

Melbye Raycore Taiwan Co., Ltd

# Specification of L2 Manageable Gigabit Ethernet Fiber Switch 7 ports LAN with 1 port fiber

Part Number: ASWS-9T7F-xxxxx-0x

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**RAYCORE**

Raycore is a fiber optic product brand name of Melbye Skandinavia AS.

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## 10/100/1000 Base-T x7 Port + Uplink (Fiber or RJ-45) x1 Port Series



(Without Fiber Tray)



(With Fiber Tray)

### 1. Descriptions

The **ASWS-9T7F-xxxxx-xx** is a very compact manageable Gigabit Ethernet layer 2+ Switch with one Gigabit fiber port and seven Gigabit Ethernet LAN ports. This Switch with its patented functions is unique due to its ability of selecting either 100 Mbps or 1 Gbps on the fiber port, using the 1x9 module or SFP.

A powerful 416 MHz CPU ensures the unit is capable of handling today's demanding management needs.

The unit support remote management by several different means.

### 2. Specifications

#### Interface

- **LAN**
  - RJ-45 Port: 10/100/1000 Base-T x6 Port
- **Telemetry services or Copper LAN**
  - RJ-45 Port: 10/100/1000 Base-T x1 Port
- **WAN**
  - Fiber Port: 100/1000 Base-X SFP, 1x9 Dual or WDM SC connector x1 Port
  - Fiber Length: Dual-Type: 20km/40km (SMF); WDM-Type: 20km/40km (SMF)

## Standard compliance

- Support IEEE 802.3 10BASE-T
- Support IEEE 802.3u 100BASE-TX/FX
- Support IEEE 802.3ab 1000BASE-T
- Support IEEE 802.3z 1000BASE-X
- Support IEEE 802.3x Flow Control
- Support IEEE 802.1p QoS
- Support IEEE 802.1q VLAN Tagging
- Support IEEE 802.1d MAC Bridges/STP
- Support IEEE 802.1w RSTP
- Support IEEE 802.1ad Provider Bridges
- Support IEEE 802.3az Energy Efficient Ethernet (EEE) function
- Support IEEE 802.3ah Link OAM

## Traffic

- Support Port Setting
- Support Bandwidth Control/Traffic Shaping:
  - Configurable per port (100kbps increments)
  - Configurable per que (100kbps increments)
- Support Storm Control: Broadcast/Multicast Storm Suppression
- Support IGMP Snooping: IGMP snooping enable and disable mode

## Link OAM Management

- OAM management (Active and Passive Mode)
- OAM Discovery
- Link Monitor support
- Unidirectional Operation support
- MIB Retrieval support
- OAM Loopback support
- Dying Gasp support

## Security & Authentication

- Support IEEE 802.1p QoS:
  - Support Eight QoS queues per port with strict or deficit-weighted round robin scheduling
  - Support QoS classification based on IEEE 802.1p, EtherType, VID, MAC/IP addresses, IPv4/IPv6 DSCP, and UDP/TCP ports and ranges
  - Support data rate shaper and policer per-queue, per-port for both ingress and egress directions in steps of 100kbps
  - Support full-duplex flow control (IEEE 802.3x) and half-duplex backpressure, symmetric and asymmetric
  - Support Multicast and broadcast storm control with flooding control.
  - Support QoS Control List (QCL Mode)
- Support IEEE802.1q VLAN:
  - Port-base VLAN
  - MAC based VLAN
  - Protocol based VLAN
  - MVR
  - IEEE-802.1ad Provider Bridge (Native or Translated VLAN)
  - IEEE802.1q tag-base VLAN, up to 256 active VLANs
  - Management VLAN
  - Support Q in Q
  - Support VLAN Translation
- Support DDM function for SFP:
  - SFP P/N
  - SFP Series number
  - SFP Type
  - Measured TX output power
  - Measured RX received optical power
  - Measured TX bias
  - Supply voltage
  - Transceiver temperature
- Support Port Mirroring
  - Per port ingress and egress mirroring

- Mirroring per VLAN and per VCAP match
- Support Port Isolation
- Support EEE
  - ActiPHY™
  - PerfectReach™
  - IEEE 802.3az resulting in one of the lowest power 7-port Gigabit Ethernet switch
- IEEE-802.1D Bridge
  - Auto MAC address learning/aging
  - MAC Addresses – Static
- IEEE 802.10AB-2005 Link Layer Discovery – LLDP

## Management

- Management via Web/HTTP
- Telnet CLI
- Support SNMP v1 & v2c and v3 agent, RFC 1213 MIB (MIB-II) and Private MIB
  - RFC 2674 VLAN MIB
  - RFC 2819 RMON (Group 1, 2, 3 & 9)
  - RFC 1213 MIB II
  - RFC 4188 Bridge MIB
  - RFC 3635 Ethernet-like MIB
  - RFC 2863 Interface Group MIB using SMI v2
  - RFC 3636 802.30 MAU MIB
  - RFC 4133 Entity MIB version 3
  - RFC 3411 SNMP Management Frameworks
  - RFC 3414 User-based Security Model for SNMPv3
  - RFC 3415 View-based access Control Model for SNMP
- Support DHCP Client for IPv4
- Support DHCP Client for IPv6 (future firmware upgrade)
- Support DHCP Snooping
- Support DHCP Option 82 relay
- Auto Provisioning for firmware and configuration upgrade
- Firmware and configuration upgrade via Web/HTTP
- Dual Bank Image

- Support Auto Laser Shutdown
  - When Fiber Rx no input that laser will shut down 3 sec then open 1 sec repeat action until Rx get input.
- Support watchdog timer
  - Watchdog timer function ensuring you can always reach management of the unit
- Support TR069
  - Firmware upgrade
  - Configuration upgrade
- Support TR098
  - Port status
  - Port setting
- Support SNMP trap dying gasp

## Hardware

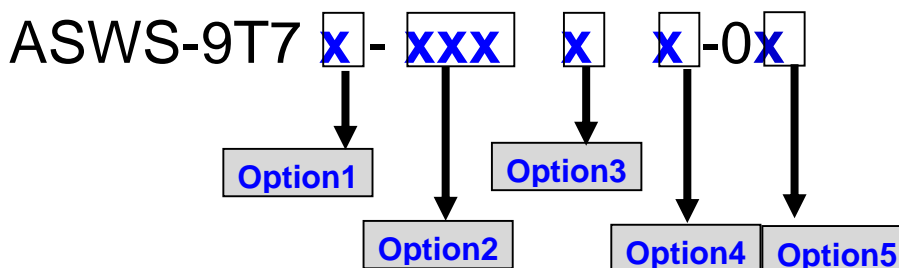
- LED Indicators:
  - Power: Blue LED
  - FX LINK/ACT : Blinks LED
  - Speed: Orange/Green LED (1000M/100M)
  - LAN 1-6 LINK/ACT: Blinks LED
  - LAN 1-6 Speed: Orange/Green/Red LED (1000M/100M/10M)
  - TM/LAN 7 LINK/ACT: Blinks LED
  - TM/LAN 7 Speed: Orange/Green/Red LED (1000M/100M/10M)
- Support Auto-negotiation for TP Port (10/100/1000 Base and Full/Half mode)
- Support Auto MDI/MDIX auto-crossover for TP ports
- Operate in store and forward mode
- 4 megabits of integrated shared packet memory
- Support Flow Control
- Support 8K MAC Address Table
- Support Jumbo Frame (9k)

## Environmental & Physical

- Installation: Desk Top/Wall Mounting/Magnet Wall Mounting
- Dimension: 93.5mm x 163mm x 32mm (LxWxH) (without fiber tray)  
142mm x 163mm x 38.5mm (LxWxH) (with fiber tray)
- Operating Temperature: 0~40°C
- Storage Temperature: 0~70°C
- Humidity: 20~80% non-condensing
- Power Consumption: <8W
- Power Input: DC Jack, 12VDC/1A
- MTBF: 100,000 h (25°C)
- Compliance: RoHS
- Compliance: CE/FCC and LVD

### 3. Ordering Information:

Part Number	Description
ASWS-9T7F-xxxxx-0x	L2 Gigabit Ethernet Fiber Switch, Managed 7 ports 10/100/1000 Base-T with 1 port 100/1000 Base-X fiber



#### Option1:

Option Code	Option Descriptions
<b>F</b>	Fiber Port: 100/1000 Base-X
<b>W</b>	Fiber Port: 100/1000 Base-X with TV RF output option, without TV Receiver

#### Option2:

Option Code	Option Descriptions
<b>009</b>	SFP Cage only
<b>131</b>	1x9 Dual SC, 1310nm, SMF 20km
<b>13A</b>	1x9 Dual SC, 1310nm, SMF 40km
<b>351</b>	1x9 Bidi SC, T1310nm/R1550nm, SMF 20km
<b>35A</b>	1x9 Bidi SC, T1310nm/R1550nm, SMF 40km

#### Option3:

Option Code	Option Descriptions
<b>1</b>	With Fiber Tray
<b>0</b>	Without Fiber Tray
<b>2</b>	Without Fiber Tray, with Magnet Bracket



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<b>3</b>	Without Fiber Tray, with Wall Mount Bracket
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**Option4:**

Option Code	Option Descriptions
<b>1</b>	100-240V/50-60Hz, 12V/1A, US (Type A), Black
<b>2</b>	100-240V/50-60Hz, 12V/1A, EU (Type C), White
<b>0</b>	No Power adaptor

**Option5:**

Option Code	Option Descriptions
<b>0</b>	Standard firmware
<b>x</b>	Customize firmware