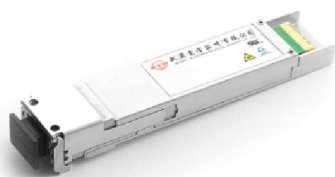# 10G EPON Symmetric OLT Transceiver XFP Module

RTXM266-600 product is designed for OLT module based on 10G EPON technology. The product is an integrated module containing a micro-optic component and semiconductor material. The module could implement DDM function. It could be used at key locations in optical networks.

Features

- XFP package with SC receptacle optical interface compliant
- Hot-Pluggable
- 10.3125Gbps&1.25Gbps downstream and 10Gbps&1.25Gbps upstream
- +3.3V single power supply
- ROHS Compliant
- C-temp operating temperature

Applications

- Optical tranceiver for 10G& 1G/10&1G symmetric EPON OLT

Standards

- IEEE 802.3av
- MSA SFF-8077iv4.5

Specifications

Parameter	Symbol	Unit	Value		
			Min	typical	Max
Electrical Characteristics					
Supply Current	Icc	mA			1200
Optical transmitter Characteristics					
Launch Optical Power -10G	Po	dBm	+2		+5
Center Wavelength Range -10G	λc	nm	1575	1577	1580
Extinction Ratio -10G	EX	dB	6		
Spectral Width(@-20dB) -10G	$\Delta\lambda$	nm			1
Side Mode Suppressing Ratio -10G	SMSR	dB	30		
Eye Diagram -10G	Complies with IEEE802.3av				
Dispersion Penalty -10G	-	dB			1.5
Launch Optical Power -1G	Po	dBm	+2		+7
Center Wavelength Range -1G	λc	nm	1480	1490	1500
Extinction Ratio -1G	EX	dB	9		
Spectral Width(@-20dB) -1G	$\Delta\lambda$	nm			1
Side Mode Suppressing Ratio -1G	SMSR	dB	30		
Eye Diagram -1G	Complies with IEEE802.3ah				
Dispersion Penalty -1G	-	dB			2.3
Optical receiver Characteristics					
Receiver Sensitivity -10G （note1）	S	dBm			-28
Overload Input Optical Power -10G	P_{in}	dBm	-6		
Receiver Settling Time -10G		ns			800
Receiver Sensitivity -1G（note2）	S	dBm			-29.78
Overload Input Optical Power -1G	P_{in}	dBm	-9.3		
Receiver Settling Time -1G		ns			400

. Measured with a PRBS 2^{31}-1 NRZ test pattern, @10.3Gb/s, EX=8dB, BER<10^{-3};

. Measured with a PRBS 2^{7}-1 NRZ test pattern, @1.25Gb/s, EX=10dB, BER<10^{-12}.

Ordering Information

Part No	Specification								
	Package	Data rate	Laser	Power	Detector	Sensitivity	Temp	Reach	Other
RTXM266-600	XFP SC	10.3125&1.25	EML	+2~+5dBm	APD	< -28dBm	0~70℃	20km+	RoHS，DDM

10G EPON Symmetric OLT Transceiver XFP Module

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	oC	-40	+85
Relative Humidity	RH	%	5	95
Power Supply Voltage	Vcc	V	0	+3.6

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Operating Case Temperature Range	Tc	oC	0	-	70
Power Supply Voltage	Vcc	V	3.13	3.3	3.47
Power Consumption	P	W			4

Principle diagram
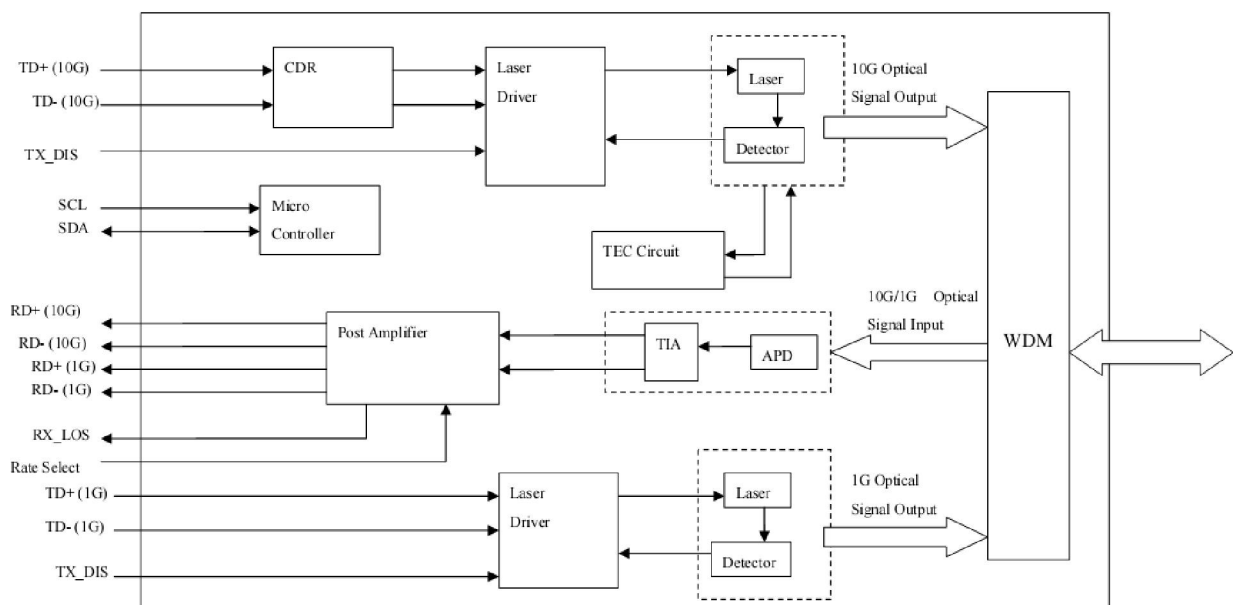
Electric Ports Definition

0000b	Auxiliary monitoring not implemented
0001b	APD Bias Voltage (16 bit value is Voltage in units of 10mV)
0010b	1G Bias current (16 bit value is current in units of 4uA)
0011b	TEC Current (16 bit value is current in units of 100uA)
0100b	10G laser temperature (Same encoding as module temperature)
0101b	10G laser wavelength (not support)
0110b	+5V Supply Voltage (not support)
0111b	1G TX Power monitor (16 bit value is power in units of 0.2uW)
1000b	+1.8V Supply Voltage (not support)
1001b	-5.2V Supply Voltage (not support)
1010b	+5V Supply Current (not support)
1101b	+3.3V Supply Current (not support)
1110b	+1.8V Supply Current (not support)
1111b	-5.2V Supply Current (not support)

Typical Application Circuit
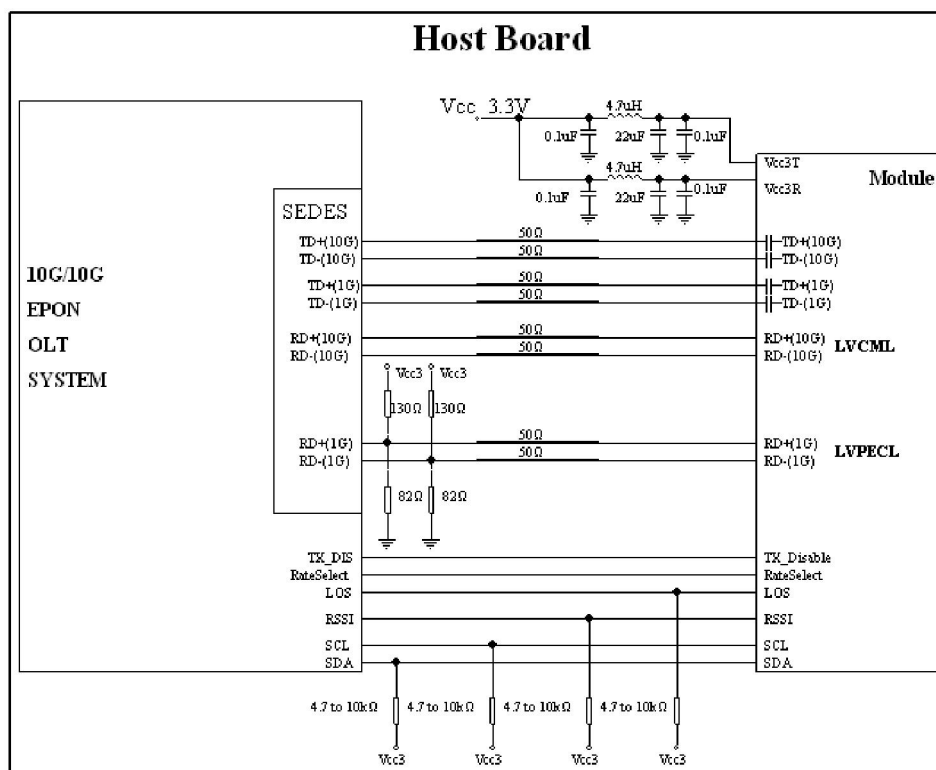
Package Outline

10G EPON Symmetric OLT Transceiver XFP Module

单位: mm
末注公差: ±0.1
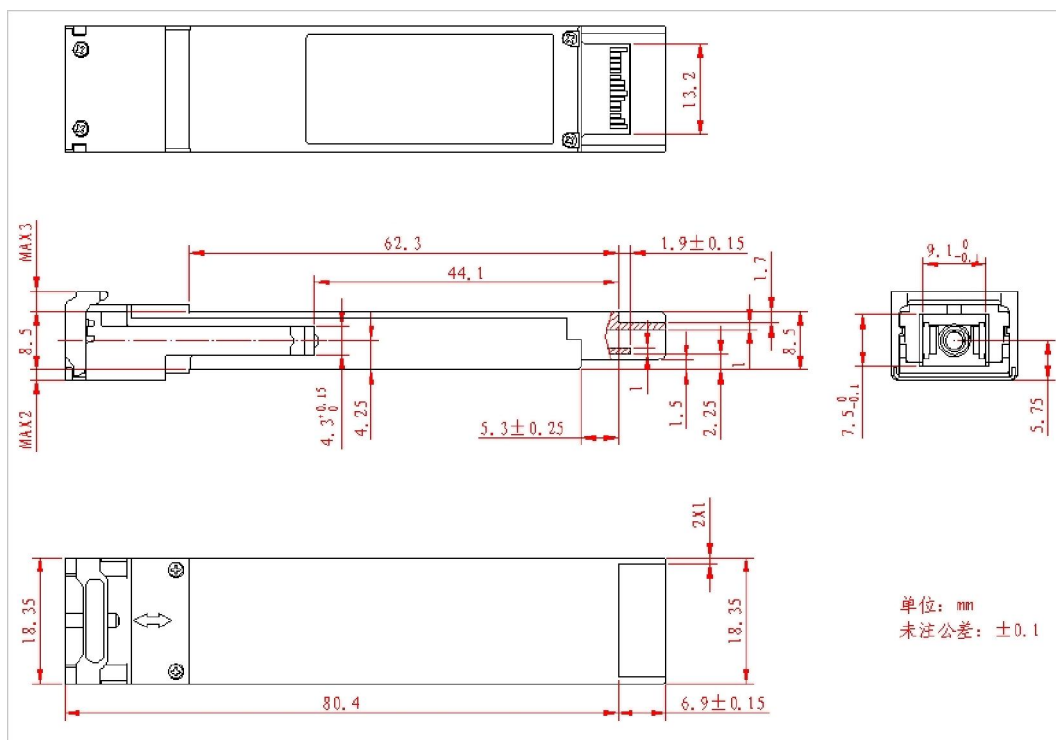
Regulatory Compliance

Feature	Test Method	Performance
RoHS	BS EN 1122: 2001 US EPA METHOD 3050B US EPA METHOD 3052 US EPA METHOD 3060A	Pb <1000ppm Cr6+ <1000ppm Hg <1000ppm PBB <1000ppm PBDE <1000ppm Cd <100ppm
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883E Method 3015.7	Class 1 (>1.5kV) – Human Body Model
Electrostatic Discharge (ESD) Immunity	IEC61000-4-2	Class 2(>4.0kV)
Electromagnetic Interference (EMI)	CISPR22 ITE Class B FCC Class B CENELEC EN55022 VCCI Class 1	Compliant with standard
Immunity	IEC61000-4-3 Class 2	Typically show no measurable effect from a 3 V/m field swept from 80 to 1000MHz applied to the transceiver without a chassis enclosure.