DSFP-2XS56-100GB-P3M-AO

MSA and TAA 100GBase-CU DSFP to 2xSFP56 Direct Attach Cable (Passive Twinax, 3m)

Features

- Compliant with DSFP and SFP MSA Specifications
- Up to 100Gbps Data Rate on PAM4
- Compliant with IEEE 802.3cd
- Optimized Construction to Minimize Insertion Loss and Crosstalk
- Customized Cable Braid Termination Limits EMI Radiation
- Hot-Pluggable
- Operating Temperature: 0 to 70 Celsius
- Single 3.3V Power Supply
- RoHS Compliant and Lead-Free

Applications

- 100GBase Ethernet

Product Description

This is an MSA compliant compatible 100GBase-CU DSFP to 2xSFP56 direct attach cable that operates over passive copper with a maximum reach of 3.0m (9.8ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is TAA (Trade Agreements Act) compliant, and is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

AddOn's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products.")

TAA COMPLIANT

Rev. 112425

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage	Vcc			3.3	V	Nominal
Storage Temperature	Tstg	-40		85	°C	
Operating Case Temperature	Tc	0		70	°C	
Data Rate	DR		53.125		Gbps	
Wire Gauge			26		AWG	

High Speed Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Differential Impedance	TDR	90	100	110	Ω	Not including gold finger site
Insertion Loss	SDD21	-17.16			dB	At 13.28GHz
Differential Return Loss	SDD11 SDD22			Note 1	dB	At 0.05 to 4.1GHz
				Note 2	dB	At 4.1 to 19GHz
Common-Mode to Common-Mode Output Return Loss	SCC11 SCC22			-2	dB	At 0.2 to 19GHz
Differential to Common-Mode Return Loss	SCD11 SCD22			Note 3	dB	At 0.01 to 12.89GHz
				Note 4	dB	At 12.89 to 19GHz
Differential to Common-Mode Conversion Loss	SCD21-IL			10	dB	At 0.01 to 12.89GHz
				Note 5	dB	At 12.89 to 15.7GHz
				-6.3	dB	At 15.7 to 19GHz

Notes:

1. Reflection Coefficient given by equation SDD11(dB) < -16.5 + 2 × SQRT(f), with f in GHz.
2. Reflection Coefficient given by equation SDD11(dB) < -10.66 + 14 × log10(f/5.5), with f in GHz.
3. Reflection Coefficient given by equation SCD11(dB) < -22 + (20/25.78)*f, with f in GHz.
4. Reflection Coefficient given by equation SCD11(dB) < -15 + (6/25.78)*f, with f in GHz.
5. Reflection Coefficient given by equation SCD21(dB) < -27 + (29/22)*f, with f in GHz.

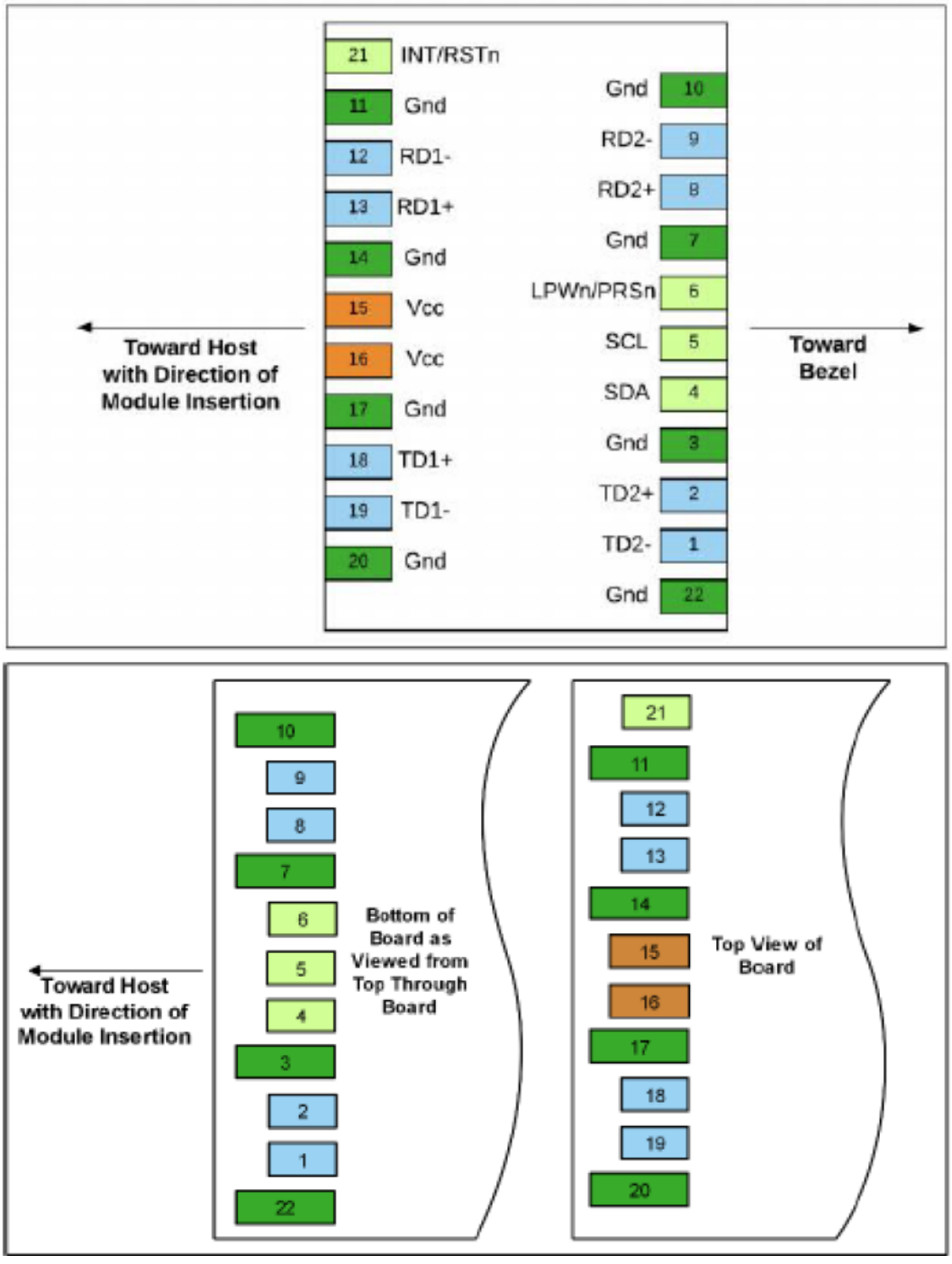
DSFP Pin Descriptions

Pin	Logic	Symbol	Name/Description	Notes
1	CML-I	TD2-	Transmitter Inverted Data Input Lane 2.	
2	CML-I	TD2+	Transmitter Data Input Lane 2.	
3		GND	Module Ground.	2
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data Line.	
5	LVTTL-I/O	SCL	2-Wire Serial Interface Clock Line.	
6	Multi-Level-I/O	LPWn/PRSn	Low-Power Mode/Module Present (MOD_ABS).	
7		GND	Module Ground.	2
8	CML-O	RD2+	Receiver Non-Inverted Data Output Lane 2.	
9	CML-O	RD2-	Receiver Inverted Data Output Lane 2.	
10		GND	Module Ground.	2
11		GND	Module Ground.	2
12	CML-O	RD1-	Receiver Inverted Data Output Lane 1.	1
13	CML-O	RD1+	Receiver Data Output Lane 1.	1
14		GND	Module Ground.	2
15		Vcc	Module +3.3V Power Supply.	
16		Vcc	Module +3.3V Power Supply.	
17		GND	Module Ground.	2
18	CML-I	TD1+	Transmitter Non-Inverted Data Input Lane 1.	1
19	CML-I	TD1-	Transmitter Inverted Data Input Lane 1.	1
20		GND	Module Ground.	2
21	Multi-Level-I/O	INT/RSTn	Dual Function Module Interrupt and Reset Pin.	
22		GND	Module Ground.	2

Notes:

1. Backwards compatible with SFF-8431 SFI Interface.
2. The module ground contacts GND recommended to be isolated from the module case by offering flexibility in the host EMI control strategy.

DSFP Electrical Pin-Out Details



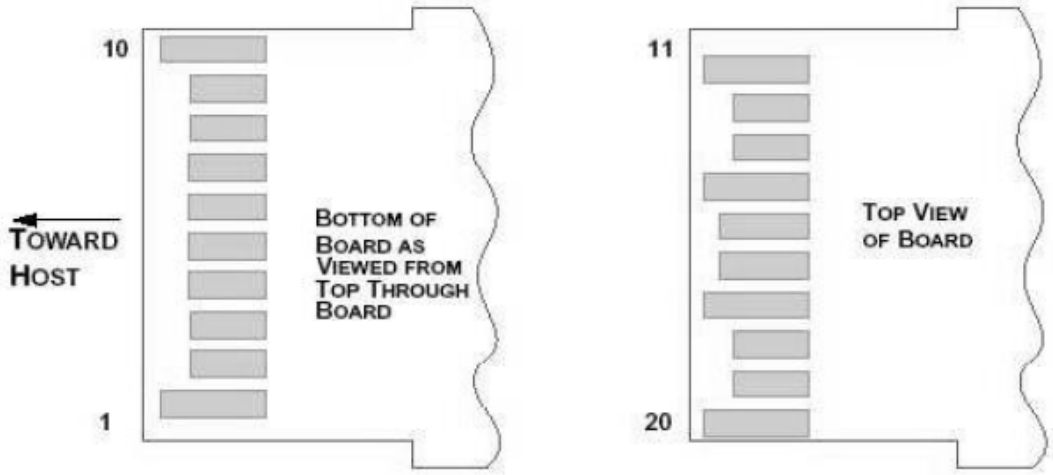
SFP Pin Descriptions

Pin	Logic	Symbol	Name/Description	Notes
1		VeeT	Transmitter Ground.	
2	LVTTL-O	Tx_Fault	Not Connected.	1
3	LVTTL-I	Tx_Disable	Transmitter Disable.	2
4	LVTTL-I/O	SDA	2-Wire Serial Data.	
5	LVTTL-I	SCL	2-Wire Serial Clock.	
6		MOD_DEF0	Module Present. Connected to the VeeT.	
7	LVTTL-I	RS0	Not Connected.	1
8	LVTTL-O	LOS	Loss of Signal.	2
9	LVTTL-I	RS1	Not Connected.	1
10		VeeR	Receiver Ground.	
11		VeeR	Receiver Ground.	
12	CML-O	RD-	Receiver Data Inverted.	
13	CML-O	RD+	Receiver Data.	
14		VeeR	Receiver Ground.	
15		VccR	Receiver Power Supply 3.3V.	
16		VccT	Transmitter Power Supply 3.3V.	
17		VeeT	Transmitter Ground.	
18	CML-I	TD+	Transmitter Data.	
19	CML-I	TD-	Transmitter Data Inverted.	
20		VeeT	Transmitter Ground.	

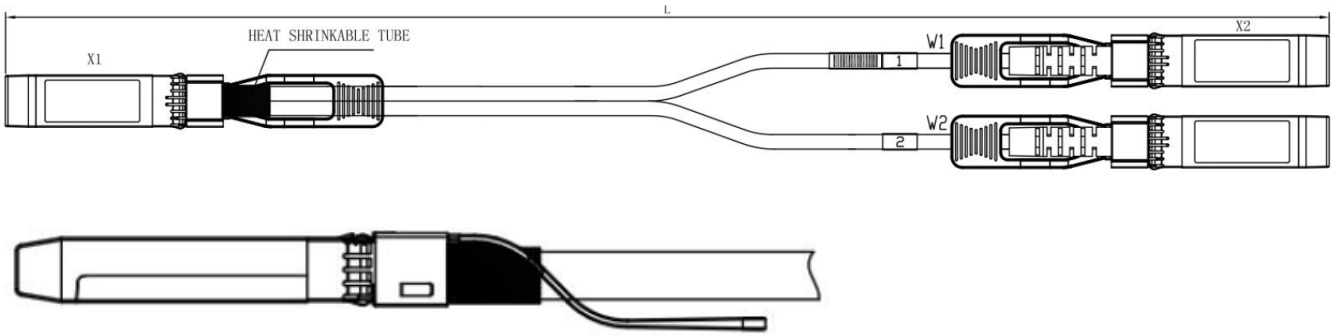
Notes:

1. Signals not supported in SFP+ copper pulled down to the VeeT with a 30kΩ resistor.
2. Passive cable assemblies do not support LOS and Tx_Disable.

SFP Electrical Pin-Out Details



Mechanical Specifications



About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is in engrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.

U.S. Headquarters

Email: sales@addonnetworks.com

Telephone: +1 877.292.1701

Fax: 949.266.9273

Europe Headquarters

Email: salessupportemea@addonnetworks.com

Telephone: +44 1285 842070