

# SO-QSFP-40G-PCUxM

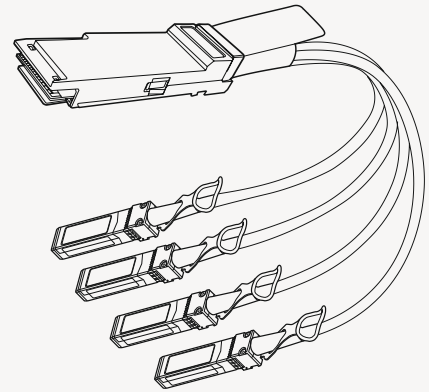
QSFP to 4xSFP+, DAC, AWG30, 0.5 to 5m, passive

## OVERVIEW

The SO-QSFP-4SFP-PCUxM are QSFP to 4x SFP+ splitter cables offering IT professionals a cost-effective interconnect solution for merging 40G QSFP and 10G SFP+ enabled host adapters, switches and servers. For typical applications, users can install this splitter cable between an available QSFP port on their 40 Gigabit/s rated switch and feed up to four upstream 10GbE-SFP+ enabled switches. Each QSFP-SFP+ splitter cable features a single QSFP connector (SFF-8436) rated for 40-Gb/s on one end and (4) SFP+ connectors (SFF-8431), each rated for 10-Gb/s, on the other. Smartoptics designs and sources every subassembly in-house guaranteeing complete control over product performance, quality and consistency. Examples include our widely respected board-as-connector platform which is direct-welded to the wire and encased in a robust Zinc-Nickel back shell for superior crosstalk and EMI performance. Cable available in 0.5M (1.7ft), 1m (3.3ft), 2m (6.6ft), 3m (9.8ft), 5m (16.4ft) & 7m (23ft) lengths to accommodate your installation requirements.

## PRODUCT FEATURES

- QSFP (40G) to 4x SFP+ (10G) splitter cable
- Up to 7m
- Connector A: QSFP SFF-8436 compliant
- Connector B: SFP+ SFF-8431 compliant
- Economically Links up a QSFP port with an upstream 10GbE-SFP+ switch
- AWG30
- Protocol agnostic support of 40GbE, QDR InfiniBand, SAS & Fibre Channel
- Robust Zinc die-cast SFP+ & QSFP connectors with pull-to-release latching
- Low cross-talk and pair-to-pair skew maintains signal integrity
- Fully compliant to the latest SFP+ & QSFP MSA (Multi-Source-Agreement)
- Designated form factor and electrical compliance for QDR InfiniBand
- The perfect direct attached storage splitter cable for Fibre Channel & SAS
- Enjoy a reduced power budget and lower port cost compared to optical



## ORDERING INFORMATION

Part Number	Description
SO-QSFP-4SFP-PCU0.5M	QSFP to 4xSFP+, DAC, AWG30, 0.5m, passive
SO-QSFP-4SFP-PCU1M	QSFP to 4xSFP+, DAC, AWG30, 1m, passive
SO-QSFP-4SFP-PCU2M	QSFP to 4xSFP+, DAC, AWG30, 2m, passive
SO-QSFP-4SFP-PCU3M	QSFP to 4xSFP+, DAC, AWG30, 3m, passive
SO-QSFP-4SFP-PCU5M	QSFP to 4xSFP+, DAC, AWG30, 5m, passive
SO-QSFP-4SFP-PCU7M	QSFP to 4xSFP+, DAC, AWG30, 7m, passive

Subject to change without notice.

For more information, visit [smartoptics.com](http://smartoptics.com).

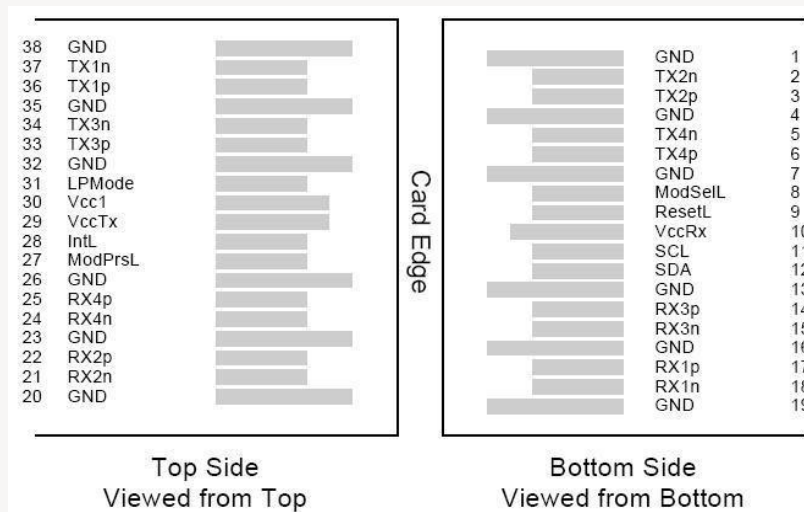
smartoptics

## APPLICATIONS

- InfiniBand SDR, DDR
- Ethernet 10G
- Rack-to-Rack, Shelf-to-Shelf interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

## PIN ASSIGNMENT AND FUNCTION DEFINITIONS

### PIN ASSIGNMENT



### PIN DEFINITION

PIN	Signal Name	Description	PIN	Signal Name	Description
1	GND	Ground (1)	20	GND	Ground (1)
2	Tx2n	CML-I Transmitter 2 Inverted Data Input	21	Rx2n	CML-O Receiver 2 Inverted Data Output
3	Tx2p	CML-I Transmitter 2 Non-Inverted Data Input	22	Rx2p	CML-O Receiver 2 Non-Inverted Data Output
4	GND	Ground (1)	23	GND	Ground (1)
5	Tx4n	CML-I Transmitter 4 Inverted Data Input	24	Rx4n	CML-O Receiver 4 Inverted Data Output
6	Tx4p	CML-I Transmitter 4 Non-Inverted Data Input	25	Rx4p	CML-O Receiver 4 Non-Inverted Data Output
7	GND	Ground (1)	26	GND	Ground (1)
8	ModSelL	LVTTLL-I Module Select	27	ModPrsL	Module Present
9	ResetL	LVTTLL-I Module Reset	28	IntL	Interrupt
10	VccRx	+3.3V Power Supply Receiver (2)	29	VccTx	+3.3V Power Supply Transmitter (2)
11	SCL	LVCMOS-I/O 2-Wire Serial Interface Clock	30	Vcc1	+3.3V Power Supply
12	SDA	LVCMOS-I/O 2-Wire Serial Interface Data	31	LPMODE	LVTTLL-I Low Power Mode
13	GND	Ground (1)	32	GND	Ground (1)
14	Rx3p	CML-O Receiver 3 Non-Inverted Data Output	33	Tx3p	CML-I Transmitter 3 Non-Inverted Data Input
15	Rx3n	CML-O Receiver 3 Inverted Data Output	34	Tx3n	CML-I Transmitter 3 Inverted Data Input

Subject to change without notice.

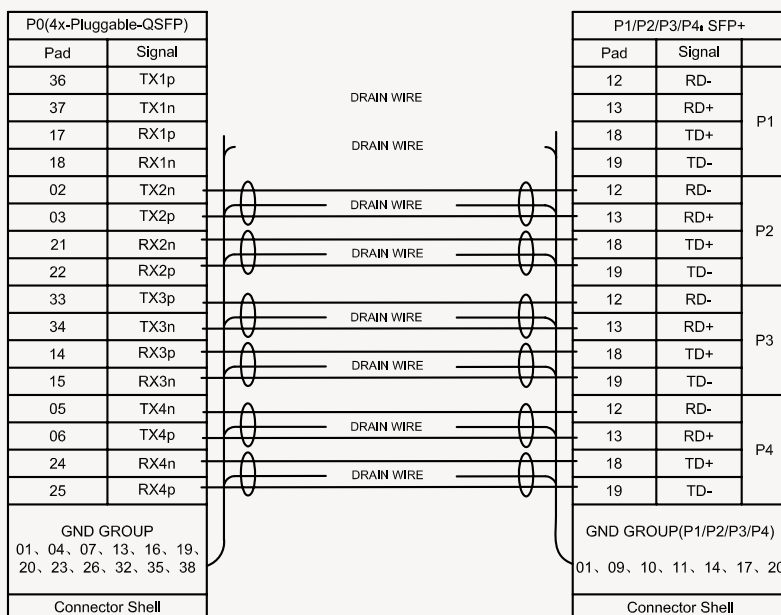
For more information, visit [smaroptics.com](http://smaroptics.com).

16	GND	Ground (1)	35	GND	Ground (1)
17	Rx1p	CML-O Receiver 1 Non-Inverted Data Output	36	Tx1p	CML-I Transmitter 1 Non-Inverted Data Input
18	Rx1n	CML-O Receiver 1 Inverted Data Output	37	Tx1n	CML-I Transmitter 1 Inverted Data Input
19	GND	Ground (1)	38	GND	Ground (1)

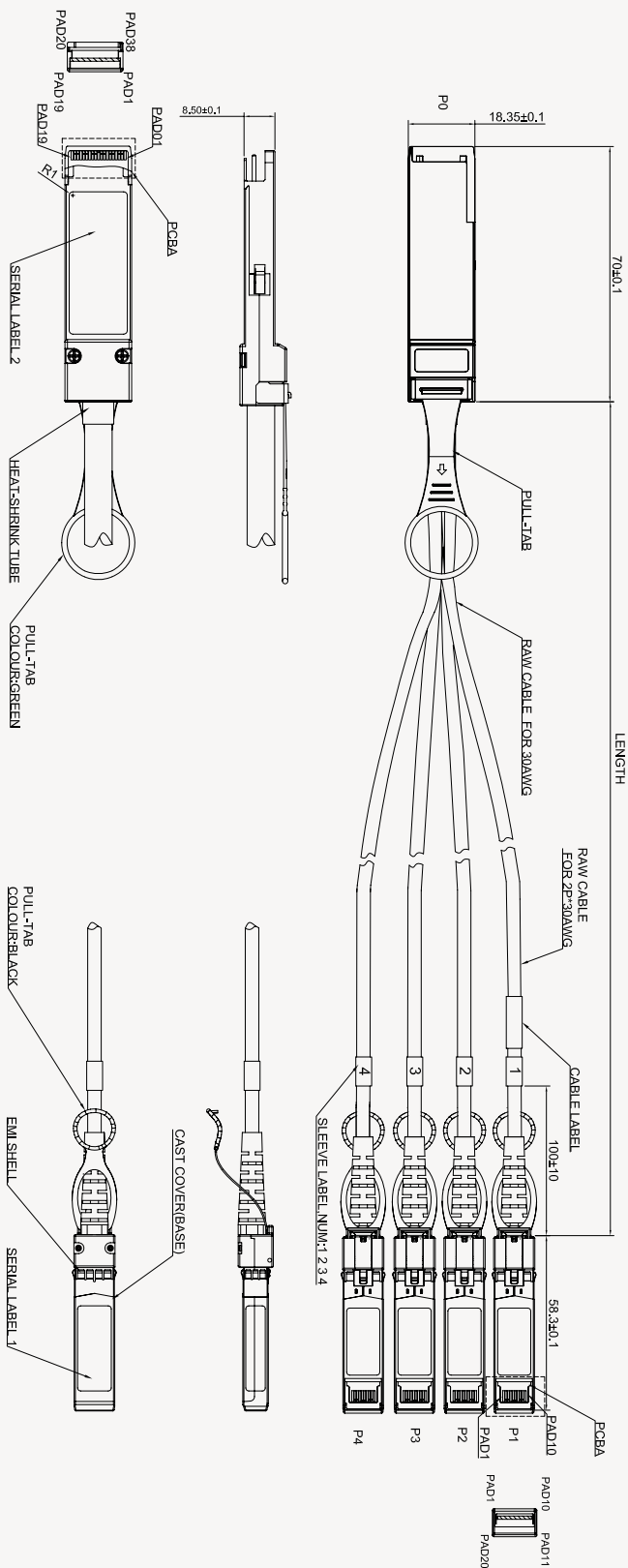
Notes:

1. All Ground (GND) are common within the QSFP+ module and all module voltages are referenced to this potential unless noted otherwise. Connect these directly to the host board signal common ground plane.
2. V<sub>cc</sub>Rx, V<sub>cc</sub>1 and V<sub>cc</sub>Tx are the receiving and transmission power suppliers and shall be applied concurrently. The connector pins are each rated for a maximum current of 500mA.

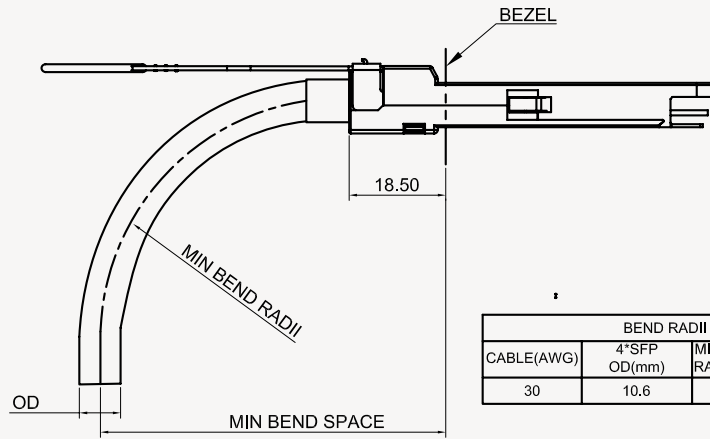
CABLE CONNECTION



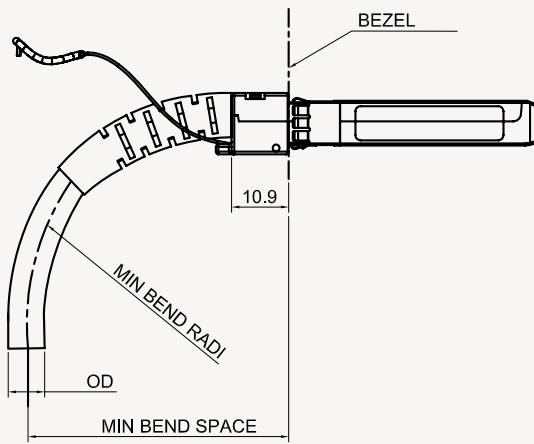
MECHANICAL DRAWING



MINIMUM BEND RADIUS



BEND RADII			
CABLE(AWG)	4"SFP OD(mm)	MIN BEND RADII(mm)	MIN BEND SPACE
30	10.6	53.0	71.5



BEND RADII			
CABLE(AWG)	OD(mm)	MIN BEND RADII(mm)	MIN BEND SPACE
30	4.2	21.0	31.9