

#### QSFP-100G-EXT36CM-AO

100GBase-CU QSFP28 to QSFP28 Male to Female Direct Attach Extension Cable (Passive Twinax, 36cm, 30AWG)

#### **Features**

- Low EMI Emission
- Oil-Resistant, Dust-Proof, and Anti-Corrosion
- Insertion Loss: 7.0dB at 12.89GHz Per Channel
- Compliant with QSFP-MSA
- Compliant with SFF-8436 and SFF-8665
- Low Near-End Crosstalk (NEXT)
- Compliant with Infiniband EDR
- Compliant with IEEE 802.3bj
- RoHS Compliant and Lead-Free
- Operating Temperature: 0 to 70 Celsius



#### **Applications**

- Extends the Link of 100G Transceivers
- Extends the Link of 100G AOCs

## **Product Description**

This is an MSA compliant 100GBase-CU QSFP28 to QSFP28 direct attach extension cable that operates over passive copper with a maximum reach of 36cm (1.2ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is TAA (Trade Agreements Act) compliant, and is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

AddOn's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products.")



# **Absolute Maximum Ratings**

Parameter	Symbol	Min.	Тур.	Max.	Unit
Storage Temperature	Tstg	-20		80	°C
Operating Case Temperature	Тс	0	25	70	°C
Data Rate Per Lane			25.78125		Gbps

# **General Specifications**

Parameter	Specifications	Notes
Feature	Adapter (convert connector type to cage type) with extended cable	
Connector Type	QSFP28 (SFF-8665)	
Cage Type	QSFP28 cage	
Wire Gauge	30AWG	
Length	26cm	1
Latch Color	Sky blue	

## Notes:

1. The length excludes the connector and cage.

## **Pin Descriptions**

Pin	Symbol	Name/Description	Notes
1	GND	Module Ground.	1
2	Tx2-	Transmitter Inverted Data Input.	
3	Tx2+	Transmitter Non-Inverted Data Input.	
4	GND	Module Ground.	1
5	Tx4-	Transmitter Inverted Data Input.	
6	Tx4+	Transmitter Non-Inverted Data Input.	
7	GND	Module Ground.	1
8	ModSelL	Module Select.	
9	ResetL	Module Reset.	
10	VccRx	+3.3V Receiver Power Supply.	
11	SCL	2-Wire Serial Interface Clock.	
12	SDA	2-Wire Serial Interface Data.	
13	GND	Module Ground.	1
14	Rx3+	Receiver Non-Inverted Data Output.	
15	Rx3-	Receiver Inverted Data Output.	
16	GND	Module Ground.	1
17	Rx1+	Receiver Non-Inverted Data Output.	
18	Rx1-	Receiver Inverted Data Output.	
19	GND	Module Ground.	1
20	GND	Module Ground.	1
21	Rx2-	Receiver Inverted Data Output.	
22	Rx2+	Receiver Non-Inverted Data Output.	
23	GND	Module Ground.	1
24	Rx4-	Receiver Inverted Data Output.	
25	Rx4+	Receiver Non-Inverted Data Output.	
26	GND	Module Ground.	1
27	ModPrsL	Module Present. Internally pulled down to the GND.	
28	IntL	Interrupt output should be pulled up on the host board.	
29	VccTx	+3.3V Transmitter Power Supply.	
30	Vcc1	+3.3V Power Supply.	
31	LPMode	Low-Power Mode.	
32	GND	Module Ground.	1
33	Tx3+	Transmitter Non-Inverted Data Input.	
34	Tx3-	Transmitter Inverted Data Input.	
35	GND	Module Ground.	1
36	Tx1+	Transmitter Non-Inverted Data Input.	
37	Tx1-	Transmitter Inverted Data Input.	
38	GND	Module Ground.	1

## Notes:

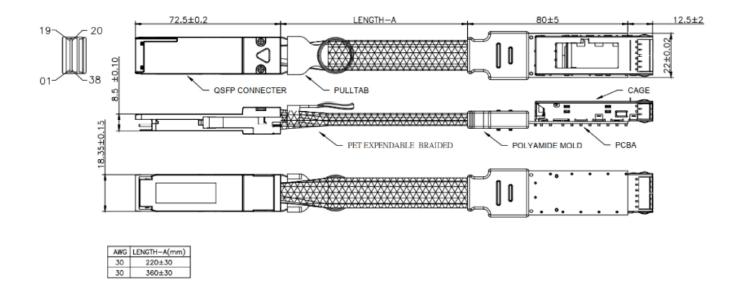
1. The module circuit ground is isolated from the module chassis ground within the module.

# WIRING DIAGRAM

HIGH SPEED SIGNAL						
P1(QS	FP28 PLUG)		P2(QSFP28 RECEPTACLE)			
PAD	SIGNAL		PAD	SIGNAL		
02	TX2n	$\vdash$	02	TX2n		
03	TX2p	<u> </u>	03	TX2p		
05	TX4n	<u> </u>	05	TX4n		
06	TX4p	$\vdash$	06	TX4p		
14	RX3p	$\vdash$	14	RX3p		
15	RX3n	$\vdash$	15	RX3n		
17	RX1p	$\vdash$	17	RX1p		
18	RX1n	$\vdash$	18	RX1n		
21	RX2n	$\vdash$	21	RX2n		
22	RX2p	$\vdash$	22	RX2p		
24	RX4n	$\vdash$	24	RX4n		
25	RX4p	$\vdash$	25	RX4p		
33	TX3p	$\vdash$	33	TX3p		
34	TX3n	$\vdash$	34	TX3n		
36	TX1p	$\vdash$	36	TX1p		
37	TX1n	$\vdash$	37	TX1n		
08	ModSelL	$\vdash$	08	ModSelL		
09	ResetL	$\vdash$	09	ResetL		
10	VccRx	$\vdash$	10	VccRx		
11	SCL	$\vdash$	11	SCL		
12	SDA	$\vdash$	12	SDA		
27	ModPrsL	$\vdash$	27	ModPrsL		
28	IntL	$\vdash$	28	IntL		
29	VccTx	$\vdash$	29	VccTx		
30	Vcc1	$\vdash$	30	Vcc1		
31	LPMode	$\vdash$	31	LPMode		
GND GROUP	GND	$\vdash$	GND GROUP	GND		
GND GROUP			GND GROUP			
01,04,07,13,16,19			01,04,07,13,16,19			
20,23,26,32,35,38			20,23,26,32,35,38			
CONNECTO	R SHELL	$\vdash$	CONNECTOR SHELL			

<sup>\*</sup>DC BLOCKING CAPS ON P1,P2 RX END.

## **Mechanical Specifications**



#### **Notes:**

- 1. Standard length as LENGTH-A in drawing with tolerance.
- 2. Unit: mm.
- 3. Compliant with IEEE802.3bj.
- 4. LED function: once pluggable QSFP28 connector end of the extender is plugged into an equipment that supports Vcc power 3.3v, the LED will be ON.

#### **About AddOn Networks**

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is in engrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.













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