

DATA SHEET

***Stretch* DisplayPort™
DisplayPort1.4
pure optical extender**

DPC-MP14-TR

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■ Description

DisplayPort 1.4 pure optical extender, DPC-MP14-TR enables to transmit up to 8K DSC(7680x4320) at 60Hz. It supports a maximum total bandwidth of 32.4Gbps with 8.1Gbps per lane. Through transmitting high bandwidth data, it can support 5K resolution up to 60Hz and even 4K at up to 144Hz. With transmission of DisplayPort 1.4 signal over MPO cable(OM3), it ensures reliable signal processing and exceptional quality without any latency.

The DPC-MP14-TR is designed with a detachable pigtail type for easy connection to equipment through its DisplayPort end, while the other end can be conveniently linked with an MPO cable. To avoid confusion in the installation environment, the DPC-MP14 applies different colors to the MPO connectors (TX-Aqua, RX-Beige). Furthermore, DPC-MP14-TR is designed to operate reliably across a wide range of temperature, providing stable performance in any environment.

With outstanding EMI(Electro Magnetic-Interference) and RFI(Radio Frequency Interference) characteristics, DPC-MP14-TR is designed for versatility across various fields.

■ Features

- Extends up to 8K DSC(7680x4320) at 60Hz
- Transmits DisplayPort1.4 data up to 330m (1,082feet) over MPO cable (OM3)
- Supports up to 32.4Gbps bandwidth with 8.1Gbps per lane (HBR3)
- Designed as pigtail type for easy installation
- Different color of MPO connectors: TX (Aqua) & RX (Beige)
- Operates in a wide range of temperature from -10°C to 60°C
- Provides immersive Multi-channel Audio, Dolby true-HD, DTS-HD Master Audio
- Data security with negligible EMI emission

■ Applications

- Medical
- Digital Signage
- Control Room
- Rental Staging
- Flight Simulation
- Dome Projection

■ **Absolute Maximum Ratings**

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these of any other conditions in excess of those given in the operational sections of the datasheet.

Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Min	Typ	Max	Units
Storage Temperature ¹	T _{ST}	-20		70	°C
Supply Volt ¹	V _{CC}	3.0	3.3	3.6	V
Relative Humidity ²	RH	5		95	%
Electrostatic Discharge	ESD		15		KV

■ **Recommended Operating Conditions**

Parameter	Symbol	Min	Typ	Max	Units
Bitrate/Channel	B	50		8500	Mbps
Operation Temperature Range	T _o	-10		60	°C
Supply Voltage	V _{CC}	3.1	3.3	3.5	V
Operating Current	I _{CC}		220		mA
Differential Impedance	R	90	100	110	ohm

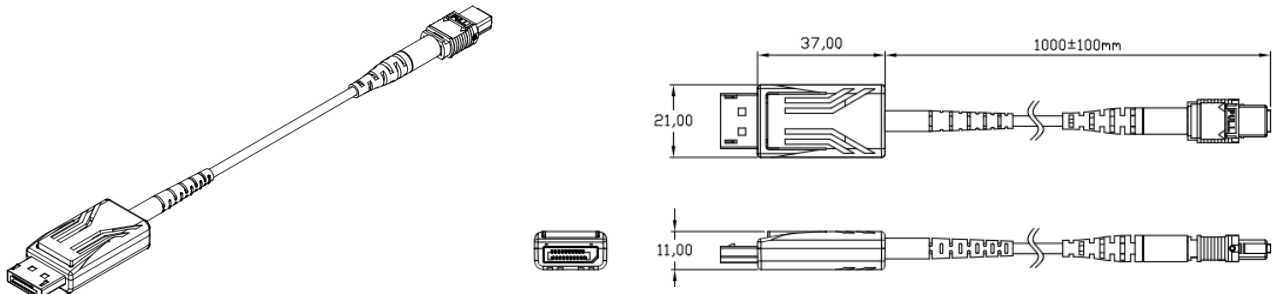
■ **Physical Characteristics**

Parameter	Description
Cable Type	MPO Cable (12 core MM OM3 Type A male fiber)
Cable Jacket	LSZH: 3.0mm(±0.2)
Cable Dimensions(WLH)	21 x 37 x 11 mm
Pull Strength	60N
Minimum Bend Radius	30mm(LSZH)

■ DisplayPort PIN Description

Source(TX)			Display (Rx)		
Pin Number	Symbol	Functional Description	Pin Number	Symbol	Functional Description
1	ML_Lane 0(p)	Lane 0 Positive	1	ML_Lane 3(p)	Lane 3 Positive
2	GND	Ground	2	GND	Ground
3	ML_Lane 0(n)	Lane 0 Negative	3	ML_Lane 3(n)	Lane 3 Negative
4	ML_Lane 1(p)	Lane 1 Positive	4	ML_Lane 2(p)	Lane 2 Positive
5	GND	Ground	5	GND	Ground
6	ML_Lane 1(n)	Lane 1 Negative	6	ML_Lane 2(n)	Lane 2 Negative
7	ML_Lane 2(p)	Lane 2 Positive	7	ML_Lane 1(p)	Lane 1 Positive
8	GND	Ground	8	GND	Ground
9	ML_Lane 2(n)	Lane 2 Negative	9	ML_Lane 1(n)	Lane 1 Negative
10	ML_Lane 3(p)	Lane 3 Positive	10	ML_Lane 0(p)	Lane 0 Positive
11	GND	Ground	11	GND	Ground
12	ML_Lane 3(n)	Lane 3 Negative	12	ML_Lane 0(n)	Lane 0 Negative
13	Config 1	Connected to ground	13	Config 1	Connected to ground
14	Config 2	Connected to ground	14	Config 2	Connected to ground
15	AUX ch (p)	Auxiliary channel	15	AUX ch (p)	Auxiliary channel
16	GND	Ground	16	GND	Ground
17	AUX ch (n)	Auxiliary channel	17	AUX ch (n)	Auxiliary channel
18	Hot plug	Hot plug detect	18	Hot plug	Hot plug detect
19	Return	Return for power	19	Return	Return for power
20	DP_PWR	3.3V	20	DP_PWR*	3.3V

■ Dimensions



Dimensions (W*L*H): 21 x 37 x 11 mm

■ Connection Diagram

