

# DAPQQxxxC000 – QSFP28 Passive Direct Attached Copper Cable

## 50cm to 3m / 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

DAPQQxxxC000 is a high performance QSFP28 passive direct attached cable for full duplex 100Gbps data links. The device supports communication over up to 3m 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
- Link Length up to 3m
- 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-Racks connection

## 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	
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

QSFP28

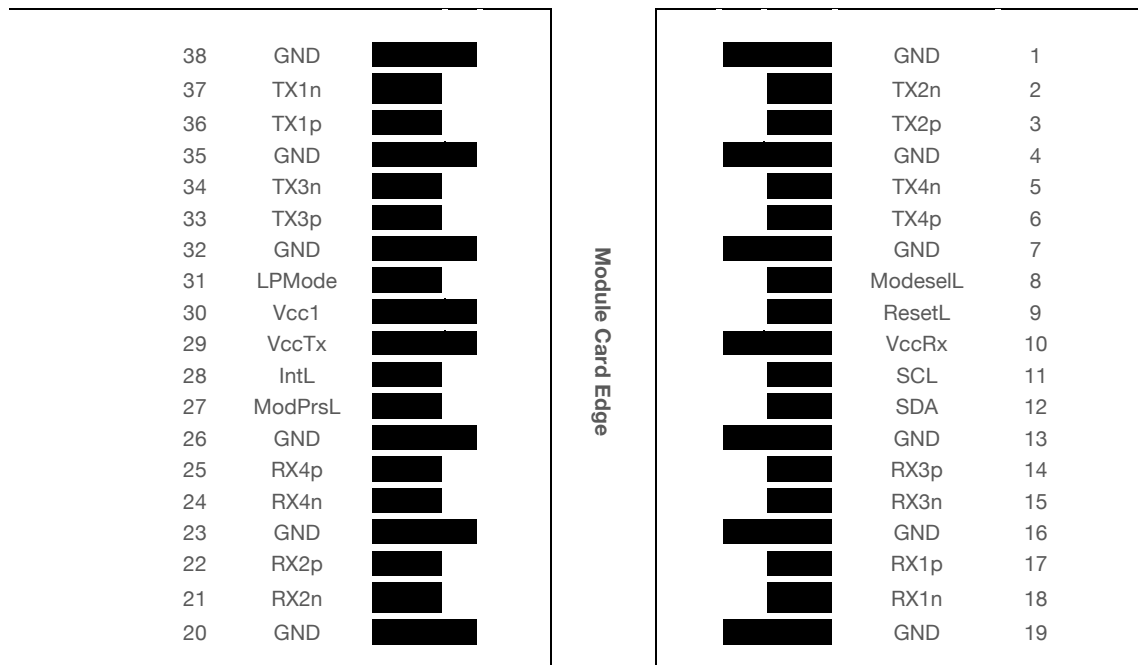


Figure 1. QSFP+ Transceiver Electrical Pad Layout

**6. Module Electrical Pin Definition**

QSFP28

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]

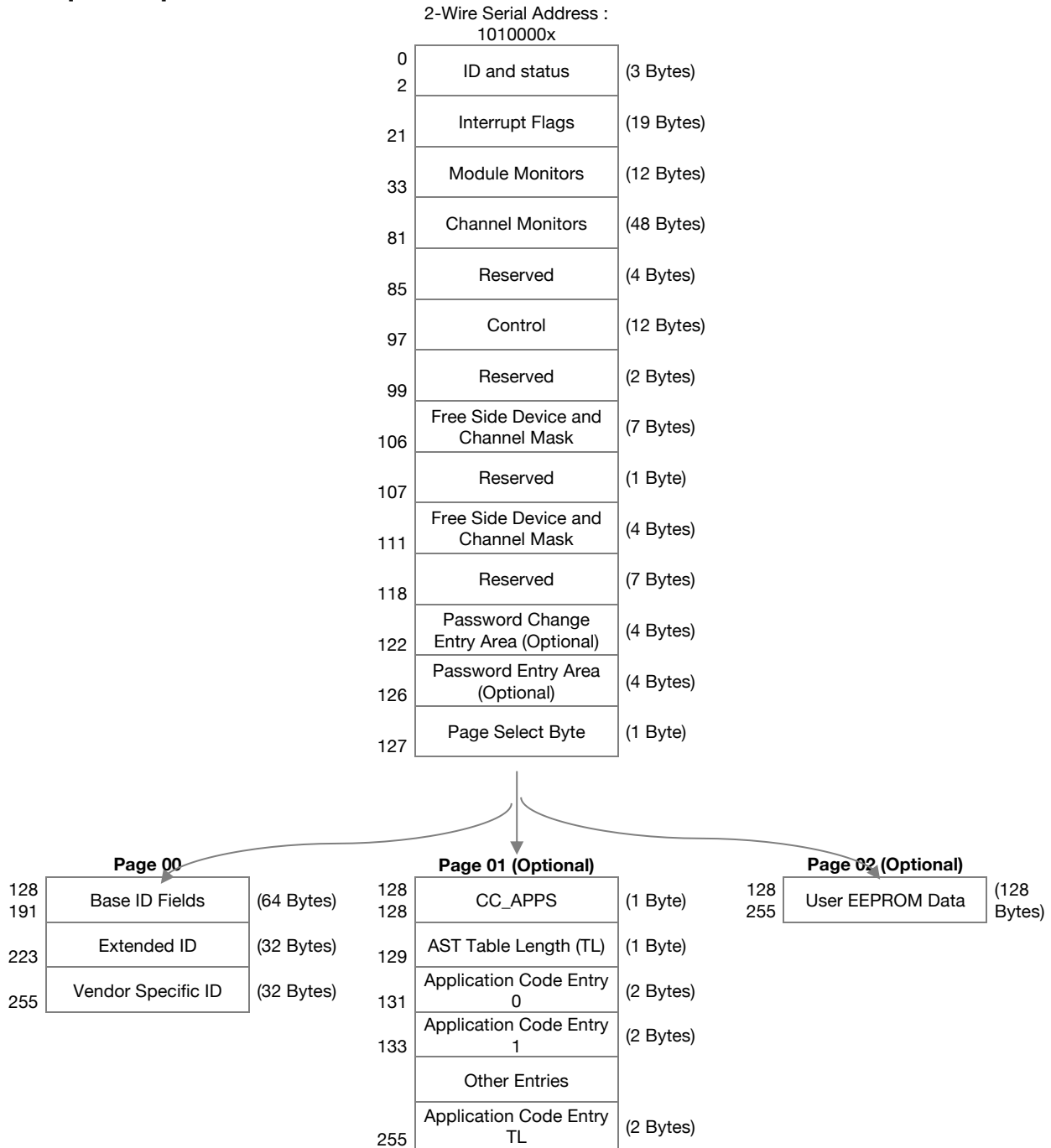


Figure 4. EEPROM of a QSFP+

## 8. Ordering Information

Part Number	Description
<b>DAPQQC50C000</b>	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>50cm</b> , 0 to 70°C
<b>DAPQQM01C000</b>	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>1m</b> , 0 to 70°C
<b>DAPQQM02C000</b>	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>2m</b> , 0 to 70°C
<b>DAPQQM03C000</b>	QSFP28 to QSFP28 passive attached copper cable, 100x Gigabit Ethernet, <b>3m</b> , 0 to 70°C

## 9. Document Revision Information

Revision	Description
<b>A</b>	Initial release

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For questions on this product please contact:  
**support@skylaneoptics.com**

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