

# DAPQQxxxC00x – QSFP28 Passive Direct Attached Copper Cable

50cm to 5m / 100x Gigabit Ethernet

*For your product safety, please read the following information carefully before any manipulation of the cable:*



**ESD**

This cable is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 / JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.

## 1. Overview

DAPQQxxxC00x is a high performance QSFP28 passive direct attached cable for full duplex 100Gbps data links. The device supports communication over up to 5m copper cable.

This Passive Direct Attached Cable is compliant with the Small Form-factor Pluggable (SFP) Multisource Agreement (MSA) and hot pluggable. Always contact Skylane Optics® commercial agents for compatibility with different equipment platforms.

## 2. Features

- QSFP28 Multi-Source Agreement compliant SFF-8665
- Serial ID functionality supported according to SFF-8636
- 4 independent duplex channels at 25Gbps.
- Up to 100Gbps Aggregated Data Rate
- Cable Length up to 5m
- Very low power consumption <0.1W
- 30 AWG Cable (<3m) / 26 AWG Cable (≥3m)
- Operating Case Temperature 0°C to 70°C
- RoHS Compliant



Figure 1. Cable  
(non-binding illustration)

## 3. Applications

- 100GBase Ethernet
- Infiniband
- Data centre
- Intra-Rack connections

4. Technical Parameters

4.1. Recommended Operating Conditions					
Parameter	Min	Typ	Max	Unit	Notes
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	DAPQQxxxC000, DAPQQxxxC00C, DAPQQxxxC00H
Relative Humidity	-		85	%	Non condensing
Power Supply Voltage	3.15	3.3	3.4	V	
Power Supply Current			30	mA	
Power Dissipation			0.1	W	

4.2. General Specifications					
Parameter	Min	Typ	Max	Unit	Notes
Data Rate		103.125		Gbps	

4.3. High-speed Electrical Interface, Host to SFP+					
Parameter	Min	Typ	Max	Unit	Notes
Tx Input Impedance	90	100	110	Ω	Differential
Rx Output Impedance	90	100	100	Ω	Differential

5. Transceiver Electrical Pad Layout

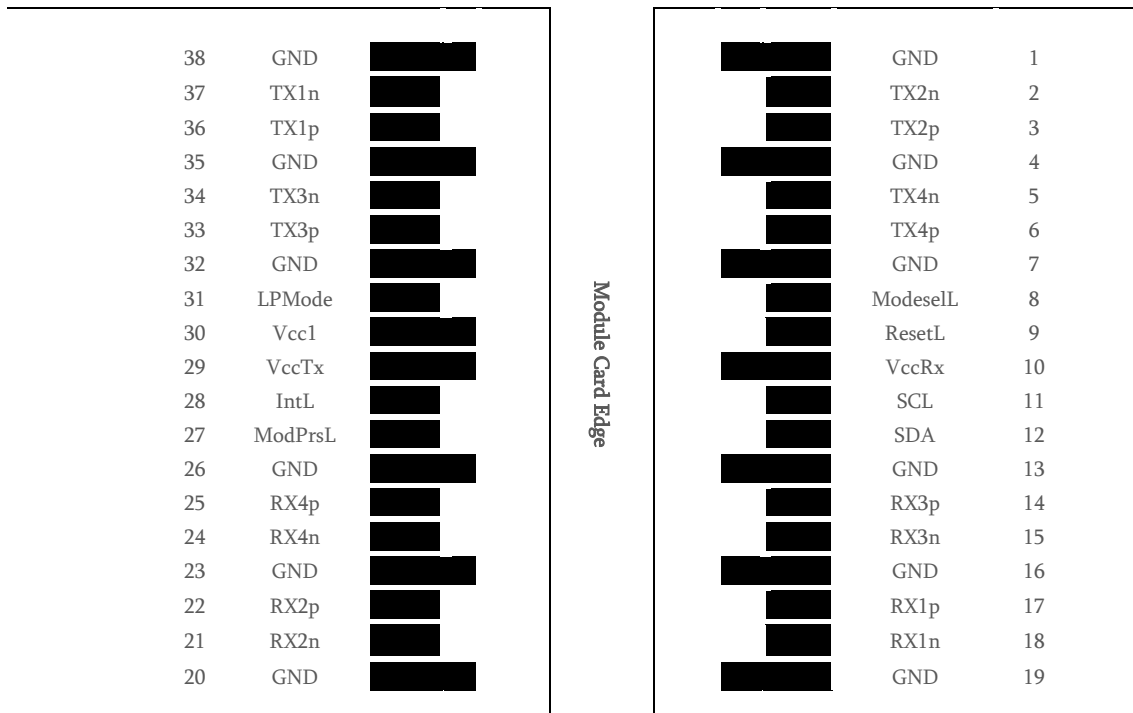


Figure 1. QSFP+ Transceiver Electrical Pad Layout

## 6. Module Electrical Pin Definition

Pin	Symbol	Description	Pin	Symbol	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	Int	Interrupt
10	VccRx	Receiver Power Supply	29	VccTx	Transmitter Power supply
11	SCL	Two-Wire Serial Interface Clock (SCL)	30	Vcc1	Power supply
12	SDA	Two-wire Serial Interface Data (SDA)	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

7. EEPROM

QSFP+ MSA (SFF-8436)

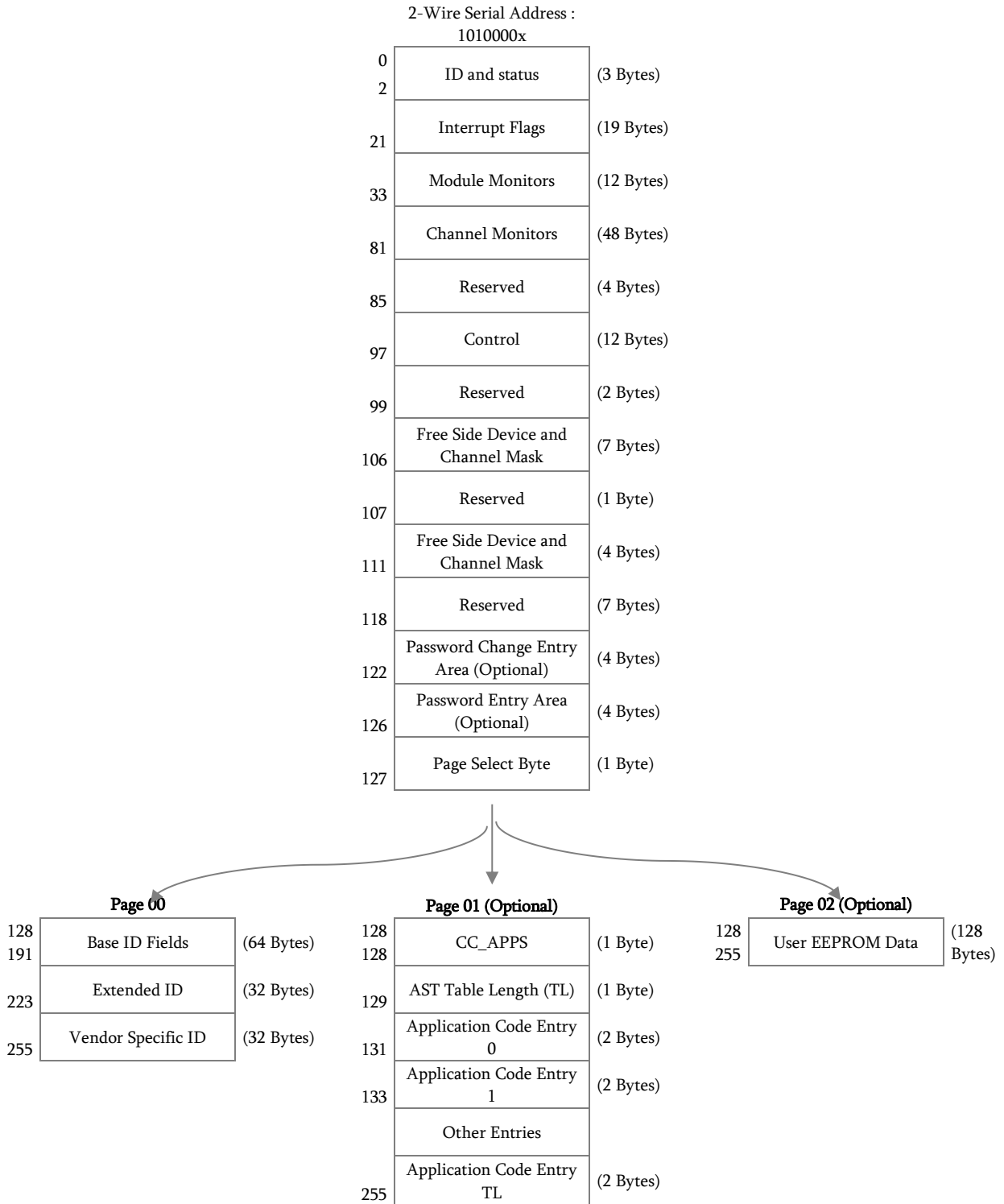


Figure 4. QSFP28 Memory Map

## 8. Ordering Information

Part Number	Description
DAPQQC50C000	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>50cm</b> , 0 to 70°C
DAPQQM01C000	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>1m</b> , 0 to 70°C
DAPQQM02C000	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>2m</b> , 0 to 70°C
DAPQQM03C000	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>3m</b> , 0 to 70°C
DAPQQM05C000	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>5m</b> , 0 to 70°C
DAPQQC50C00C	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>50cm</b> , 0 to 70°C, <b>Cisco HW</b>
DAPQQM01C00C	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>1m</b> , 0 to 70°C, <b>Cisco HW</b>
DAPQQM02C00C	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>2m</b> , 0 to 70°C, <b>Cisco HW</b>
DAPQQM03C00C	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>3m</b> , 0 to 70°C, <b>Cisco HW</b>
DAPQQM05C00C	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>5m</b> , 0 to 70°C, <b>Cisco HW</b>
DAPQQC50C00H	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>50cm</b> , 0 to 70°C, <b>HP-H3C HW</b>
DAPQQM01C00H	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>1m</b> , 0 to 70°C, <b>HP-H3C HW</b>
DAPQQM02C00H	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>2m</b> , 0 to 70°C, <b>HP-H3C HW</b>
DAPQQM03C00H	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>3m</b> , 0 to 70°C, <b>HP-H3C HW</b>
DAPQQM05C00H	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>5m</b> , 0 to 70°C, <b>HP-H3C HW</b>
DAPQQC50C00G	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>50cm</b> , 0 to 70°C, <b>HP- Procurve HW</b>
DAPQQM01C00G	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>1m</b> , 0 to 70°C, <b>HP- Procurve HW</b>
DAPQQM02C00G	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>2m</b> , 0 to 70°C, <b>HP- Procurve HW</b>
DAPQQM03C00G	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>3m</b> , 0 to 70°C, <b>HP- Procurve HW</b>
DAPQQM05C00G	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>5m</b> , 0 to 70°C, <b>HP- Procurve HW</b>

## 9. Document Revision Information

Revision	Description
A	Initial release
B	Cisco and HP-H3C variants added. 5m variants added
C	Ordering information tab updated with "G" version

Skylane Optics® supplies a broad range of optical transceivers. Our engineers work closely with our customers to find the best solutions for every application. We are committed to provide high quality products and services to our customers.

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Quality

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Smartly