25G SFP28 DAC

Product Features

- Fully compliant to the latest SFP28 MSA
- Optimized PCB with auto soldering process
- Stamped EMI Ground Finger
- EEPROM in cable assembly
- Enables 25Gb/s per channel transmission
- 30AWG,28AWG and 26AWG cable sizes
- RoHS2 compliant

Application

- Adapter Card, Wireless BBU, Data Centre, High Performance Computing(HPC), Router, Server, Storage, Switch

Absolute Maximum Ratings

Parameter	Unit	Min.	Typical	Max.	Notes
Storage Temperature	°C	-40		85	
Operating Case Temperature	°C	0		70	
Operating Relative Humidity	%			85	
Power Supply Working Voltage	V	3.135	3.3	3.465	
Bit Rate	Gbps		25		

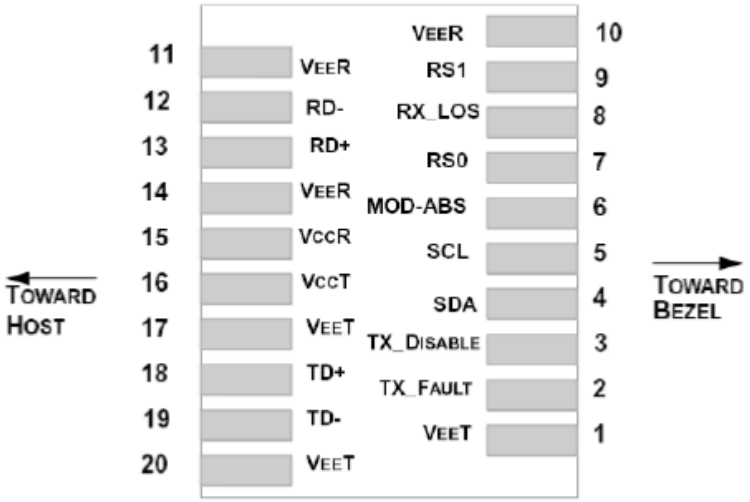
Characteristics - All performance is specified at whole working temperature and conditions

Item		Parameter
Physical	Length	1 to 5m
	Cable Colour	Black
Electrical	Resistance	2 ohm Max
	Insulation Resistance	10M ohm Min
SI Performance	SDD21	-22.48dB Min. @12.89GHz no suck-out < 30GHZ
	SDD11/SDD22	-16.5+2*sqrt(f)dB Max @0.05GHz-4.1GHz -10.66+14*1og(f/5.5) dB Max@4.1GHz-19GHz
	SCD22	-22+(20/25.78)*f dB Max@0.01GHz~12.89GHz -15+(6/25.78)*f dB Max@12.89GHz~19GHz
	SCC11	-2dB Max
	SCD21-SDD21	-10dB Max @0.01GHz~12.89GHz -27+(29/22)*f dB Max @12.89GHz~15.7GHz -6.3dB Max @15.7GHz~19GHz
	NEXT	-30 dB Max
	COM	3 dB Min

PIN Function Definitions

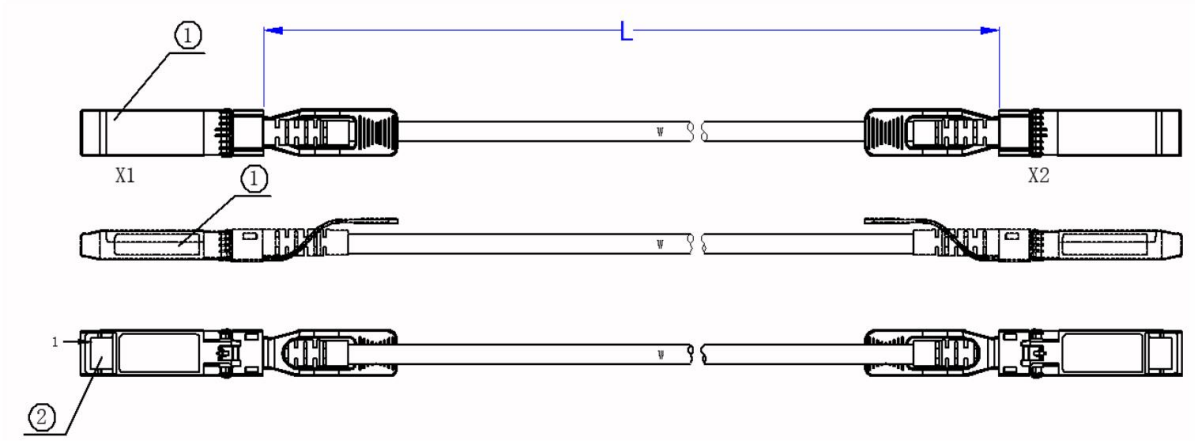
Pin No.	Symbol	Level / Logic	Description
1	VeeT		Module Transmitter Ground
2	Tx_Fault	LVTTL-O	Module Transmitter Fault Indication
3	Tx_DIS	LVTTL-I	Transmitter Disable; Active High Disable Transmitter Output
4	SDA	LVTTL-I	2-Wire Serial Interface Data Line
5	SCL	LVTTL-I/O	2-Wire Serial Interface Clock
6	MOD_ABS	LVTTL-O	Module Absent, connected to ground in the module
7	RS0		Rate Select 0, optionally controls SFP28 module receiver
8	RX_LOS	LVTTL-O	Loss of Receiver Signal Indication
9	RS1		Rate Select 1, optionally controls SFP28 module transmitter
10	VeeR		Module Receiver Ground
11	VeeR		Module Receiver Ground
12	RD-	CML-O	Receiver Inverted Data Output
13	RD+	CML-O	Receiver Non-Inverted Data Output
14	VeeR		Module Receiver Ground
15	VccR		Module Receiver 3.3V Supply
16	VccT		Module Transmitter 3.3V Supply
17	VeeT		Module Transmitter Ground
18	TD+	CML-I	Transmitter Non-Inverted Data Input
19	TD-	CML-I	Transmitter Inverted Data Input
20	VeeT		Module Transmitter Ground

SFP28 Transceiver Electrical Pad Layout



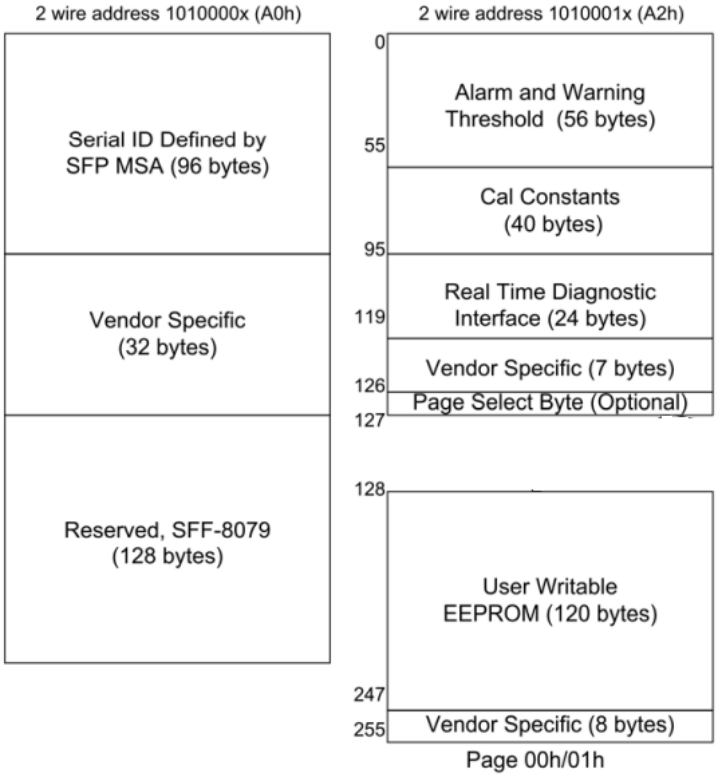
Mechanical Specifications

For detail mechanical information, please refer to the related document of SFF-8432.



EEPROM Information

The digital diagnostic memory map specific data field define as following. For detail EEPROM information, please refer to the related document of SFF 8472 Rev 12.0.



EEPROM A0h Definitions

Data Address	Size (Bytes)	Name of Field	Description	Hex Value
0	1	Identifier	SFP/SFP+/SFP28	03
1	1	Ext.Identifier	Serial ID module	04
2	1	Connector	Copper pigtail	21
3	1	Transceiver	1X copper passive	01
4	1	Transceiver	ESCON & SONET compliance codes	00
5	1	Transceiver	SONET compliance codes	00
6	1	Transceiver	Ethernet compliance codes	00
7	1	Transceiver	Short distance & Electrical inter enclosure	41
8	1	Transceiver	Passive cable	04
9	1	Transceiver	Twin Axial Pair	80
10	1	Transceiver	Fibre Channel Speed	00
11	1	Encoding	64B/66B	06
12	1	BR, Nominal	>25Gbps	FF
13	1	Rate Identifier		00
14	1	Length(SMF,km)	not support	00
15	1	Length(SMF)	not support	00

16	1	Length(50um)	not support	00
17	1	Length(62.5um)	not support	00
18	1	Length(Copper)	0~1m：01； 1.01~2m：02； …… 8.01~9m：09；	XX
19	1	Length(OM3)	not support	00
20-35	16	Vendor name	SFP vendor name (ASCII)---BROADEX	XXX
36	1	Transceiver	0Bh: 25GBASE-CR CA-L;	0B
37	1	Vendor OUI	SFP vendor IEEE company ID	00
38	1	Vendor OUI	SFP vendor IEEE company ID	00
39	1	Vendor OUI	SFP vendor IEEE company ID	00
40-55	16	Vendor PN	Part number	XXX
56	1	Vendor rev	Revision level for part number, Version A	41
57	1	Vendor rev	Revision level for part number	20
58	1	Vendor rev	Revision level for part number	20
59	1	Vendor rev	Revision level for part number	20
60-61	2	Wavelength	Compliance to SFF8431 Appendix E	01 00
62	1	Unallocated	Unspecified	00
63	1	CC_BASE	Check code (0 to 62)	XX
64	2	Options		00
65				00
66	1	BR, max	Upper bit rate margin, units of %	67
67	1	BR, min	Lower bit rate margin, units of %	00
68-83	16	Vender SN	Serial number provided by vendor	XXX
84-91	8	Date code	Vendor’s manufacturing date code	XXX
92	1	Diagnostic	Internal cal , Average Power	00
93	1	Enhanced Options		00
94	1	SFF-8472 Compliance	Diagnostics Compliance(SFF-8472 V12.0)	08
95	1	CC_EXT	Check code (64 to 94)	XX

ESD

The SFP+ module and host SFI contacts (High Speed Contacts) shall withstand 1kV electrostatic discharge based on Human Body Model and all host contacts with exception of the SFI contacts (High Speed Contacts) shall withstand 2kV electrostatic discharge based on Human Body Model. The SFP+ module shall meet ESD requirements given in EN61000-4-2, criterion B test specification such that units are subjected to 15kV air discharges during operation and 8kV direct contact discharges to the case per section 2.9 in SFF-8431 REV4.1. However, normal ESD precautions are still required during the handling of this module. This transceiver is shipped in ESD protective packaging. It should be removed from the packaging and handled only in an ESD protected environment.

Ordering Information

Ordering P/Ns	Description
DHZZbb-SCCA-XXX	25G 1m~5m SFP28 DAC, SFP28 form-factor, 0~70°C Industrial temperature

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