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S125-LP-DAC

1.25 Gbps SFP Direct Attach Passive Cable

Description:

S125-LP-DAC passive copper cable assemblies provide high-performance, cost-effective connectivity solutions for 1 Gbps Ethernet and 1 Gbps Fibre Channel applications. These cables enable hardware manufacturers to achieve high port density, flexible configuration and efficient port utilization while maintaining low costs and reduced power consumption.

Designed to deliver reliable high-speed data transmission, these cable assemblies meet or exceed industry standards for Gigabit Ethernet and Fibre Channel in terms of performance and reliability.

They are classified as passive copper cables because they do not contain signal conditioning circuitry, such as crosstalk or echo cancellation, within the SFP connectors. They are also commonly known as **DAC (Direct Attach Cable)** cables.

S125-LP-DAC cable is a good alternative to link 1 Gbps SFP ports, with low-cost, low power consumption and low latency.



Features:

- Support for multi-gigabit data rates up to 1.25 Gbps Ethernet
- Cable type: Passive Copper Twinax Cable
- Wire AWG: AWG30, AWG26
- Hot-pluggable SFP 20 PIN footprint
- Available lengths: 1 m to 10 m
- Maximum power consumption < 0.1 W
- Improved Pluggable Form Factor (IPF) compliant for enhanced EMI/EMC performance
- Compliant with applicable SFP+ MSA spec.
- Commercial temperature range: 0 - +70 °C
- Electrical interface compliant with SFF-8431
- RoHS compliant

Applications:

- ✧ 1 Gbps Ethernet
- ✧ End of row/Middle of row switching architectures
- ✧ Switched fabric I/O such as ultra high bandwidth switches and routers
- ✧ Data center cabling infrastructure
- ✧ High density connections between networking equipment
- ✧ Storage Area Networks (SAN) & Storage Servers

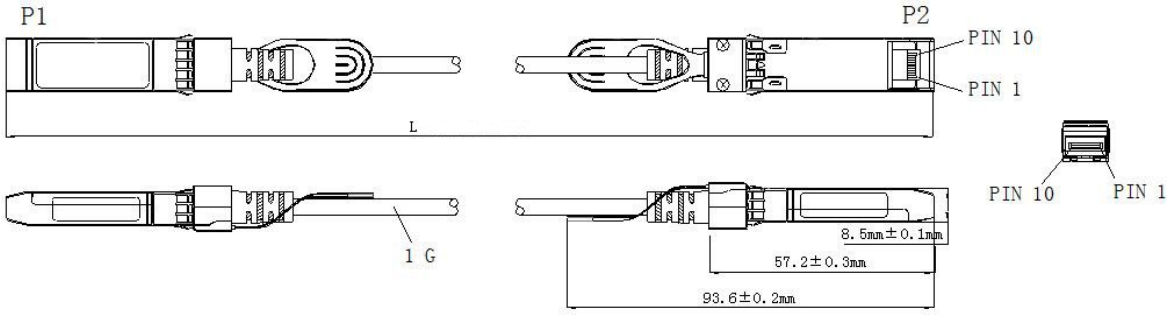
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Mechanical dimensions schema:



Operating environment:

Parameter	Min.	Typ.	Max.
Data rate per lane	1.25 Gbps	1.25 Gbps	
Operating case temperature	0 °C	+ 25 °C	+ 70 °C
Relative humidity	5 %		95 %
Supply voltage	3.15 V	3.3 V	3.45 V

PIN function definitions:

PIN #	Symbol	Function	Notes
1	VeeT	Transmitter ground	
2	TX Fault	N/A	*1*
3	TX_DIS	Transmitter disable	*2*
4	SDA	Tow wire serial data	
5	SCL	Tow wire serial clock	
6	MOD-DEF0	Module present, connect to VeeT	
7	RS0	N/A	*1*
8	LOS	LOS of signal	*2*
9	RS1	N/A	*1*
10	VeeR	Receiver ground	
11	VeeR	Receiver ground	
12	RD-	Receiver data inverted	
13	RD+	Receiver data non-inverted	
14	VeeR	Receiver ground	
15	VccR	Receiver supply 3.3 V	
16	VccT	Transmitter supply 3.3 V	
17	VeeT	Transmitter ground	
18	TD+	Transmitter data non-inverted	
19	TD-	Transmitter data inverted	
20	VeeT	Transmitter ground	

Notes: 1) Signals not supported in SFP+ Copper pulled-down to VeeT with 30K ohms resistor
2) Passive cable assemblies do not support LOS and TX_DIS

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Performance specifications:

Description	Value
Electrical	
Min. dielectric withstand voltage	300 V DC
Insulation resistance	1000 MΩ
Current rating	0.5 Amp Min/Signal Contact
Cable	
Conductor	Solid
Wire gauge	AWG30, AWG26
Impedance	100 ± 5 Ω
Cable OD	AWG 30: 4.2 mm AWG 26: 5.2 mm
Jacket type	PVC
Bend radius	5 x cable outer diameter (OD)

Ordering code:

S125-LP-DAC-dd-XX

Examples of distance code:

dd Code	Distance
100	1 m
200	2 m
300	3 m
400	4 m
500	5 m
600	6 m
700	7 m
1000	10 m

Examples of Ordering code:

Code	Description
S125-LP-DAC-100-XX	1.25G SFP DAC cable, 1 m
S125-LP-DAC-200-XX	1.25G SFP DAC cable, 2 m
S125-LP-DAC-300-XX	1.25G SFP DAC cable, 3 m
S125-LP-DAC-400-XX	1.25G SFP DAC cable, 4 m
S125-LP-DAC-500-XX	1.25G SFP DAC cable, 5 m
S125-LP-DAC-600-XX	1.25G SFP DAC cable, 6 m
S125-LP-DAC-700-XX	1.25G SFP DAC cable, 7 m
S125-LP-DAC-1000-XX	1.25G SFP DAC cable, 10 m

Note: Custom cable diameters and lengths are available upon request.

Remark: Full compatibility is conditioned by exact specification of the end device; compatibility of older SFPs is not guaranteed with new devices or updated SW.

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