



ESD threshold 1kV for SFI pins and 2kV for all other electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114A (HBM). However, normal ESD precautions are still required during the handling of this module.



Features

- Operating case temperature: 0°C to 70°C
- Supports 10,3125Gbps Data rate

Applications

- Suitable for 10G Ethernet usage



Product may differ from the picture

Compliances

- Compliant with RoHS
- Compliant with SFF-8431
- Compliant with SFF-8432
- Compliant with SFF-8472

Overview

Part Number	Data Rate	Cable Jacket	Cable Length	AWG	Temperature
SFP-10G-PDAC-0.5M-H	10,3125Gbps	-	0.5m	30	0°C to 70°C
SFP-10G-PDAC-0.65M-H	10,3125Gbps	-	0.65m	30	0°C to 70°C
SFP-10G-PDAC-1M-H	10,3125Gbps	-	1m	30	0°C to 70°C
SFP-10G-PDAC-2M-H	10,3125Gbps	-	2m	30	0°C to 70°C
SFP-10G-PDAC-3M-H	10,3125Gbps	-	3m	30	0°C to 70°C
SFP-10G-PDAC-5M-H	10,3125Gbps	-	5m	24	0°C to 70°C
SFP-10G-PDAC-10M-H	10,3125Gbps	-	10m	24	0°C to 70°C

Ordering Information

Part Number	Product Description
SFP-10G-PDAC-0.5M-H	10GBase SFP+ to SFP+ Passive DAC (HP) xm, x as the length of the cable



PIN Description

PIN	Symbol	Name - Description	Notes
1	VEET	Transmitter Ground (Common with Receiver Ground)	
2	TFAULT	Transmitter Fault. Not Supported.	1
3	TDIS	Trnsmitter Disable. Laser output disabled on high or open.	2
4	MOD_DEF(2)	Module Definition 2. Data line for Serial ID.	1
5	MOD_DEF(1)	Module Definition 1. Clock line for Serial ID.	1
6	MOD_DEF(0)	Module Definition 0. Grounded within the module.	1
7	Rate Select	No Connection Required	
8	LOS	Loss of Signal Indication. Logic 0 indicates normal operation.	3
9	VEER	Receiver Ground	
10	VEER	Receiver Ground	
11	VEER	Receiver Ground	4
12	RD-	Receiver Inverted Data Out. AC Coupled	4
13	RD+	Receiver Non-Inverted Data Out. AC Coupled	
14	VEER	Receiver Ground	
15	VCCR	Receiver Power Supply	
16	VCCT	Transmitter Power Supply	
17	VEET	Transmitter Ground	
18	TD+	Transmitter Non-Inverted Data In. AC Coupled	5
19	TD-	Transmitter Inverted Data In. AC Coupled	5
20	VEET	Transmitter Ground	

Notes:

- Open collector/drain output, which should be pulled up with a 4.7kΩ to 10kΩ resistor on the host board if intended for use. Pull up voltage should be between 2.0V to 3.6V. A high output indicates a transmitter fault caused by either the TX bias current or the TX output power exceeding the preset alarm thresholds. A low output indicates normal operation. In the low state, the output is pulled to <0.8V.
- Laser output disabled on TX_Disable >2.0V or open, enabled on TX_Disable <0.8V.
- LOS is open collector output. Should be pulled up with 4.7kΩ to 10kΩ on host board to a voltage between 2.0V and 3.6V. Logic 0 indicates normal operation; logic 1 indicates loss of signal.
- RD-/+: These are the differential receiver outputs. They are internally AC-coupled 100Ω differential lines which should be terminated with 100Ω (differential) at the user SERDES.
- TD-/+: These are the differential transmitter inputs. They are internally AC-coupled, differential lines with 100Ω differential termination inside the module.



Figure 1: Diagram of host board connector block pin numbers and names



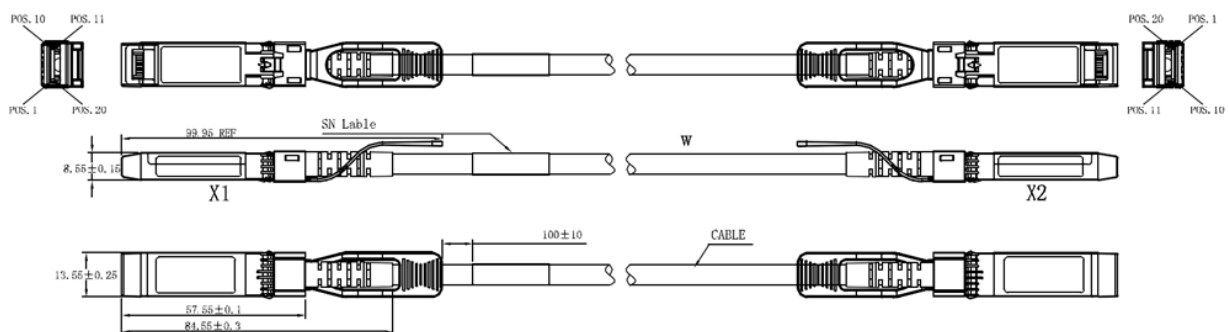
Recommended Operating Conditions

Parameters	Symbols	Min	Typ	Max	Unit	Notes
Storage Temperature	TS	-40		85	°C	
Operating Case Temperature	TOP	0		70	°C	
Data Rate per Lane			10.3125		Gbps	per channel
Power Supply Voltage	Vcc	3.135	3.3	3.465	V	

Electrical Characteristics

Parameters	Symbol	Min	Typ	Max	Unit	Notes
Differential Impedance Insertion Loss	Zd	90	100	110	dB	
Common-mode to common mode output return loss	SCCXX	$< -7 + 1.6 * f$ with f in GHz			dB	0.01~2.5GHz
Common-mode to common mode output return loss	SCCXX			-3	dB	2.5~11.1GHz
Differential Return Loss	SDDXX	$< -12 + 2 * \text{SQRT}(f)$ with f in GHz			dB	0.01~4.1GHz
Differential Return Loss	SDDXX	$< -6.3 + 13 * \text{Log}_{10}(f/5.5)$ with f in GHz			dB	4.1~11.1GHz
Difference Waveform Distortion Penalty	dWDPc			6.75	dB	
VMA Loss	L			4.4	dB	
VMA Loss to Crosstalk Ratio	VCR	32.5			dB	

Mechanical Dimensions



Revision History

Revision	Doc. #	Date	Author	Description
Version 1.0	DT000401	13/02/2025	GS	Initial Document

Note: Nexgen A/S reserves the right to change this document without notice.