

## Super SFP(25G) and Ultra SFP(56G) Loopback (Enhanced Version)



### OVERVIEW

Luxshare-TECH's Super SFP(25Gbps) and Ultra SFP(56Gbps) passive electrical loopback module is used for high speed testing application for SFP host ports. The Super SFP and Ultra SFP loopback are designed for 25Gbps(NRZ) and 56Gbps(PAM4) Ethernet applications separately, which the loopback provides 28Gbps/56Gbps RX and TX loop-lane, I2C module management interface and all the SFP SFF hardware signals. This Loopback module loops back 1-lane 28Gbps or 56Gbps transmitting data from the Host back to 1-lane 28Gbps or 56Gbps receiving data port to the Host, it provides an efficient way to verify SFP ports during R&D test, production testing and field testing. Luxshare-TECH Super SFP(25Gbps) and Ultra SFP(56Gbps) Loopback provides programmable power dissipation up to 3W allowing the module to emulate all the Super SFP and Ultra SFP power classes. It also provides a voltage sense, an insertion counter, a power staging, a LED blinking rate, an upper temperature cut off and 4 temperature sensors.

### FEATURES & BENEFITS

- High speed signals Loopback: TX are electrically looped back to RX per lane with attenuation options at 28Gbps/lane or 56Gbps/lane
- Adding-5dB~10dB attention into the TX looped back to RX link, similar with DAC feature
- Data communication interface: The Loopback Module supports the same I2C interface as optical module
- LED indicator: A dual-color LED shows low/high power mode status and I2C enable/disable status
- Power control: Power dissipation could be controlled by I2C artificially, Range 0-3W, resolution is 0.2W
- Temperature monitor: 2 sensors on PCBA, another two closed to shell. Temp data could be read by I2C
- Cut-off temperature: A Cut-off temperature is pre-defined by register. Avoiding the overheating
- Insertion counter: Insertion action could be counted and it is nonvolatile
- Voltage monitoring: Vcc could be detected. Range 0~3600mV, Resolution 0.1mV
- Device information read/write access right: System ID, Revision, Module dynamic info. Password entry etc
- Low speed signal: Modsel, Reset, Lpmode, Modprsl, IntL, SCL&SDA etc
- Visual software interface: Intelligent user interface available

### PRODUCT APPLICATIONS

Server test  
HPC test  
Router/Switch test

### INDUSTRY STANDARDS

SFF 8431  
SFF 8472  
IEEE802.3by and IEEE802.3cd

## TECHNICAL INFORMATION

### MATERIAL

Contact gold plated 30u"  
Nickel plated zinc die cast shells & latching  
Mechanism parts  
Thermoplastic cable pull tab

### ELECTRICAL PERFORMANCE

Differential impedance: 100 ohm  
Current : 0.5 A/contact  
Voltage: 30 V AC/contact

### Partial PN Table

Product Numbers	Product Description
LA0SF203-SD-R	S-SFP Loopback FPC -18dB 1.0W

### MECHANICAL PERFORMANCE

Rated Durability Cycles 250  
Latch Pull Strength 90N MIN  
Cable Retention in Plug 90N MIN

### ENVIRONMENTAL

Operating Temperature: -20°C to +105°C  
RoHS compliant

### SPECIFICATION

ES-10-00-0027