

SNR-CFP-100G-SR10

CFP, 100G BASE Series

CFP 100G Series

Multi-Mode 100GBASE-SR10

CFP Transceiver

RoHS6 Compliant



Features

- ◆ Compliant to the IEEE 802.3ba(100GBASE-SR10)
- ◆ Support interoperability with IEEE 802.3ae 10GBASE-SR modules of various form factors such as SFP+, XFP, X2
- ◆ Compliant to the CFP MSA Specification
- ◆ Up to 100m on OM3 and 150m on OM4 MMF
- ◆ VCSEL array transmitter and PIN array receiver
- ◆ Single 3.3V Power Supply and Power dissipation $\leq 8W$
- ◆ Operates at 10.3125Gbps per channel
- ◆ Operating Case Temperature: 0°C ~ +70°C
- ◆ MDIO digital diagnostic interface and control capabilities
- ◆ Utilizes a standard 24/20 lane optical fiber with MPO connector

Applications

- ◆ 100GBE and 10GBE interconnects
- ◆ Datacom/Telecom switch & router connections
- ◆ Data aggregation and backplane applications
- ◆ Proprietary protocol and density application

Ordering Information

Part No.	Data Rate	Fiber	Distance *(note2)	Interface	Temp.	DDMI
SNR-CFP100-SR10*(note1)	100Gbps	MMF	100m/150m	MPO	0°C ~+70°C	Yes

Note1: Standard version

Note2: 100m with OM3 MMF and 150m with OM4 MMF

SNR-CFP-100G-SR10

CFP, 100G BASE Series

Regulatory Compliance

Product Certificate	Certificate Number	Applicable Standard
TUV	R50135086	EN 60950-1:2006+A11+A1+A12
		EN 60825-1:2007
		EN 60825-2:2004+A1+A2
UL	E317337	UL 60950-1
		CSA C22.2 No. 60950-1-07
EMC CE	AE 50135430 0001	EN 55022:2006
		EN 55024:1998+A1+A2
CB	JPTUV-024038-M1	IEC 60825-2
		IEC 60950-1
FCC	WTF13F0503735E	47 CFR PART 15 OCT., 2010
	WTF13F0503732E	47 CFR PART 15 OCT., 2010
FDA	1230816-000	CDRH 1040.10
RoHS	RLSZF00163462	2011/65/EU

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T _s	-40	+85	°C
Supply Voltage	V _{cc}	-0.5	3.6	V
Operating Relative Humidity(non-condensing)	RH	5	85	%

*Exceeding any one of these values may destroy the device immediately.

Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	T _c SNR-CFP100-SR10	0	-	+70	°C
Power Supply Voltage	V _{cc}	3.2	3.3	3.4	V
Power Dissipation	P _m	-	-	8	W
Low Power Mode Dissipation	P _{low}	-	-	2	w
Aggregate Bit Rate	BR _{Aggr}	-	103.125	-	Gbps
Lane Bit Rate	BR _{LANE}	-	10.3125	-	Gbps

SNR-CFP-100G-SR10

CFP, 100G BASE Series

Performance Specifications - Electrical

Parameter	Symbol	Min.	Typ.	Max	Unit	Notes
Transmitter						
AC common mode input voltage tolerance		-	-	20	mV	RMS
Input Impedance (Differential)	Z _{in}	90	100	110	ohms	
Input High Voltage	V _{IH}	2	-	V _{CC} +0.3	V	3.3V LVCMOS
		0.84	-	1.5	V	1.2V LVCMOS
Input Low Voltage	V _{IL}	-0.3	-	0.8	V	3.3V LVCMOS
		-0.3	-	0.36	V	1.2V LVCMOS
Receiver						
Differential output voltage, peak-to-peak		-	-	760	mV	
AC common mode output voltage		-	-	15	mV	RMS
Termination mismatch at 1MHz		-	-	5	%	
Output impedance (Differential)	Z _{out}	90	100	110	ohms	
Output rise and fall time		24			ps	20%~80%
Output High Voltage	V _{OH}	V _{CC} -0.2	-	-	V	3.3V LVCMOS (I _{OH} =-100uA)
		1.0	-	1.5	V	1.2V LVCMOS
Output Low Voltage	V _{OL}	-	-	0.2	V	3.3V LVCMOS (I _{OL} =100uA)
		-0.3	-	0.2	V	1.2V LVCMOS

Optical and Electrical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit
OM3 MMF	L	0.5	-	100	m
Aggregate Bit Rate	BR _{Aggr}	-	103.125	-	Gbps
Per Lane Bit Rate	BR _{LANE}	-	10.3125	-	Gbps
Transmitter					
Center Wavelength	λ _C	840	850	860	nm
RMS spectral width	RMS	-	-	0.65	nm

SNR-CFP-100G-SR10

CFP, 100G BASE Series

Average Launch Power, Each Lane ^{*(note3)}	Pout/lane	-7.6	-	2.4	dBm
Transmit OMA, per Lane	TX_OMA/lane	-5.6	-	3	dBm
Difference in launch power between any two lanes(OMA)		-	-	4	dB
Peak power, each lane		-	-	4	dBm
Transmitter and dispersion penalty, each lane	TDP/lane	-	-	3.5	dB
Extinction Ratio ^{*(note4)}	ER	3	-	-	dB
Optical Return Loss Tolerance		-	-	12	dB
Average launch power of OFF transmitter, each lane		-	-	-30	dBm
Output Optical Eye ^{*(note4)}	IEEE 802.3ba-2010 Compliant				
Receiver					
Center Wavelength	λ_C	840	850	860	nm
Damage Threshold		3.4	-	-	dBm
Optical modulation amplitude, each lane		-	-	3	dBm
Stressed receiver sensitivity in OMA, each lane		-	-	-5.4	dBm
Average power at receiver input, each lane	RX/lane	-9.5 ^{*(note5)}	-	+2.4	dBm
Peak power, each lane		-	-	4	dBm
Receiver reflectance	Rr	-	-	-12	dB

Note3: Output is coupled into a 50/125 μ m multi-mode fiber.

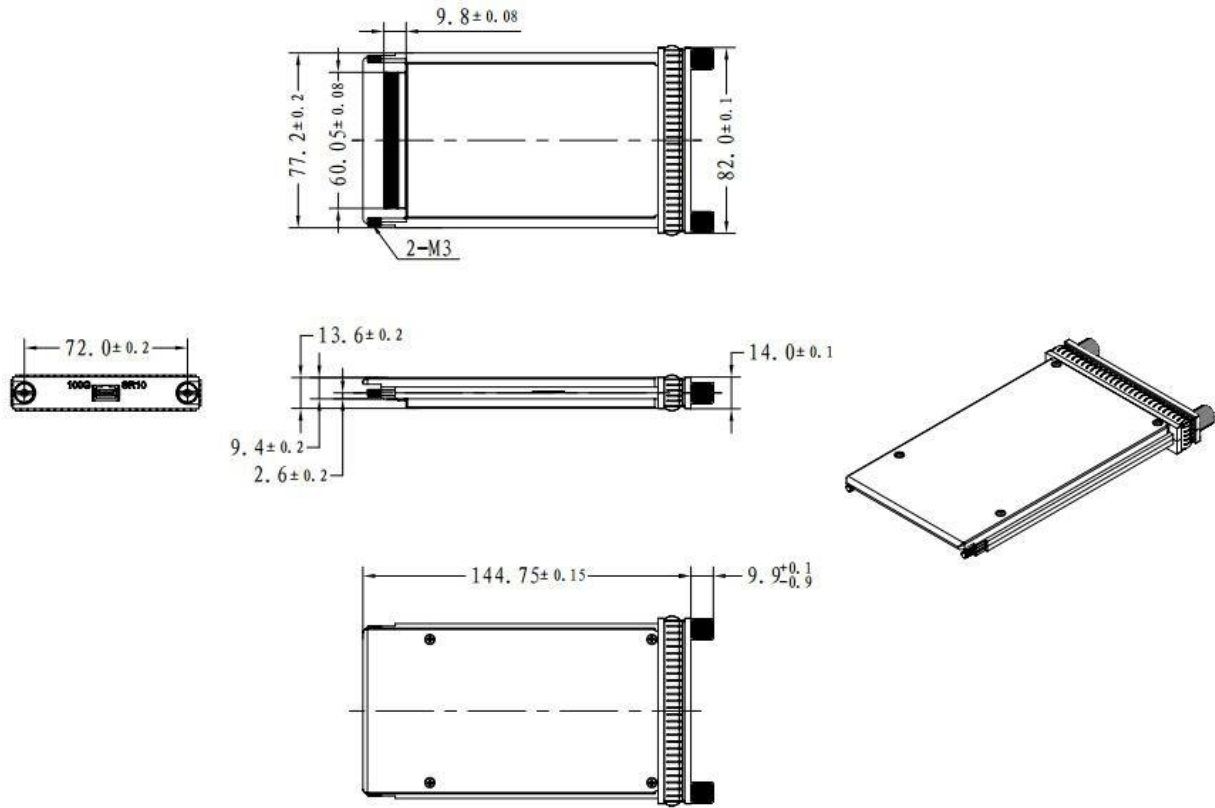
Note4: Filtered, measured with a PRBS $2^{31}-1$ test pattern @10.3125Gbps

Note5: Minimum average optical power measured at BER less than $1E-12$, with a $2^{31}-1$ PRBS.

SNR-CFP-100G-SR10

CFP, 100G BASE Series

Mechanical Specifications



GUARANTEE:



CONTACT:

Address: Building 56/2, Predelnaya Street, Yekaterinburg, Russia

Tel: +7(343) 379-98-38

Fax: +7(343) 379-98-38

E-mail: info@nag.ru

Online shop: <http://shop.nag.ru>