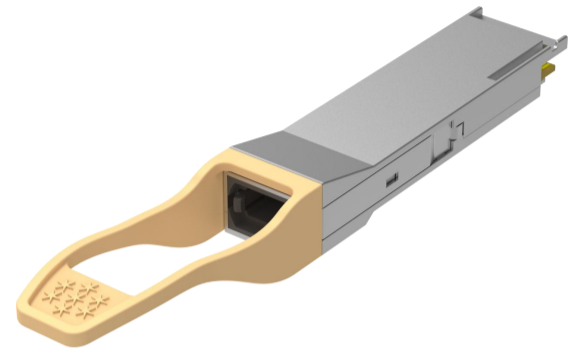


100GBASE-SR4 100m QSFP28 Transceiver (C-temp)

Features

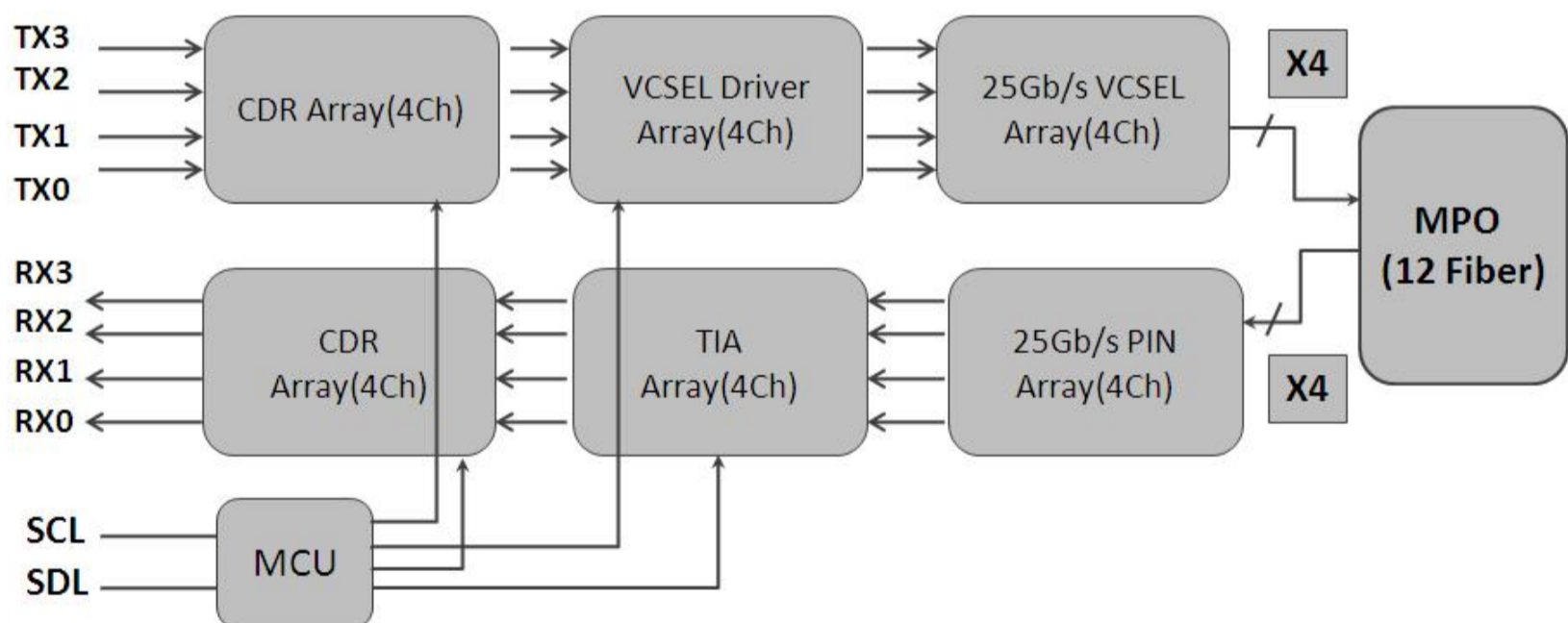
- Hot-pluggable QSFP28 form-factor
- 4 channels full-duplex transceiver module
- 4x 850nm VCSEL array and PIN photo-detector array
- Internal CDR circuits on both receiver and transmitter channels
- Supports CDR bypass
- Compliant with QSFP28 MSA, IEEE 802.3bm 100GBASE-SR4 and InfiniBand EDR
- Compliant with IEEE 802.3ba 40GBASE-SR4 and InfiniBand FDR
- Data rate up to 103.125Gbps
- Reach up to 70m (OM3) or 100m (OM4) over MMF
- Power consumption < 2.5W
- MPO12 receptacle
- Operating case temperature range from 0°C to 70°C
- 3.3V power supply voltage
- RoHS compliant (lead free)



Applications

- Data Center Network

Module Block Diagram



Ordering information

Part Number	Product Description
FST-100G-SR4	100GBASE-SR4 100m QSFP28 Transceiver (C-temp)



Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.3	3.6	V
Input Voltage	Vin	-0.3	Vcc+0.3	V
Storage Temperature	Tst	-20	85	°C
Case Operating Temperature	Top	0	70	°C
Humidity(non-condensing)	Rh	5	95	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	Vcc	3.13	3.3	3.47	V
Operating Case temperature	Tca	0		70	°C
Data Rate Per Lane	fd		25.78125		Gbps
Humidity	Rh	5		85	%
Power Dissipation	Pm		2	2.5	W
Fiber Bend Radius	Rb	3			cm

Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Differential input impedance	Zin	90	100	110	ohm
Differential Output impedance	Zout	90	100	110	ohm
Differential input voltage amplitude	ΔVin	300		1100	mVp-p
Differential output voltage amplitude	ΔVout	500		800	mVp-p
Skew	Sw			300	ps
Bit Error Rate	BER		E-5		
Input Logic Level High	VIH	2.0		VCC	V
Input Logic Level Low	VIL	0		0.8	V
Output Logic Level High	VOH	VCC-0.5		VCC	V
Output Logic Level Low	VOL	0		0.4	V

Notes:

1. BER=10⁻⁵; PRBS 2³¹-1@25.78125Gbps.
2. Differential input voltage amplitude is measured between TxnP and TxnN.
3. Differential output voltage amplitude is measured between RxnP and RxnN.



Optical Characteristics

Table 3 - Optical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Centre Wavelength	λ_c	840	850	860	nm	-
RMS spectral width	$\Delta\lambda$	-	-	0.6	nm	-
Average launch power, each lane	P _{out}	-8.4	-	2.4	dBm	-
Optical Modulation Amplitude(OMA),each lane	OMA	-6.4		3	dBm	-
Transmitter and dispersion eye closure(TDEC),each lane	TDEC			4.3	dB	
Extinction Ratio	ER	3	-	-	dB	-
Average launch power of OFF transmitter, each lane				-30	dB	-
Eye Mask coordinates: X1, X2, X3, Y1, Y2, Y3	SPECIFICATION VALUES {0.3,0.38,0.45,0.35,0.41,0.5}			Hit Ratio = 5x10 ⁻⁵		
Receiver						
Centre Wavelength	λ_c	840	850	860	nm	-
Stressed receiver sensitivity in OMA				-5.2	dBm	1
Maximum Average power at receiver , each lane input, each lane				2.4	dBm	-
Minimum Average power at receiver , each lane				-10.3	dBm	
Receiver Reflectance				-12	dB	-
LOS Assert		-30			dBm	-
LOS De-Assert – OMA				-7.5	dBm	-
LOS Hysteresis		0.5			dB	-

Notes:

1. Measured with conformance test signal at TP3 for BER = 10e-5



Mechanical Dimensions

