



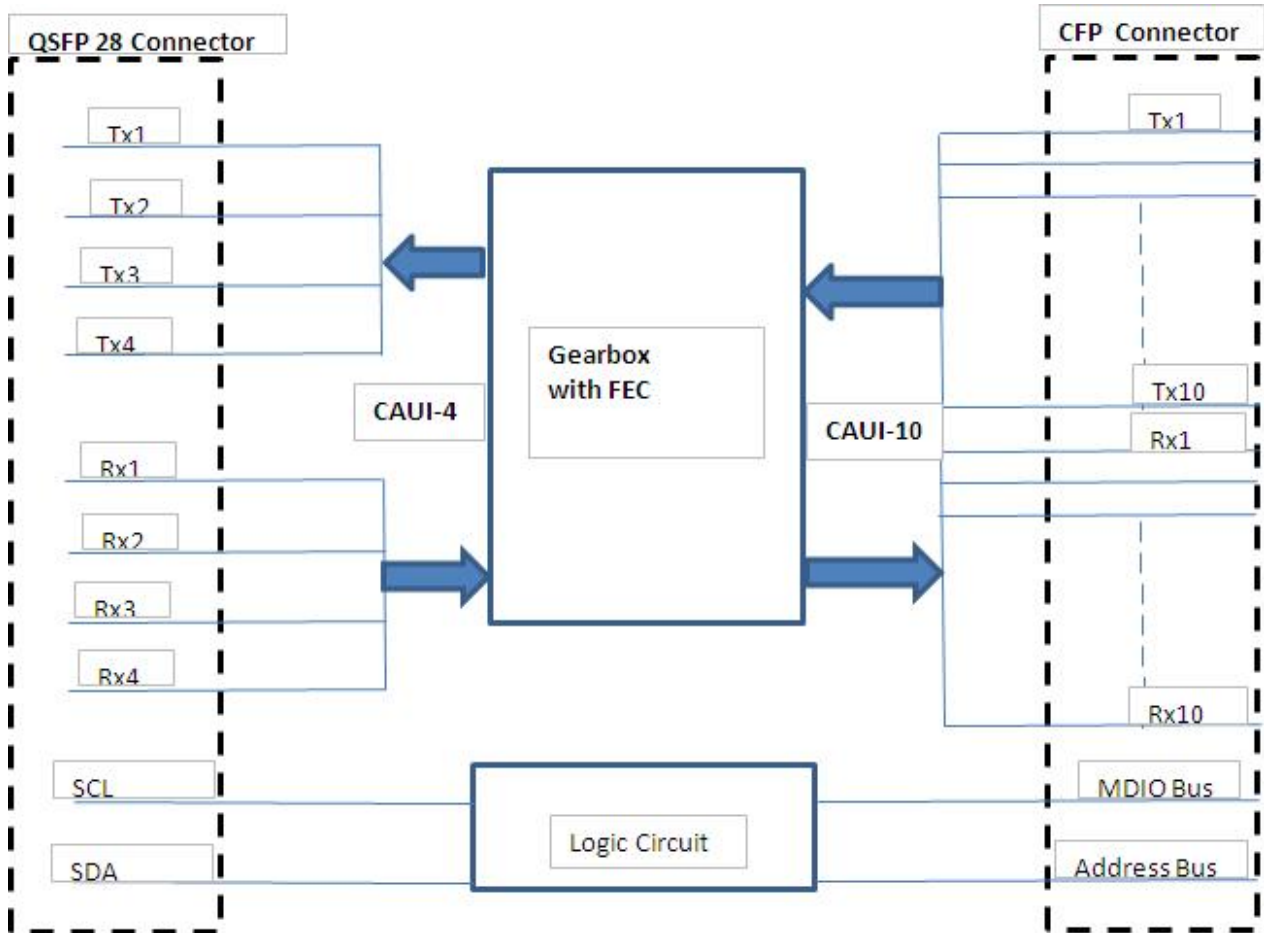
# 100G CFP TO QSFP28 Converter Module with FEC

## CVR-CFP-QSFP28-F

### GENERAL DESCRIPTION

General Information	
Manufacturer Part Number	CFP to QSFP28-F
Product Name	CFP to QSFP28-F Converter Module
Product Type	Converter Module
Features	<ul style="list-style-type: none"><li>● CAUI -10 Electrical Interface:10 Lanes @10Gbit/s for CFP port</li><li>● CAUI -4 Electrical Interface:4 Lanes @25.78Gbit/s for QSFP28 port</li><li>● Hot Pluggable</li><li>● Low latency FEC</li><li>● MDIO, I2C Support</li><li>● Compliant to CFP MSA</li><li>● RoHS-6 compliant</li><li>● Case operating temperature: 0 to 70 °C</li><li>● The CFP to QSFP28-F Converter Module converts a 100 Gigabit CFP port into a 100 Gigabit QSFP28 port. With the Converter Module, customers have the flexibility to use the 100 Gigabit CFP interface port of a switch with CFP modules or QSFP28 modules.</li></ul>
I/O Expansions	
CFP port	MDIO
QSFP28 port	I2C
Physical Characteristics	
Form Factor	Internal
Dimensions	13.6mmHeight x 82mmWidth x 144.75mm Depth

## Block Diagram



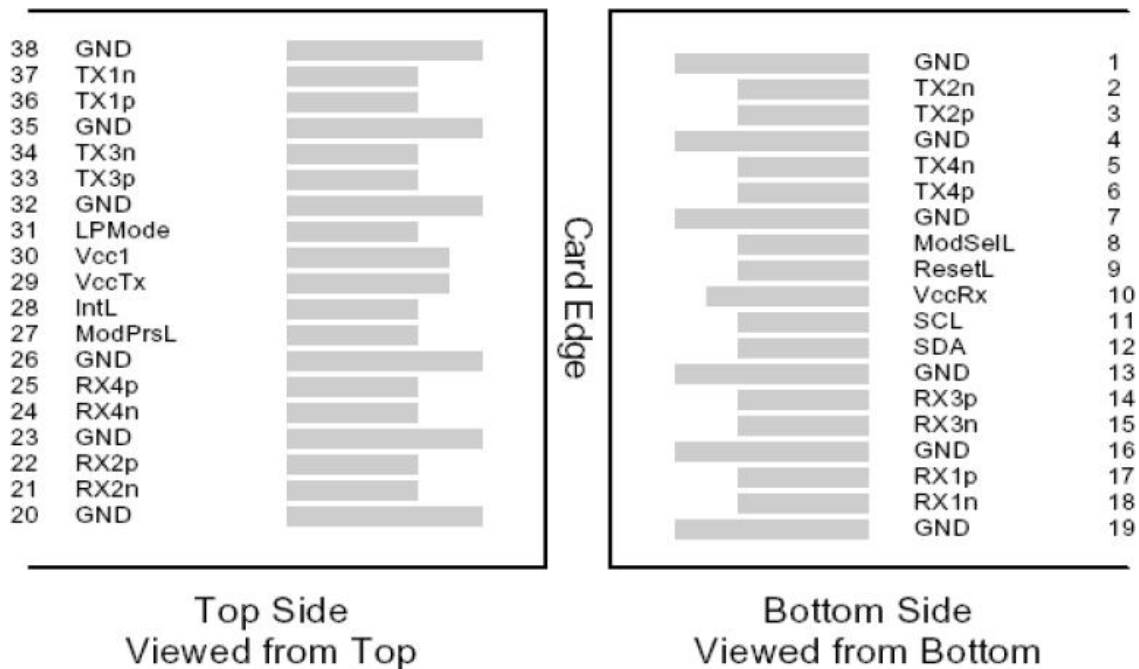
### CAUI-10 Interface (CFP port)

CAUI Receiver Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Signal Rate Per Lane			10.3125		Gb/s	
Differential data output swing per lane	$V_{out,pp}$	CAUI-10 as defined by IEEE P802.3bm			mV	
Data output rise time	$t_r$				ps	
Data output fall time	$t_f$				ps	
CAUI Transmitter Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Signal Rate Per Lane			10.3125		Gb/s	
Input differential impedance	$R_{in}$	CAUI-10 as defined by IEEE P802.3bm			$\Omega$	
Differential data input swing per lane	$V_{in,pp}$				mV	
Data input rise time tolerance	$t_r$				ps	
Data input fall time tolerance	$t_f$				ps	

### CAUI-4 Interface (QSFP28 port)

CAUI Receiver Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Signal Rate Per Lane			25.78		Gb/s	
Differential data output swing per lane	Vout,pp	CAUI-4 as defined by IEEE P802.3bm			mV	
Data output rise time	tr				ps	
Data output fall time	tf				ps	
CAUI Transmitter Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Signal Rate Per Lane			25.78		Gb/s	
Input differential impedance	Rin	CAUI-4 as defined by IEEE P802.3bm			$\Omega$	
Differential data input swing per lane	Vin,pp				mV	
Data input rise time tolerance	tr				ps	
Data input fall time tolerance	tf				ps	

### PIN Assignment of QSFP28 port



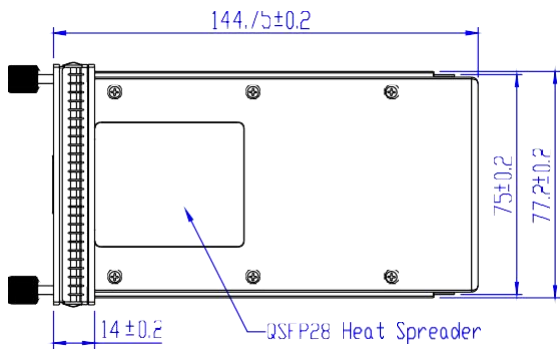


## PIN Assignment of CFP port

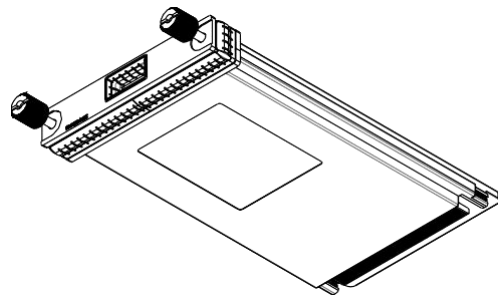
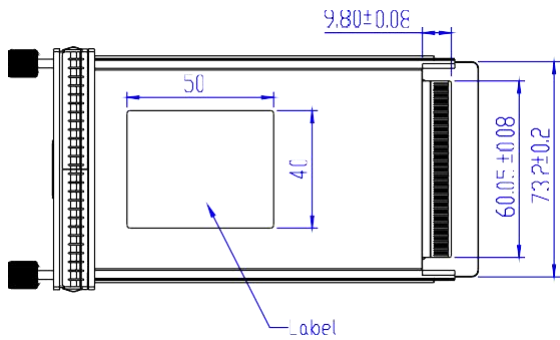
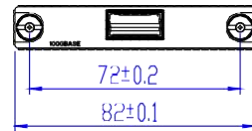
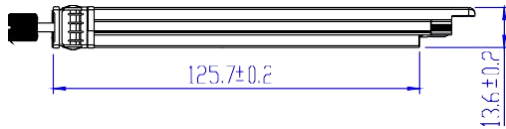
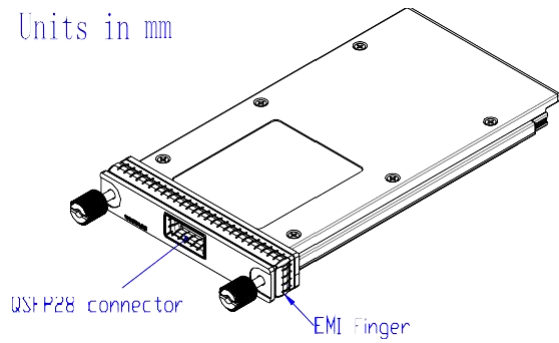
	Top Row (2nd Half)		Bottom Row (2nd Half)
148	GND	1	3.3V_GND
147	REFCLKn	2	3.3V_GND
146	REFCLKp	3	3.3V_GND
145	GND	4	3.3V_GND
144	N.C.	5	3.3V_GND
143	N.C.	6	3.3V
142	GND	7	3.3V
141	TX3n	8	3.3V
140	TX3p	9	3.3V
139	GND	10	3.3V
138	TX8n	11	3.3V
137	TX8p	12	3.3V
136	GND	13	3.3V
135	TX7n	14	3.3V
134	TX7p	15	3.3V
133	GND	16	3.3V_GND
132	TX6n	17	3.3V_GND
131	TX6p	18	3.3V_GND
130	GND	19	3.3V_GND
129	TX5n	20	3.3V_GND
128	TX5p	21	VND_IO_A
127	GND	22	VND_IO_B
126	TX4n	23	GND
125	TX4p	24	(TX_MCLKn)
124	GND	25	(TX_MCLKp)
123	TX3n	26	GND
122	TX3p	27	VND_IO_C
121	GND	28	VND_IO_D
120	TX2n	29	VND_IO_E
119	TX2p	30	PRG_CNTL1
118	GND	31	PRG_CNTL2
117	TX1n	32	PRG_CNTL3
116	TX1p	33	PRG_ALRM1
115	GND	34	PRG_ALRM2
114	TX0n	35	PRG_ALRM3
113	TX0p	36	TX_DIS
112	GND	37	MOD_LOPWR

	Top Row (1st Half)		Bottom Row (1st Half)
111	GND	38	MOD_ABS
110	N.C.	39	MOD_RSTn
109	N.C.	40	RX_LOS
108	GND	41	GLB_ALRMn
107	RX9n	42	PRTADR4
106	RX9p	43	PRTADR3
105	GND	44	PRTADR2
104	RX8n	45	PRTADR1
103	RX8p	46	PRTADR0
102	GND	47	MDIO
101	RX7n	48	MDC
100	RX7p	49	GND
99	GND	50	VND_IO_F
98	RX6n	51	VND_IO_G
97	RX6p	52	GND
96	GND	53	VND_IO_H
95	RX5n	54	VND_IO_J
94	RX5p	55	3.3V_GND
93	GND	56	3.3V_GND
92	RX4n	57	3.3V_GND
91	RX4p	58	3.3V_GND
90	GND	59	3.3V_GND
89	RX3n	60	3.3V
88	RX3p	61	3.3V
87	GND	62	3.3V
86	RX2n	63	3.3V
85	RX2p	64	3.3V
84	GND	65	3.3V
83	RX1n	66	3.3V
82	RX1p	67	3.3V
81	GND	68	3.3V
80	RX0n	69	3.3V
79	RX0p	70	3.3V_GND
78	GND	71	3.3V_GND
77	(RX_MCLKn)	72	3.3V_GND
76	(RX_MCLKp)	73	3.3V_GND
75	GND	74	3.3V_GND

## Package Outline (Unit:mm)



Units in mm



## Appendix A. Document Revision

Version No.	Date	Description
1.0	2016-4-27	Preliminary datasheet