

QSFP28 passive Breakout SFP28 4x25G Twinaxial Direct Attach Cable



Description

The BlueLAN® SC282701LXMXX QSFP28 Direct Attach Cable is a low-power, low-cost and low-latency solution for short interconnections between devices in data centers. Choose the most popular connection for 4x25G QSFP28 to 4x SFP28 data links with up to 5 Meter length.

BlueLAN® QSFP28 Direct Attach Cables deliver the most flexible and scalable solution for today's demands in data center environments.

BlueLAN® QSFP28 Direct Attach Cables are 100% compliant with QSFP28 Multi-Source Agreement (MSA).

Applications

- ✓ 100GBase to 4x 25GBase Ethernet
- ✓ Switch to Switch Interface
- ✓ Router/Server Interface
- ✓ Data Center Networks
- ✓ Storage Area Networks
- ✓ High Performance Computing
- ✓ Other links

Features

- ✓ 100GbE to 4x25GbE data rate
- ✓ Go Green and reduce OPEX:
Maximum 5 mW power consumption
- ✓ Hot-pluggable QSFP28 footprint compliant to SFF-8665
- ✓ Hot-pluggable QSFP28 footprint compliant to SFF-8665
- ✓ IEEE P802.3bj
- ✓ Available in following length (Meter):
1, 2, 3, 5
- ✓ AC coupled input and outputs
- ✓ Custom EEPROM signature
- ✓ Nickel plated zinc diecast enclosure, for lower EMI
- ✓ RoHS compliant and lead-free
- ✓ Single +3.3V power supply
- ✓ Case operating temperatures:
Commercial: 0°C to +70°C
Industrial: -40°C to +85°C

Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended.

Warranty

Every BlueLAN® Direct Attach Cable comes with a 5 year replacement warranty and lifetime support.

For a warranty inquiry, please contact your CBO sales representative.

This warranty only covers the first user of the equipment.

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by CBO before they become applicable to any particular order or contract. In accordance with the CBO policy of continuous improvement specifications may change without notice.

The publication of information in this data sheet does not imply freedom from patent or other protective rights of CBO or others.

Further details are available from any CBO sales representative.

Installation

Before installation attach an ESD-preventive wrist to ensure not to damage the Direct Attach Cable or hardware.

BlueLAN® SC282701LXMX can be installed in any Small Form Factor Pluggable (QSFP28 / SFP28) port. You can install the SC282701LXMX regardless if the system is powered on or off, because it is hot-swappable.

Insert each connector of the Direct Attach Cable into the QSFP28/ SFP28 port of your devices.

Pay attention to the max. bend radius of the cable.

You can now use your link.

Order Information

Part No.	Length	Temperature	AWG
SC253501K1M30	1 Meter	0°C – 70°C	30
SC253501K2M30	2 Meters	0°C – 70°C	30
SC253501K3M30	3 Meters	0°C – 70°C	30
SC253501K5M26	5 Meters	0°C – 70°C	26
Optional: Industrial Temp. (must be added as option)	1-5 Meters	-40°C – 85°C	30-26

Regulatory Compliance

Feature	Standard	Co.
Electrostatic Discharge (ESD)	- IEC/EN 61000-4- 2	✓
Electromagnetic Interference (EMI)	- FCC Part 15 Class B EN 55022 - Class B (CISPR 22A)	✓
Component Recognition	- IEC/EN 60950, UL	✓
RoHS	- 2002/95/EC	✓
EMC	- EN61000-3	✓

1. General Information

Parameter	Value
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	100 Mega Ohm
Mega Ohm Current Rating	0.5 Amp Min/Signal Contact
Flammability Rating	UL 94 V-0
Shield	Braid/Foil

2. Raw Cable Characteristics

Parameter	Value
Conductor	Solid
Wire Gauge	30 AWG to 26 AWG
Impedance	100 $\pm$ 5 Ohm
Construction	Twinaxial
Jacket Type	PVC

3. Plug Characteristics

Parameter	Value	
Back shell Material	Nickel Plated Zinc Diecast	
Contact	PCB with Gold-Plated Pads	
Latch	Positive latching with pull	
Insertion Force	SFP28	18N maximum
	QSFP28	40N maximum
Withdrawal Force	SFP28	12.5N maximum
	QSFP28	30N maximum
Retention Force	90N maximum	
Durability	SFP28	100 Cycles minimum
	QSFP28	250 Cycles minimum

4. Electrical Interface Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Power Supply Voltage	Vcc	3.35		3.46	V	
Power Supply Current	Icc			0.15	mA	
Power Total				5	mW	

5. EEPROM Information SFP28

The SFP MSA defines a 256-byte memory map in EEPROM describing the transceivers capabilities, standard interfaces, manufacturer, and other information, which is accessible over a 2 wire serial interface at the 8-bit address 1010000X (A0h).

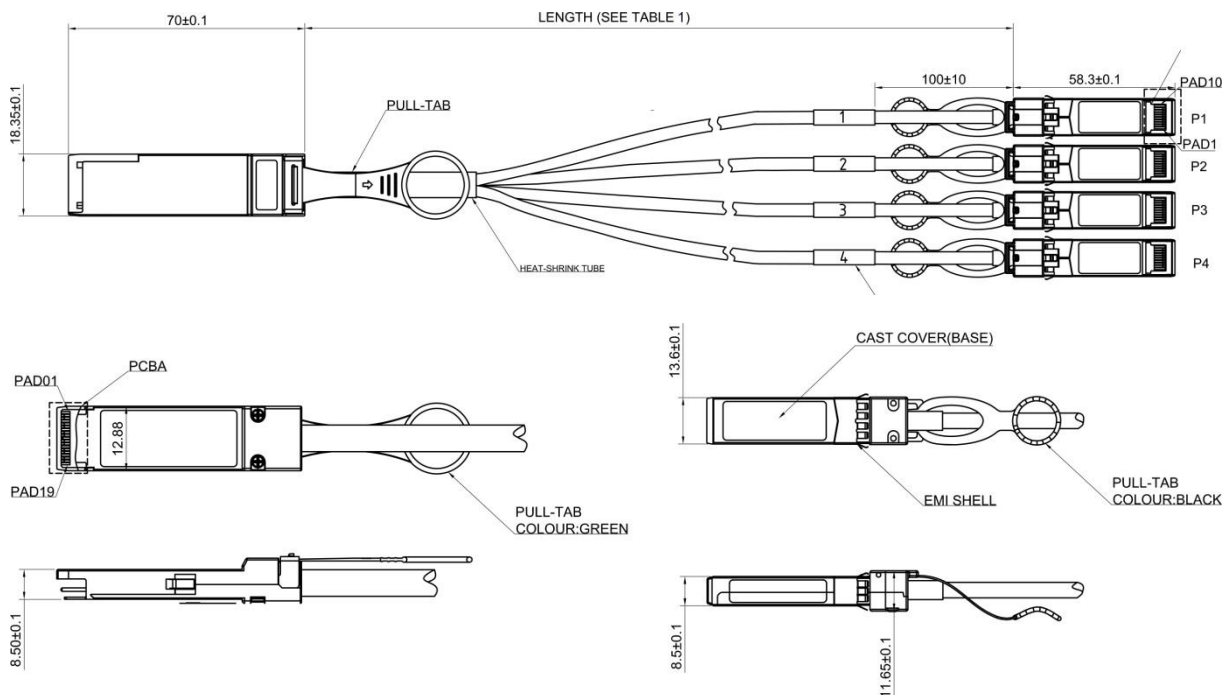
Data Address	Field Size (Bytes)	Name of Field	Contents (Hex)	Description
0	1	Identifier	XX	Formfactor
1	1	Ext. Identifier	XX	
2	1	Connector	XX	
3-10	8	Transceiver	XX XX XX XX XX XX XX XX	Transmittter Code
11	1	Encoding	XX	
12	1	BR, Nominal	XX	Transceiver Speed
13	1	Reserved	00	
14	1	Length (9μm) km	XX	Max. link length in KM
15	1	Length (9μm) 100m	XX	Max. link length in M
16	1	Length (50μm) 10m	XX	Max. link length in M
17	1	Length(62.5μm)10m	XX	Max. link length in M
18	1	Length (Copper)	XX	Max. link length in M
29	1	Reserved	00	
30-35	16	Vendor name	XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX	CBO-BlueLAN
36	1	Reserved	00	
37-39	3	Vendor OUI	XX XX XX	
40-55	16	Vendor PN	XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX	Product Number - depending on Part
56-59	4	Vendor rev	XX XX XX XX	Vendor revision
60-61	2	Wavelength	XX XX	Transceiver Wavelength
62	1	Reserved	00	
63	1	CC BASE	XX	Checksum of bytes 0-62
64-65	2	Options	XX XX	
66	1	BR, max	XX	
67	1	BR, min	XX	
68-83	16	Vendor SN	XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX XX	Part serial number
84-91	8	Vendor date code	XX XX XX XX XX XX 20 20	Year, Month, Day
92	1	Diagnostic type	XX	Diagnostics
93	1	Enhanced option	XX	Diagnostics
94	1	SFF-8472	XX	Diagnostics
95	1	CC_EXT	XX	Checksum of bytes 64-94
96-255	160	Vendor Specific		

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Data Address	Field Size (Bytes)	Name of Field	Description
128	1	Identifier	Formfactor
129	1	Ext. Identifier	
130	1	Connector	
131-138	8	Transceiver	Transmittter Code
139	1	Encoding	
140	1	BR, Nominal	Transceiver Speed
141	1	Extended RateSelect Compliance	Tags for Extended RateSelect compliance
142	1	Length (9µm) km	Max. link length in KM
143	1	Length (9µm) 100m	Max. link length in M
144	1	Length (50µm) 10m	Max. link length in M
145	1	Length(62.5µm)10m	Max. link length in M
146	1	Length (Copper)	Max. link length in M
147	1	Device Tech	Device technology
148-163	16	Vendor name	CBO-BlueLAN
164	1	Extended Transceiver	Extended Transceiver Codes for InfiniBand
165-167	3	Vendor OUI	
168-183	16	Vendor PN	Product Number - depending on Part
184-185	2	Vendor rev	Vendor revision
186-187	2	Wavelength	Transceiver Wavelength
188-189	2	Wavelength tolerance	Guaranteed range of laser wavelength (+/- value) from Nominal wavelength (Wavelength Tol. = value/200 in nm)
190	1	Max Case Temp	Maximum Case Temperature in Degrees C
191	1	CC_BASE	Check code for Base ID Fields (addresses 128-190)
192-195	4	Options	Rate Select, TX Disable, TX Fault, LOS
196-211	16	Vendor SN	Part serial number
212-219	8	Vendor date code	Year, Month, Day
220	1	Diagnostic type	Diagnostics
221	1	Enhanced option	Indicates which optional enhanced features are implemented in the transceiver.
222	1	Reserved	Reserved
223	1	CC_EXT	Check code for the Extended ID Fields (addresses 192-222)
224-255	32	Vendor Specific	Vendor Specific EEPROM

7. Mechanical Specifications (Unit: mm)



7.1 Bend Radius

Parameter	Min.	Typ.	Max.	Unit
Cable Diameter (26 AWG)		QSFP28: 1,12 SFP28: 0,56		cm
Bend Radius (26 AWG)	QSFP28: 5,60 SFP28: 2,80			cm
Cable Diameter (30 AWG)		QSFP28: 0,92 SFP28: 0,46		cm
Bend Radius (30 AWG)	QSFP28: 4,60 SFP28: 2,30			cm

8. Revision History

Revision	Initiated	Review	Approved	History	Release Date
V 1.0	Michael	Olaf	Christian	Released	02 / 2017
V 1.1	Michael	Olaf	Christian	Updated electrical specs	02 / 2019
V 1.2	Michael	Olaf	Christian	Updated cycles	12 / 2019

9. Further Information

For further information, please contact info@cbo-it.de or www.cbo-it.de