Lanmus

LM-S7056-48FP8H

DATASHEET

L3 Managed PoE Ethernet Switch 48 * 10/25G SFP28 Port

The LM-S7056-48FP8H is a high-performance, next-generation Layer 3 switch designed for enterprise, data center, and carrier-grade network environments. Built to meet the ever-growing demands for scalable and high-density connectivity, this switch combines 48 × 10/25G SFP28 ports with 8 × 40/100G QSFP28 uplink ports, providing a versatile and future-proof solution for modern networks.

PRODUCT INTRODUCTION

Product Overview

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The LM-S7056-48FP8H is engineered to deliver superior speed, flexibility, and high availability, making it ideal for a wide range of applications, from data center core switches to aggregation layers in large-scale enterprise networks.

The switch is designed with both Layer 2 and Layer 3 capabilities, offering wire-speed forwarding on all ports to ensure optimal performance and low latency for high-bandwidth applications. Whether it is used for high-density data aggregation or as an access layer switch, the LM-S7056-48FP8H ensures seamless traffic flow, efficient routing, and enhanced network security. It also includes extensive support for advanced features like VLANs, ACLs, and Q-in-Q, which help organizations manage traffic effectively while safeguarding the integrity of their networks.

With dual-FRU redundant power supply support for both AC and DC configurations, the LM-S7056-48FP8H is designed for mission-critical environments that require maximum uptime and fault tolerance. The hot-swappable power supply ensures that any power-related failure will not disrupt the operation of the switch, providing high availability and operational reliability.

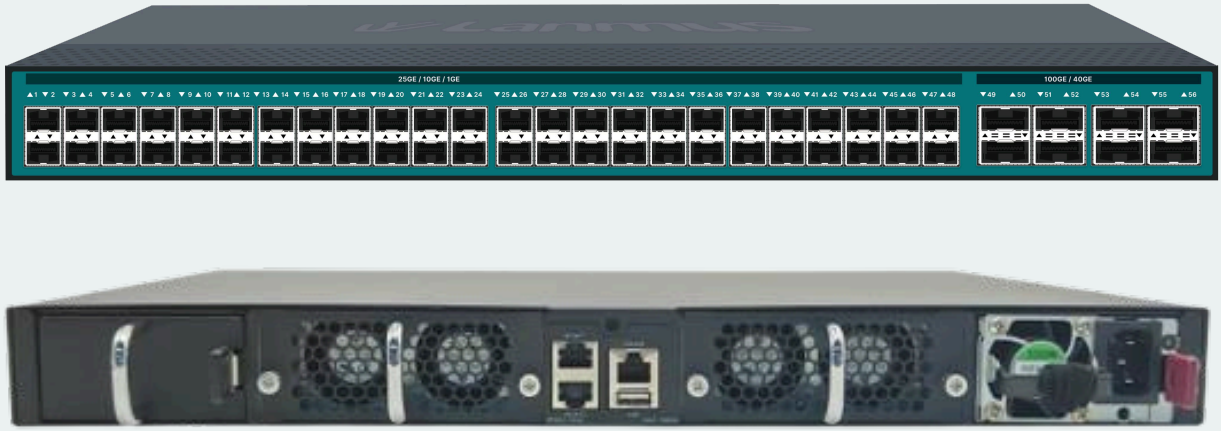
Moreover, the LM-S7056-48FP8H supports elastic stacking, allowing multiple units to be combined and managed as a single logical device, simplifying management and facilitating scalability. This feature enables users to expand their network infrastructure with ease while maintaining consistent performance and operational efficiency.Whether deployed in data center core, enterprise campus networks, or service provider environments, the LM-S7056-48FP8H offers unmatched versatility and performance. It is the ideal solution for organizations looking to future-proof their network infrastructure, ensuring seamless support for growing traffic loads and evolving business requirements.

Product Overview

The LM-S7056-48FP8H is a high-performance Layer 3 switch built for enterprise, data center, and carrier-grade networks. It features 48 × 10/25G SFP28 ports and 8 × 40/100G QSFP28 uplinks, delivering scalable, high-density connectivity for modern infrastructures.

Designed for speed, reliability, and flexibility, it offers wire-speed performance, advanced Layer 2/3 features, and robust security. With redundant power supplies and elastic stacking support, it ensures high availability and easy scalability, making it ideal for core and aggregation deployments.

DEVICE BRIEF INFORMATION



LM-S7056-48FP8H

- 48 * 10/25G SFP28
- 8 * 40/100G QSFP28
- AC or DC redundant power supply
- 440 × 410 × 44mm

Key Features

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.

High-density 100G fiber access

- Provides high-density connectivity with 48 × 10G/25G SFP28 ports, ideal for access and aggregation layers in data centers, enterprise networks, and service provider environments.
- Supports flexible, high-speed connections for a wide range of networking applications, including high-performance computing, cloud services, and virtualized environments.

Dual-FRU Redundant Power Supply

- Features dual FRU (Field Replaceable Unit) power supplies with hot-swappable capabilities for both AC and DC power inputs, ensuring high availability.
- Redundant power supply configuration guarantees continuous operation in critical environments, minimizing downtime and service disruptions.

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.
- Support VRRP/ERRP/ERPS/MSTP/Smart-link etc. Various link redundancy and network redundancy protocol.
- Support 802.3ad LACP.

Key Features

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

Multi-service capabilities

- Support DHCP Server and DHCP Relay
- Support L2-Tunnel
- Support Ethernet OAM protocol

Routing protocol

- Support static route
- Support dynamic route such as RIP/OSPF/BGP/ISIS

Safety Mechanism

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

Key Features

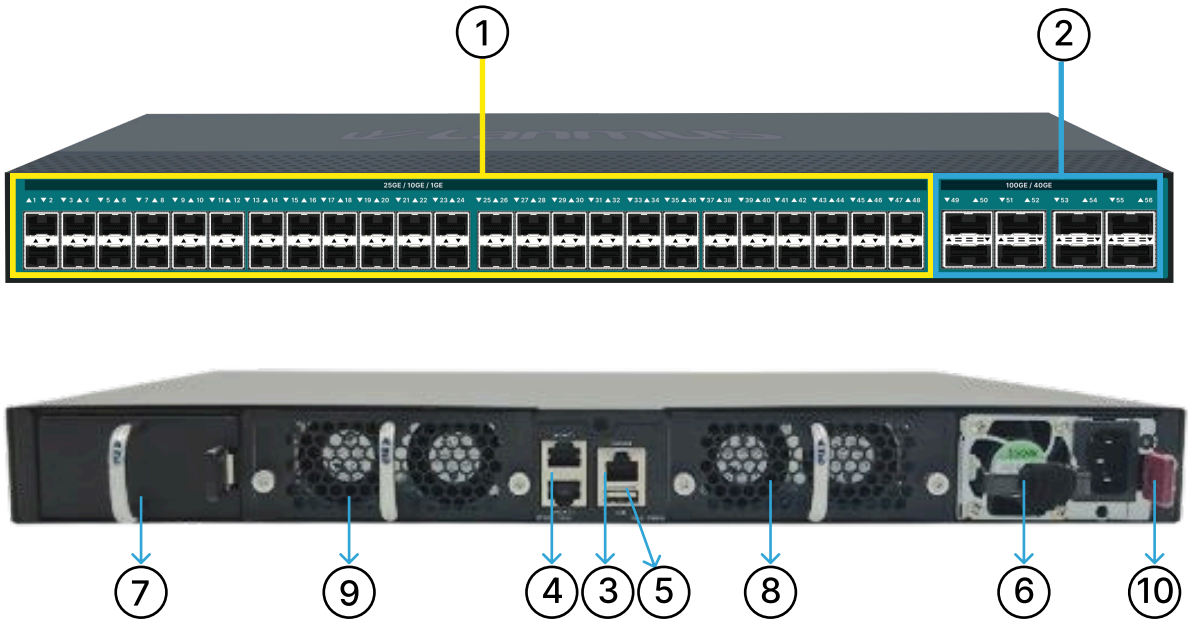
Network Management Function

- Support CLI based on RS-232 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-S7056-48FP8H
Port	48 * 10/25G SFP28; 8 * 40/100G QSFP28
Exchange Capacity	4Tbps
Packet Forwarding Rate	2800Mpps
VLAN	4K
DRAM & Flash	DRAM:4GB; Flash:8GB
Power	AC： 100～240V 47/63Hz; DC : 36V ~75V
Power Consumption	≤500W
Weight	10Kg
Dimension	440*410*44mm
Environment	Working Temperature：-10°C～55°C Storge Temperature：-40°C～70°C Relative Humidity :10%~90%, no condensation

Panel view



① 40 * 10/25G SFP28 ② 8 * 40/100G OSFP28 ③ Comsole Port

④ Out-Band MGMT Port ⑤ USB Port ⑥ Power Module 1

⑦ Power Module 2 ⑧ FAN Module 1 ⑨ FAN Module 2 ⑨ GND

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.

LED Indicator

LEDs/ Buttons	Colors	Function	Description	
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
SFP/QSP28 Port	Green	Port status	ON/ FLASH	The link is properly connected (link up) and in action Works in 10G/100G mode
			OFF	The link is interrupted (link down).
	Orange		OFF	The link is properly connected (link up) and in action Works in 100/1000Mbps or 40Gbps mode.

Plug-In Units

Power Supply Unit (PSU)

On the rear panel of the switch, there are two slots for Power Supply Unit (PSU). The mounting slots can be equipped with DC or AC type PSUs. The different types of PSUs can be equipped into the switch. The below shows AC and DC type of power supply modules. Two PSUs, for supplying redundancy, dual PSUs have to be installed at a system.

Plug-In Units

The power supply unit (PSU) feeds the proper power voltage to the base board of switch. Two PSUs are possible to be mounted into rear side of the chassis and it can be DC or AC type of PSU. Therefore, you need to decide to choose proper power supply unit according to installation environment.

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

The below shows the electrical characteristics of the switch:

Characteristic	LM-S7056-48FP8H
Nominal DC power supply	DC: -20V ~ -60V
Nominal AC power supply	100～240V; 47/63Hz
AC Rated power of power supply	550W

FAN Unit

The switch provides 2 fan unit slots on the rear panel. This plug-in unit internally consists of 2 fans. User can insert a fan unit to a fan slot by slowly adjusting them to fit into the slot guidance. The air flows from the front side inlet to the rear side outlet.

FAN Unit

Characteristic	LM-S7056-48FP8H
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

Characteristic	LM-S7056-48FP8H
VLAN	Support 4K VLANs Support 1:1 and N:1 VLAN switching Support basic and flexible QinQ
MAC	Support 128K MAC address table Support Control the number of MAC addresses on a port Support Port MAC address filtering is supported Support blackhole MAC
Stackable	Support Sacking of 08 units through a single ip address. Support Unified management Support Redundancy mechanism Support High speed interconnect
Spanning Tree	Support the STP/RSTP/MSTP Support BPDU protection, root protection, and loopback protection
Port	Support bidirectional bandwidth control Support static and dynamic LACP aggregation Support multi-port mirroring Support port storm suppression Support 9K Jumbo ultra-long frame forwarding
Device Safety	Support SSHv2 Secure Shell is supported Support SNMP V3 encryption management Support the Telnet login and password mechanism of the Security IP address

Software Specifications

Characteristic	LM-S7056-48FP8H
User Security	Support anti-ARP-spoofing prevention Support automatic suppression of anti-ARP-flooding attacks Support IP Source Guard to automatically create IP, MAC, port, and VLAN binding tables Support Port Isolation Hardware isolates packets between ports Support MAC address binding to ports and port MAC address filtering are supported Support IEEE 802.1X and AAA/RADIUS/TACACS+ user authentication
Network Security	Support ARP traffic detection based on each user's MAC address Support ARP packet suppression or user blocking based on ARP traffic detection Support port broadcast/multicast packet suppression and automatic shutdown of dangerous ports Support the DHCP Option 82 and PoE+ tag can be used to upload user physical location information
ACL	Support standard and extended ACL Support ACL policy based on time period Support provide flow classification and flow definition based on IP header information such as source/ destination MAC address, VLAN, 802.1p, ToS, DSCP, source/destination IP address, L4 port number, protocol type, etc.
QoS	Support flow rate limiting function based on custom business flow Supports mirroring and redirection functions based on custom business flows Support priority marking based on custom service flow, support 802.1P, DSCP priority remark capability Supports port-based traffic policing and the two-speed, three-color CAR function Support port-based priority scheduling function, queue scheduling algorithms such as SP/WRR/SP+WRR
Multicast	Support Layer 2 multicast entry 8K Support IGMP v1/v2/v3 snooping Support PIM-SM, PIM-DM, and PIM-SSM Support IGMP Proxy Support controlled multicast

Software Specifications

Characteristic	LM-S7056-48FP8H
ARP	Support ARP capacity 32k Support Aging ARP entries Support the ARP Proxy Support IP address conflict identification between connected users
IPV4	Support 512 Layer 3 interfaces Support IPv4 route entry 64K Support Layer 3 multicast entry 8K Supports the Ping, Traceroute, VRRP, OSPF, RIP, PIM, BGP, ISIS, and BFD protocols
IPV6	Support IPv6 route entry 16K Support ICMPv6 Support the neighbor discover Supports RIPng, BGP+, and OSPFv3
Loop Protection	Support ERPS Ethernet ring network protocol (loop healing time <50ms) Support loopback-detection on ports
Link Protection	Support FlexLink link backup (link healing time <200ms) Supports RSTP/MSTP link healing hardware acceleration (loop healing time <1s) Support LACP dynamic link aggregation (link healing time <200ms)
Equipment Protection	Support VRRP host backup
Network Maintenance	Support the LLDP neighbor device discovery protocol Support RFC3176 Flow traffic analysis to monitor and collect statistics on traffic based on protocols or addresses Support Ping and Traceroute
Equipment Management	Support CLI, Console port, Telnet, SSH, and WEB configuration management Support SNMP v1, v2, and v3 management Support SNTP

Connector Specifications

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

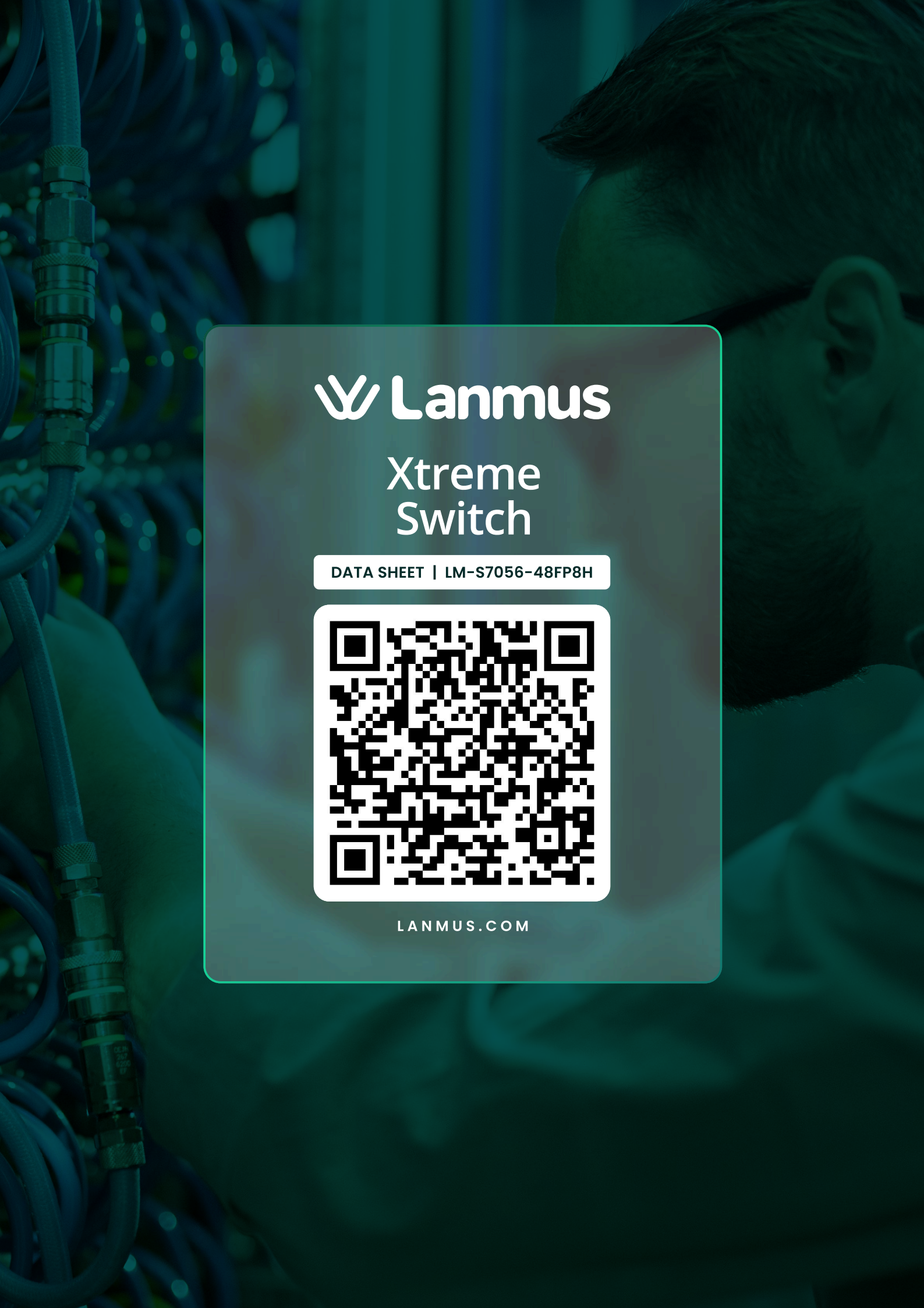
Network Interfaces

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

Index	QSFP28 Module Description
1	- 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
2	- Wavelength: 850nm / Distance: 100m / Mode: MMF - Connector: MMF Data rate: 40 Gbit/s / Core type: Dual Core - Operating Temperature: 0°C ~ 70 °C 40G BASE-SR4

Purchase Info

Product Name	Product Description
LM-S7056-48FP8H	48 * 10/25G SFP28; 8 * 40/100G QSFP28; support Dual-FRU AC or DC redundant power supply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