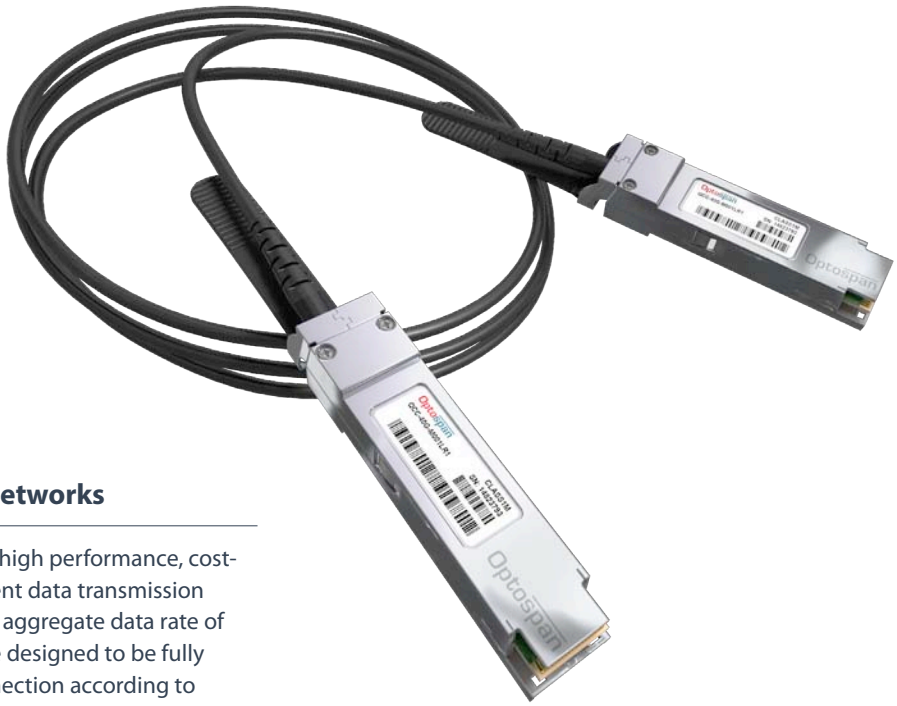
Optospan

40G QSFP+ DIRECT ATTACH *PASSIVE COPPER CABLE*



High Speed Connectivity for Data Center Networks

OptoSpan Direct Attach Passive Copper Cables offer high performance, cost-effective connectivity at 40G rates. With 4 independent data transmission and receiving channels, OptoSpan cables achieve an aggregate data rate of 40Gbps over 100 meters transmission. The cables are designed to be fully compatible in form factor and optical/electrical connection according to QSFP Multi-Source Agreement (MSA).

FEATURES

- 4-Channel Full-Duplex Passive Copper Cable
- Support for multi-gigabit data rates
- Maximum aggregate data rate: 40 Gb/s
- Hybrid link length up to 5m (passive limiting)
- Low power consumption: 0.02 W (typ.)

APPLICATIONS

- 10/40 Gigabit Ethernet
- InfiniBand4x, SDR, DDR, QDR
- 2, 4, 8, 10 Gigabit Fiber Channel
- Fiber Channel over Ethernet
- Data Centers, SAS, Servers, Hubs, Switches, Routers

COMPATIBILITY

OEM	Example Part#
Alcatel	QSFP-40G-C3M
Arista	CAB-Q-Q-3M
Cisco	QSFP-H40G-CU3M
Brocade	40G-QSFP-C-0301
Dell	332-1363
Extreme	40GB-C03-QSFP
IBM	BN-QS-QS-CBL-3M
Juniper	EX-QSFP-40GE-DAC-3M
Generic	

OptoSpan QSFP+ Passive Copper Cables support I2C serial interface, which can be used to identify the product and performance capabilities.

MAXIMUM RATINGS

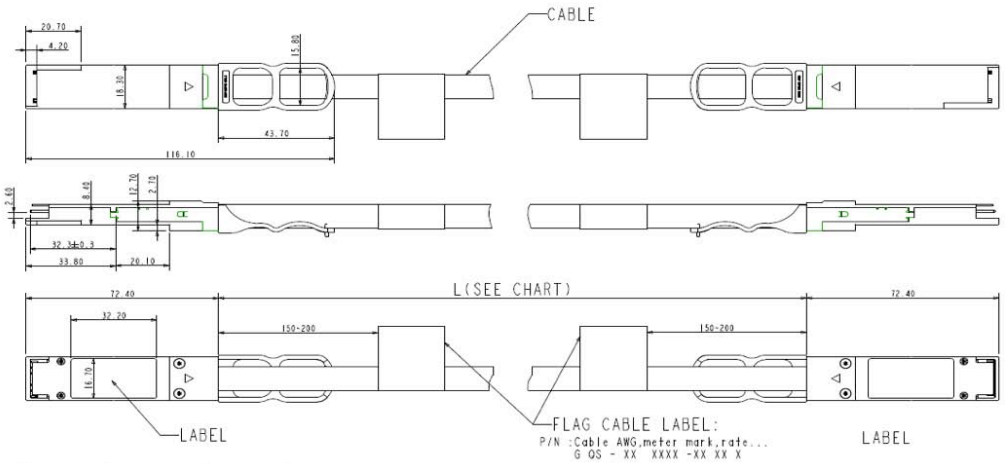
Parameter	Typical Value
Number of Lanes	4 Tx & 4 Rx
Date Rate (each lane)	10 Gb/s
Maximum Aggregate Data Rate	40 Gb/s
Bit Error Ratio	E^{-12}
Interface	Serial, I2C-based (as defined by QSFP MSA)
Power Consumption (each lane)	0.02 W
Operation Temperature	0~+70 °C

Parameter	Symbol	Min	Max
Storage Temperature	T_{STG}	-40 °C	85 °C
Relative Humidity (non-condensation)	RH	0%	85%
Operating Case Temperature	Topc	0 °C	70 °C
Supply Voltage	VCC	3.14V	3.47V

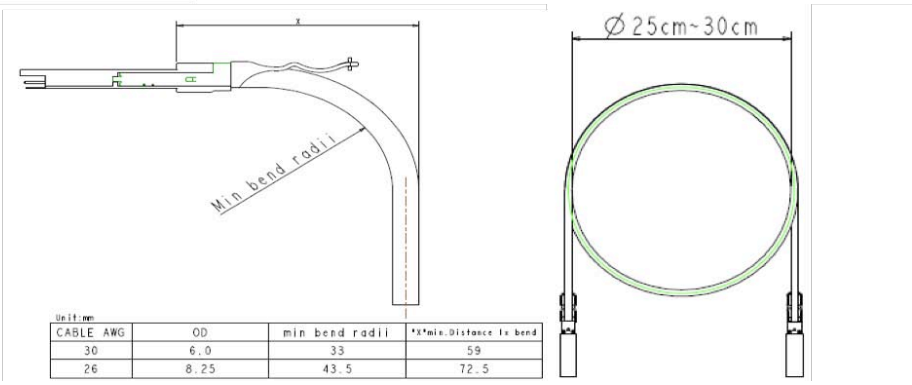
RoHS 2002/95/EC

Specifications may change without notice. Display product photos shown are examples for viewing, not actual products.

MECHANICAL DESIGN



代码	长度范围(m)	公差(cm)
L	L≤0.5	±3
	0.5<L≤5	±5
	5<L≤20	±8
	20<L	±10



Unit:mm

CABLE AWG	OD	min bend radii	*X*min.Distance to bend
30	6.0	33	59
26	8.25	43.5	72.5

QSFP+ PIN DESCRIPTIONS

PIN	Name	Function/Description	PIN	Name	Function/Description
1	GND	Ground	20	GND	Ground
2	Tx2n	Transmitter Inverted Data Input	21	Rx2n	Receiver Inverted Data Output
3	Tx2p	Transmitter Non-Inverted Data Input	22	Rx2p	Receiver Non-Inverted Data Output
4	GND	Ground	23	GND	Ground
5	Tx4n	Transmitter Inverted Data Input	24	Rx4n	Receiver Inverted Data Output
6	Tx4p	Transmitter Non-Inverted Data Input	25	Rx4p	Receiver Non-Inverted Data Output
7	GND	Ground	26	GND	Ground
8	ModSelL	Module Select	27	ModPrsL	Module Present
9	ResetL	Module Reset	28	IntL	Interrupt
10	Vcc Rx	+3.3V Power Supply Receiver	29	Vcc Tx	+3.3V Power supply transmitter
11	SCL	2-wire serial interface clock	30	Vcc1	+3.3V Power supply
12	SDA	2-wire serial interface data	31	LPMode	Low Power Mode
13	GND	Ground	32	GND	Ground
14	Rx3p	Receiver Non-Inverted Data Output	33	Tx3p	Transmitter Non-Inverted Data Input
15	Rx3n	Receiver Inverted Data Output	34	Tx3n	Transmitter Inverted Data Input
16	GND	Ground	35	GND	Ground
17	Rx1p	Receiver Non-Inverted Data Output	36	Tx1p	Transmitter Non-Inverted Data Input
18	Rx1n	Receiver Inverted Data Output	37	Tx1n	Transmitter Inverted Data Input
19	GND	Ground	38	GND	Ground