

# LMSW-83M

## Ruggedized Gigabit Ethernet Layer 2 Managed PoE Switch

**3x 100/1000Base-X FO HMA**  
**8x 10/100/1000Base-T, RJ-45 with PoE+**

### Description:

The LMSW-83M is Layer 2 military grade managed switch with 3x Fiber optic HMA-J ports (Gigabit or Fast Ethernet) and 8x 10/100/1000Base-X RJ-45 ports with PoE+ functionality that provides stable and reliable Ethernet transmission. The LMSW-M series models can provide excellent data optical network performance and rugged design.

The switch supports a variety of management functions, including STP/RSTP/MSTP and ITU-T G.8032 Ring<50 ms recovery time, advanced PoE management functions such as PoE device auto-checking and auto reset, layer 2 Ethernet IGMP, VLAN, QoS, Security, IPv6, bandwidth control, port mirroring, cable diagnostic and Green Ethernet.

The switch is able to fit all the common 12/24 V DC and 230 V AC power systems simultaneously (redundant power supply). The switch operates in wide operating temperature range -40 to +70 °C. The switch can operate as stand alone device or in addition the 19" brackets allow switch installation into 19" rack.

### Features:

- Robust compact design resistant to harsh environmental conditions and rough handling
- Front panel : 8x 10/100/1000Base-T: RJ-45 interface with support of IEEE802.3af/at PoE output (30 W per Port, up to 180 W)
- Rear panel: 3x 100/1000Base-X FO port with HMA-J connectors
- Built-in power booster design up to 55 V DC for PoE/PoE+ output
- Redundant dual input AC/DC power supply available



LMSW-83M

### Functionality:

- Advanced PoE Management, PoE PD auto detection and auto reset, PoE configuration for power planning, weekly scheduling
- Support IEEE802.3az EEE (Energy Efficient Ethernet) Management to optimize the power consumption
- STP, RSTP, MSTP, ITU-T G.8032 Ethernet Protection Ring (EPR) for cabling redundant
- Provides 5 ring instances that each can support u-Ring, u-Chain or Sub-Ring type for flexible uses. Supports up to 5 rings in one device.
- QoS, Traffic classification QoS, CoS, Bandwidth control for Ingress and Egress, Strom Control, DiffServ
- IEEE802.1q VLAN, port base VLAN, Mac base VLAN, IP subnet base VLAN, Protocol base VLAN, VLAN translation, MVR
- Dynamic IEEE 802.3ad LACP Link Aggregation, Static Link Aggregation
- IGMP/MLD snooping V1/V2/V3, IGMP Filtering / Throttling, IGMP query, IGMP proxy reporting, MLD snooping
- Security: Port based and MAC based IEEE802.1X, RADIUS, ACL, TACACS+, HTTP/HTTPS, SSL/SSH v2
- CLI, Web base management, SNMP v1/v2c/v3, Telnet server for management
- Software upgrade via TFTP and HTTP, redundant firmware to avoid in case of upgrade failure
- DHCP client/Relay/Snooping/Snooping option 82/Relay option 82
- RMON, MIB II, Port mirroring, Event syslog, DNS, NTP/SNTP, IEEE802.1ab LLDP
- Support IPV6 Telnet server /ICMP v6, SNMP, HTTP, SSH/SSL, NTP/SNTP, TFTP, QoS, ACL
- Cable diagnostics, measuring cable OK or broken point distance



LMSW-83M – 19" brackets installed



LMSWF-83M rear view

## Specifications:

Standards:	
IEEE 802.3	10Base-T, 10 Mbps Ethernet
IEEE 802.3u	100Base-TX, 100Base-FX, Fast Ethernet
IEEE 802.3ab	1000Base-T Gbps Ethernet over twisted pair
IEEE 802.1d	STP (Spanning Tree Protocol)
IEEE 802.1w	RSTP (Rapid Spanning Tree Protocol)
IEEE 802.1s	MSTP (Multiple Spanning Tree Protocol)
ITU-T G.8032/ Y.1344	EPR (Ethernet Protection Ring)
IEEE 802.1Q	Virtual LANs (VLAN)
IEEE 802.1X	Port based Network Access Control, Authentication
IEEE 802.3ad	Link aggregation for parallel links with LACP (Link Aggregation Control Protocol)
IEEE 802.3x	Flow control for Full Duplex
IEEE 802.3af	PoE (Power over Ethernet)
IEEE 802.3at	PoE+ (Power over Ethernet enhancements)
IEEE 802.1ad	Stacked VLANs, Q-in-Q
IEEE 802.1p	LAN Layer 2 QoS/CoS Protocol for Traffic Prioritization
IEEE 802.1ab	Link Layer Discovery Protocol (LLDP)
IEEE 802.3az	EEE (Energy Efficient Ethernet)
<b>Switch Architecture</b>	Backplane (Switching Fabric): 22 Gbps
<b>Data Processing</b>	Store and Forward
<b>Flow Control</b>	IEEE 802.3x for full duplex mode Back pressure for half duplex mode
<b>PoE standard</b>	IEEE802.3af, IEEE802.3at
<b>PoE RJ-45 pin Assignment</b>	8x RJ-45 port support IEEE 802.3af/at End-Span, Alternative A mode Positive (VCC+): RJ-45 pin 1, 2 Negative (VCC-): RJ-45 pin 3, 6 Data: 1,2,3,4,5,6,7,8
<b>Network Connector</b>	8x RJ-45 10/100/1000BaseT(X) auto negotiation speed, Auto MDI/MDI-X, Full/Half duplex
<b>Console Network Cable</b>	RS-232 (RJ-45) UTP/STP above Cat. 5e cable EIA/TIA-568 100 Ohm (100 m)
<b>Protocol</b>	CSMA/CD
<b>Reverse polarity protection</b>	
<b>LED signalization</b>	

Mechanical & environmental parameters:		Electromagnetic compatibility tests
Interface	RJ-45 port: ruggedized, watertight connectors FO: HMA-J Expanded Beam connector	<b>EMC</b> – Electromagnetic compatibility: MIL-STD 461E: 1999, methods RE102, CE102 MIL-STD 461F methods CS101, CS114, CS115, CS116, RS103
Distance	UTP cable (10Base-T, 100Base-TX, 1000Base-T): 100 m	
Environmental temperature	Fulfils MIL-STD 810G Operating: -40 °C to +70 °C Storage: -40 °C to +85 °C	<b>Safety tests</b>  <b>LVD</b> – Low Voltage Directive: EN 60950-1 ed.2:2006
Mechanical	Fulfils MIL-STD 810G, IP 65 protection	
Power supply: DC <sup>2</sup> AC	10.5-36 / 20-57 V DC 176-242 V AC	
Dimensions	430 x 275 x 65 mm (W x D x H)	
Weight	4.5 kg	

## Ordering code:

<b>LMSW-83M</b>	-	<b>XX</b>	-	<b>XX</b>	-	<b>XX</b>
		<b>Fiber optic</b> <b>M5:</b> MM 50/125 μm <b>S3:</b> SM 1310 nm <b>S5:</b> SM 1550 nm			<b>Distance (FO)</b> <b>XX<sup>1</sup>:</b> Multimode <b>10:</b> 10 km <b>30:</b> 30 km <b>50:</b> 50 km	<b>Power supply<sup>2</sup></b> <b>AC:</b> 176-242 V AC <b>DC:</b> 10.5-36 V DC <b>DC5:</b> 20-57 V DC

Note: 1) distance depends on optical fiber parameters  
2) standard power supply: DC: 10.5-36 V, please define – if required different

### Standard accessories:

- Power cable
- Console cable
- Brackets for installation into 19" rack
- Manual

### Options:

- Military-Grade UTP cables (IP67) 2, 5, 8 m  
LMSW08B-LAN-xx, xx – length m
- Tactical fiber optic cable with HMA-J connectors



LMCAB-PSC-03-62GB-16J08-33SN-DC



LMSW08B-LAN-08



Tactical cable with HMA-J connectors