



100G/200G CFP2-DCO COHERENT MODULE Transceiver

Features

- Proprietary SiPh PIC engine with in-house design and assembly
- Linear operation enabling 100Gbps DP-QPSK and 200Gbps DP-16QAM
- Ultra-narrow linewidth laser with gridless DWDM wavelength tuning across extended C-band
- Supports staircase FEC and soft-decision FEC
- Supports CAUI-4 for 100GBE and OTL4.4 for OTU4 host interfaces
- Built-in mini EDFAs ensures high output power and extended reach
- Commercial case temperature range of 0°C~70°C
- Duplex LC receptacles
- RoHS-6 compliant.



Applications

- Metro & Long Haul WDM
- Data Center Interconnect
- Point to Point high rate links

Compliances

- Compliant with latest OIF Implementation Agreement OIF-CFP2-DCO-01.0
- Compliant with MSA CFP2 Hardware Specification Revision 1.0
- Compliant with CFP MSA Management Interface Specification Version 2.6 r06a
- Compliant with OIF-CEI-04.0, December 29, 2017
- Compliant with IEEE 802.3 (MDIO)

Description

Jabil Photonics CFP2-DCO module can be used on host board to support transmission over DWDM links in Metro networks, Data Center Interconnect (DCI), and Long Haul (LH) applications, as well as Point-to-Point (P2P) coherent transmission up to 80km unamplified link for 5G wireless and MSO access market.

Mode	FEC	Interop	Gbaud	Max. B2B ROSNR
100G Diff QPSK	7% HD-FEC	Yes	27.95	16dB
100G QPSK	7% UFEC	-	28.31	15dB
100G QPSK	20% SD-FEC	-	31.87	13dB
200G 16QAM	20% SD-FEC	-	32.03	22dB

Environmental Specifications

Parameter	Min.	Typ.	Max.	Unit
Operation Temperature	0	+25	+70	°C
Storage Temperature	-40	-----	+85	°C
Operation Humidity*	5	-----	85	%
Storage Humidity	5	-----	90	%

(*) not condensing

Operating Specifications

Parameter	Min.	Typ.	Max.	Unit
Supply Voltage	3.2	+3.3	+3.4	V
Power Consumption				
100G DQPSK HDFEC (interop)		18	20	W
100G QPSK UFEC		23	25	W
100G QPSK SDFEC		23	25	W
200G 16QAM SDFEC		28	30	W

Optical Specifications

Transmitter:

TX Specifications	Min	Typical	Max	Unit	Note
Optical power settable range	-5		2	dBm	
Optical power stability	-0.3		+0.3	dB	
Optical power accuracy			1	dB	
Frequency range	191.25		196.10	THz	
Frequency accuracy	-1.5		1.5	GHz	
Laser linewidth			300	kHz	
Tx OSNR (in-band)	33			dB	
TX OSNR (out-of-band)	40				
Tx enable time (warm start)	-		1	s	
Tx enable time (cold start)			150	s	
TX_DIS assert time	-		10	ms	
TX output power when disabled			-35	dBm	
Tx PDL			1	dB	
Optical Return Loss	27			dB	

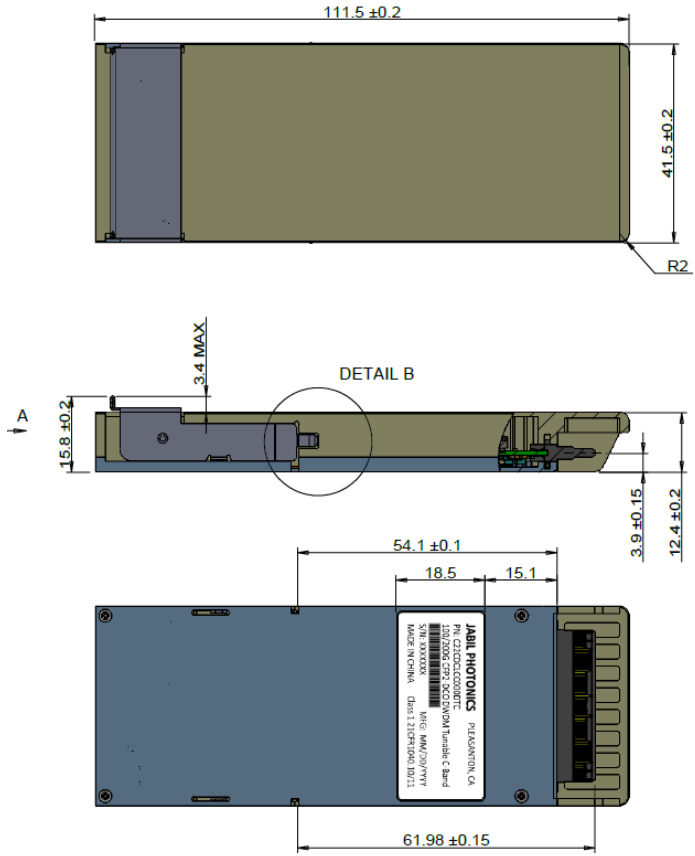
Receiver:

RX Specifications	Min	Typical	Max	Unit	Note
Max input power			10	dBm	
Input power Range 100G DQPSK HD-FEC (Input OSNR>16dB) 100G QPSK UFEC (Input OSNR >15dB) 100G QPSK SD-FEC (Input OSNR >13dB) 200G 16QAM SD-FEC (Input OSNR >22dB)	-18		+2	dBm	
Rx Sensitivity 100G DQPSK HD-FEC 100G QPSK UFEC 100G QPSK SD-FEC 200G 16QAM SD-FEC	-26 -26 -30 -22			dBm	OSNR > 30dB
Rx Optical Input power monitor range	-31		10	dBm	
Rx Optical Input Power accuracy	-1		+1	dB	
CD range 100G DQPSK HD-FEC 100G QPSK UFEC 100G QPSK SD-FEC 200G 16QAM SD-FEC			12,000 12,000 40,000 10,000	ps/nm	CD compensation range selectable through MDIO interface for best power consumption
Rx cold start time			60	sec	
Rx re-acquisition time			35	ms	



SOP tracking			300	Krad/s	100G, 1dB ROSNR penalty
Mean PMD/DGD Tolerance (QPSK)			15	ps	Less than 0.5dB OSNR penalty
Filter Tolerance (QPSK)	30			GHz	<i>FWHM filter bandwidth. Less than 0.5dB penalty.</i>
Optical Input Power Transient Tolerance (QPSK)			5.0	dB	100μs rise/fall time < 0.5dB OSNR penalty
PDL Tolerance (QPSK)			3	dB	Noise is added after PDL insertion. Pre-FEC BER is at threshold.

Dimensions





Ordering information

Jabil Part Number	Package	Rate	Reach	Other info
JPC22CDCLCC000DTC	CFP2	100/200G	Up to 2000Km	DCO version DDM/RoHS

Contact information

For additional information and evaluation samples order, please contact:

Chuck Sinha, Sr. Director of Sales

Jabil Photonics

5960 Inglewood Dr. Suite 100, Pleasanton, CA

Mobile: 408-505-0955

Email: Chuck_Sinha@Jabil.com