# **LM-7000H Module Series**

### Ethernet and PoE+ modules for the PT-G7728/G7828 Series and MDS-G4012/20/28 Series



#### **Features and Benefits**

- -40 to 85°C wide operating temperature
- IEC 61850-3 and IEEE 1613 compliant
- IEC 62439-3 Clause 4 (PRP) and Clause 5 (HSR) compliant
- · Hot-swappable

#### **Certifications**



#### Introduction

The LM-7000H Module Series is designed for the PT-G7728/G7828 Series and MDS-G4012/G4020/G4028 Series IEC 61850-3 Ethernet switches. These modules provide additional flexibility to supported switches by letting you add 4 Gigabit Ethernet or PoE ports per module, or 2 Gigabit PRP/HSR ports per module.

### **Specifications**

#### **Ethernet Interface**

PoE Ports (100/1000BaseT(X), RJ45 connector)	LM-7000H-4GPoE: 4
10/100BaseT(X) Ports (RJ45 connector)	LM-7000H-4TX: 4
PoE Ports (10/100BaseT(X), RJ45 connector)	LM-7000H-4PoE: 4
100/1000BaseSFP Slots	LM-7000H-4GSFP: 4
10/100/1000BaseT(X) Ports (RJ45 connector)	LM-7000H-4GTX: 4
Combo Ports (100/1000BaseT(X) PRP/HSR or 100/ 1000BaseSFP PRP/HSR)	LM-7000H-2GPHR: 2 (For PT-G7728 Series only)

#### **Power Parameters**

Power Consumption	LM-7000H-4GTX: 3.63 W (max.)
	LM-7000H-4GPoE: 3.8 W (max.)
	LM-7000H-4GSFP: 4.8 W (max.)
	LM-7000H-4TX: 1.85 W (max.)
	LM-7000H-4PoE: 1.85 W (max.)
	LM-7000H-2GPHR: 8.1 W (max.)

#### **Physical Characteristics**

Weight	LM-7000H-4GSFP: 0.3 kg (0.66 lb) LM-7000H-4GTX: 0.24 kg (0.53 lb) LM-7000H-4GPoE: 0.31 kg (0.69 lb) LM-7000H-4TX: 0.24 kg (0.53 lb) LM-7000H-4PoE: 0.31 kg (0.69 lb) LM-7000H-2GPHR: 0.31 kg (0.69 lb)
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#### MTBF

Time	LM-7000H-4GPoE: 1,280,518 hrs LM-7000H-4GSFP: 2,475,903 hrs LM-7000H-4GTX: 2,641,729 hrs LM-7000H-4PoE: 1,280,220 hrs LM-7000H-4TX: 2,640,462 hrs LM-7000H-2GPHR: 1,832,962 hrs
Standards	Telcordia (Bellcore), GB
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/warranty

## **Ordering Information**

Model Name	10/100/ 1000BaseT(X) Ports	10/100BaseT(X) Ports	100/ 1000BaseSFP Slots	100/ 1000BaseT(X) PoE Ports	10/100BaseT(X) PoE Ports	Combo Ports (10/100/ 1000BaseT(X) PRP/HSR or 100/ 1000BaseSFP PRP/HSR)	Operating Temp.
LM-7000H-4GTX	4	-	-	-	-	-	-45 to 85°C
LM-7000H-4TX	-	4	-	-	-	-	-45 to 85°C
LM-7000H-4GPoE	-	-	-	4	-	-	-45 to 85°C
LM-7000H-4PoE	-	-	-	-	4	-	-45 to 85°C
LM-7000H-4GSFP	-	-	4	-	-	-	-45 to 85°C
LM-7000H-2GPHR	-	-	-	-	-	2	-45 to 75°C

# **Accessories (sold separately)**

#### SFP Modules

SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode with LC connector for 4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to $60^{\circ}$ C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to $60^{\circ}$ C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to $60^{\circ}$ C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature



	1310 nm, RX 1550 nm, 0 to 60°C operating temperature
	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
	SFP module with 1 1000BaseEZX port with LC connector for 110 km transmission, 0 to 60°C operating temperature
	SFP module with 1 1000BaseEZX port with LC connector for 120 km transmission, 0 to 60°C operating temperature
	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXLC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, 0 to 60°C operating temperature
	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature
	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXLC	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature
SFP-1GSXLC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°C operating temperature
	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature

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