

## X2 Transceiver 10 Gbps

### Description:

The X2 transceiver module is a hot pluggable in the Z-direction module that is usable in typical router line card applications, storage, IP network and LAN and compliant to X2 MSA. The S10-D31-X2-LR is a fully integrated 10.3 Gbps optical transceiver module that consists of a 10.3 Gbps optical transmitter and receiver, XAUI interface, Mux and Demux with clock and data recovery (CDR).



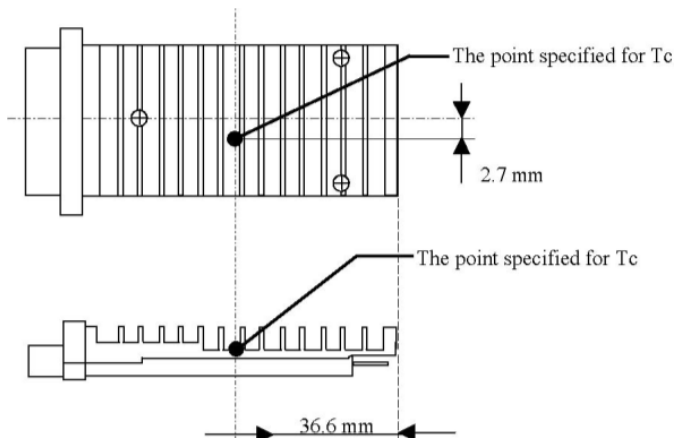
### Features:

- XAUI Electrical Interface: 4 Lanes @ 3.125 Gbps
- Hot Z-Pluggable
- SC-Duplex Optical Receptacle
- MDIO, DOM Support
- Uncooled DFB
- Pin Photo-detector
- Operating Case Temperature: 0 to 70 °C
- Compliant to X2 MSA
- Mechanical Footprint: 91x36x13.46 mm (LxWxH)

### Specifications:

	Unit	SR	LR	ER	ZR
Average output power (min / max)	dBm	-6 / -1	-5 / 0,5	-1 / 4	0 / 5
Receiver sensitivity	dBm	-9	-14,4	-24	-24
Overload	dBm	0,5	0,5	-1	0,5
Maximum distance	km	0,300	20	40	80
Fiber type	-	MMF	SMF	SMF	SMF
Optical link budget	dBm	3	9,4	23	24
Wavelength / laser type	nm	850 / VCSEL	1310 / DFB	1550/EML	1550 / EML

### Dimension:



## Application:

- 10-Gibabit Ethernet
- 10-Gigabit Sonet (OC-192) / SDH (STM-64)
- 10-Gigabit Fiber channel

## Ordering codes for 10 Gbps X2 transceivers:

### Standard series:

Part number:	Speed [Gbps]	Distance dd [-]	Wavelength [nm]	Temperature [-]	Fiber type [-]	Connector [-]
M10-V85-X2-SR-D-XX	10	0,300	850	D	MMF	SC
S10-D31-X2-LR-D-XX	10	10	1310	D	SMF	SC
S10-D55-X2-ER-D-XX	10	40	1310	D	SMF	SC
S10-D55-X2-ZR-D-XX	10	80	1310	D	SMF	SC

### Bidirectional series:

Part number:	Speed [Gbps]	Distance - dd [-]	TX wavelength [nm]	Rx wavelength [nm]	Temperature [-]	Fiber [-]	Connector [-]
S10-W27/33-X2-LR-D-XX	10	10	1270	1330	D	SMF	SC
S10-W33/27-X2-LR-D-XX	10	10	1330	1270	D	SMF	SC

### DWDM series:

Part number:	Speed [Gbps]	Distance dd [-]	Wavelength [-]	Temperature [-]	Fiber type [-]	Connector [-]
S10-Dyy yy[i]-X2-ER-D-XX	1.25	40	DWDM	D	SMF	LC
S10-Dyy yy-X2-ZR-D-XX	1.25	80	DWDM	D	SMF	LC

### DWDM laser code:

yy [-]	Frequency [THz]	Wavelength [nm]	yy [-]	Frequency [THz]	Wavelength [nm]	yy [-]	Frequency [THz]	Wavelength [nm]	yy [-]	Frequency [THz]	Wavelength [nm]
C17	191,7	1563,86	C29	192,9	1554,13	C40	194,0	1545,32	C51	195,1	1536,61
C18	191,8	1563,05	C30	193,0	1553,33	C41	194,1	1544,53	C52	195,2	1535,82
C19	191,9	1562,23	C31	193,1	1552,52	C42	194,2	1543,73	C53	195,3	1535,04
C20	192,0	1561,42	C32	193,2	1551,72	C43	194,3	1542,94	C54	195,4	1534,25
C21	192,1	1560,61	C33	193,3	1550,92	C44	194,4	1542,14	C55	195,5	1533,47
C22	192,2	1559,79	C34	193,4	1550,12	C45	194,5	1541,35	C56	195,6	1532,68
C23	192,3	1558,98	C35	193,5	1549,32	C46	194,6	1540,56	C57	195,7	1531,90
C24	192,4	1558,17	C36	193,6	1548,51	C47	194,7	1539,77	C58	195,8	1531,12
C25	192,5	1557,36	C37	193,7	1547,72	C48	194,8	1538,98	C59	195,9	1530,33
C26	192,6	1556,55	C38	193,8	1546,92	C49	194,9	1538,19	C60	196,0	1529,55
C27	192,7	1555,75	C39	193,9	1546,12	C50	195,0	1537,40	C61	196,1	1528,77
C28	192,8	1554,94									

### CWDM series:

Part number:	Speed [Gbps]	Distance dd [-]	Wavelength [-]	Temperature [-]	Fiber type [-]	Connector [-]
S10-Cyy-X2-LR-D-XX	10	10	CWDM	D	SMF	LC
S10-Cyy-X2-ER-D-XX	10	40	CWDM	D	SMF	LC
S10-Cyy-X2-ZR-D-XX	10	80	CWDM	D	SMF	LC

**CWDM laser code:**

yy/zz [-]	Wavelength [nm]	Clasp Color Code [-]	yy/zz [-]	Wavelength [nm]	Clasp Color Code [-]	dd code [-]	Distance [km]
27	1270	Gray	45	1450	Brown	SR	0.300
29	1290	Gray	47	1470	Gray	LR	10
31	1310	Gray	49	1490	Purple	ER	40
33	1330	Purple	51	1510	Blue	ZR	80
35	1350	Blue	53	1530	Green		
37	1370	Green	55	1550	Yellow		
39	1390	Yellow	57	1570	Orange		
41	1410	Orange	59	1590	Red		
43	1430	Red	61	1610	Brown		

**Table 3: Distance code.**

[i] yy yy means last 4 digits of DWDM wavelength. Example: For channel C17 of DWDM use 63 86 in ordering code