



ACLF-HSP100G-DAC26-P05m

100G QSFP28 Direct Attach Cable 5m Datasheet

General Description

The 100G QSFP28 Direct Connect Cable (DAC) is a 4-channel parallel passive copper product for storage, data centers and high-performance computing connections. Each channel is capable of transmitting data at 25 Gbps, enabling a 100 Gbps total data rate of 5 meters.

Features

- Enhanced EMI / EMC performance
- 25Gbps data transfer rate per channel, up to 100Gbps
- Compliant with the IEEE 802.3bj standard and Infiniband EDR specifications
- Meets QSFP + MSA and SFF-8661 / SFF-8665 standards
- Support serial ID function through EEPROM
- 30AWG to 26AWG cable available
- RoHS and halogen-free options

Benefits

- Cost-effective copper solution
- Lowest total system power solution
- Lowest total system EMI solution
- Optimized design for Signal Integrity

Applications

- Switch / router / HBA / SAN, NIC card
- 40G \ 100G Ethernet
- Storage, switch, data center, network center
- Infiniband, QDR / EDR

Product Description

QSFP28 Direct Attach Cables are suitable for very short distances and offer a highly cost-effective way to establish a 100-Gigabit link between QSFP28 ports of QSFP28 switches within racks and across adjacent racks.

These cables are used for 100GbE and Infiniband standards, to maximize performance. QSFP28 are designed to meet emerging data center and high performance computing application needs for a high density cabling interconnect system capable of delivering an aggregate data bandwidth of 100Gb/s. This interconnect system is fully compliant with existing industry standard specifications such as the QSFP MSA and IBTA (InfiniBand Trade Association). The QSFP+ cables support the bandwidth transmission requirements as defined by IEEE 802.3ba (100 Gb/s) and Infiniband QDR (4x25 Gb/s per channel) specifications.



+17863204446
+14073606163



8318 VIVARO ISLE WAY,
WINDERMERE FL.



SALES@ACLFIBER.COM

ACLF-HSP100G-DAC26-P05m 100G QSFP28 Direct Attach Cable 5m Datasheet

Recommended Operation Condition

Parameter	Symbol	Min	Max	Unit
Operating Case Temperature	Topc	-20	85	°C
Storage Temperature	Tst	-40	85	°C
Relative Humidity (non-condensation)	RS	30	60	%
Supply Voltage	VCC3	3.135	3.465	V
Voltage on LVTTTL Input	Vi lvttl	-0.3	VCC3 +0.2	V
Power Supply Current	ICC3		10	mA
Total Power Consumption	Pd	-	30	mW

Notes:

Stress or conditions exceed the above range may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those listed in the operational sections of this specification is not applied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

High Speed Characteristics

Parameter	Symbol	Min	Typ	Max	Units	Notes
Differential Impedance	Zd	90	100	110	Ω	

Differential Input Return Loss	SDDXX	$< -12 + 2 \cdot \sqrt{f}$ with f in GHz			dB	0.01~4.1GHz
		$< -6.3 + 13 \cdot \log_{10}(f/5.5)$ with f in GHz			dB	4.1~11.1GHz
Common Mode Output Return Loss	SCCXX	$< -7 + 1.6 \cdot f$ with f in GHz			dB	0.01~2.5GHz
				-3	dB	2.5~11.1GHz
Difference Waveform Distortion Penalty	dWDPc			6.75	dB	
VMA Loss	L			4.4	dB	
VMA Loss to Crosstalk Ratio	VCR	32.5			dB	



ACLF-HSP100G-DAC26-P05m 100G QSFP28 Direct Attach Cable 5m Datasheet

Pin Function Definition

QSFP+ Pin Function Definition

Pin	Logic	Symbol	Name/Description	Note
1		GND	Ground	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	
4		GND	Ground	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	
7		GND	Ground	1
8	LVTLL-I	ModSelL	Module Select	
9	LVTLL-I	ResetL	Module Reset	
10		VccRx	+ 3.3V Power Supply Receiver	2
11	LVC MOS-I/O	SCL	2-Wire Serial Interface Clock	
12	LVC MOS-I/O	SDA	2-Wire Serial Interface Data	
13		GND	Ground	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Ground	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Ground	1
20		GND	Ground	1
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	
23		GND	Ground	1
24	CML-O	Rx4n	Receiver Inverted Data Output	1

25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Ground	1
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		VccTx	+3.3 V Power Supply transmitter	2
30		Vcc1	+3.3 V Power Supply	2
31	LVTTL-I	LPMode	Low Power Mode	
32		GND	Ground	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Output	
35		GND	Ground	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Output	
38		GND	Ground	1



+17863204446
+14073606163



8318 VIVARO ISLE WAY,
WINDERMERE FL.

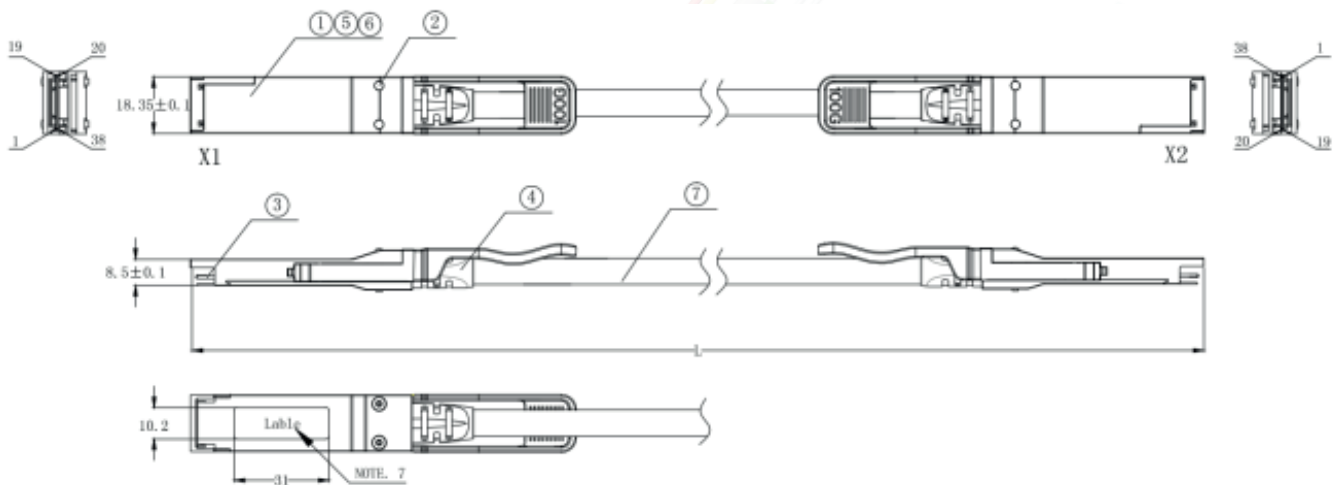


SALES@ACLFIBER.COM

ACLF-HSP100G-DAC26-P05m 100G QSFP28 Direct Attach Cable 5m Datasheet

Mechanical Specifications

The connector is compatible with the SFF-8432 specification.



Length (m)	Cable AWG
0.3	30
0.5	30
1	30
2	30
3	30
4	30
5	26
7	26





ACLF-HSP100G-DAC26-P05m 100G QSFP28 Direct Attach Cable 5m Datasheet

Ordering Information

100G QSFP28 Passive Copper Cable Assembly, Passive

P/N	Length	Data Rate	AWG	Length Tolerance
ACLF-HSP100G-DACxx-PS5m	0.5m	100G	24 / 26 / 28 / 30	+1/-0cm
ACLF-HSP100G-DACxx-P01m	1m	100G	24 / 26 / 28 / 30	+1/-3cm
ACLF-HSP100G-DACxx-P1.5m	1.5m	100G	24 / 26 / 28 / 30	+3/-3cm
ACLF-HSP100G-DACxx-P02m	2m	100G	24 / 26 / 28 / 30	+3/-3cm
ACLF-HSP100G-DACxx-P2.5m	2.5m	100G	24 / 26 / 28 / 30	+3/-3cm
ACLF-HSP100G-DACxx-P03m	3m	100G	24 / 26 / 28	+3/-3cm
ACLF-HSP100G-DACxx-P05m	5m	100G	24 / 26	+6/-6cm
ACLF-HSP100G-DACxx-P07m	7m	100G	24 / 26	+9/-9cm

Notes:

You can be customized diameter and distance.



+17863204446
+14073606163



8318 VIVARO ISLE WAY,
WINDERMERE FL.



SALES@ACLFIBER.COM