

Applications

Board and System Level Testing
Test and Measurement
Switch and Router Chamber Testing
---HASS and HALT
100Mb/s to 10.7Gbps

Features

SFP+ MSA Compliant
Hot-Pluggable MSA Footprint
Dual LED Indicator to Display Module Status
No Reference Clock Required
Compliant With SONET, SDH, GBE, FC
1W Power Consumption
Case Temperature Range from -40° C to +85° C
Automatic Shut Down & Self-Protection
Custom Memory Map Capability

Benefits

Economical SFP+ Port Testing
Power on Validation
Temperature Sensing



SFP+ Electrical Loopbacks for Testing and Measurement

The Timbercon EL-11-07001 SFP+ electrical loopback is used for testing SFP+ transceiver ports in host/system boards. By substituting a full-featured SFP+ transceiver, the electrical loopback provides a cost effective method for SFP+ port testing.

The EL-11-07001 is packaged in an MSA compliant housing offering excellent heat dissipation, compatible with all SFP+ ports. Transmit data from the host is electrically routed, (internal to the loopback module), to the receive data outputs and back to the host. Since the loopback module does not contain laser diodes, photodiodes, a laser driver or transimpedance amplifier chips, etc., it provides an economical way to exercise SFP+ ports during R&D validation, production testing and field analysis.

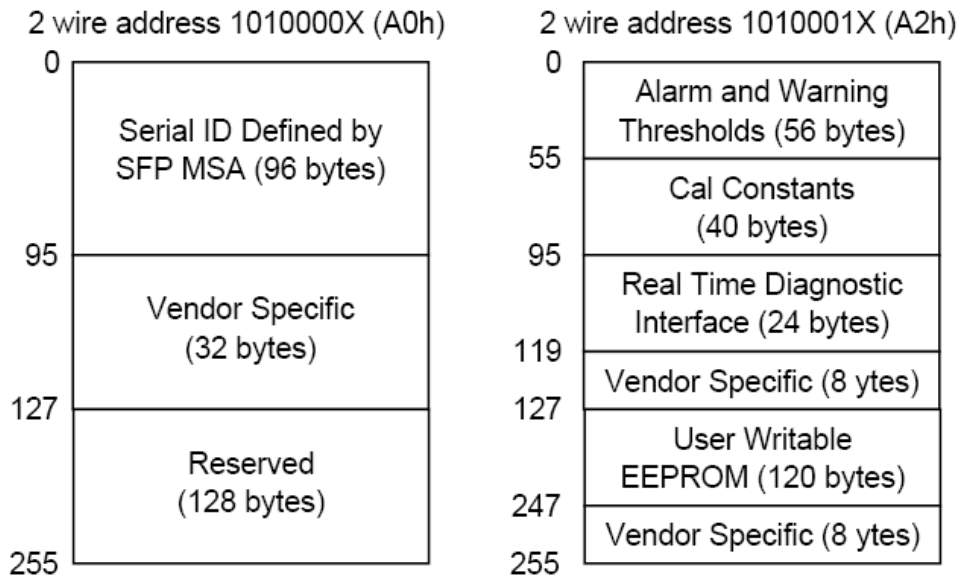
LED Indicators

The Timbercon EL-11-07001 contains two LED indicators to display the operating status of the device. The green LED illuminates when the Loopback is fully plugged in and blinks when the temperature is beyond the allowable range. The red LED illuminates for a power down status and blinks when the Loopback shuts down due to extreme temperature,

Memory Map

In addition to the electrical loopback function, the EL-11-07001 provides a MSA standard 2-wire serial communication interface to digital diagnostics. This provides information about the present operating conditions, as well as the pre-loaded EEPROM memory map. Both standard and custom memory maps are available.

Memory Location Descriptions



Recommended Operating Conditions

Parameter	Symbol	Notes	Min	Max	Unit
Maximum Supply Voltage	V _{cc}		-0.5	4.0	V
Storage Temperature	T _s		-40	85	C
Case Operating Temperature	T _{op}		-40	85	C
Supply Voltage	V _{cc}		3.15	3.45	V
Supply Current	I _{cc}	1		300	mA
Supply Current Power-Down	I _{ccd}	1		200	mA
Module Total Power Down	P	1		1	W
Bit Rate	BR		100M	10.7G	bps
Bit Error Ratio	BER	2		1.00E-12	

Notes:

1. Maximum total power value is specified across the full temperature and voltage range and may vary according to different options.
2. Tested with a 2⁷-1, 2²³-1, 2³¹-1 PRBS pattern