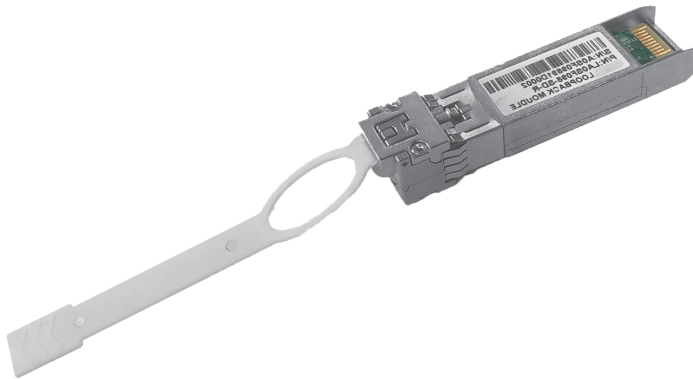# Super SFP(25G) and Ultra SFP(56G) Loopback

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 seperately, 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

◆ 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

Super SFP(25G) and Ultra SFP(56G) Loopback

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

MECHANICAL PERFORMANCE

Rated Durability Cycles 250

Latch Pull Strength 90N MIN

Cable Retention in Plug 90N MIN

ENVIRONMENTAL

Operating temperature: 0℃ to +80℃

RoHS compliant

SPECIFICATION

ES-10-00-0028

Partial PN Table

Product Numbers	Product Description
LA0SF096-SD-R	S-SFP Loopback-5dB
LA0SF098-SD-R	S-SFP Loopback-0dB