

SFP56 50G to SFP56 50G ACC



2.5~5.0M

PVC Black

Key Features

- Support 53.125G PAM4
- 50G to 50G Data Rate
- 3.3V Power Supply
- Hot Pluggable
- BER < 10⁻⁶ (pre FEC)
- BER < 10⁻¹⁵ (post FEC)
- Excellent SI performance
- RoHS Compliance

Applications

- Data center & Networking Equipment
- Servers/Storage Devices
- High Performance Computing (HPC)
- Switches/Routers
- Telecom Central Offices

Supported Standards

- SFP-DD MSA
- IEEE 802.3ck
- IEEE 802.3cd
- I²C for EEPROM
- CMIS 5.x and SFF-8636



Ordering Information

LFPP-KK1xxxC		SFP56 50G to SFP56 50G ACC – 2.5~5.0M			
Ordering P/Ns	Description	Length	AWG	Cable	NOTE
LFPP-KK1x25C	SFP56 50G to SFP56 50G ACC	2.5m	30 AWG	PVC Black	
LFPP-KK1x35C	SFP56 50G to SFP56 50G ACC	3.5m	28 AWG	PVC Black	
LFPP-KK1x50C	SFP56 50G to SFP56 50G ACC	5.0m	26 AWG	PVC Black	

xxx define ACC cable length

Description

The SFP56 to SFP56 50G Active Redriver Copper Cable Assembly, meticulously designed for application in the telecommunications and data center sectors. It helps carry 50Gb of traffic per cable in both directions. The cable adheres to the standardized SFP form factor and complies rigorously with MultiSource Agreement (MSA) specifications.

Absolute Maximum Ratings

Parameter	Unit	Min.	Max.	Notes
Supply Voltage	V	-0.3	3.6	
Data Input Voltage	V	-0.3	3.6	
Control Input Voltage	V	-0.3	3.6	
Operating Temperature	°C	0	70	
Storage Temperature	°C	-40	+85	
Relative Humidity (NonCondensing)	%	5	85	

Operational Specification

Parameter	Unit	Min	Typical	Max	Notes
Supply Voltage (Vcc)	V	3.135	3.3	3.465	Per End
Power Consumption	W			1.5	Per End
Operating Case Temperature	°C	0		70	
Operating Relative Humidity	%	0		85	
Modulation Format			56G PAM4		
Bit Rate	Gbps		50		

Electrical Characteristics

Parameter	Unit	Min	Typical	Max	Notes
Characteristic Impedance	ohm	90	100	110	
Time Propagation Delay (Informative)	ns			4.9	

SI Performance

Item	Parameter	Require	Reference
1	ILdd Insertion loss at 26.56 GHz	19.75 dB (Max.)	IEEE 802.3ck Section 162.11.2
2	ILdd Insertion loss at 26.56 GHz	11 dB (Min.)	IEEE 802.3ck Section 162.11.2
3	ERL Minimum cable assembly	>8.25 dB*.	IEEE 802.3ck Section 162.11.3
4	RLcd Differential mode to common mode return loss	0.01GHz – 40GHz Equation (162-20)	IEEE 802.3ck Section 162.11.4
5	ILcd Differential mode to common mode insertion loss	0.01GHz – 40GHz Equation (162-21)	IEEE 802.3ck Section 162.11.5
6	RLcc Common mode to common mode return loss	0.01GHz – 40GHz Equation (162-22)	IEEE 802.3ck Section 162.11.6
7	COM	3dB (Min.)	IEEE 802.3ck Section 162.11.7

*Cable assemblies with a com greater than 4 dB are not required to meet minimum ERL

Cable Wiring

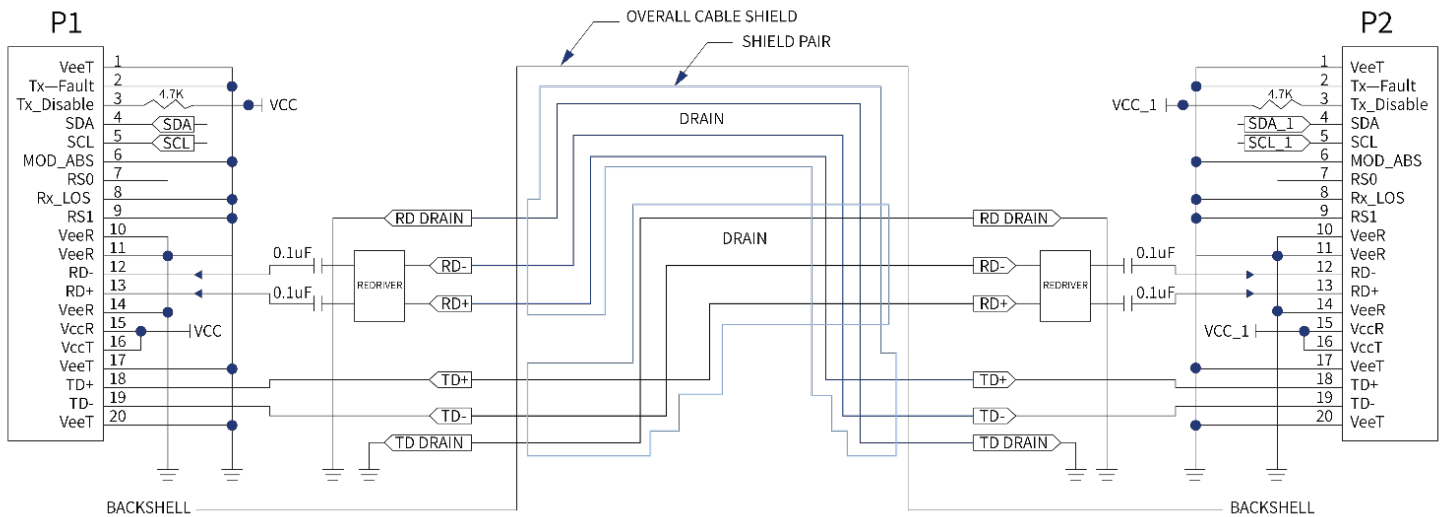
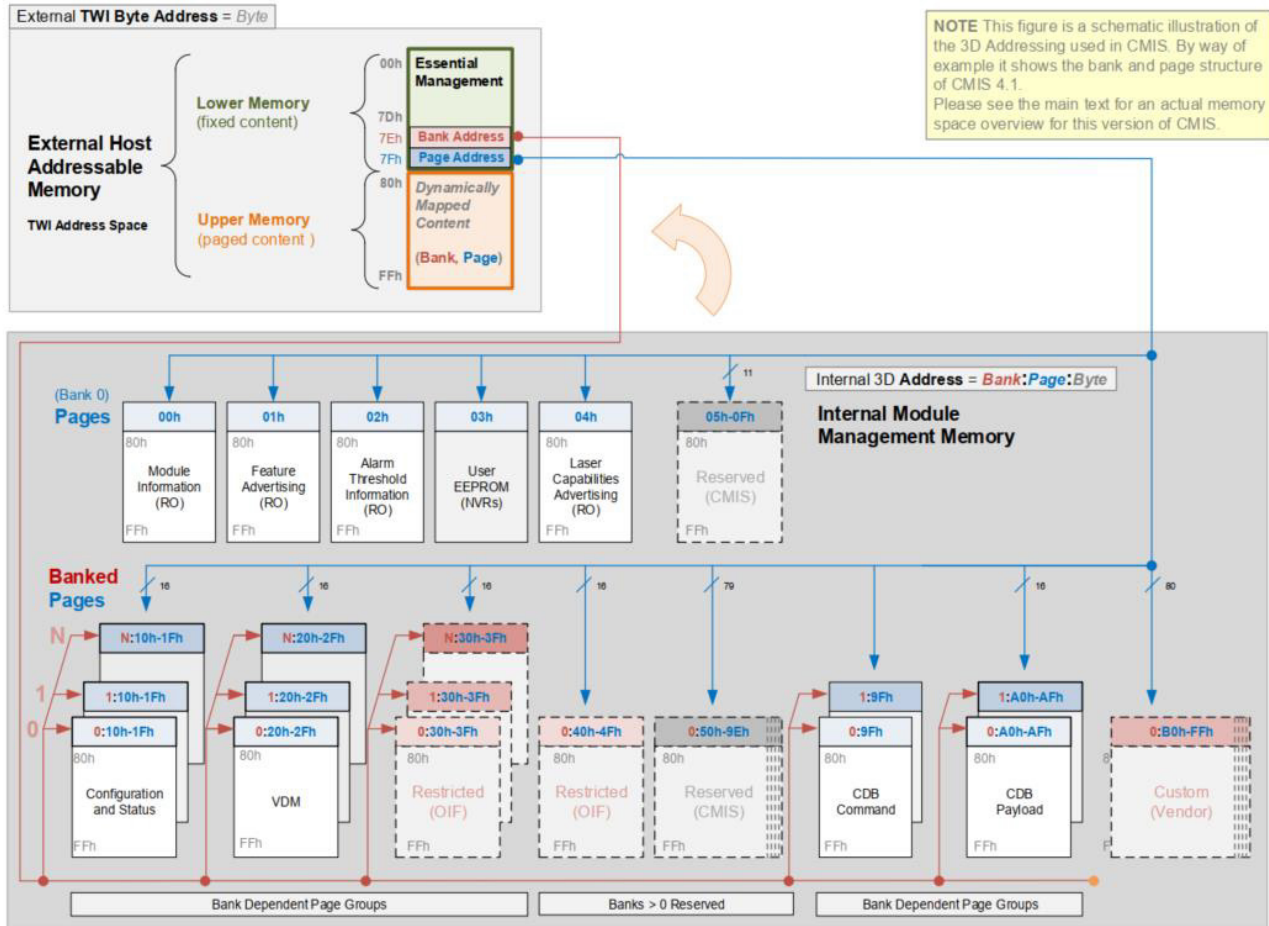


Figure 2 SFP56 to SFP56 Active Redriver Cable Assembly Wiring

Memory Map information (CMIS Version)



Lower Memory Overview

Address	Size	Subject Area	Description
0-3	4	ID and Status Area	Module ID from SFF8024 list, version number, Type and status Flat mem indication, CLEI present indicator, Maximum TWI speed, Current state of Module, Current state of the Interrupt signal
4-7	4	Lane Flag Summary	Flag summary of all lane flags on pages 10h1Fh
8-13	6	ModuleLevel Flags	All flags that are not lane or data path specific
14-25	12	ModuleLevel Monitors	Monitors that are not lane or data path specific
26-30	5	Module Global Controls	Controls applicable to the module as a whole

31-36	6	ModuleLevel Flag Masks	Masking bits for the ModuleLevel flags
37-38	2	CDB Status Area	Status of most recent CDB command
39-40	2	Module Firmware Version	Module Firmware Version
41-63	23	Reserved Area	Reserved for future standardization
64-82	19	Custom Area	Vendor or module type specific use
83-84	2	Inactive Firmware Version	Version Number of Inactive Firmware. Values of 00h indicates module supports only a single image.
85-117	33	Application Advertising	Combinations of host and media interfaces that are supported by module data path(s)
118-125	8	Password Entry and Change	
126	1	Bank Select Byte	Bank address of currently visible Page
127	1	Page Select Byte	Page address of currently visible Page

Page 00h Overview

Address	Size (bytes)	Name	Description
128	1	Identifier	Identifier Type of module
129-144	16	Vendor name	Vendor name (ASCII)
145-147	3	Vendor OUI	Vendor IEEE company ID
148-163	16	Vendor PN	Part number provided by vendor (ASCII)
164-165	2	Vendor rev	Revision level for part number provided by vendor (ASCII)
166-181	16	Vendor SN	Vendor Serial Number (ASCII)
182-189	8	Date Code	
190-199	10	CLEI code	Common Language Equipment Identification code
200-201	2	Module power characteristics	
202	1	Cable assembly length	
203	1	Media Connector Type	
204-209	6	Copper Cable Attenuation	
210-211	2	Cable Assembly Lane Information	
212	1	Media Interface Technology	
213-220	8	Reserved	
221	1	Custom	
222	1	Checksum	Includes bytes 128-221
223-255	33	Custom Info NV	

Note: For the above, refer to Common Management Interface Specification Rev5.0

Mechanical Specifications

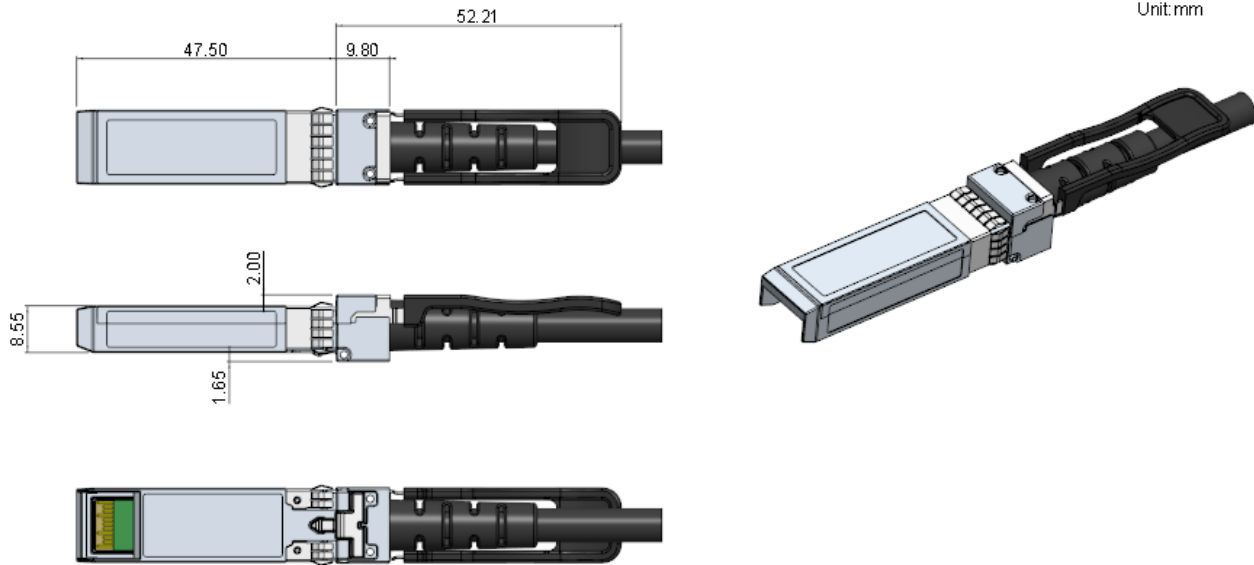


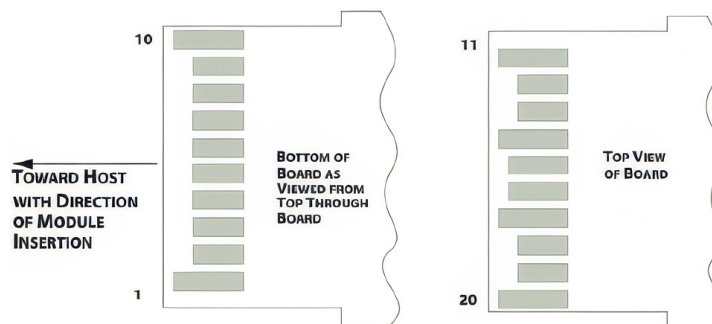
Figure 4 SFP56 Form Factor

SFP56 PIN Function Definitions

Pin	Logic	Symbol	Description
1		VeeT	Module Transmitter Ground
2	LVTTL-O	Tx_Fault	Module Transmitter Fault
3	LVTTL-I	Tx_DIS	Transmitter Disable; Active High Disable Transmitter Output
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data
5	LVTTL-I/O	SCL	2-Wire Serial Interface Clock
6		Mod_ABS	Module Absent, connected to VeeT or VeeR in the module
7	LVTTL-I	RS0	Rate Select0, optionally controls SFP+ module receiver
8	LVTTL-O	RX_LOS	Receiver Loss of Signal Indication
9	LVTTL-I	RS1	Rate Select1, optionally controls SFP+ module transmitter
10		VeeR	Module Receiver Ground
11		VeeR	Module Receiver Ground
12	CML-O	RD-	Receiver Inverted Data Output
13	CML-O	RD+	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	CML-I	TD+	Transmitter Non-Inverted Data Input
19	CML-I	TD-	Transmitter Inverted Data Input
20		VeeT	Module Transmitter Ground

SFP56 Electrical Pad Layout

For detail mechanical information, please refer to the related document of SFP MSA.



Disclaimer

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