



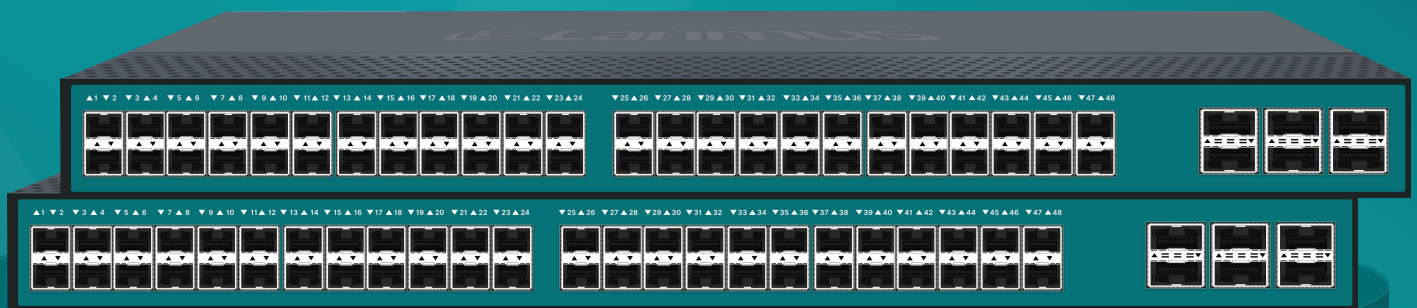
LM-S7054-48X6H

DATASHEET

L3 Managed Ethernet Switch

The LM-S7054-48X6H switch is a high-performance 10G fiber switch developed by our company. It features advanced hardware design and a hot-swappable power supply for redundancy.

This switch supports up to 48×1G/10G SFP+ ports, along with 6×40GE/100GE QSFP28 uplink ports. It offers full-port L2/L3 wire-speed forwarding, IPv6 support, and a range of business features, including ACL policies and network security.



PRODUCT INTRODUCTION

Product Overview

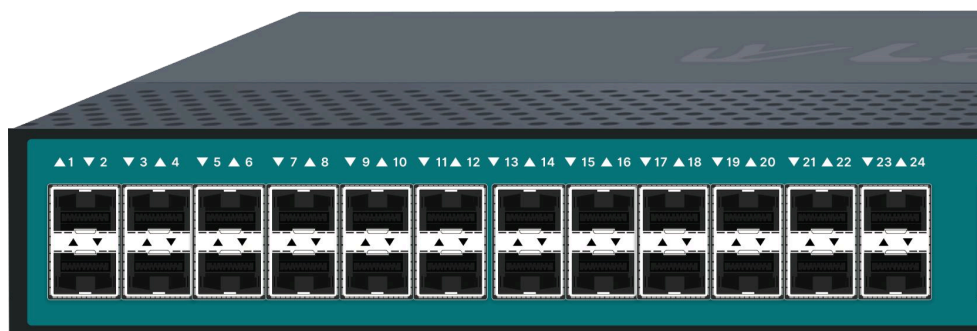
The **LM-S7054-48X6H** switch is a high-performance 10G fiber switch developed by our company. It features advanced hardware design and a hot-swappable power supply for redundancy.

This switch supports up to 48×1G/10G SFP+ ports, along with **6×40GE/100GE QSFP** 28 uplink ports. It offers full-port L2/L3 wire speed forwarding, IPv6 support, and a range of business features, including ACL policies and network security.

The LM-S7054-48X6H provides the highest 10 Gigabit port density and maximum switching capacity in its class, supporting wire speed forwarding on all ports. It also accommodates flexible access for both 10GE and 100GE connections and automatically recognizes the type of optical module installed, maximizing user investment protection and ensuring flexibility.

Additionally, designed for high-density and high-bandwidth applications, this switch meets the demands of next-generation enterprise networks, data centers, and metropolitan area networks. It is suitable for network operators, campus Ethernet aggregation or access layers, data center access layers, and small to medium-sized enterprise core layers, offering comprehensive server access solutions for data centers.

With its robust performance, scalability, and advanced security features, the LM-S7054-48X6H ensures reliable and efficient network operations for growing enterprises. It provides future-proof infrastructure that can adapt to evolving network demands, making it a critical component for organizations seeking high-speed, stable, and secure connectivity.



KEY FEATURES

Equipment Stability

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

Carrier grade equipment stability

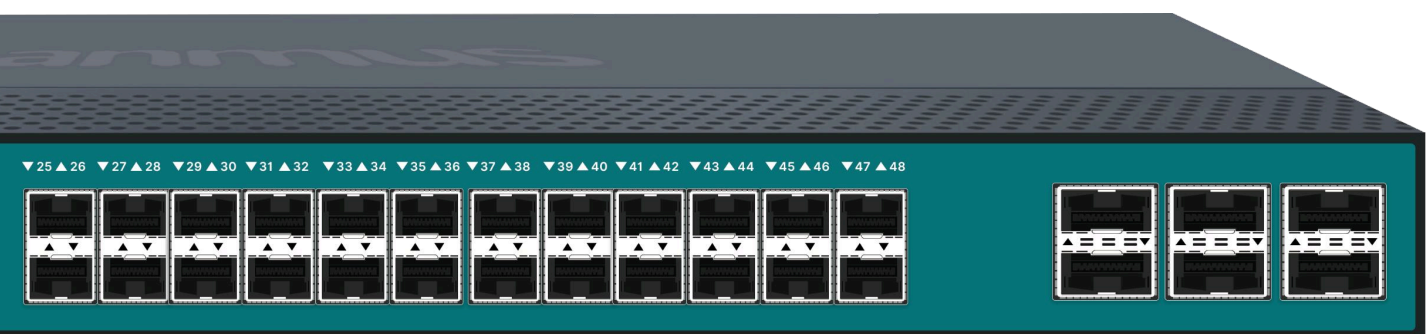
- Based on Linux operating system, support IPv4/IPv6 dual protocol stack platform
- Support multiple link redundancy and network redundancy protocols such as STP/RSTP/MSTP/ERPS/LACP

Stackable

- Support combine the processing power of multiple switches into a single logical device.
- Support when a switch in the stack system fails, traffic can be automatically switched to other switches, network availability and redundancy.
- Support stacking simplifies the management process. Administrators only need to manage one logical device.

Rich routing protocol

- Support static route
- Support dynamic routes such as RIP, OSPF, BGP,
- Support IPV4/IPV6 dual protocol stack, support RIPng OSPFv3



Key Features

Perfect safety mechanism

- Support ACL security filtering mechanism, which can provide security control functions based on MAC, IP, L4 port
- Support ARP attack automatic protection and user blocking functions
- Support DHCP attack automatic protection based on Mac Address and user blocking functions
- Support DHCP-snooping/IP-source-Guard/802.1X and other security features
- Support link protection functions such as BFD, Flex Link, LACP Support remote loop detection function
- Support remote user authentication based on TACAS+, 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

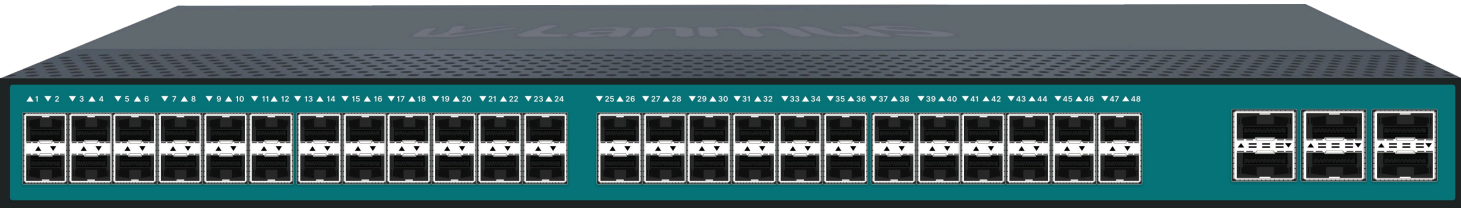
Simple and easy-to-use network management function

- 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

Enhanced multi-service capabilities

- Support DHCP Server and DHCP Relay

DEVICE INFORMATION



- 48 * 1GE/10GE SFP+
- 6 * 40GE/100GE QSFP28
- 2160Gbps Switching capacity
- Size: 440 × 410 × 44mm 19" Rackmount
- AC+AC (or AC+DC, or DC+DC) power supply
- AC: 100~240V; 47/63Hz
- DC: -20V~-60V
- 2 * Modular FAN supply

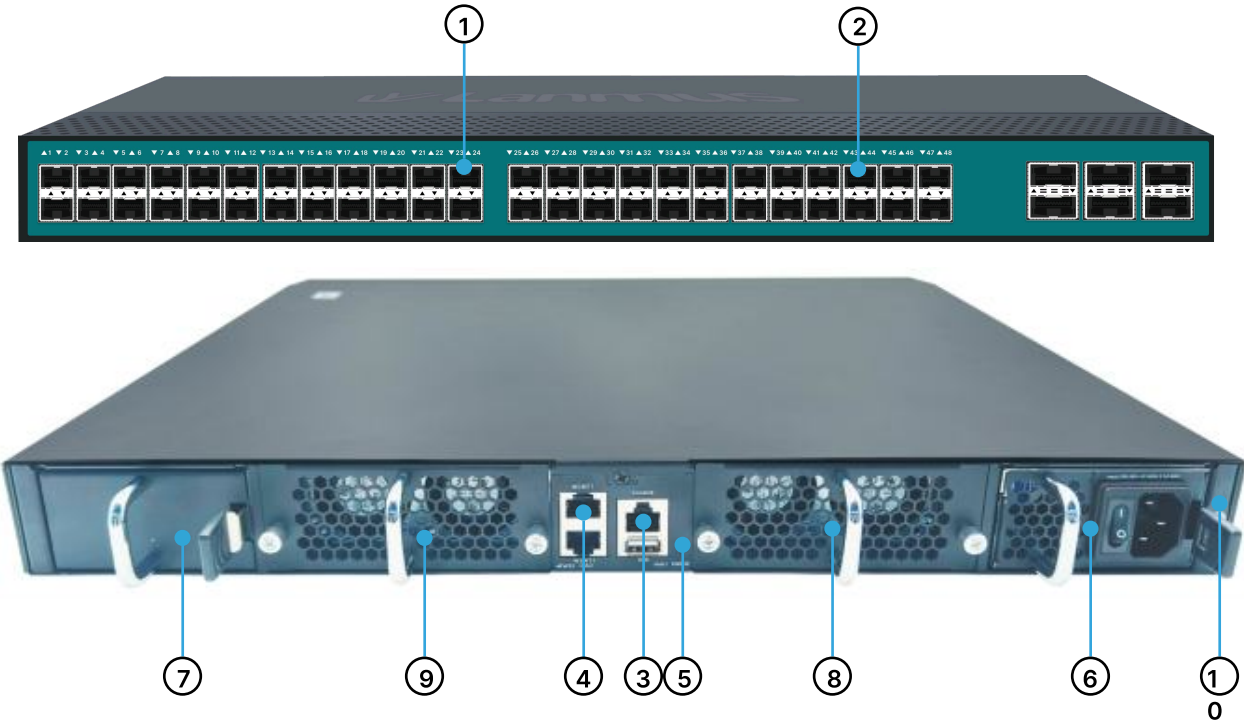
Hardware Specifications

Attributes	LM-S7054-48X6H
Port	48 * 1GE/10GE SFP + 6 * 40GE/100GE QSFP 28
Chip Solution	98DX8548 (Marvell)
Exchange Capacity	2160Gbps
Packet Forwarding Rate	600Mpps
Memory and Storage	Memory: 4GB; Storage: 8GB

Hardware Specifications

Attributes	LM-S7054-48X6H
MAC Address	32K
Packet Buffer	48Mbit
Power	AC: 100~240V; 47/63Hz; DC: 20V 60V
Power Consumption	≤220W
Weight	≤9kg
Dimensions (W * H * D)	440×410×44mm (L * W * H)
Environment	Working Temperature: -10℃~50℃ Storge Temperature: -40℃~70℃ Relative Humidity: 5%~95%, non-condensing

Panel View



Panel View

- ① 48 * 1GE/10GE SFP+
- ② 40G/100G QSFP28
- ③ Console Port
- ④ Out-of-band management port
- ⑤ USB
- ⑥ Power Slot 1
- ⑦ Power Slot 2
- ⑧ FAN 1
- ⑨ FAN 2
- ⑩ GND

LABEL	Connector Type	Connector Description
1G/10GE 1-48	SFP+	Connect the user port
40G/100G 1-6	QSFP28	Connect to external uplink equipment
USB	USB2.0/3.2	Connecting peripherals for uploading and downloading configuration
CONSOLE	RJ45	The software debug port
MGMT	RJ45	The out-band management port

LED Indicator

MODEL	LM-S7054-48X6H	
Panel view		
LABEL	Connector Type	Connector Description
1G/10GE 1-48	SFP+	Connect the user port
40G/100G 1-6	QSFP28	Connect to external uplink equipment
USB	USB2.0/3.2	Connect the user port
CONSOLE	RJ45	Connect the user port

Plug-In Units

Plug-In Units	
Nominal DC power supply	DC: -20V ~ -60V
Nominal AC power supply	100~240V; 47/63Hz
FAN	The temperature starts at 0 degrees and rotates at 30% speed (about 3900 RPM), and the speed increases by 0.78% x 13000 rpm for every 1-degree increase.
AC Rated power of power supply	280W
DC Rated power of power supply	220W

FAN Unit

The switch provides two fan unit slots on the rear panel. Each plug-in unit consists of two internal fans. Users can insert the fan units into the slots by carefully aligning them with the slot guidance. The airflow moves from the front-side inlet to the rear-side outlet, ensuring effective cooling.

Characteristic	
FAN	The temperature of the switch chip attachment starts at 30 degrees and rotates at 30% speed (about 3600 RPM). For every 1-degree increase, the speed increases by 1.57% x 12000 rpm.

Software Specifications

Software Specifications

MODEL	LM-S7054-48X6H
Attributes	
VLAN	Support 4K VLAN Support VLAN based on port, MAC and protocol Support dual Tag VLAN, Access/Trunk/Hybrid
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
Stackable	Support sacking of 8 units through a single ip address. Support unified management. Support redundancy mechanism. Support high speed interconnect.
VXLAN	Support VXLAN uses MAC in UDP encapsulation Support VMS can move between different Layer 2 network domains. Support VNI is used to isolate different virtual networks to ensure that network traffic of different tenants is isolated Support Enable virtual machine packets to communicate across different subnets and data centers
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)

Software Specifications

MODEL	LM-S7054-48X6H
Attributes	
Mirroring	Supports multi-port mirroring analysis Service flow-based image analysis
ACL	Support standard and extended ACL Support ACL policy based on time Provide MAC, IP, L4 port and port level security control functions
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 on 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
Safety	Support user hierarchical management and password protection Support Radius & TACACS+ authentication Support MAC address learning limit, support black hole MAC function Support port isolation Support broadcast message rate suppression Support IP Source Guard Support ARP flood suppression and ARP spoofing protection
Layer 3	Support ARP learning and aging Support IPv4/IPv6 static route Support dynamic route RIP/OSPF/BGP Support IPv4/IPv6 dual-stack platform Support VRRP, CLI, Telnet, WEB, SNMP V1/V2/V3, SSHv2 mode
Terminal Services	Configurations through CLI Console Terminal service
Network Management	DHCP Server DHCP Relay DHCP Snooping DHCP Option60 DHCP Option82 DHCP Option66 DHCP Option120 SNTP Simple Network Time Protocol) LLDP

Software Specifications

MODEL	LM-S7054-48X6H
Attributes	
Maintenance	- Per-module debug features - CPU usage display and alarm - Memory usage display and alarm - Device temperature, PSU, FAN, status display and alarm - User operation logs - Management of logs, alarms, and debugging information - Detailed Diagnostic-information collection - Manual/Schedule reboot - Reboot Information logging - Ping - IPv6 Ping - Traceroute - Time configuration - Time zone
System Security	- SSHv1/v2 - RADIUS - TACACS+ - Authentication - Accounting - 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
Spanning Tree	- Rapid Spanning-Tree Protocol - Multi-instance Spanning-Tree Protocol
Network Management	- DHCP Server - DHCP Relay - DHCP Snooping - DHCP Option60 - DHCP Option82 - DHCP Option66 - DHCP Option120 - SNTP Simple Network Time Protocol) - LLDP

Software Specifications

MODEL	LM-S7054-48X6H
Attributes	
Maintenance	Per-module debug features CPU usage display and alarm Memory usage display and alarm Device temperature, PSU, FAN, status display and alarm User operation logs Management of logs, alarms, and debugging information Detailed Diagnostic-information collection Manual/Schedule reboot Reboot Information logging Ping IPv6 Ping Traceroute Time configuration Time zone
System Security	SSHv1/v2 RADIUS TACACS+ Authentication Accounting 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
Spanning Tree	Rapid Spanning-Tree Protocol Multi-instance Spanning-Tree Protocol
Configuration Management	Inbound management interface and configuration Outbound management interface and configuration Privileged user priority and privileged commands Network management based on SNMPv1/v2c/v3 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 Upload and download files through Xmodem

Software Specifications

MODEL	LM-S7054-48X6H
Attributes	
System Management	Support FTP, TFTP file upload and download Support SNTP Support LLDP neighbor device discovery protocol Support RFC1213 SNMP network management 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

The switch provides standardized interfaces, thus facilitating rapid and trouble-free integration into the existing network infrastructures.

Network Interfaces

The switch optical interface ports for SFP/SFP+ modules and below table is available SFP/SFP+ module list.

MODEL	LM-S7054-48X6H
Index	SFP/SFP+/QSFP28 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

Connector Specifications

MODEL	LM-S7054-48X6H
Index	SFP/SFP+/QSFP28 Module Description
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: 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)
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)
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)

Connector Specifications

MODEL	LM-S7054-48X6H
Index	SFP/SFP+/QSFP28 Module Description
12	• Wavelength: 850nm/ Distance: 100m/ Mode: MMF • Connector: MMF Data rate: 100 Gbit/s/ Core type: Dual Core • Operating Temperature: 0°C ~ 70°C • 100G BASE-SR4

Purchase Info

Product Name	Product Description
LM-S7054-48X6H	48 * 1GE/10GE SFP+ & 6 * 40GE/100GE QSFP28 Power module Optional Support Dual-FRU AC or DC redundant power supply

LED Indicator

MODEL	LM-S7054-48X6H			
Panel view				
LABEL	Connector Type	Connector Description		
MGMT	SFP+	Connect the user por		
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
FAN1(left) FAN2(right)	Green	Fan running status	ON	FAN is running normally.
			OFF	FAN is running abnormally.
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	Insert flash (Fat32)
			OFF	NO Insert flash (Fat32)
MGMT	Green	Port status	ON	The link is properly connected (link up) and in action.
			OFF	The link is interrupted (link down).
STK	Green	Usb flash insertion status	ON	Enable Stack
			OFF	Disable Stack

LED Indicator

MODEL	LM-S7054-48X6H			
LED indicator				
LEDs/ Buttons	Colors	Function	Description	
QSFP28 Port	Green	Port status	OFF	The link is interrupted (link down).
	Orange		ON	The link is properly connected (link up) and in action. Works in 100/1000Mbps or 40Gbps mode

SPECIFICATION

Plug-In Units

Power Supply Unit (PSU)

On the rear panel of the switch, there are two slots for Power Supply Units (PSU). The mounting slots can be equipped with either DC or AC type PSUs, and different types of PSUs can be installed in the switch. Below are the AC and DC types of power supply modules.

Two PSUs are required for redundancy, so dual PSUs must be installed in the system. The power supply unit feeds the proper voltage to the baseboard of the switch.

Up to two PSUs can be mounted on the rear side of the chassis, and either can be DC or AC type. Therefore, it is important to choose the proper power supply unit according to the installation environment.

The power connector (AC or DC type) for the main power supply is located on the rear panel of the PSU. For redundant power feeding, the second PSU must be used.



Xtreme Switch

DATA SHEET | LM-S7054-48X6H



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