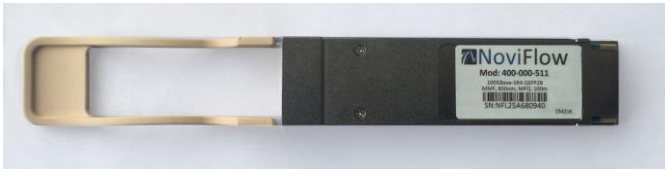
NoviConnect™ 511 100G QSFP28 SR Transceiver

NoviConnect 511. This Industry Standard 100GBase-SR4 QSFP28 Transceiver operates 4 channels at 850nm over Multi-Mode Fiber, with a maximum reach of 70m on OM3 and 100m on OM4 MMF connected via a MPO connector, is certified for optimal performance with NoviFlow switching products, and is fully compliant with MSA (Multi-Source Agreement) standards. All NoviConnect products from NoviFlow are 100% functionally tested to ensure trouble-free installation and operation when used with NoviFlow's NoviSwitch network products.



NoviConnect Transceivers are factory programmed with specific configuration data required for seamless networking compliance and for optimal network performance when used with NoviFlow switching products. These transceivers can be mixed and connected to devices with MSA industry standard compliant transceivers, for outstanding network performance.

NoviFlow Inc.™ aims to change the traditional approach to networking by making switching smarter. The company was founded to deliver upon the promise of SDN. Our SDN data plane products combine the benefits of virtualization and programmability with network processors that can handle complex flows, making it possible for data center and network operators to keep up with today's exponentially growing networking demand. In order to ensure the highest levels of network performance, seamless compatibility and trouble-free upgrades with our NoviSwitch, NoviFlow offers a complete line of high-performance and cost-effective SFP transceiver modules.

Key Features:

- Four-Channel full-duplex transceiver
- Transmission data rate up to 26Gbps per channel
- Support 40GE and 56G FDR data rate
- 4 channels 850nm VCSEL array
- 4 channels PIN photo detector array
- Internal CDR circuits on both receiver and transmitter channels
- Low power consumption <3.5W
- Operating case temperature 0°C to +70°C
- 3.3V power supply voltage
- Hot Pluggable QSFP form factor
- Maximum link length of 70m on OM3 Multimode Fiber (MMF) and 100m on OM4 MMF
- Single MPO connector receptacle
- Built-in digital diagnostic function

PRODUCT DESCRIPTION

The NoviConnect 511 QSFP28 SR Transceiver (100 Gbps over fiber) is a high performance, cost effective module supporting dual data-rate of 100Gbps and supporting distances up to 70m on OM3 Multimode Fiber (MMF) and 100m on OM4 MMF.

RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage	Vcc	3.13	3.3	3.47	V
Operating Case Temp.	Tca	0		70	°C
Data Rate Per Lane	fd		25.78125		Gbps
Humidity	Rh	5		85	%
Power Dissipation	Pm			3.5	W
Fiber Bend Radius	Rb	3			cm

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	%

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	TYP.	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	BR			E-12	
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

OPTICAL CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	NOTES
TRANSMITTER						
Center Wavelength	λC	840	850	860	nm	
RMS Spectral Width	Δλ			0.6	nm	
Average Optical Power per channel	POUT	-8.5		2.4	dBm	
Optical Modulation Amplitude (OMA), each lane	OMA	-6.4		3	dBm	
Transmitter and dispersion eye closure (TDEC), each lane	TDEC			4.4	dB	
Extinction Ratio	ER	3			dB	
Peak power, each lane				4	dBm	
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						
Center Wavelength	λC	840	850	860	nm	
Stressed receiver sensitivity in OMA, each lane				-5.2	dBm	1
Average power at receiver input, each lane				2.4	dBm	
Receiver Reflectance				-12	dB	
Minimum Average power at receiver, each lane				-10.3	dB	
LOS Assert		-30			dBm	
LOS De-Assert - OMA				-7.5	dBm	
LOS Hysteresis		0.5			dB	

NOTES: Measured with conformance test signal at TP3 for BER = 10e-12

ORDERING INFORMATION Model number 400000511

FOR MORE INFORMATION

www.noviflow.com | contact@noviflow.com

NoviFlow switching made smarter