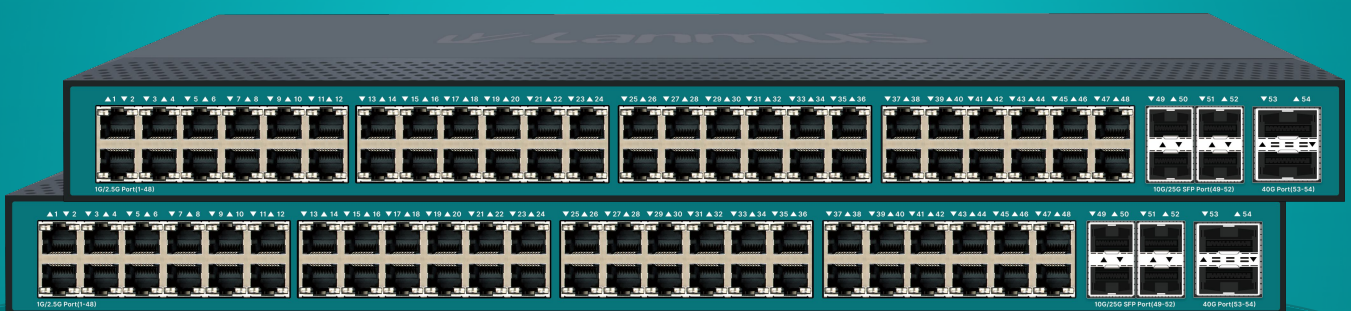


LM-S6054-48MG4X2Q

DATASHEET

2.5G 48 port L3 Managed Ethernet Switch with 2 x 40G QSFP uplink

The LM-S6054-48MG4X2Q is a high-performance Layer 3 core routing switch designed to meet the high-density and high-bandwidth needs of next-generation enterprise networks, data centers, and metropolitan area networks. It also serves the requirements of telecom network operators and can be used in the aggregation or access layers of campus Ethernet networks.



PRODUCT INTRODUCTION

Product Overview

The LM-S6054-48MG4X2Q is a next-generation Layer 3 managed Ethernet switch engineered for high-density, high-performance network environments that demand reliability, scalability, and advanced intelligence.

Designed to meet the evolving needs of enterprise core networks, data centers, metropolitan area networks (MANs), and telecom infrastructures, this switch delivers carrier-grade performance with flexible deployment options across core, aggregation, and access layers.

Built on a robust hardware platform and powered by a Linux-based dual-stack (IPv4/IPv6) operating system, the LM-S6054-48MG4X2Q ensures seamless integration, efficient routing, and optimized data forwarding for large-scale, mission-critical networks.

With 48 multi-speed 100/1000M/2.5G Base-T RJ45 ports, 4 high-speed 10G/25G SFP+ uplinks, and 2 40G QSFP ports, the switch offers exceptional port density and flexible high-bandwidth uplink connectivity to meet the demands of modern traffic loads and cloud-driven applications.

Featuring a Virtual Switch Framework (VSF), the LM-S6054-48MG4X2Q allows multiple switches to operate as a single logical unit, simplifying management and scaling network capacity without increasing complexity. This capability enables unified configuration, monitoring, and upgrading, ensuring operational efficiency and reduced downtime during maintenance or expansion.

The switch integrates a comprehensive suite of Layer 2 and Layer 3 features, including VLAN segmentation, OAM/APS link protection, advanced QoS, ACL security control, and hardware-based NetFlow traffic analysis, providing precise network visibility and control.

Product Overview

Enhanced redundancy protocols such as STP/RSTP/MSTP and LACP ensure network resilience, while RADIUS and TACACS+ authentication, port isolation, and ARP spoofing protection safeguard against unauthorized access and data breaches.

With a switching capacity of 600 Gbps and a packet forwarding rate of 446.43 Mpps, the LM-S6054-48MG4X2Q is optimized for low-latency, high-throughput data transmission. Intelligent fan control and efficient power design ($\leq 125W$ full load) contribute to long-term stability and energy savings.

DEVICE BRIEF INFORMATION



LM-S6054-48MG4X2Q

- 48 * 100/1000M/2.5G Base-T RJ45 port
- 4 * 10G/25G SFP+
- 2 * 40G QSFP
- 440X330X44mm (W * D * H)
- AC input: 100~240V,47/63 Hz

Key Features

Carrier-level equipment stability

- Based on Linux operating system, support IPv4/IPv6 dual protocol stack platform
- Support multiple link redundancy and network redundancy protocols such as STP/RSTP/MSTP/LACP

Perfect safety mechanism

- Support link protection functions FlexLink, LACP
- Support remote loop detection function
- Support remote user authentication based on TACACS+, RADIUS, and Local user authentication

Powerful QoS capabilities

- Support port speed and flow speed limit function
- Support classification based on service flow and QoS flow control function
- Support queue scheduling algorithms such as SP/WRR/SP+WRR
- Support port-based and service flow-based mirroring functions

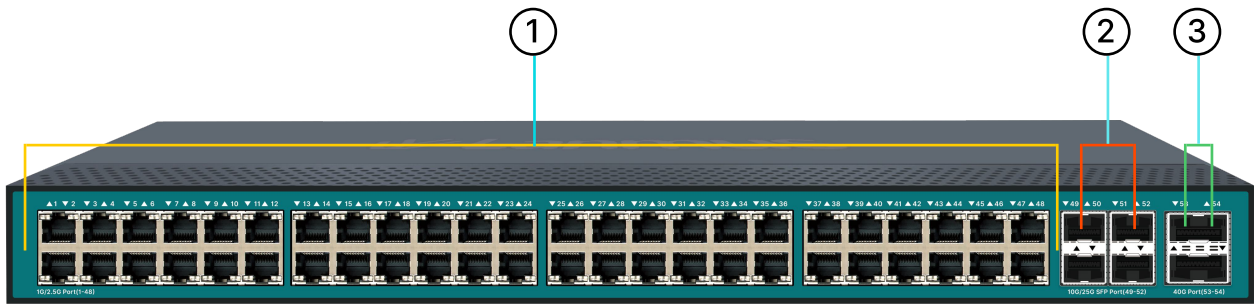
Rich management protocols

- Support easy-to-use network management function
- Support CLI based on RS232 serial port, Telnet and SSHv2
- Support web-based configure operation management, support SNMP v1/v2/v3
- Support remote upgrade or equipment through FTP and TFTP

Hardware Specifications

Attributes	LM-S6054-48MG4X2Q
Ethernet Port	48 * 10/100/1000M/2.5G Base-T 4 * 10G/25G SFP+ 2 * 40G QSFP
Management Port	1x Console, 1x Mgmt port
Exchange Capacity	600Gbps
Packet Forwarding Rate	446.43Mpps
MAC Address	32K
Packet Buffer	72Mbit
ACL Table	11.5K (8 Slices)
Routing Table	64K/16K (IPv4/IPv6)
Memory and Storage	Memory: 1GB; Flash: 8GB
Power	AC: 100 ~ 240V; 47/63 Hz
Power Consumption	Full load ≤125W
Cooling System	4 * smart speed fan (Fixed)
Dimensions	440 X 330 X 44mm (W * D * H)
Environment Temperature	Working Temperature: -10°C~50°C Storage temperature: -40°C~70°C Relative Humidity: 5%~95%, non-condensing

Panel view



- ① 10/100/100M/2.5G Base-T
- ② 10G/25G SFP+
- ③ 40G QSFP

LED Indicator

LEDs/ Buttons	Colors	Function	Description	
PWR1(left) PWR2(right)	Green	Power Status	ON	The AC/DC power module is normal.
			OFF	The AC/DC power module faulty or unavailable
ETH	Green	Port status	ON	MTMG port LinkUP.
			OFF	The MTMG port is not connected.
SYS	Green	System running status	Green OFF	The device is not running or power off
			Green Flash	The device is running normally.
USB	Green	Usb flash insertion status	ON/ FLASH	The link is properly connected (link up) and in action Works in 2.5G/10Gigabit mode.
			OFF	The link is interrupted (link down).

Plug-in Units



Power Supply Unit (PSU)

The device has a built-in power module, and the power port is located at the rear of the device. The below shows the electrical characteristics of the switch :

Characteristic	Power Supply
AC	AC: 100~240V, 47~63Hz

FAN Unit

The fans of the device operate according to the power of the device environment. The chassis has four built-in fans for heat dissipation.

Characteristic	FAN
LM-S6054-48GT4X2Q	4 * FAN

Software Specifications

Characteristic	LM-S6054-48MG4X2Q
VLAN	Support 4K VLAN Support VLAN based on port, MAC and protocol Support dual Tag VLAN, Access/Trunk/Hybrid

Software Specifications

Characteristic	LM-S6054-48MG4X2Q
Ethernet	Ethernet interface operating modes Ethernet interface operating rates Jumbo Frame Port enable/disable Port based storm-control Unknow-unicast/unknow-multicast/broadcast storm-control Port-isolate
MAC	Support static MAC address setting Support blackhole MAC address filtering Support port MAC address limit Automatic learning and aging of MAC addresses
ARP	Static and dynamic ARP entries Aging of ARP entries ARP-Proxy
Port Control	Support two-way bandwidth control Support port storm suppression Support 9K Jumbo ultra-long frame forwarding
Port Aggregation	Support static link aggregation Support dynamic LACP Each aggregation group supports a maximum of 8 ports LAG load balance (SIP/DIP/SMAC/DMAC)
Mirroring	Supports multi-port mirroring analysis Service flow-based image analysis
ACL	Support standard and extended ACL Support ACL policy based on time period Provide MAC, IP, L4 port and port level security control functions
Safety	Support RADIUS & TACACS+ authentication Support port isolation Support broadcast message rate suppression Support IP Source Guard Support ARP flood suppression and ARP spoofing protection

Software Specifications

Characteristic	LM-S6054-48MG4X2Q
QoS	- Traffic classification based on COS/DSCP (simple classification) - Traffic classification based on ACL (complex classification) - Traffic classification based on inner header of the tunnel packets - Queue scheduling - Remark the priority fields (COS/DSCP) of the packet based on ACL - Traffic policing based on direction(in/out) of Port - Traffic policing based on direction(in/out) of VLAN - Traffic policing based on direction(in/out) of flow - Traffic policing based on direction(in/out) of aggregated flow - SP (Strict Priority) scheduling - WRR (Weighted Round Robin) scheduling - SP + WRR mixed scheduling
Layer 3	- Support ARP learning and aging - Support IPv4static route - Support dynamic route RIP/OSPF - Support IPv4/IPv6 dual-stack platform - Support CLI、Telnet、WEB、SNMP V1/V2/V3、SSHv2 mode
Terminal Services	- Configurations through CLI - Console Terminal service
Spanning-Tree	- Rapid Spanning-Tree Protocol - Multi-instance Spanning-Tree Protocol
Network Management	- DHCP Server - DHCP Relay - SNTP (Simple Network Time Protocol) - LLDP
Maintenance	- Per-module Debug features - CPU usage display and alarm - Memory usage display and alarm - User operation logs - Management of logs, alarms, and debugging information - Manual reboot - Reboot Information logging Ping - IPv6 Ping - Traceroute - To CPU/From CPU packets statistics - Time configuration - Timezone

Software Specifications

Characteristic	LM-S6054-48MG4X2Q
System Security	SSHv1/v2 RADIUS TACACS+ MAC/IP ACL Port/VLAN/L4-Port ACL IP Source Guard Limitation on MAC address learning on interface Rate limit CPU Traffic Limit CLI/WEB/SNMP/Telnet/SSH filtering
Configuration Management	Inband management interface and configuration Outband management interface and configuration Privileged user priority and privileged commands Network management based on SNMP v1/v2 Public and private MIB Public and private Trap Configuration and management based on WEB Restore factory default configuration
File system	Upload and download files through FTP or TFTP
System Management	Support FTP, TFTP file upload and download Support SNMP Support LLDP neighbor device discovery protocol Support Ping and Traceroute Supports configuration management based on WEB pages
Upgrade	Upgrade with the local image file Upgrade with the remote TFTP server Online upgrade Uboot

Connector Specifications

Index	SFP/SFP+ Module Description
1	- Wavelength: 850 nm / Distance: 550 m / Mode: multi-mode - Connector: LC / Data rate: 1.25Gbit/s / Core type: Dual Core - Operating Temperature: 0°C - 70°C

Connector Specifications

Index	SFP/SFP+ Module Description
1	- Wavelength: 850 nm / Distance: 550 m / Mode: multi-mode - Connector: LC / Data rate: 1.25Gbit/s / Core type: Dual Core - Operating Temperature: 0°C - 70°C
2	- Wavelength: 1310nm / Distance: 5km / Mode: single-mode - Connector: LC / Data rate: 1.25Gbit/s / Core type: Dual Core - Operating Temperature: 0°C - 70°C
3	- Wavelength: 1310 nm / Distance: 10 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C - 70°C
4	- Wavelength: 1310 nm / Distance: 15 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C - 70°C
5	- Wavelength: 1310 nm / Distance: 20 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C - 70°C
6	- Wavelength: 1310 nm / Distance: 40 km / Mode: single-mode - Connector: LC / Data rate: 1.25 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C - 70°C
7	- Wavelength: 850nm / Distance: 300m / Mode: Multimode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70°C - 10G BASE-SR (10G)
8	- Wavelength: 850nm / Distance: 300m / Mode: Multimode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70°C - 1000 BASE-SX (1G), 10G BASE-SR (10G)
9	- Wavelength: 1310nm / Distance: 10Km / Mode: Single mode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70°C - 10G BASE-LR (10G)
10	- Wavelength: 1550nm / Distance: 40Km / Mode: Single mode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70°C - 10G BASE-ER (10G)

Connector Specifications

Index	SFP/SFP+ Module Description
11	- Wavelength: 1310nm / Distance: 70Km / Mode: Single mode - Connector: LC / Data rate: 10.3125 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70°C - 10G BASE-ZR (10G)

Purchase Info

Product Name	Product Description
LM-S6054-48GT4X2Q	48 * 100/1000M/2.5G Base-T RJ45 port 4 * 10G/25G SFP+ 2 * 40G QSFP



Xtreme Switch

DATA SHEET | LM-S6054-48MG4X2Q



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