



## 25G SFP28 Electrical Passive Loopback Hot Pluggable, 0~5dB Internal Attenuation, 0~2.5W Power Consumption

**Part Number:** FSPP-NX-XLB-xx-xx



### Overview

FSPP-NX-XLB SFP28 Loopback modules are compliant with the current SFP28 Multi-Source Agreement (MSA) specification. The Loopback modules provide an effective way of testing the SFP28 port in the host system by looping back the electrical signal (optics are excluded). It provides an economical way to mimic 25G Ethernet and CPRI Option #10 on SFP28 ports in simulation testing environments.

### Applications

- Board and System Level Testing
- System Test and Measurement
- Switch / Router Chamber Test
- Power Consumption Validation

### Features

- Compliant with SFF-8402 SFP28 MSA
- Electrical Data Rate up to 28Gbps
- Hot Pluggable
- 2-wire interface for management
- Single +3.3V power supply
- Different Option for Internal Attenuation and Power Consumption
- RoHS Compliant

### Absolute Maximum Ratings

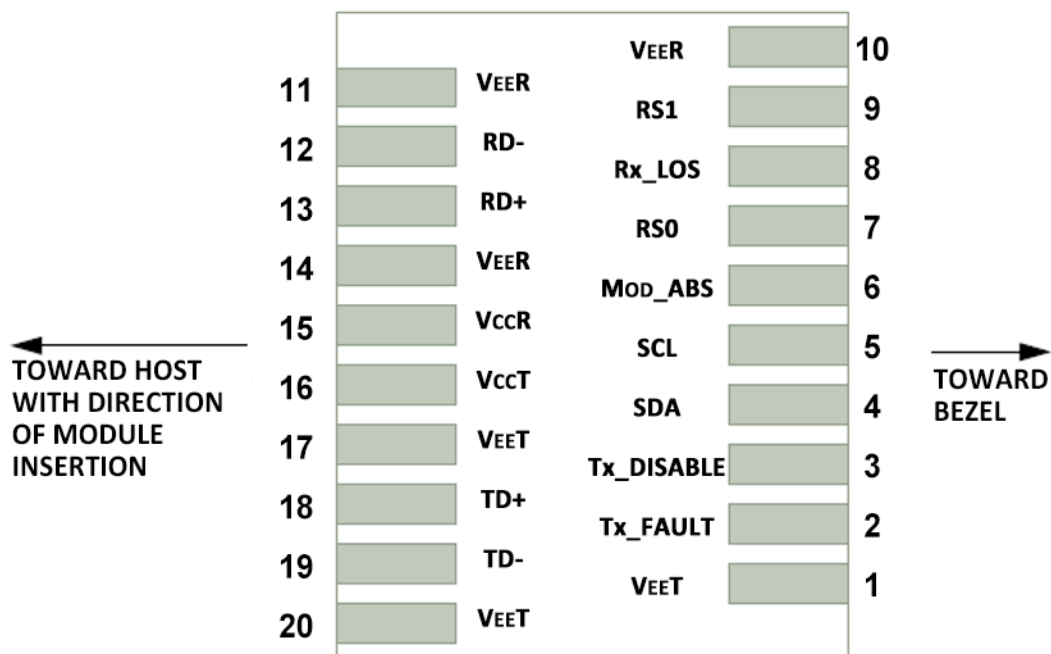
Parameters	Symbol	Min.	Max.	Unit
Storage Temperature	T <sub>ST</sub>	-40	+85	°C
Storage Relative Humidity	RH	0	95	%
Supply Voltage	V <sub>CC3</sub>	-0.5	+4.0	V



## Recommended Operating Conditions

Parameters	Symbol	Min.	Typ.	Max.	Unit
Case Operating Temperature	T <sub>OP</sub>	-20	-	+85	°C
Supply Voltage	V <sub>CC</sub>	+3.13	+3.3	+3.47	V
Date Rate	DR	1.25	-	28	Gb/s
Differential Impedance	Z	90	100	110	Ohm
Durability Cycles			100	200	Times

## Pin Assignment



Host PCB SFP28 Pad Assignment Top View

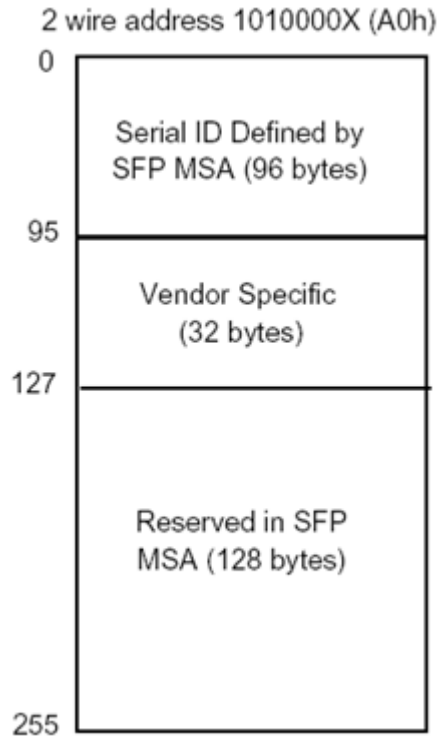


## Pin Description

Pin	Name	Function / Description
1	VEET	Transmitter Ground
2	Tx_FAULT	Internally tied to Transmit ground. Tx_FAULT is not implemented.
3	Tx_DISABLE	Internally pulled up to Vcc through a 5.11k ohm resistor. Tx_DISABLE is not implemented.
4	SDA	2-wire Serial Interface Data Line (SDA: Serial Data Signal)
5	SCL	2-wire Serial Interface Clock (SCL: Serial Clock Signal)
6	MOD_ABS	Module Absent, this pin is internally tied to Transmit ground
7	RS	Rate Select, this Pin is internally pulled low through a 33.2k resistor. Rate Select is not implemented.
8	Rx_LOS	Receiver Loss of Signal Indication, this Pin Internally tied to Receiver Ground. Rx_LOS is not implemented.
9	VEER	Receiver Ground
10	VEER	Receiver Ground
11	VEER	Receiver Ground
12	RD-	Receiver Inverted Data output, AC coupled
13	RD+	Receiver Non-Inverted Data output, AC coupled
14	VEER	Receiver Ground
15	VCCR	Not used
16	VcCT	EEPROM power
17	VEET	Transmitter Ground
18	TD+	Transmitter Non-Inverted Data Input, AC coupled
19	TD-	Transmitter Inverted Data Input, AC coupled
20	VEET	Transmitter Ground

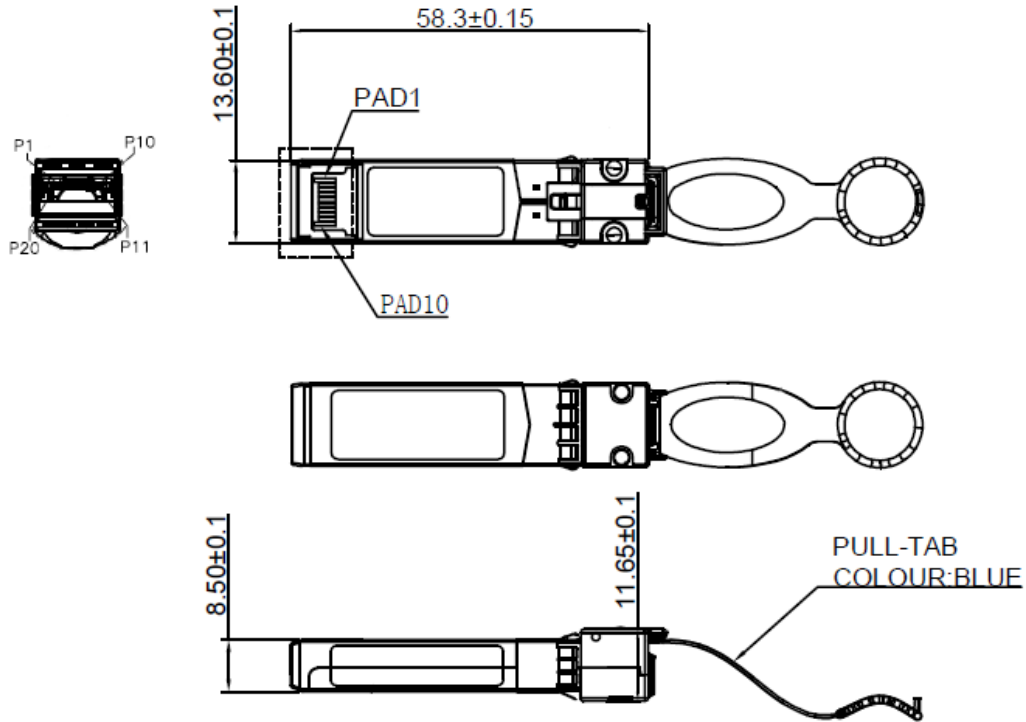


## Memory Map





## Mechanical Dimensions



(All Dimensions are ±0.20mm Unless Otherwise Specified, Unit: mm)

## Ordering Information

FSPN-NX-XLB-□□-□□

### Internal Attenuation

00: 0dB                      35: 3.5dB  
 50: 5dB                     xx: Customized Value

### Power Consumption

00: 0W                        10: 1W  
 15: 1.5W                    20: 2W  
 25: 2.5W                    xx: Customized Value