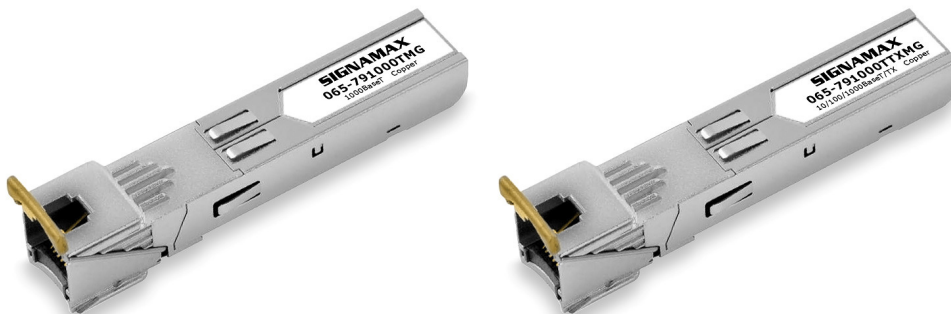


065-791000TMG 1000BaseT and 065-791000TTX 10/100/1000BaseT/TX Copper Small Form-factor Pluggable (SFP) Modules



The Signamax model 065-791000TMG is a Small Form-factor Pluggable (SFP) 1000BaseT module that supports Gigabit Ethernet only over Category 5e or better twisted-pair cable at distances up to 100 meters. The Signamax 065-791000TTXMG is a Small Form-factor Pluggable (SFP) 10/100/1000BaseT/TX module that supports Standard, Fast, and/or Gigabit Ethernet over Category 5e or better twisted-pair cable at distances up to 100 meters**.

They adhere to the IEEE 802.3z standard for Gigabit Ethernet, and are cost-effective methods of providing changeable 1000BaseT or 10/100/1000BaseT/TX Ethernet twisted-pair interfaces to switches and media converters equipped with a standard Gigabit-capable SFP slot.

APPLICATIONS

- Gigabit Ethernet Media Converters
- Gigabit Ethernet LAN switch applications
- Switch to switch SerDes interface
- Switch to switch SGMII interface

KEY FEATURES

- Compliant with SFP MultiSource Agreement. Compliant with IEEE802.3z
- 100 meters transmission over UTP Cat. 5e or better cable.
- Compatible with 1000BaseX and 1000BaseT auto-negotiation.
- Auto-detects MDI/MDI-X.
- 065-791000TTXMG model supports 10/100/1000BASE-T operation in host systems with SGMII interface.
- Internal PHY IC is configurable by the host system via I²C interface.
- Single 3.3V power supply and low power dissipation.

ORDERING INFORMATION

Part Number	Description
065-791000TMG	Twisted-pair 1000BaseT SFP Module – RJ-45 (Cat. 5e or better cable), 100 m
065-791000TTXMG	Twisted-pair 10/100/1000BaseT/TX SFP Module – RJ-45 (Cat. 5e or better cable), 100 m

SUMMARY SPECIFICATION

Part Number	Minimum Data Rate	Maximum Data Rate	Typical Bit Error Rate	Supply Voltage	Operating Temp.
065-791000TMG	1000 Mbps	1000 Mbps	10 ⁻¹⁰	3.3V	0 ~ 70 °C
065-791000TTXMG	10 Mbps**	1000 Mbps	10 ⁻¹⁰	3.3V	0 ~ 70 °C

**Note: 10/100/1000BaseT/TX operation requires an SGMII interface with no clocks in the host system. With a SERDES interface that does not support SGMII, the module will operate at 1000BaseT only.

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065-791000TMG & 065791000T/TXMG 02222012

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DETAILED SPECIFICATIONS

• APPLICABLE STANDARDS

IEEE 802.3 (10BaseT Standard Ethernet)
IEEE 802.3u (100BaseTX Fast Ethernet)
IEEE 802.3z (1000BaseT Gigabit Ethernet)

• ABSOLUTE MAXIMUM RATINGS

Storage Temperature: TS -40 -- 85 °C

Supply Voltage: V_{CC} -0.5 – 4.0 V

Relative Humidity: 5 - 95 %

• RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
Ambient Operating Temperature	T _{AMB}	0		70	°C	
Supply Voltage	V _{CC}	3.135	3.3	3.465	V	
Supply Current (3.3V)	I _S		330	385	mA	

• HIGH-SPEED ELECTRICAL INTERFACE, HOST TO SFP

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
TD+, TD- Input Voltage Swing	V _{in+} , V _{in-}	250		1200	mV	2
RD+, RD- Output Voltage Swing	V _{out+} , V _{out-}	250		800	mV	2
Rise Time (Receiver)	t _r			2	ns	1
Fall Time (Receiver)	t _f			2	ns	1
Tx Input Impedance	Z _{in}		50		Ohm	2
Rx Output Impedance	Z _{out}		50		Ohm	2

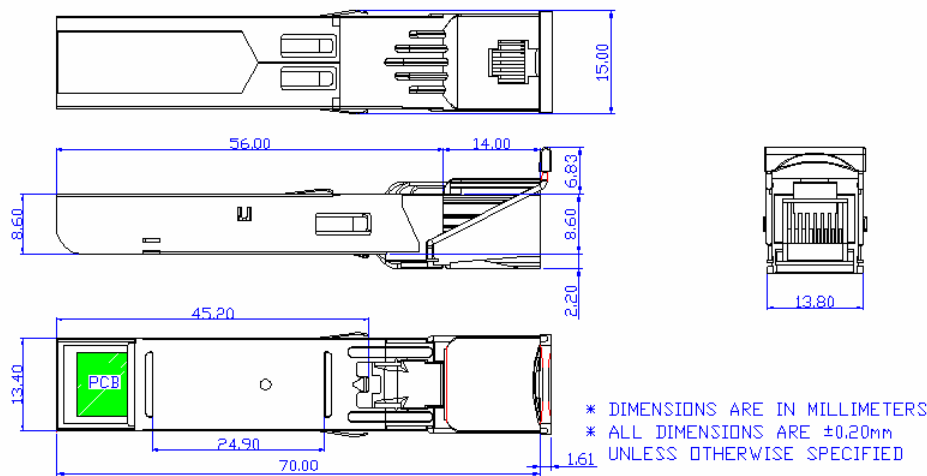
Notes: 1. 10% to 90% value
2. Single ended

• HIGH-SPEED ELECTRICAL INTERFACE, CABLE TO SFP

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNITS	NOTE
Transmission Frequency	f _t		125		MHz	1
Tx Output Impedance	Z _{out,Tx}		100		Ohm	2
Rx Input Impedance	Z _{in,Rx}		100		Ohm	2

Notes: 1. MLT-3 encoding per IEEE 802.3u.
2. Differential for frequencies ranging from 1 MHz to 125 MHz.

• MECHANICAL DIMENSIONS (units in mm)



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