

## 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

Figure 92-18 (QSFP28 plug)

## Already in D1

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.

## To be provided

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.

**To be provided (rev.1 documentation on CFP MSA web site)**

Figure 92-20 (CFP4 plug)

**To be provided (rev.1 documentation on CFP MSA web site)**

Figure 92-21 (CFP4 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)