

## 850nm 32.4G Type-C Hybrid Cable

### Product Features

- Compliant to DP1.4 and Type-C
- 4 lanes for optical signals on G.651 OM2 MMF, 7 lanes of electrical signals on AWG cable
- 4\*8.1Gbps optical interface for 4 lanes 4\*DP1.4 application
- electrical interface for up to 480Mbps USB2.0/1.1/1.0 application
- 4 lanes of 850nm VCSEL LD with PIN to implement the DP1.4 channel
- Up to 3m or customized transmission length cable, and maximum outer diameter < 3.25mm
- Support +5V@3A power supply transmission, and maximum power dissipation < 400mW
- Operation case temperature of 0~50°C
- RoHS compliant, and Class 1 laser safety

### Applications

- VR Glass
- DP display

### Operating Conditions

Parameter	Unit	Min.	Typical	Max.
Storage Temperature	°C	-40		85
Operating Case Temperature	°C	0		50
Power Supply Voltage	V	4.5	5	5.5
Relative Humidity (non-condensation)	%	0		85
Power Consumption	mW		350	400
Data Rate, each DP1.4 lane	Gbps		8.1	10.3125
Data Rate, USB2.0/1.1/1.0 lane	Mbps	1.5		480
Cable Length	m	0.2	1.2	3
Cable Diameter	mm	2.75	3.25	
Fiber Bending Radius	mm	20	40	

**Optical Characteristics**

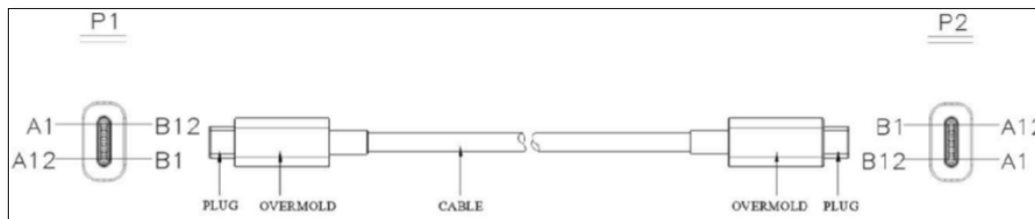
All performance is specified at whole working temperature and conditions

Parameter	Unit	Min.	Typical	Max.
<b>Transmitter</b>				
TX Central Wavelength	nm	820	850	880
Spectral Width (RMS)	nm			0.65
Data Input Swing Differential/TX	mV	200	-	1600
Date Differential Impedance	Ω	90	100	110
<b>Receiver</b>				
RX Central Wavelength	nm	820	850	880
Data Output Swing Differential/RX	mV	400	-	800
Date Differential Impedance	Ω	90	100	110
Bit Error Rate (8.1Gbps@PRBS31)		-	-	1E-12

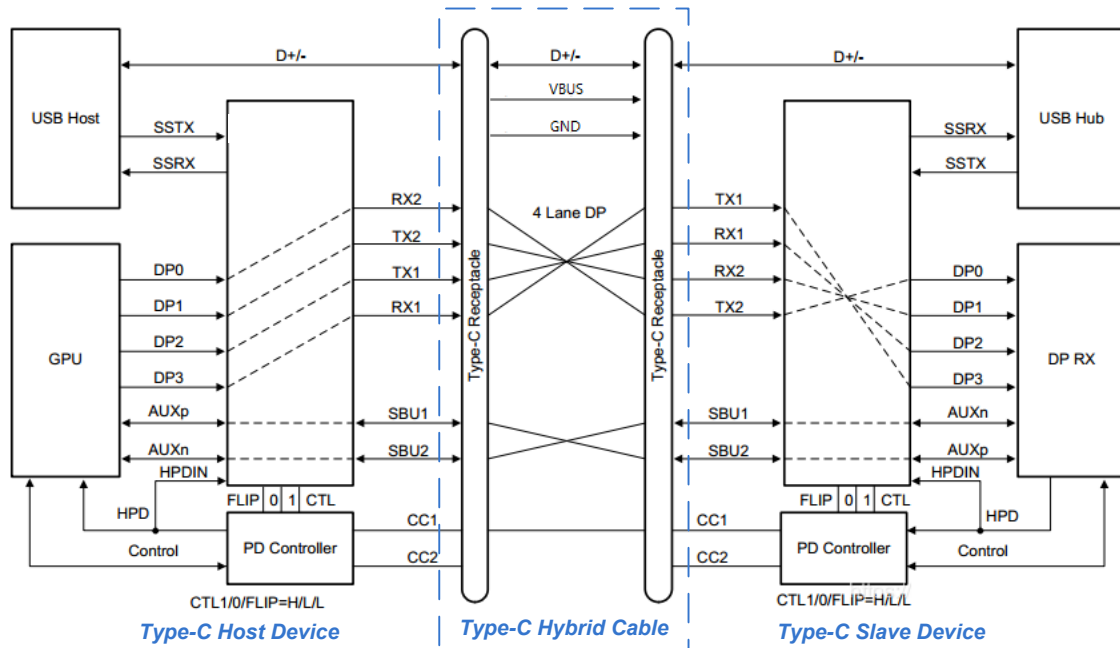
**Pin and Cable Assignment**

TX	<b>No.</b>	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
	<b>TypeC</b>	GND	TX1+	TX1-	VBUS	CC1	D+	D-	SBU1	VBUS	RX2-	RX2+	GND
	<b>Mapping</b>	GND	DP_Lane2	5V@3A	CC	D+	D-	AUX+	5V@3A	DP_Lane0	GND		
	<b>Mapping</b>	GND	DP_Lane3	5V@3A	AUX-			VCONN	5V@3A	DP_Lane1	GND		
	<b>TypeC</b>	GND	RX1+	RX1-	VBUS	SBU2	D-	D+	CC2	VBUS	TX2-	TX2+	GND
RX	<b>No.</b>	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1
	<b>AWG</b>	AWG20#	G.651 OM2	G.651 OM2	AWG22#	AWG30#	AWG30#	AWG30#	AWG30#	AWG30#	G.651 OM2	G.651 OM2	
	<b>No.</b>	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
	<b>TypeC</b>	GND	TX1+	TX1-	VBUS	CC1	D+	D-	SBU1	VBUS	RX2-	RX2+	GND
	<b>Mapping</b>	GND	DP_Lane3	5V@3A	CC	D+	D-	AUX-	5V@3A	DP_Lane1	GND		
RX	<b>Mapping</b>	GND	DP_Lane2	5V@3A	AUX+			VCONN	5V@3A	DP_Lane0	GND		
	<b>TypeC</b>	GND	RX1+	RX1-	VBUS	SBU2	D-	D+	CC2	VBUS	TX2-	TX2+	GND
	<b>No.</b>	B12	B11	B10	B9	B8	B7	B6	B5	B4	B3	B2	B1

**Mechanical Outlines**



**Typical Interface Circuit**



**ESD**

This transceiver is specified as ESD threshold 1kV for high speed data pins and 2kV for all other electrical input pins, tested per MIL-STD-883, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module. This transceiver is shipped in ESD protective packaging. It should be removed from the packaging and handled only in an ESD protected environment.

**Laser Safety**

This is a Class 1 Laser Product according to IEC 60825-1:2007. This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated (June 24, 2007).

**Ordering Information**

Ordering P/Ns	Description
DHZZkk-ECCA-XXX	32.4G Type-C Hybrid Cable, Support 4 Lanes DP1.4 and 1 Lane USB2.0/1.1/1.0, Type-C connector, 0~50°C Commercial Temperature -XXX: cable length definition. For example: -012: 1.2m cable

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