

92.11 MDI specification

This sub-clause defines the Media Dependent Interface (MDI). The 100GBASE-CR4 and, as per 92.7, is coupled to the cable assembly, as per 92.10, by the MDI.

92.11.1 100GBASE-CR4 MDI connectors

Connectors meeting the requirements of 92.11.1.1 (Style-1) or 92.11.1.2 (Style-2) shall be used as the mechanical interface between the PMD of 92.7 and the cable assembly of 92.10. The plug connector shall be used on the cable assembly and the receptacle on the PHY. Style-1 or Style-2 connectors may be used as the MDI interface.

For Style-1 and Style 2 100GBASE-CR4 plug connectors the receive lanes are AC coupled; the coupling capacitors are contained within the plug connectors as specified in 92.8.4.5.

92.11.1.1 Style-1 100GBASE-CR4 MDI connectors

The connector for each end of the cable assembly shall be the quad small form factor pluggable (QSFP28) with the mechanical mating interface defined by SFF-TBD and illustrated in Figure 92–18. The MDI connector shall be the quad small form factor pluggable (QSFP28) receptacle with the mechanical mating interface defined by SFF-TBD and illustrated in Figure 92–19. These connectors have contact assignments matching that in Table 92–13, and electrical performance consistent with the signal quality and electrical requirements of 92.8 and 92.9.

Already in D1.1

Figure 92-18 (QSFP28 plug)

Already in D1.1

Figure 92-19 (QSFP28 receptacle)

The Style-1 MDI connector of the 100GBASE-CR4 PMD comprises 38 signal connections. The Style-1 100GBASE-CR4 MDI connector contact assignments shall be as defined in Table 92–13.

Already in D1.1

Table 92-13 (QSFP28 contact assignments)

92.11.1.2 Style-2 100GBASE-CR4 MDI connectors

The connector for each end of the cable assembly shall be the 100G Form Factor Pluggable 4 (CFP4) with the mechanical mating interface defined in CFP4 MSA HW Specification and illustrated in Figure 92-20. The MDI connector shall be the 100G Form Factor Pluggable (CFP4) receptacle with the mechanical mating interface defined by CFP4 MSA HW Specification and illustrated in Figure 92-21. These connectors have contact assignments matching that in Table 92-14, and electrical performance consistent with the signal quality and electrical requirements of 92.8 and 92.9.

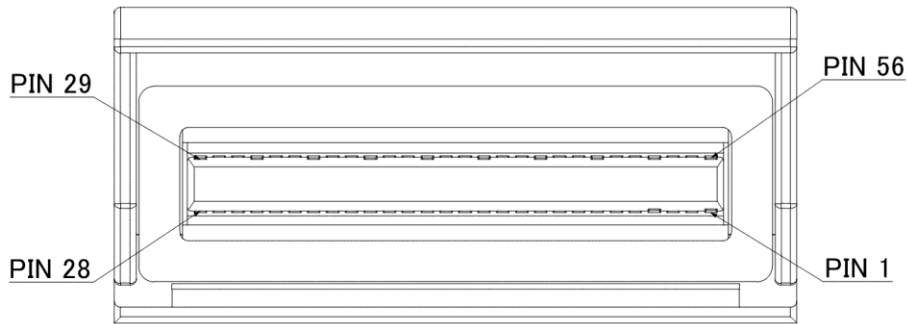


Figure 92-20 (CFP4 MDI cable plug assembly)

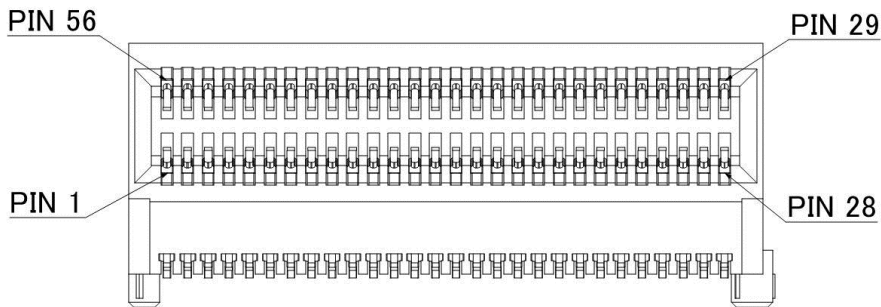


Figure 92-21 (CFP4 MDI host receptacle)

The Style-2 MDI connector of the 100GBASE-CR4 PMD comprises 56 signal connections. The Style-2 100GBASE-CR4 MDI connector contact assignments shall be as defined in Table 92–14.


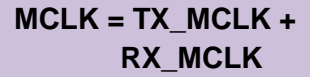
CFP4 Bottom		CFP4 Top		CFP4 Top ALT1		Toward Host  (pin views from top)
1	3.3V_GND	56	GND	GND		
2	3.3V_GND	55	TX3n	TX0n		
3	3.3V	54	TX3p	TX0p		
4	3.3V	53	GND	GND		
5	3.3V	52	TX2n	TX1n		
6	3.3V	51	TX2p	TX1p		
7	3.3V_GND	50	GND	GND		
8	3.3V_GND	49	TX1n	TX2n		
9	VND_IO_A	48	TX1p	TX2p		
10	VND_IO_B	47	GND	GND		
11	TX_DIS	46	TX0n	TX3n		
12	RX_LOS	45	TX0p	TX3p		
13	GLB_ALRMn	44	GND	GND		
14	MOD_LOPWR	43	(REFCLKn)	(REFCLKn)		
15	MOD_ABS	42	(REFCLKp)	(REFCLKp)		
16	MOD_RSTn	41	GND	GND		
17	MDC	40	RX3n	RX3p		
18	MDIO	39	RX3p	RX3n		
19	PRTADR0	38	GND	GND		
20	PRTADR1	37	RX2n	RX2p		
21	PRTADR2	36	RX2p	RX2n		
22	VND_IO_C	35	GND	GND		
23	VND_IO_D	34	RX1n	RX1p		
24	VND_IO_E	33	RX1p	RX1n		
25	GND	32	GND	GND		
26	(MCLKn)	31	RX0n	RX0p		
27	(MCLKp)	30	RX0p	RX0n		
28	GND	29	GND	GND		

Table 92-14 (CFP4 pin assignments)